

**Social Anxiety, Personality Traits and Self-Esteem as Predictors of Social Media
Addiction among Undergraduates in Plateau State**

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Management and Social Sciences, Lead City University, Ibadan, Oyo State, Nigeria**

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Certification

This is to certify that Ajegena Owlama Rachel with Matriculation Number LCU/PG/003771 carried out this research work titled ‘Social Anxiety, Personality Traits and Self Esteem as Predictors of Social Media Addiction among Undergraduates in Plateau State’ in the Department of Psychology, Faculty of Management and Social Sciences, Lead City University, Oyo State, for the award of Masters of Science Degree (M.Sc) in Clinical Psychology and that this has not been previously submitted.

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Dedication

This research work is dedicated to the glory of God.

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Abstract

Social media addiction is increasingly recognized for its psychological and socio-economic impacts, such as impaired social relationships, academic underperformance, anxiety, and depression. While research on this phenomenon is emerging in Nigeria, there remains a gap in understanding the predictive role of social anxiety, personality traits, and self-esteem, especially among Nigerian undergraduates. This study examines how social anxiety, personality traits, self-esteem, and demographics (age, gender) predict social media addiction. This study addresses this gap by employing a cross-sectional quantitative survey with 397 undergraduate participants in Plateau State. The study made use of the social cognitive, cognitive behavioral, self determination and social comparison theories to explain this phenomenon. Four hypotheses were tested. Social anxiety did not significantly predict social media addiction ($\beta = .120$, $R^2 = .014$, $p > .05$), suggesting it has no influence in this context. Personality traits, however, were significant predictors ($R = .18$, $R^2 = .032$, $p < .05$), with extraversion ($\beta = .112$, $p < .05$) and conscientiousness ($\beta = -.106$, $p < .05$) having notable effects. Self-esteem also significantly predicted social media addiction ($\beta = -.128$, $R^2 = .016$, $p < .05$). Age and gender differences were non-significant (age: $F(3, 393) = .637$, $p > .05$; gender: $t(397) = 1.017$, $p > .05$). This study recommends tailored interventions, additional research, and application of findings in practice to better address social media addiction among Nigerian youth.

Key Words: Social Anxiety, Personality Traits, Self-Esteem and Social Media Addiction

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Chapter One

Introduction

1.1 Background to the Study

Social media has revolutionized the way individuals communicate, share information, and connect with others globally. Platforms like Facebook, Instagram, Twitter, Snapchat and TikTok have become integral parts of daily life, influencing how people interact, form relationships, and perceive themselves and others. For example, as of 2021, approximately 69% of adults in the United States use at least one social media platform, with usage rates increasing across age groups¹. The use of social media is on a steady incline, with well over 2.8 billion people being active users of social media, and using social media for over two and a half hours a day².

In recent times, social media has become embedded in modern society, breaking down barriers of distance and time while significantly altering how individuals connect and manage their daily activities. Social media is built upon principles of openness, customization, user-driven communication, cooperation, and the exchange of information and knowledge³. Social media refer to online applications and interactive platforms that enable users to create, discuss, modify, and share content generated by other users. They are built upon the technological and ideological principles of Web 2.0⁴.

Social media platforms offer a shared space where individuals can engage in communication, collaboration, and a variety of social and interactive activities⁵. These platforms operate under a hybrid media framework, making them interactive, user-driven, and providing diverse user experiences⁶. Social media can also be regarded as virtual

collections of sharable user profiles or virtual communities which nurture the core motivational factors of social connection and a sense of community⁷. Examples of social media encompass business and social networking platforms, blogs, news-sharing and collaborative websites, virtual environments, podcasts, e-commerce communities, open-source software networks as well as platforms for sharing creative content and educational resources⁸. In addition to the various forms of social media, there are also distinct categories of users. For instance, Aima's research report identified six types of social media users, categorized by according to behavioural factors such as trust and control "personas". The varied user base and their behaviours make it essential to gain a deeper understanding of how different personality traits influence individuals' involvement and participation on social media⁹.

Despite the positive role social media plays in daily life, its widespread adoption has raised important questions about its impact on mental health and the general well-being of individuals. Further, in African regions, social media use and addiction have been reported as highest among other regions¹⁰. One of the problems includes social media addiction. Addiction may be defined as a brain disease, marked by an inability to control one's behaviours and urges, and significant impairment in daily functioning¹¹. Social media addiction, often referred to as problematic social media use or social media dependency, is characterized by excessive and compulsive use of social media platforms, leading to negative consequences in various life domains. It can result in decreased productivity, impaired relationships and adverse psychological effects. Social media addiction can be considered a type of internet addiction, and is a behavioural addiction characterized by an uncontrollable

use of social media, which causes a persistent and significant interruption in an individual's daily functioning, rendering that individual unable to perform everyday tasks adequately¹².

Alternatively, it may be defined as a strong preoccupation with social media sites, characterized by the strong urge to visit such sites, frequent visits to the sites, engaging in the use of such sites for long periods of time, and devotion of energy to use such sites, such that social relationships, functionality at work or school, daily activities, and general well-being are otherwise affected and interfered¹³. Both of these definitions describe an unhealthy use of social media, resulting in a noticeable decrease in an individual's ability to function due to a strong compulsion to use social media. The term social media addiction therefore represents a state of maladaptive psychological dependency on social media, such that a behavioural addiction is developed¹⁴.

This psychological dependence on the use of social media is reinforced by the pleasure of interacting and receiving rewards in form of comments, increase in feelings of acceptance or belonging, and an increased sense of popularity¹⁵. This may become particularly dangerous if it remains the only form of self-fulfillment or acceptance which an individual possesses, as losing it may play a role in development of adverse effects from feeling rejected and interpersonal isolation, such as depression and suicide¹⁶.

Particularly among adolescents and young adults, social media addiction is gaining significant attention, especially for the negative outcomes associated with it. Among university students, for example, excessive social media use, and ultimately social media addiction is attributed to issues like poor mental health outcomes and decline in academic performance¹⁷. The interest in social media addiction raises important questions which seek to find both causes and consequences of the phenomenon. One particular cause that is

associated with social media addiction among students is the Fear of Missing Out (FoMO)¹⁸. Adolescents and young adults are especially vulnerable to the development of FoMO, as they desire to remain in the know of trends and recent happenings along with peers¹⁹. This points to the importance of environmental factors in the development of social media addiction. However, it is also possible that internal factors can make contributions to the development of social media addiction among university students. This research therefore explores such factors²⁰.

Social anxiety, also known as social phobia is a well-documented psychological construct characterized by an intense fear and avoidance of social situations, particularly those involving unfamiliar people or situations often due to the anticipation of negative evaluation by others. Anxiety in itself is a diffuse, unpleasant, vague sense of apprehension. It is a response to an imprecise or unknown threat²¹. Anxiety disorders such as social anxiety disorder are hence an intense form of anxiety, which impair regular functioning. Social anxiety follows this same pattern, with social anxiety being a normal experience, while Social Anxiety Disorder is marked by persistent symptoms of social anxiety, which significantly impair daily functioning²². In this research, social anxiety is viewed on a continuum, describing the amount of fear that an individual experiences in social settings, with an associated fear of negative evaluation and fear of rejection from others in the environment²³. From this definition of social anxiety, it becomes clear that perception of evaluation by others is held important, leading to a fear of social interactions. Individuals with high levels of social anxiety often experience distressing thoughts and fears of being judged, humiliated, or rejected by others and may turn to social media as a way to interact

with others while avoiding face-to-face interactions²⁴. However, this preference could potentially increase their risk of social media addiction.

Personality is a complex composition of an individual that gives a description of that individual. Due to the diverse and vast amount of theories existing concerning the phenomenon, it does not have one specific definition²⁵. It is hence, perhaps best defined through the use of traits²³. Personality traits are defined as consistent and relatively long lasting characteristics and dispositions which are expressed through cognitions, emotions and behaviours²⁰. Following this, personality is defined in this research as the collection of an individual's traits which are relatively enduring and stable over time. A general consensus in the definition and measurement of personality is to categorize such traits into groups or factors, such as with the big five by McCrae and Costa in 1987²⁵. These factors include Openness to new experiences, Conscientiousness, Extraversion, Agreeableness, and Neuroticism, simply truncated as OCEAN.

Personality traits, such as extraversion, neuroticism, and conscientiousness, have been associated with various forms of addictive behaviours. Understanding how specific personality traits may predispose individuals to social media addiction is essential for early identification and intervention. With the proliferation of social media, researchers and mental health professionals have become increasingly concerned about the potential for social media addiction or problematic use. Social media addiction, also known as problematic social media use or social media dependency is characterized by excessive, compulsive, and uncontrolled use of social media platforms, often to the detriment of one's daily life, relationships, and psychological well-being. Symptoms may include spending excessive

amounts of time on social media, neglecting real-life responsibilities, withdrawal symptoms when not using social media, and unsuccessful attempts to cut down or control usage²⁴.

Personality traits play a significant role in shaping an individual's behaviour and responses to various stimuli, including social media. Research has suggested that specific personality traits may be associated with an increased susceptibility to addictive behaviours, including social media addiction. Individuals with extraverted personalities may be more inclined to use social media as a means for social interaction and self-expression. High levels of neuroticism are also associated with increased vulnerability to stress and negative emotions, which may lead individuals to use social media as a coping mechanism. Furthermore, low conscientiousness may be linked to impulsive and compulsive behaviours, including excessive social media use¹⁶.

Self-esteem refers to an individual's overall evaluation of their self-worth and plays a vital role in their overall mental well-being. People with high self-esteem tend to have a positive self-image, while those with low self-esteem may struggle with feelings of inadequacy and insecurity. Social media platforms often provide opportunities for individuals to seek validation, attention, and approval from others through likes, comments, and followers. Those with low self-esteem may be particularly drawn to these forms of online validation, potentially contributing to social media addiction-like behaviours¹⁸.

1.2 Statement of the Problem

Social media has become an integral part of modern life, with billions of people worldwide using various platforms to connect, share and communicate. While social media offers numerous benefits, such as enhancing social connections and facilitating information

sharing, there is growing concern about the potential for social media addiction. In fact, social media addiction is believed to exponentially grow along the growing use of social media²⁶. Understanding the factors that contribute to social media addiction is therefore crucial in addressing this issue.

More specifically, pervasive social media use is on the incline among undergraduates in Nigeria, with recent evidence showing that the Northern areas (like Jigawa) are experiencing an upsurge in the use of social media, which is described as unnecessarily excessive among undergraduates²⁷. In recent years, the pervasive use of social media platforms has transformed the landscape of human interaction, communication, and self-presentation. While social media offers numerous advantages, its excessive and compulsive use, often termed social media addiction, has emerged as a growing concern with potential implications for individuals' mental health and overall well-being. The prevalence of social media addiction is on the rise, affecting individuals across diverse age groups and backgrounds. It is characterized by behaviours such as spending excessive amounts of time on social media, neglecting offline responsibilities, experiencing withdrawal symptoms when unable to access social media, and an inability to control one's usage despite negative consequences. These behaviours can lead to detrimental effects on various aspects of individuals' lives, including their academic and occupational performance, relationships, and psychological well-being²⁸.

Social media addiction is not solely a consequence of technology or platform design; it is also influenced by individual differences and psychological factors. Understanding these factors is crucial for identifying at-risk individuals, developing targeted interventions, and mitigating the negative consequences associated with excessive social media use. The fear of

negative evaluation in social situations may lead to seeking refuge in social media, extraversion, neuroticism, and conscientiousness may influence susceptibility to social media addiction and low self-esteem may drive individuals to seek external validation through social media. This will collectively aid in the development and advancement of social media addiction, filling an important gap in the understanding of this complex issue²⁹.

More specifically, there is a substantial dearth in literature which discusses the combined (predictive) influence of social anxiety, personality, and self-esteem on social media addiction, more so in Nigerian populations. In this regard, the present study aims to explore this scarcity, and provide contributions to existing literature. Further elaborating on this gap, the role of gender in social media addiction has been subject to debate. Gaining an understanding of this role will also fill the gap in interventions addressing social media addiction through self-esteem³⁰.

1.3 Aim and Objectives of the Study

The aim of this study is to investigate the role of social anxiety, personality traits, and self-esteem as predictors of social media addiction. However, the specific Objectives of the study are to:

1. Identify the relationship between levels of social anxiety and the likelihood of developing social media addiction.
2. Find out if specific personality traits such as openness, extroversion, introversion, conscientiousness and neuroticism are more strongly associated with social media addiction.

3. Investigate whether self-esteem has a predictive relationship with social media addiction.
4. Examine whether selected demographic characteristics (age and gender) influence social media addiction.

1.4 Research Questions

What is the relationship between levels of social anxiety and the likelihood of developing social media addiction?

1. Are specific personality traits such as extroversion, introversion and neuroticism more strongly associated with social media addiction?
2. Does self-esteem have a predictive outcome on social media addiction?
3. Do demographic characteristics (age and gender) demonstrate an influence on social media addiction?

1.5 Hypotheses

The following hypotheses will be put forward for testing:

H₀₁ Social anxiety will significantly predict social media addiction among undergraduates in Plateau State.

H₀₂ Undergraduates' personality traits will significantly influence social media addiction.

H₀₃ Self-esteem will significantly predict social media addiction among undergraduates in Plateau State.

H₀₄ Demographic variables (age and gender) will significantly influence social media addiction among undergraduates in Plateau State.

1.6 Significance of the Study

This research underscores Social Anxiety, Personality Traits and Self-Esteem as Predictors of Social Media Addiction. The significance of the study is multifaceted and extends to various stakeholders, including researchers, mental health professionals, educators, policymakers, and the general public. While there is a growing body of research examining the relationship between social media use and mental health outcomes, there is a need for more comprehensive investigations into the underlying psychological factors that may contribute to social media addiction.

This study contributes to the scientific understanding of social media addiction by investigating the interplay between psychological factors like social anxiety, personality traits, and self-esteem. This knowledge enhances our comprehension of the complex phenomenon of addiction in the digital age. Such knowledge is crucial for developing targeted interventions and promoting healthier online behaviours in the digital age. This study enables early identification of at-risk individuals. This information is valuable for mental health professionals, educators, and parents who can intervene to prevent or address addictive behaviours.

The findings can inform the development of targeted interventions for individuals exhibiting specific risk factors. Tailored treatments are more likely to be effective in reducing social media addiction and its associated negative consequences. Promoting healthier online behaviors is crucial in the era of digital technology. This study can provide insights into strategies for improving digital well-being and encouraging responsible social media use. Mental health professionals can benefit from a better understanding of the psychological factors contributing to social media addiction. This knowledge can guide counseling and

therapy approaches for affected individuals. Educators and schools can use the study's findings to implement educational programs that raise awareness about the potential risks of excessive social media use and teach students how to manage their online activities more responsibly.

Furthermore, policymakers can use the research to inform the development of regulations and guidelines related to social media use, especially for vulnerable populations such as adolescents and young adults. Individuals themselves can benefit from the study by gaining insight into their own risk factors for social media addiction. This self-awareness can empower them to make informed decisions about their online behaviour. Social media addiction has public health implications due to its potential to impact mental well-being and social relationships. Understanding the predictors can help public health officials design programs and initiatives to address this issue at a broader level. Ultimately, this study extends to multiple domains including scientific knowledge, mental health practice, education, policy development and individual well-being as it addresses a pressing issue of our time and offers solutions to mitigate its impacts.

1.7 Scope of the Study

This research will concentrate on the issue of addiction to social media among undergraduates in Plateau State, in order to ascertain the predictors of this maladaptive behaviour. The scope of this research is therefore centered on finding significant factors which influence the development of social media addiction among these students, in order to make well informed recommendations for change depending on the results.

1.8 Limitation of the Study

Every research thesis has limitations and this study is no exception. First, the study's main limitation was its reliance on self-reported data. This could have affected the validity of the data collected, as it may not have fully captured the participants' actual behaviours. Also, the sample size and representation of the participants limited the generalization of the findings, as the study involved only a small group of undergraduates from specific institutions in Plateau State which may not be the accurate reflection of all students in the region or other regions.

1.9 Operational Definition of Terms

Social Media Addiction: The level of psychological dependence of the undergraduate students on social networking sites, characterized by compulsive internet use, and impairment or interference with daily functioning. It is conceptualized as the total score on the Social Media Addiction scale-Student form (SMAS-SF). Higher scores indicate higher levels of social media addiction.

Social Anxiety: This is defined as the level of fear that the undergraduates experience in social situations, due to fear of judgment, negative evaluation, or rejection by others. In this study, it is conceptualized as the total score on the Social Phobia Inventory scale. Higher scores are indicators of higher levels of social media addiction.

Personality Traits: This is defined as the collection of relatively stable and enduring characteristic traits an individual possesses, which are exhibited through thoughts, feelings and actions. In this study, it is conceptualized as the scores on each dimension on the Ten

Item Personality Inventory (TIPI). Higher scores on each dimension are indicators of higher levels of Extraversion, Neuroticism, Agreeableness, Openness to new experiences, and Conscientiousness respectively.

Self-esteem: This is defined as an individual's overall perception of self-worth. In this study, it is conceptualized as the total score on the Rosenberg Self-Esteem (RSE) scale, with higher scores indicating higher levels of self-esteem.

Undergraduates: These are individuals enrolled in a university or tertiary institution for the purpose of pursuing their first degree. They are usually from different backgrounds and are at a stage where they are exploring various academic disciplines and gaining foundational knowledge in their chosen fields of study.

Endnotes

1. B. Auxier & M. Anderson, *Social Media Use in 2021*, Pew Research Center, Available Online: <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021>
2. X. Cao; M. Gong; L. Yu & B. Dai, *Exploring the mechanism of social media addiction: An empirical study from WeChat users*, *Internet Research*, 22, 2020, 30(4):1305-28
3. G. Lampropoulos, K. Makkonen & E. Siakas, *Security and Privacy Issues and Concerns About The Use of Social Networking Services*, E-Learn: World Conference on e-Learning in Corporate, Government, Healthcare, and Higher Education, 2019, 457–466.
4. D. Bhugra, D. Moussaoui, T. J. Craig, *Oxford textbook of social psychiatry*, Oxford University Press, ISBN: 0198861478-9780198861478, pp. 673, 2022
5. G. Lampropoulos; K. Siakas; P. Makkonen & E. Siakas, *A 10-Year Longitudinal Study of Social Media Use in Education*, **International Journal of Technology in Education**, 4(3), 2021, 373–398.
6. M. Fan; S. A. Qalati; M. A. S. Khan; S. M. M. Shah; M. Ramzan & R. S. Khan, *Effects of entrepreneurial orientation on social media adoption and SME performance: The moderating role of innovation capabilities*, **PLoS ONE** 16(4), 2021, e0247320, DOI: doi:10.1371/journal.pone.0247320.
7. B. Dai; A. Ali & H. Wang, *Exploring information avoidance intention of social media users: a cognition–affect–conation perspective*, **Internet Research**, 30 (5), 2020, 1455-1478, DOI: <https://doi.org/10.1108/INTR-06-2019-0225>
8. G. Lampropoulos, T. Anastasiadis; K. Siakas & E. Siakas, *The impact of personality traits on social media use and engagement: An overview*, **International Journal on Social and Education Sciences (IJonSES)**, 4(1), 2022, 34-51, DOI: <https://doi.org/10.46328/ijonses.264>
9. K. Kircaburun; S. Alhabash & Ş.B. Tosuntaş, *Uses and Gratifications of Problematic Social Media Use Among University Students: a Simultaneous Examination of the Big Five of Personality Traits, Social Media Platforms, and Social Media Use Motives*, **International Journal of Mental Health and Addiction**, 18, 2020, 525–547, <https://doi.org/10.1007/s11469-018-9940-6>

10. K. Moore & G. Craciun, *Fear of Missing Out and Personality as Predictors of Social Networking Sites Usage: The Instagram Case*, *Psychological Reports*, 124(4), 2021, 1761-1787, DOI: <https://doi.org/10.1177/0033294120936184>
11. H. Liu; C. Yu; H. Wu; Z. Duan & G. Yan, *A new hybrid ensemble deep reinforcement learning model for wind speed short term forecasting*, *Energy*, 202, 2020, 117794, ISSN 0360-5442, <https://doi.org/10.1016/j.energy.2020.117794>.
12. C. Cheng; Y. C. Lau; L. Chan & J. W. Luk, *Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values*, *Addictive behaviors*, 117, 2021, 106845.
13. F. A. Mahamid, DZ Berte, *Social media addiction in geopolitically at-risk youth*, **International Journal of Mental Health and Addiction**, 15, 17, 2019, 102-11.
14. Y. Hou; D. Xiong; T. Jiang; L. Song & Q. Wang, *Social media addiction: Its impact, mediation, and intervention*, **Cyberpsychology: Journal of psychosocial research on cyberspace**. 21, 2019, 13(1).
15. J. Brailovskaia; H. W. Bierhoff; E. Rohmann; F. Raeder & J. Margraf, *The relationship between narcissism, intensity of Facebook use, Facebook flow and Facebook addiction*, **Addictive Behaviors Reports**, 11, 2020, 100265, ISSN 2352-8532, <https://doi.org/10.1016/j.abrep.2020.100265>.
16. M. Dalvi-Esfahani; A. Niknafs; D. J. Kuss; M. Nilashi & S. Afrough, *Social media addiction: Applying the DEMATEL approach*. *Telematics and Informatics*, 1, 43, 101250, 2019.
17. M. Gong; L. Yu & A. Luqman, *Understanding the formation mechanism of mobile social networking site addiction: evidence from WeChat users*, *Behaviour & Information Technology*, 1, 39(11):1176-91, 2020.
18. C. E. Nwafor; P. C. Ugwu; C. A. Okoye & B. E. Ofoma, *Social Media Addiction Moderates the Relationship between Interpersonal Isolation and Suicidal Ideation among Undergraduates*, **Journal of Psychology and Allied Disciplines**, 29, 2023, 2(1).
19. T. A. Aygul & S.E. Akbay, *Smartphone addiction, fear of missing out, and perceived competence as predictors of social media addiction of adolescents*, **European Journal of Educational Research**, 8(2), 2019, 559-66.
20. N. Bloemen & D. De Coninck, *Social media and fear of missing out in adolescents: The role of family characteristics*, *Social Media+ Society*, 6(4):2056305120965517, 2020.

21. M. B. First, *Psychiatric Classification*, In: Tasman, A., *Tasman's Psychiatry*, Springer, Cham, 2024, https://doi.org/10.1007/978-3-030-51366-5_91
22. L. Pickering; J. A. Hadwin & H. Kovshoff, *The role of peers in the development of social anxiety in adolescent girls: A systematic review*, *Adolescent Research Review*, (5), 2020, 341-62.
23. M. R. Mohammadi; M. Salehi; A. Khaleghi; Z. Hooshyari; S. A. Mostafavi; N. Ahmadi; S. K. Hojjat; P. Safavi & M. Amanat, *Social anxiety disorder among children and adolescents: A nationwide survey of prevalence, socio-demographic characteristics, risk factors and co-morbidities*, **Journal of Affective Disorders**, 15;263:450-7, 2020.
24. B. Ejaz; A. Muazzam; A. Anjum; G Pollock & R. Nawaz, *Measuring the scale and scope of social anxiety among students in Pakistani higher education institutions: An alternative social anxiety scale*, **Sustainability**, 11, 12(6), 2020, 2164.
25. E. Stănculescu & M. B. Griffiths, *Social media addiction profiles and their antecedents using latent profile analysis: The contribution of social anxiety, gender, and age*, **Telematics and Informatics**, 1, 74, 2022, 101-879.
26. T. Abbott, *Social and personality development*, Routledge, London, ISBN: 9781003209300, pp. 208, 2021.
27. P. T. Jr Costa; R. R. McCrae & C. E. Löckenhoff, *Personality across the life span*, **Annual Review of Psychology**, 4, 70, 2019, 423-48.
28. Y. Sun & Y. Zhang, *A Review of Theories and Models Applied in Studies of Social Media Addiction and Implications for Future Research*, **Addictive Behaviors**, 2020, 106699, DOI:10.1016/j.addbeh.2020.106699.
29. N. Zubairu, *The impact of social media platforms amongst tertiary institutions student in dutsejigawa state, Nigeria*, **International Journal of Social Sciences and Humanity Studies**, 13(1), 2021, 79-101.
30. ALDayel & W. Magdy, *Stance detection on social media: State of the art and trends*, **Information Processing & Management**, 58, (4), 2021, 102597, ISSN 0306-4573, <https://doi.org/10.1016/j.ipm.2021.102597>.

Chapter Two

Literature Review

This aspect of the thesis gives an overview of each variable in the study, with relevance to their nature, as represented through literature. This literature review begins with a conceptual review of each variable, and then proceeds to present a theoretical backdrop which relates the variables. Subsequently, a review of relevant and similar research previously conducted is provided, followed by a conceptual framework guiding the present research, and a summary of the gaps in literature.

2.1 Conceptual Review

2.1.1 Social Media Addiction

Social media addiction, also known as problematic social media use or social media dependency refers to a compulsive and excessive engagement with social networking platforms that result in negative consequences for an individual's physical, psychological, and social well-being¹. Similar to other forms of addiction, such as substance abuse or gambling, social media addiction is characterized by a loss of control over usage, preoccupation with social media activities, withdrawal symptoms when access is restricted and continued use despite negative effects².

Several factors contribute to the development of social media addiction, including psychological social and environmental influences³. Psychological factors such as personality traits (e.g., neuroticism, impulsivity), low self-esteem, loneliness, and poor coping mechanisms may predispose individuals to excessive and addictive or problematic social media use. Social influences, including peer pressure, social comparison, and fear of missing

out (FOMO), also play a significant role in driving addictive behaviours such as social media addiction. Moreover, the design features of social media platforms, such as notifications, likes, and endless scrolling, are specifically engineered to capture users' attention and promote habitual use, further fuelling addiction⁴.

The consequences of social media addiction can be wide-ranging and profound, affecting various domains of an individual's life. Psychologically, excessive social media use has been linked to increased levels of stress, anxiety, depression, and loneliness⁵. It can also impair cognitive functions, including attention memory (through decreased sleep quality), and decision-making abilities⁶. Further, addiction to social media may lead to social isolation, deterioration of real-life relationships, and decreased productivity in academic or professional settings. Furthermore, prolonged exposure to curated and idealized representations of others' lives on social media platforms can exacerbate feelings of inadequacy and negatively impact self-esteem and body image⁷.

The social media platforms that will be adopted for this study are: Instagram, Snapchat and TikTok.

Instagram

Instagram is an online social media platform and networking service designed for sharing photo and videos, this app was launched in 2010 by co-founders Kevin Systrom and Mike Krieger. It is currently owned by Meta Platforms, Inc., the parent company of Facebook, and is among the largest social media platforms in the world, Instagram surpassed two billion monthly active users in 2022⁸. The company's headquarters are in Menlo Park, California.

Instagram's service is relatively straightforward. It focuses on posts containing images and/or short-form videos. These posts are contained within a user's profile and may be displayed publicly within Instagram or privately to the user's followers. There are two main channels for posting: into the user's permanent feed or into their "Stories," a special section where content remains for 24 hours before disappearing (unless specifically archived). Users can also go "live," meaning they can stream a video directly from their camera to the platform in real time⁹.

Users can interact with one another through private messages, also referred to as direct messages (DMs), where they have the option to send lasting photos or videos, as well as media that disappears after being viewed. Users have the ability to "follow" one another, and all the accounts a person follows are combined into a single feed. The platform also offers the option to browse by topic or hashtag, allowing users to explore a random selection of trending posts⁸.

Instagram allows users to capture photos or videos within the app and edit both new or existing content using text, gifs, icons, and filters that can enhance lighting, create distortions, or add features like hats or cat ears. Feed posts may contain a caption from the user, geotagging data, and/or tags linking to other user accounts. The platform also allows for text comments to be added to feed posts and for users to "like" posts through the use of a heart icon¹⁰.

A large number of advertisers were drawn to Instagram by the platform's popularity and features, which contributed to the emergence of the "influencer" generation—people with sizable social media followings who utilize their platform to promote certain goods or

services. Brands frequently seek out influencers, offering them financial incentives and complimentary products in exchange for sharing information, reviews, or mentioning a product in their posts or videos¹¹.

Despite being celebrated for its rapid growth and immense popularity, Instagram has faced criticism for challenges common to social media platforms, such as addiction, inappropriate content, misinformation, and inadequate moderation. Research has also indicated that it can negatively affect the mental health of teenagers, particularly harming the self esteem of young girls¹².

Snapchat

This is one of the most widely used social media platforms in the world. The site has 360 million active monthly users with three billion “snaps” (photos and videos) generated every day. Snapchat was founded in 2011 by Evan Spiegel, Reggie Brown, and Bobby Murphy, all students at Stanford University¹³. It is a one-to-one and group messaging app that lets users send photo, video, and text messages that disappear after several seconds. Roughly 150 million people use Snapchat every day, and they consume around 800 hours of video per second.

In addition to its messaging features, Snapchat features Stories (photo or video messages that can be replayed for 24 hours), Memories (saved photos for sharing later), and stickers to embellish messages. The app has been widely adopted, especially among teenagers and millennials¹⁴

TikTok

TikTok is a social networking app that allows users to create, edit, and share short videos ranging from 15 seconds to three minutes. It offers a variety of music, sounds, filters, and special effects that can be incorporated into the videos. Users can also upload videos from their devices to the app. By the early 2020s, over one billion people around the globe were actively using TikTok¹⁵.

TikTok users can create and share videos on a wide range of subjects. Popular content includes comedic and educational clips, as well as challenges that encourage users to dance, lip-sync, or perform quirky actions like rolling on the ground like a tumbleweed. TikTok offers submission guidelines, yet some users still upload dangerous or illegal content, including risky dares. One particular challenge led to a surge of car thefts in North America after TikTok users highlighted a security vulnerability in specific Kia and Hyundai models. Both critics and the app's owners recommend that users exercise caution regarding the stunts they decide to perform and share¹⁶. They also encourage parents to oversee their children's activities on TikTok. In response, Tiktok has introduced a feature that tracks screen time and enable users to set reminders for taking breaks. Additionally, regulators worldwide have raised concerns about privacy, safety, and security related to TikTok¹⁷.

2.1.2 Social Anxiety

Social anxiety, also known as social phobia, is a common mental health disorder characterized by overwhelming fear and distress in social situations. Individuals with social anxiety often experience excessive self-consciousness fear of negative evaluation, and

avoidance of social interactions, leading to significant impairment in various areas of life¹⁸. Understanding the complex interplay of neurobiological, psychological, and social factors underlying social anxiety is essential for a full grasp of the concept.

Neurobiological research has identified several key brain regions and neurotransmitter systems implicated in the pathophysiology of social anxiety. Dysfunction within the amygdala, a brain region involved in processing threat-related stimuli, is central to the hyperarousal and exaggerated fear response observed in individuals with social anxiety¹⁹. Heightened amygdala reactivity to social cues and perceived social threats contributes to the maintenance of social anxiety symptoms.

Moreover, alterations in the serotonin system, particularly dysregulation of serotonin neurotransmission, have been implicated in the etiology of social anxiety. Serotonin, known for its role in regulating mood and anxiety, modulates amygdala activity and emotional processing, thereby influencing vulnerability to social anxiety. Dysfunction within the hypothalamic-pituitary-adrenal (HPA) axis, the body's stress response system, also contributes to the dysregulation of stress hormones such as cortisol, exacerbating symptoms of social anxiety²⁰.

Cognitive-behavioural models highlight the role of cognitive biases, maladaptive beliefs, and safety behaviours in the maintenance of social anxiety. Individuals with social anxiety tend to interpret ambiguous social cues negatively and overestimate the likelihood of social rejection or humiliation. They often engage in safety behaviours, such as avoidance, reassurance-seeking, or excessive self-monitoring, to manage anxiety and prevent perceived social threats²¹.

Furthermore, early childhood experiences including parental modeling, attachment patterns, and peer interactions, shape individuals' beliefs and expectations about social relationships, contributing to the development of social anxiety. Negative reinforcement processes, wherein avoidance behaviours alleviate immediate distress but reinforces anxiety over time, perpetuate the cycle of social anxiety and avoidance²².

Social factors, including socialization experiences, cultural norms, and interpersonal relationships, significantly impact the expression and course of social anxiety. Adverse social experiences, such as bullying, rejection, or social ostracism, increase vulnerability to social anxiety and contribute to the development of negative self-perceptions and interpersonal distrust²³. Moreover, cultural expectations regarding social behaviour and conformity influence individuals' perceptions of social threats and acceptable social norms. Societal pressures to meet unrealistic standards of social competence and attractiveness exacerbate feelings of inadequacy and social comparison among individuals with social anxiety²⁰.

Social anxiety is a multifaceted disorder characterized by neurobiological, psychological, and social determinants. By integrating findings from neuroscience, psychology, and sociology, we gain a deeper understanding of the complex mechanisms underlying social anxiety and its profound impact on individuals' lives. Future research efforts should focus on elucidating the interactive effects of neurobiological vulnerabilities and social contextual factors in the development and maintenance of social anxiety. Also, evidence-based interventions targeting cognitive restructuring, exposure therapy, and social skills training offer promising avenues for alleviating social anxiety symptoms and improving quality of life for affected individuals²⁴.

2.1.3 Personality Traits

Personality traits exert profound influences on individuals' cognitive functioning, emotional responses, and interpersonal relationships. Extraversion is associated with greater social engagement, positive affect, and assertiveness, whereas neuroticism predicts heightened emotional reactivity, vulnerability to stress, and susceptibility to mood disorders. Agreeableness and conscientiousness are positively correlated with pro-social behaviour, empathy, and adaptive coping strategies, whereas openness to experience reflects individuals' curiosity, creativity, and receptivity to new ideas²⁵.

Moreover, personality traits influence individuals' vocational interests, career choices, and leadership styles in organizational settings. Conscientiousness predicts job performance, task persistence, and occupational success, whereas extraversion is associated with effective leadership, networking skills, and career advancement. Understanding the interplay between personality traits and situational factors enables organizations to recruit, train, and manage employees more effectively, enhancing productivity and job satisfaction²⁶.

2.1.4 Self-esteem

Self-esteem represents a fundamental aspect of individuals' self-concept, encompassing beliefs and attitudes about one's own worth, abilities, and characteristics. For undergraduates, self-esteem is a crucial factor influencing academic motivation, social relationships, and mental health outcomes. Understanding the developmental trajectories, influential factors, and psychological implications of self-esteem is essential for promoting adaptive adjustment and positive outcomes among undergraduate populations²⁷.

Research on self-esteem development indicates that adolescence and young adulthood represent critical periods of self-concept formation and consolidation. During adolescence, individuals undergo significant cognitive, emotional, and social changes, leading to fluctuations in self-esteem levels. Adolescents' self-esteem tends to decline temporarily during the early stages of adolescence, as they navigate identity exploration, peer comparisons, and social transitions²⁸. However, self-esteem typically stabilizes and increases gradually during late adolescence and emerging adulthood, as individuals develop greater self-awareness, autonomy, and social competence.

Numerous intrapersonal, interpersonal, and contextual factors influence undergraduates' self-esteem trajectories. Intrapersonal factors, such as personality traits, cognitive attributions, and self-perceptions, play a crucial role in shaping individuals' self-evaluations and self-concept clarity. Personality traits, including extraversion, neuroticism, and conscientiousness, are associated with varying levels of self-esteem and resilience to stressors²⁹.

Interpersonal relationships and social experiences also exert significant influences on undergraduates' self-esteem. Supportive relationships with family members, peers, and mentors contribute to the development of secure attachment bonds and positive self-regard. Conversely, experiences of rejection, social comparison, and peer victimization may undermine individuals' self-esteem and subjective well-being²⁷.

Moreover, contextual factors, such as cultural norms, societal expectations, and academic environments, shape undergraduates' self-esteem perceptions and adjustment processes. Socio-cultural contexts that prioritize individual achievement, competition, and

perfectionism may contribute to heightened performance pressure and diminished self-worth among undergraduates³⁰.

Self-esteem is closely linked to various psychological outcomes, including emotional well-being, academic achievement, and interpersonal functioning. Individuals with high self-esteem tend to experience greater life satisfaction, optimism, and resilience in the face of adversity. They are more likely to engage in adaptive coping strategies, seek social support, and pursue meaningful goals. Conversely, low self-esteem is associated with a range of negative psychological outcomes, including depression, anxiety, and social withdrawal. Undergraduates with low self-esteem may exhibit maladaptive coping behaviours, perfectionist tendencies, and fear of failure, which can impede academic performance and hinder interpersonal relationships³⁰.

2.2 Theoretical Review

Several psychological theories and concepts have been proposed in order to explain the relationships and interactions between these variables. As a result, the researcher will review the following theories;

- i. Social Cognitive Theory
- ii. Cognitive-Behavioural Theory
- iii. Self Determination Theory
- iv. Social Comparison Theory

2.2.1 Social Cognitive Theory

The social cognitive theory was initially propounded by Albert Bandura in the 1960s as the Social Learning Theory. By 1986, the Social Learning Theory had been rebranded into a behavioural change model, referred to as the Social Cognitive Theory³¹. This theory proposes that the learning of human behaviour can be studied within the social contexts in which it occurs. The theory highlights the importance of a triad of factors which are necessary for the context in which social learning occurs, including the person, the environment, and the behaviour³². The social cognitive theory therefore emphasizes the role of social contexts (influence of others) in determining internal and external based reinforcement of learned behaviours. This means that the social context which surrounds a particular behaviour may have a role in both the acquisition (learning) and maintenance of the behaviour (reinforcement)³³. The social cognitive theory proposes six principles which guide the model, including:

Reciprocal Determinism: This highlights the mutual and dynamic interaction between a person (the individual and his/her experiences and cognitions), the environment (the social context), and the behaviour (a response to a particular stimulus)³⁴.

Behavioural Capacity: This highlights the individual's capacity for behaving in a certain way, particularly when a goal-oriented behaviour is concerned. It emphasizes on the individual's total set of abilities, through skills and knowledge, to be able to carry out a behaviour³³.

Observational Learning: This principle explains that human beings have the capacity to learn behaviours through observation and imitation of others in the social

environment. Therefore, within the social context, a behaviour can easily be learned just by watching others, which provides an increased tendency for that behaviour to be replicated. This is of particular importance as individuals who are exposed to the stimulus of a behaviour being performed successfully are more likely to also perform the behaviour. A person without the sufficient capacity for a behaviour may attempt the behaviour after observing successful performance of that behaviour in the social context³⁵.

Reinforcements: This principle places emphasis on the importance of outcomes of, and responses to a behaviour in increasing or decreasing the chances of a behaviour being repeated. Within the social context, an individual may get external reinforcements from others concerning a behaviour, such as favourable commendations and positive appraisals which can increase the tendency to continue that certain behaviour³⁶. Whereas a negative appraisal, or otherwise less favorable response from others concerning that behaviour, may lead to a decreased likelihood of continuing the behaviour. This principle has particular relevance as it acts as a bridge between the environment and behaviours. Reinforcements may also be internal, thereby highlighting the connection between an individual's experiences and a behaviour³⁷.

Expectations: This principle proposes that individuals have expectations of consequences and outcomes of their behaviours, even before they carry them out. These expectations have a role to play in the performance of such behaviours, as they draw from previous experiences and previous reinforcements to drive a motivation to perform or not perform a behaviour³⁵.

Self-efficacy: Here, the emphasis is placed on an individual's belief in his/her abilities to carry out a certain behaviour. Having confidence in one's abilities to carry out a particular

behaviour, after an analysis (or weighing) of barriers and supporting factors surrounding the behaviour within a social context³³.

Various aspects of the social cognitive theory may also provide adequate explanation for the development and maintenance of social media addiction. The social cognitive theory of self-regulation is very effective in discussing social media addiction. Self-regulation is a mechanism of self-influence, where an individual is said to have the ability to plan, monitor and assess his or her own behaviours³⁸. The self-regulation described in this theory is particularly related to the self-efficacy principle. This is because self-regulation increases people's feelings of self-efficacy³⁹. Therefore, self-regulation is a pathway for increased self-efficacy. Individuals with social media addiction are thought to have lower levels of self-regulation, as they cannot control their impulses and urges to engage in social media use. These individuals therefore have a decreased self-efficacy when it comes to their beliefs about their abilities to stop maladaptive use of social media. This theory is therefore also relevant to the present study by providing a basis for the relation between self-esteem and social media addiction. Self-esteem, being an evaluator opinion of one's self, is also relevant to the discourse of self-regulation and self-efficacy. When it comes to addictive behaviours, self-esteem is an important determinant of the self-efficacy to stop the behaviour. Because social media addiction entails excessive engagement with social media and a tendency to seek online validation, this theory helps explain why individuals addicted to social media often exhibit lower self esteem⁴⁰.

2.2.2 Cognitive-Behavioural Theory

The cognitive-behavioural theory is a derivative of two schools of thought in psychology; the cognitive perspective, and the behavioural perspective. By extension therefore, this theory contains elements of both perspectives as principles of its propositions. The theory is attributed to the extensive works on intervention (Cognitive-Behavioural Therapy) done by Aaron Beck in the 1960s⁴¹. By merging the broad fields of cognitive and behavioural psychology, a more encompassing theory was obtained, and in effect, a more encompassing therapeutic procedure. The principles of this theory assume that thoughts/beliefs/cognitions, behaviours and emotions are all interconnected, where maladaptive thought patterns can spiral into emotional and behavioural problems. One of such behavioural problems is problematic internet use, under which social media addiction is classified⁴². Social media addiction is seen as a problematic internet use, indicating that it develops from exposure to the internet (social media in this case), after which maladaptive cognitions develop, further leading to pathological use of the internet, and in effect pathological use of social media. It further posits that situational cues (often reinforcements) provide a stronger pathway between the internet/social media and the development of maladaptive cognitions./social media and the development of maladaptive cognitions⁴³. The cognitive-behavioural theory of problematic internet use by Davis posits that there are certain internet-related cognitions and behaviours which result in negative life outcomes. This is an indicator of the possibility of negative life outcomes related to social media use. Examples of the internet-related cognitions that may be expected with social media addiction include:

“obsessive thoughts about the Internet, diminished impulse control in online activities, guilt about online use, and experiencing more positive feelings about oneself when online compared with when offline”(p.6)⁴⁴

Behavioural factors associated with internet and social media addiction can involve compulsive social media use that negatively impacts work, education, or personal relationships, denial regarding problematic usage, and utilizing social media as a form of escapism⁴⁵.

2.2.3 Self Determination Theory

It is a psychological paradigm that explores people's internal motives and psychological health of people. It was propounded by Deci and Ryan in 1985. The theory states that, people have a natural tendency toward growth and development. The idea of intrinsic motivation, which refers to doing things for their own intrinsic fulfilment or enjoyment rather than in response to outside demands or rewards, is fundamental to this theory⁴⁶. Autonomy is a vital component of human functioning and stresses the significance of people having a sense of agency and volition in their behaviours. People are more likely to feel satisfied and in better health when they believe they have control over the decisions and actions they do. This is consistent with studies showing that situations that enable autonomy promote higher levels of motivation, performance, and psychological well-being⁴⁷. SDT emphasizes how important it is for people to feel capable of achieving their goals. Feeling effective and in control of one's activities is a necessary component of competence. Human motivation and wellbeing are driven by three basic psychological needs:

Autonomy: Autonomy refers to the need to feel a sense of volition and choice in one's actions. Individuals with a high level of autonomy perceive themselves as having control over their behaviours and decisions. Instead of feeling forced or in the grip of other forces, they have the freedom to engage in activities that are consistent with their values, interests, and objectives. Autonomy fosters intrinsic motivation, as people are more inclined to participate in activities voluntarily and with genuine interest when they experience a sense of independence⁴⁸.

Autonomy is compromised when individuals feel compelled or pressured to use these platforms, rather than engaging in them voluntarily. Research has shown that social media platforms often employ persuasive design features, such as notifications and algorithms that may undermine users' sense of autonomy and promote compulsive usage⁴⁹. As a result, people may grow dependent on social media to fulfil their need for autonomy, even when it leads to obvious negative consequences such as reduced productivity or impaired offline relationships⁵⁰.

Competence: Competence relates to the need to feel effective and capable in interactions with the environment. When individuals perceive themselves as competent, they believe they have the skills, abilities, and resources necessary to achieve desired outcomes and succeed in their endeavours. Experiencing a sense of mastery and accomplishment in tasks that are personally meaningful fosters a sense of competence. Competence is associated with increased intrinsic motivation, persistence, and well-being⁵⁰

Competence in the context of social media addiction refers to individuals' perceptions of their ability to navigate and effectively utilize these platforms. Excessive social media use

can lead to feelings of mastery and accomplishment if individuals perceive themselves as proficient in garnering likes, comments, or followers⁵¹. However, prolonged engagement with social media may also erode individuals' sense of competence if they experience negative feedback or social comparison effects that undermine their self-esteem⁵². This can create a cycle of dependence on social media for validation and reinforcement of self-worth.

Relatedness: The need for social support, a feeling of community, and a sense of interpersonal connection is known as relatedness. Since humans are innately social creatures, developing deep connections based on compassion, respect, and empathy is necessary to satiate their desire for relatedness. Satisfying the desire for relatedness is beneficial for social integration, emotional health, and general life satisfaction. Supportive social connections provide individuals with a sense of security, validation, and belonging, enhancing their motivation and well-being⁵².

Relatedness, as conceptualized by SDT, involves individuals' need for social connection and belongingness. Social media platforms provide opportunities for individuals to connect with others, share experiences, and receive social support, thereby fulfilling their need for relatedness⁵³. However, excessive social media use may also lead to superficial or passive forms of social interaction, detracting from the quality of offline relationships and undermining individuals' sense of genuine connection. Moreover, social media addiction may result in social withdrawal or isolation if individuals prioritize online interactions over face-to-face communication, exacerbating feelings of loneliness or disconnection⁵⁵.

2.2.4 Social Comparison Theory

Social Comparison Theory is a theory that proposes that people evaluate themselves by comparing themselves to others. According to this theory, people have an innate desire to understand and evaluate their own abilities and opinions, and one way they do this is by comparing themselves to others⁵⁶. The theory suggests that people make two types of social comparisons: upward comparisons, where they compare themselves to others who they perceive as better off, and downward comparisons, where they compare themselves to others who they perceive as worse off. The theory suggests that upward comparisons can lead to negative feelings such as envy, while downward comparisons can lead to positive feelings such as gratitude⁵⁷. However, the direction of the comparison may depend on the context and the individual's goals and motivations. Social Comparison Theory has been applied to various contexts, including more recent areas such as Social Media Addiction and the Fear of Missing Out (FoMO). For example, when people perceive that others are experiencing more enjoyable or fulfilling experiences in online contexts, they may feel inadequate or inferior, which in turn, can lead to increased FoMO which pushes them to constantly stay online in order to monitor activities as they unfold, resulting in excessive use and addiction⁵⁸.

This theory has been supported by several studies. It was found that social comparison played a significant role in the development of FoMO, which more often than not places individuals at the precipice of addiction. The study surveyed 382 college students and found that those who engaged in more frequent social comparison were more likely to experience FoMO⁵⁹. The researchers suggested that social media use, which often involves comparing

oneself to others, may be a particularly potent trigger of FoMO which is unfortunately often accompanied by addiction.

Some researchers also found support for Social Comparison Theory in the context of FoMO. The study surveyed 379 adults and found that those who experienced FoMO reported higher levels of social comparison and lower levels of life satisfaction⁶⁰. The researchers concluded that FoMO may arise as a result of the constant social comparisons that occur in today's hyper-connected world. Overall, Social Comparison Theory provides a useful framework for understanding the role of comparison in the development of FoMO and subsequently, addiction. By recognizing the impact of social comparison on our well-being, we can take steps to minimize its negative effects and cultivate a more positive sense of self⁶¹.

2.3 Review of Empirical Studies

Social media has become an integral part of contemporary life, particularly among undergraduate students. While it offers numerous benefits such as connectivity and information sharing, concerns have emerged regarding its addictive potential and its impact on mental health and academic performance. This paper aims to review empirical evidence from studies conducted in Nigeria and abroad to explore the factors contributing to social media addiction among undergraduate students and its implications for mental health and academics⁶².

Several factors have been identified as contributing to social media addiction among undergraduate students. These include psychological factors such as low self-esteem, loneliness, and the need for validation⁶². Social factors, such as peer influence and societal norms, also play a significant role in shaping social media usage patterns⁶¹. Additionally, the

design features of social media platforms, such as notifications and rewards systems, can contribute to addictive behaviours⁶³.

The excessive use of social media has been associated with various mental health issues among undergraduate students. These include depression, anxiety, and stress. Social media addiction can exacerbate existing mental health conditions and contribute to feelings of social isolation and inadequacy⁶⁴. Moreover, the constant comparison with peers on social media platforms can lead to negative self-perceptions and diminished well-being⁵⁷.

Social media addiction can also have detrimental effects on the academic performance of undergraduate students. Studies have found a negative correlation between excessive social media use and academic achievement⁶⁵. The distraction caused by frequent checking of social media accounts can impede concentration and productivity. Moreover, the procrastination tendencies associated with social media addiction can lead to poor time management and reduced academic engagement⁶⁶.

Several studies, both in Nigeria and abroad have been carried out to examine the possible factors that could implicate social media addiction among undergraduate students and its influence on their mental health and academics. A review of some of the empirical evidences in the literature is provided below:

The research paper titled “Relationship between Social Media Use and Social Anxiety in College Students: Mediation Effect of Communication Capacity” examined the growing prevalence of social anxiety among college students in the context of widespread social networking. While there may be a connection between social media use and social anxiety among college students, this relationship has not yet been established. The study aimed to

explore how various types of social media usage relate to social media usage relate to social anxiety in this demographic and to analyze the mediating effects of communication capacity⁶⁷. A substantial sample of 1,740 students from seven colleges in China was analyzed for this research. Bi-variate correlation and structural equation analysis revealed that passive social media use had a positive correlation with social anxiety, whereas active social media use showed a negative correlation. Communication capacity partially mediated the link between social media use (both passive and active) and social anxiety⁶⁷. Active social media use may help decrease social anxiety by enhancing communication capacity, while improved communication capacity may lessen the impact of passive social media use on social anxiety. The distinct effects of different types of social media use on social anxiety warrant attention from educators⁶⁸. Promoting communication skills education among college students could be beneficial in reducing their social anxiety. The research concluded that social anxiety problems developed by college students during their development are often the result of a combination of personal, external, and other factors. The findings indicated that the connection between social media and social anxiety can be better understood when considering communication capacity as a mediator. Active social media use was found to have a significant negative relationship with social anxiety, while passive use showed a significant positive correlation. Reducing passive social media use among college students and implementing communication capacity-focused interventions could enhance students' psychological well-being, which should be a priority for educators⁶⁹.

Similarly, some scholars embarked on a study titled "The Effects of Social Networking Sites Needs and Academic Stressors on Academic Motivation of College Students". The study explored the recent rise in popularity of social networking sites (SNSs), particularly among

college students⁷⁰. These platforms provide various features that enable users to connect with friends and family, share information, and exchange resources. The research aimed to examine the impact of SNS-related needs and academic stressors on academic motivation of college students at a private school in Iligan city, Lanao del Norte, Philippines, during the second semester of the 2022-2023 academic year⁷¹. A simple random sampling method was used, and 511 first, second, and third-year students participated by responding to adapted Likert-type instruments that measured the study's variables. The findings indicated that the majority of college students used Facebook, Facebook Messenger, and Youtube daily. It was also found that both SNSs and academic stressors positively influenced extrinsic motivation. Moreover, academic stressors contributed positively to motivation overall⁷¹. As a result, educators and school administrators should consider integrating SNSs to boost student motivation and engagement. Specifically, educators can utilize SNS features to foster collaboration, communication, and information sharing among students. Additionally, they could design academic tasks that encourage students to use SNSs for exploring and applying course material⁷².

A different study explored the advantages of social networks, highlighting the potential for negative outcomes such as Problematic Social Networking Site Use (PSNSU), particularly among young people. Using the framework of uses and gratification theory and the social skill account of problematic internet use, it examined the connection between the intensity of social networking use and PSNSU, considering the role of social skills and social anxiety⁷³. It involved 26,612 Chinese college students from Shaanxi province and also investigated gender differences in these relationships. Structural equation modelling revealed that social anxiety partially mediated the positive link between high social networking intensity and

PSNSU. However, increased social skills, associated with greater social media use, helped reduce the negative impact of intense social networking on PSNSU⁷⁴. The Multi-group analysis revealed that the link between the intensity of social networking use and social networking use and social skills, as well as the relationship between social anxiety and PSNSU were more pronounced in males. In contrast, the connections between social skills and both social anxiety and PSNSU were stronger in females^{73,74}. These findings suggested that the intensity of social networking use is related to PSNSU through two mechanisms: competitive mediation via social skills and complementary mediation via social anxiety. Therefore, interventions aimed at addressing PSNSU should consider the social effects of social networking use and account for gender differences⁷⁵.

The purpose of this paper was to investigate whether four motives – conformity, enhancement, social and coping – mediate relationships between four personality types – agreeableness, extraversion, neuroticism and openness to experience – and Social Networking Site (SNS) addiction. Impulse control was included as a moderator. The paper used a survey to collect data at two points in time from 304 SNS users. Structural equation modeling was used for data analysis. The findings of the study contributed to existing literatures by showing that motives of SNS use connect personality to SNS addiction. It also showed that self-reflective factors like impulse control can reduce the positive effects of motives on SNS addiction. Empirical results showed that conformity, enhancement and coping motives act as mediators between various personality types and SNS addiction. Furthermore, impulse control weakens the effects of two motives – enhancement and social – on SNS addiction⁷⁶.

This paper discussed how social media has been growing rapidly during the past decade. However, it remains unclear whether social media make people more emotionally healthy or less. The study aimed to explore the effect of Instagram use on individuals' social anxiety. With a general basis of the three-stage model of interactive media use for health promotion, the authors conducted a cross-sectional online survey study (N = 388) in the context of Singapore and empirically tested a mediation pathway linking Instagram use to social anxiety. The results indicated that Instagram use did not directly increase social anxiety. Instead, social comparison, a proximal outcome, and self-esteem, an intermediate outcome played mediating roles, supporting the complete mediation effects⁷⁷. This finding provided important theoretical and practical implications for the design of health campaigns and education in this digital era to enhance the positive effect of social media on health and emotional well-being. It showed that Instagram use alone would not directly increase social anxiety. Instead, its effect was completely mediated by social comparison and self-esteem⁷⁸. Future research should continue the investigation of mechanisms underlying the impacts of social media on emotional well-being, and help health educators and campaigners design better programs to support the public's positive development of wellness in this digital era.

Another study titled "Social Media Addiction and Academic Productivity Amongst Nigerian Students: Implications" examined social media usage amongst students in Nigeria vis-à-vis academic productivity. The study evaluated the implications of social media addiction on students' academic productivity in Nigeria. It adopted a quantitative research methodology approach in the acquisition of data. Given the prevailing COVID-19 lockdown circumstance when the study was conducted, Google online survey was used to gauge the views of targeted respondents⁷⁹. The survey captured views of different categories of students in Nigeria on

their experience on social media usage as it impacts their academic productivity. It provided an inclusive perspective survey on social media usage vis-à-vis academic productivity amongst the Nigerian students. It established the relationship between social media addiction or overuse and academic productivity of students in Nigeria⁷⁹.

Similarly, some scholars embarked on a study titled “social media addiction and young people: a systematic review of literature” This systematic review aimed to review and synthesize the factors, relationship between young people and social media addiction and intervention of social media addiction among young people. A systematic review was designed based on the PRISMA, an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses. Articles published between year 2010 to 2020 were sought from SCOPUS and Science Direct. All related papers were reviewed and quality evaluation was performed. Eleven studies were finally selected and data were extracted, organized and analysed in narrative synthesis. The need of satisfaction in real-life relationship among young people became the most common factors of addiction, addiction to social media will cause mental health problems among them indirectly and cognitive reconstruction and strategies may help in rehabilitation⁸⁰.

Another study titled “Impact of Social Media on Teenagers: Nigerian Experience” The study examined the influence of social media on teenagers, focusing on Abuja as the research area. The research identified the most commonly used social media platforms by Nigerian teenagers, explored the methods through which they access these platforms, and examined their motivations for social media engagement⁸¹. Additionally, it investigated the specific ways teenagers utilized social media and its impact on their lifestyles. Data were collected

using structured questionnaires from secondary school students aged 13 to 19. The data were analysed using both descriptive and inferential statistics, presented in frequency and percentage tables, and the research hypothesis was tested with Chi-square statistic (χ^2). The hypothesis test results indicated that social media usage significantly affects teenagers' lifestyles ($\alpha=0.05, \chi^2 = 0.344, p\text{-value}=0.002$). This research explored the effects of social media on teenagers, particularly how it shapes their lifestyles and learning behaviours. Despite the negative influences associated with social media, it is difficult to imagine a world without it today. The study suggested implementing corrective and preventive strategies to mitigate these negative impacts and emphasized the need for teenagers to be properly educated and made aware of the potential problems associated with social media use⁸².

Another study titled "Social media use by undergraduate students of education in Nigeria: a survey Abstract". This research investigated teacher students' perceptions, intentions, experiences, attitudes, opinions, and barriers concerning social media use and impact of social media on their learning process. A stratified sampling technique was applied to draw the sample, and 242 teacher students were selected as sample from three higher educational institutions in Gombe State, Nigeria. A questionnaire survey method was used to collect the data. Data analysis was by means of simple and inferential statistics⁸³.

The outcome of the study was a unique contribution because the pertinent literature provided little evidence or research highlights concerning teacher students' social media use. Even more, the results of the study may be a useful resource for university administrators, education policy makers, and innovative teachers in universities — especially in developing

countries and particularly Nigeria — when considering integration of modern techniques and technologies with university teaching and learning⁸⁴.

Another study titled “Assessment of Social Media Addiction as It Affects Concentration among Undergraduate Students in Kwara State, Nigeria”. The study examined social media addiction as it affects concentration. Descriptive survey study was adapted and simple random sampling technique was adopted for the study where 200 undergraduates were selected. The researcher designed a 24 item questionnaire divided into two segments, titled Assessment of Social Media Addiction as it Affects Concentration in Nigeria with validity and reliability of 0.71 index was used to gather the needed data while descriptive statistical tools were used. It was recommended that social media should be incorporated into the teaching and learning process since phones are portable to meet the current trend⁸⁵.

Similarly, another study titled “the impact of social media platforms amongst tertiary institutions student in Dutse Jigawa state, Nigeria”. It identified why students use social media platforms as well as its impact on students’ performance. In order to meet the study objectives, the data was collected via an online questionnaire distributed in the electronic form to a sample of students attending tertiary institutions in Dutse. The mixed method research design was applied in the study. The Statistical Package for Social Science (SPSS) was used to analyse the quantitative data⁸⁶. The study concluded that tertiary institutions should encourage students to use social media for academic research and assignments and those institutions should create ways to encourage students to use social media for academic purposes rather than for other purposes that interfere with their studies⁸⁶.

Another study titled “Investigating Social Media Usage and Addiction Levels among Undergraduates in University of Ibadan, Nigeria” examined social media usage and addiction among undergraduates in university of Ibadan, Nigeria. The study adopted the survey method of ex-post-facto design. Multistage sampling procedure was adopted to select nine hundred and seven (907) undergraduate students from seven (7) faculties in University of Ibadan. A questionnaire named “Social Media Utilization and Addiction Questionnaire” was used for data collection. Five (5) research questions were answered in the study. Data were analysed using descriptive statistics and Pearson’s product moment correlation. Facebook (751 or 90.2%) and Twitter (646 or 77.6%) were the most commonly accessible social media networks. Also, Facebook (695 or 65.2%) Twitter (467 or 56.1%) were the most regularly used social networks while meeting friends (651 or 78.2%), getting news (566 or 67.9%), communication (554 or 66.5%) and online learning (450 or 54.0%) were major purposes for social media usage among the undergraduate students. High level of social media addiction was also established among the undergraduates. Social media usage was found to be positively related⁸⁷.

Another study titled “social media addiction among Nigerian students: issues arising and possible solutions”. This study aimed to analyse social media addiction among Nigerian students and to proffer possible solutions. Oral interview using structured questions, observation of students’ behaviour was used for data collection. It established that social media has addictive tendencies on students and recommended that students should devote more time on innovative endeavours. Furthermore, social media apps should present more vocational contents, all of which would contribute to meeting the needs of sustainable development in Africa⁸⁸.

Another study titled “Social Media Addiction and Academic Productivity Amongst Nigerian Students: Implications. The study aimed to examine social media usage amongst students in Nigeria vis-à-vis academic productivity. The research examined the effects of social media addiction on the academic productivity of students in Nigeria. A quantitative research methodology was utilized to gather the data for this study. Given the prevailing COVID-19 lockdown circumstance when the study was conducted, Google online survey was used to gauge the views of targeted respondents. The survey captured views of different categories of students in Nigeria on their experience on social media usage as it impacts their academic productivity⁸⁹.

The study provided an inclusive perspective survey on social media usage vis-à-vis academic productivity amongst the Nigerian students. It established the relationship between social media addiction or overuse and academic productivity of students in Nigeria. The findings of the study revealed a significant relationship between social media addiction or overuse and students' academic productivity in Nigeria. A majority of the respondents reported spending excessive amounts of time on social media platforms, leading to distractions and decreased focus on academic tasks. The study highlighted the negative implications of social media addiction on students' ability to concentrate on study effectively, and achieve academic success⁹⁰.

A study titled “a study of social network addiction among youths in Nigeria”. The purpose of this paper was to examine whether youths were becoming addicted to social networking sites to keep up interpersonal relationship. The survey research method was used with standardized questions drawn up. Eight higher institutions in Oyo state were used and

the sample population drawn from them. Data gathered was analyzed using frequency count and simple percentages. It was gathered that majority of the respondents showed a tendency towards addiction to social network sites and so could not do without going through their online profiles daily. Recommendations were then made that more time should be spent on face-to-face interaction rather than on online communication, other social interests outside the internet that would sustain close interpersonal relationships should also be built upon⁹¹.

2.3.1 Personality Traits and Social Media Addiction

Individual characteristics play a significant role in predicting social media addiction among undergraduates. Personality traits such as neuroticism and extraversion have been consistently linked to increased susceptibility to social media addiction. Individuals with high levels of neuroticism tend to experience negative emotions more intensely, leading them to seek refuge in social media platforms as a means of coping. Similarly, individuals high in extraversion may use social media as a tool for social enhancement and validation⁹².

Empirical studies examining the relationship between Big Five personality traits and social media addiction have yielded mixed findings, reflecting the complex nature of personality-social media interactions. Extraversion, characterized by sociability, assertiveness, and positive affect, has been inconsistently associated with social media addiction. Although extraverted individuals are often more inclined to participate in social interactions and networking on social media, they might also be prone to addictive behaviours motivated by the need for social validation and recognition⁸⁵.

Neuroticism, reflecting emotional instability, anxiety, and vulnerability to stress, has consistently emerged as a significant predictor of social media addiction. Individuals high in

neuroticism may use social media as a coping mechanism to alleviate negative affect and seek reassurance from others, leading to compulsive and maladaptive patterns of use. Agreeableness, characterized by altruism, empathy, and interpersonal harmony, has been inversely associated with social media addiction. Agreeable individuals prioritize real-life social relationships and may exhibit lower levels of engagement with online social networks⁹³.

Conscientiousness, representing self-discipline, organization, and goal-directedness, has shown a negative association with social media addiction. Conscientious individuals are more likely to regulate their online behaviours, set boundaries, and prioritize offline activities over excessive social media use. Openness to experience, reflecting curiosity, creativity, and openness to novelty, has yielded mixed findings in its association with social media addiction, suggesting the need for further research to elucidate this relationship⁹⁴.

Several mechanisms may underlie the relationship between Big Five personality traits and social media addiction, including motivational factors, self-regulatory processes, and social influences. Personality traits influence individuals' motivations for using social media, such as seeking social connection, entertainment, or information. Moreover, self-regulatory processes, such as impulsivity, self-control, and cognitive biases, moderate individuals' susceptibility to social media addiction. Within the smartphone literature, it has been suggested that some personality traits place individuals as particularly vulnerable to problematic social media use (PSMU), and smartphone distraction in the broader sense⁹⁰. It is essential to explore the types of individuals who are especially drawn to social media and how their personality traits can affect, or be affected by their use of these platforms. For instance, research has shown that extraverted people may be more likely to utilize social

media because they are often outgoing and can communicate with others there instead of in person⁹⁵. Social media may offer a forum for debate for those who lack agreeableness because they tend to be more contentious. However, those with high levels of agreeability could use it to socialize. Although, research linking the most prominent personality traits with social media use have produced mixed results showing that high levels of neuroticism are linked with greater social media use and addiction found no associations between neuroticism and PSMU⁹⁶.

In a particular study carried out, the researchers aimed to explore the connection between the Big Five personality traits and social media addiction within the context of a developing country, specifically, Jordan. They also investigated how factors such as gender, age, type of college, expenses, and experience moderated this relationship. Through a survey of 380 undergraduate students, it was discovered that respondents spent on more time on platforms like Facebook, WhatsApp and YouTube than the established addiction threshold. While only 7.9% of participants were identified as social media addict, 62.1% fell into the alert category, and 30% were classified as normal users⁹⁷. The findings indicated that individuals who score lower in neuroticism, extraversion, and openness to unconventional ideas are more likely to use social media extensively, making them more susceptible to addiction. The results indicated that the moderating effects of gender, age, and expenses were not significant. However, college type and experience did show some moderating influence on addiction to social networking sites. Additionally, the findings revealed that men generally spend more time than women on platforms like Facebook, YouTube, Instagram, Google + and LinkedIn, while women tend to spend more time on WhatsApp and Twitter. These insights can inform the development of effective strategies and features aimed at

promoting healthy and productive social networking site usage among students to enhance their well-being and academic success⁹⁸.

The implications of the relationship between Big Five personality traits and social media addiction extend to various domains of psychological functioning, including mental health, interpersonal relationships, and academic performance. Individuals high in neuroticism and low in conscientiousness may be at heightened risk for developing negative psychological outcomes, such as depression, anxiety, and social isolation, associated with excessive social media use. Conversely, individuals high in extraversion and agreeableness may derive social support and positive reinforcement from online interactions, enhancing their psychological well-being. Several researchers have undertaken studies to investigate this phenomenon. However, most of these studies were not carried out in Nigeria or by extension, the African continent. The study seeks to explore this area and to existing knowledge while at same time help in closing the knowledge gap as it were⁹⁹.

In a cross-sectional study “Personality Traits, Social Anxiety and Gender as Predictors of Smartphone Addiction among Students in Tertiary Institutions, investigated whether personality traits, social anxiety, and gender have predictive relationship with Smartphone addiction¹⁰⁰. Data were collected from a sample of 203 (121 female and 82 male) youths in Enugu State. Participants completed self-reported measures of personality traits (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to experience), Social Anxiety and Smartphone addiction. Hierarchical multiple regression results showed that personality traits (Extraversion ($\beta=.19$), Agreeableness ($\beta=.02$), Conscientiousness ($\beta=-.09$, $p=.00$), Neuroticism ($\beta=.18$, $p=.00$) and Openness to experience ($\beta=.05$) and gender ($\beta=-.00$, $p=.00$) had no predictive relationship with Smartphone addiction but Social Anxiety (β

= .27, $p < .01$) had a significant positive predictive relationship with smart phone addiction. They thus, recommended that parents and significant others regulate Smartphone use of their wards so as to promote a healthy and optimal health functioning⁹³.

The possible link between personality traits and social media addiction is a significant area of interest in psychological research, yet it is seldom explored. A study examined whether undergraduate tourism students were addicted to social media and, if so, the possible relationship between this addiction and their personality traits⁷⁰. The study employed a descriptive approach, a type of quantitative research method. Researchers used a questionnaire and convenience sampling technique to gather data. Information was collected from 454 undergraduate tourism students and analysed using Pearson correlation test in SPSS 25. The findings indicated that agreeableness was the most prominent personality trait among the students, who exhibited low levels of social media addiction. Additionally, a positive correlation was identified between neuroticism and social media addiction, while extraversion, agreeableness, and conscientiousness showed a negative correlation with social media addiction. The study also found that tourism students exhibited a dependency on social media. Social media addiction can negatively impact individuals' personal growth and professional lives⁴⁹. As a result, the researchers suggested that both theoretical and practical investigations should be conducted to address this addiction. It is essential to create more tailored intervention strategies based on individual personality traits and to implement awareness and training programs in practical settings. The researchers noted the lack of existing literature exploring the link between the personality traits of undergraduate tourism students and social media addiction. Thus, the study aimed to fill a significant gap in the research⁸⁸.

It is well-accepted that personality traits have considerable effects on human behaviour. This acceptance has made the relationships between social media behaviour & addiction and personality traits an essential research topic. It is believed that "there are several theories suggesting that personality differences play an important role in developing and maintaining addictive use of different online applications"⁷². Furthermore, some authors stated that "different personalities have different motivations for using social networking sites, which may in turn lead to social networking sites addiction". In the past few decades, in order to examine the relationships between social media addiction and personality traits, various studies have been conducted, although in small numbers¹⁰¹.

A study was also conducted to examine the relationship between the Big Five personality traits and the social media addiction in a developing country perspective like Jordan⁷⁸. The study also explored the moderating roles of gender, age, college type, expenses and experience. A survey of 380 undergraduate students revealed that participants spent more time on Facebook, WhatsApp, and YouTube than the established addiction threshold. While only 7.9% were classified as social media addicts, 62.1% fell into the alert category, and 30% were considered normal users. The findings indicated that individuals who are less neurotic, more extraverted, and less open to unconventional ideas were more likely to be heavy users of social media, increasing their risk of addiction. Gender, age, and expenses showed no significant moderating effects, but college type and social media experience did influence addiction levels. The results also showed that men spent more time than women on Facebook, YouTube, Instagram, Google + and LinkedIn, whereas women spent more time on WhatsApp and Twitter¹⁰².

Another study was conducted to investigate the impact of personality traits on social media addiction among students⁷⁹. The research aimed to provide information about personality and social media addiction among university students in Bandung. This research focused on the correlation between personality type and social media addiction. Quantitative approach was established to provide research data, using statistical Spearman correlation technique. Multistage sample were conducted and gathered 483 university students. The scale used to measure social media addiction were BSMAS (Bergen social Media Addiction Scale) and IPIP-BFM-25 (Big Five Factor) were measured the personality types. The results showed 3 types of personality had significant correlation with the social media addiction tendency. They were neuroticism, extraversion and agreeable types of personality. There were two conclusions in this research, the first conclusion, the more neuroticism, agreeableness, and extraversion the more addiction to social media. The second conclusion was the more conscientiousness and openness to experience, less addicted to social media. This could mean these types of personality traits are the factors that can protect people from social media addiction¹⁰³.

In addition, a study was conducted to investigate the associations between personality traits, based on the Big Five model, and addictive behaviours to different online activities among adolescents⁸⁰. A sample of 920 participants were recruited from four secondary schools in different districts using random cluster sampling. A structured questionnaire, including demographic information, internet usage pattern, the Internet Addiction Test, the Game Addiction Scale, the Bergen Facebook Addiction Scale - Revised, and the Big Five Inventory, was administered to each participant. The results demonstrated a significant difference in personality traits for addictive behaviours related to different online activities.

Specifically, higher neuroticism ($\beta = 0.15, p < 0.001$) and less conscientiousness ($\beta = 0.12, p < 0.001$) displayed significant associations with internet addiction in general; less conscientiousness ($\beta = 0.09, p < 0.01$) and low openness ($\beta = 0.06, p < 0.05$) were significantly associated with gaming addiction; and neuroticism ($\beta = 0.15, p < 0.001$) and extraversion ($\beta = 0.10, p < 0.01$) were significantly associated with social networking addiction¹⁰⁴.

The excessive use of the Internet and social media has been linked to behavioural addiction, leading many researchers to explore this widespread issue more deeply. A study by some researchers aimed to fill a gap in knowledge by using just one sample population to identify similarities and differences in relationships between technology addictions and personality characteristics, especially traits, self-esteem, and self-construal⁸¹. The sample consisted of 512 undergraduate students. The results showed that Internet addiction and social media addiction shared many more similarities than differences. Agreeableness, conscientiousness, openness to experiences, emotional stability, self-esteem, the frequency of checking account, and Internet usage were predictors of both Internet addiction and social media addiction. Age, satisfaction with life, and interdependent self-construal did not predict Internet addiction or social media addiction, whereas real self and extraversion predicted Internet addiction only, and gender, posting updates, a number of friends, and independent self-construal predicted social media addiction only. These results provide some basis for an understanding of Internet and social media addiction profiles.

Personality traits of social media users could play a significant role in their engagement with social media. Many studies examining the link between personality and social media addiction have primarily utilized the Five-Factor Model of Personality. For

instance, it was observed that patients with anxiety disorders (PAD) and patients with depression (PD) were more addicted to social media than healthy controls (HC) despite similar frequencies of social media use¹²⁹. In the study, mood modification, conflict, and relapse aspects of social media addiction were observed to be more predominant in patients with depression and patients with anxiety disorders than healthy controls. A key finding regarding social media addiction is that it is more prevalent among individuals with anxiety disorders compared to healthy controls. The presence of dependent, histrionic, narcissistic, obsessive-compulsive, borderline, and paranoid personality traits in healthy individuals, as well as borderline and dependent traits in those with anxiety disorders, heightened the risk of social media addiction. Interestingly, none of the personality traits in individuals with depression were found to increase their likelihood of becoming socially addicted.

A study suggested investigating the connection between the Dark Triad personality traits and social media addiction, while also considering the role of social anxiety in this relationship⁸⁴. Misuse of social media has been linked to the Dark Triad, a group of negative personality characteristics, including narcissism, Machiavellianism, and psychopathy⁸³. The findings indicated that there are significant, though relatively weak, positive correlations between the three negative personality traits and social media addiction. This implies that traits such as narcissism, psychopathy, or Machiavellianism may contribute to a higher likelihood of social media addiction. Additionally, the relationship between social anxiety and social media addiction is notably strong, making it more likely for young individuals with social anxiety to develop addictive behaviours on social media. The findings revealed that social anxiety does not have an additional impact on the connection between the Dark Triad and social media addiction. Psychopaths, in particular, may become highly focused on

and engaged in deviant behaviours, to the extent that they develop a dependency on social networks, as these platforms provide a conducive environment for such activities⁸².

In a study titled 'An Investigation of the Problematic Internet Use of Teacher Candidates Based on Personality Types, Shyness, and Demographic Factors' indicated that men are more vulnerable than women to developing an online addiction and they also found out that, there was a strong link between neuroticism, shyness, lying, and internet addiction⁷¹. Also, a study conducted on 'Internet Addiction in Adolescents: Prevalence and Risk Factors', and the results indicated that social media and online gaming usage raised the risk of internet addiction, but among those with significant use of the internet, extraversion and conscientiousness appeared to be protective characteristics⁷³. Another study on 'Who are Problematic Internet Users? An Investigation of the Correlations between Problematic Internet Use and Shyness, Loneliness, Narcissism, Aggression, and Self Perception', indicated that problematic internet use is associated with shyness and hostility⁷⁴.

In a study 'Personality, Internet Addiction, and Other Technological Addictions: A Psychological Examination of Personality Traits and Technological Addictions. Findings indicated that certain personality types may increase an individual's risk of developing a technological addiction. Conscientiousness, agreeableness, neuroticism, extraversion, and openness to experience, for example, have been found to explain between 6% and 17% of the variance in many types of technological addictions, including addictions to Facebook, video games, and the internet, as well as mobile devices. Another research 'The Relationship between Internet Addiction and Personality Traits in Slovak Secondary Schools Students' set out to find out how common dependence on the web was, among 707 secondary school students in Slovak secondary schools and their findings also showed that students who are

more conscientious than less conscientious will have a lower rate of internet addiction; students who are more neurotic than less neurotic will have a higher risk of internet addiction; and students who exhibit more open behaviour will have a lower rate of internet addiction than students who exhibit more closed behaviour¹⁰⁵.

The study, titled 'Personality Traits, Strategies for Coping with Stress and the Level of Internet Addiction—A Study of Polish Secondary-School Students' conducted which included 383 secondary school students between ages 15 to 19⁷⁶. The researchers found a relationship between particular personality traits and coping mechanisms and media addiction. The personality traits most closely linked to problematic internet use were emotional stability and conscientiousness⁷⁷.

2.3.2 Self-esteem and Social Media Addiction

The relationship between self-esteem and social media addiction is characterized by bidirectional influences, wherein low self-esteem may contribute to increased susceptibility to social media addiction, and excessive social media use may exacerbate feelings of inadequacy and self-doubt. Individuals with low self-esteem may use social media as a means of seeking validation, approval, and social acceptance from others, thereby reinforcing addictive patterns of use. Conversely, prolonged exposure to idealized representations of others' lives on social media platforms may trigger social comparison processes and undermine individuals' self-esteem, perpetuating a cycle of maladaptive behaviours and negative effect¹⁰⁶.

Several mechanisms and moderating factors contribute to the relationship between self-esteem and social media addiction. Maladaptive coping strategies, such as avoidance and

escapism, may mediate the association between low self-esteem and excessive social media use, serving as temporary solutions to alleviate negative affect and self-doubt. Moreover, individual differences in personality traits, attachment styles, and coping strategies may moderate the strength of the relationship between self-esteem and social media addiction¹⁰⁷.

The interplay between self-esteem and social media addiction has significant psychological implications for individuals' mental health and well-being. Low self-esteem is associated with increased vulnerability to depression, anxiety, and loneliness, which may be exacerbated by excessive social media use. Individuals who rely heavily on social media for validation and social comparison may experience diminished self-worth and satisfaction with life, leading to negative psychological outcomes. We are living in an era of rapid technological advancements, particularly in relation to computers, social media, and the internet. The internet, a continuously evolving technology, connects billions of individuals and countless technological devices globally. Its significance lies in its ability to facilitate and sustain information exchange and communication. Social media, which emerged in the 2000s due to internet advancements, has become a primary communication tool for many people⁷⁰. Social media and the internet offer numerous advantages, including easy access to information, the ability to conduct research, and the freedom to communicate with others. Nevertheless, it is important to recognize that alongside the many potential benefits, there are also negative impacts.

Social media developed alongside the internet, offering opportunities for both personal and group communication. It has become a regularly used platform in people's daily lives, providing various features such as the ability to share opinions and comment on others⁸⁶. As a result, it is likely that issues like social media addiction will emerge due to

individuals, regardless of age, spending too much time on these platforms. Furthermore, this excessive use impacts their personal, academic, and professional lives, hindering their ability to meet various responsibilities⁸⁹. These individuals may experience a range of psychological, social, and physical issues, along with behaviours that could pose risks to their health⁹². Individuals with low self-esteem, who fear being perceived as inadequate in social settings, often display avoidance behaviours in such environments. To fulfill their need for communication, they may retreat to the internet and its various platforms, distancing themselves from face-to-face interactions. This tendency can contribute to the rise in problematic internet usage⁹². Self-esteem encompasses psychological traits, behaviours, and life ambitions, along with an assessment of one's abilities and the potential to achieve those goals. It is understood that an individual's self-esteem is shaped by the feedback received from their surroundings and their personal perceptions. Generally, self-esteem can be viewed as a personality trait that manifests these feelings. When a person has a positive self-image, it is likely that their self-esteem is elevated⁹⁰.

The rising adoption of digital tools in Nigeria and globally has led to a noticeable increase in the excessive use of social media and the internet, particularly during the Covid-19 pandemic. Given that unchecked social media and internet usage can result in addiction, it is believed that promptly identifying the effects of such problematic behaviours across various age groups and taking appropriate measures can significantly enhance individuals' health and quality of life. This can be achieved through awareness-raising initiatives and counselling services aimed at providing guidance⁸⁶.

A study was conducted on Relationship between social media addiction, self-esteem, sensation seeking, and boredom among college students⁹³. 105 participants were sampled.

With the results obtained from the Regression Analysis it was concluded that Social Media Addiction is prevalent in youths, however, Self-esteem and Boredom are strong Predictors. This echoes the findings of a previous researcher who conducted a study on undergraduate students recruited through a social psychology course at Peking University, China⁹³. A total of 250 students who enrolled in the course participated in the study for one course credit. Research revealed negative associations between social media addiction and college students' mental health and academic performance, and the role of self-esteem as an underlying mechanism for the relation between social media addiction and mental health. This study showed that social media has a significant influence on young people, which causes addiction levels to increase, and the time they spend on these networks to go up.

A study carried out was aimed to determine the association between social networking addiction and self-esteem in Pakistani university students⁹⁴. The study employed a cross-sectional research design. A total of 300 university students were chosen from a university in Faisalabad city, Pakistan, using a stratified random sampling method. The Social Networking Addiction Scale and the Rosenberg Self-Esteem Scale were used to assess the social networking addiction and self-esteem of university students respectively. The findings of the study revealed a significant negative correlation between social networking addiction and the self-esteem of the participants. Moreover, social networking addiction was found to be a significant predictor of lower levels of self-esteem in the participants. Examining the reason behind this association between social media usage and self-esteem, it is found that personal profiles that are visible to the public and friends allow people to express thoughts and provide feedback through comments, ensuring that the user is aware of their views on their private lives. As a result, these comments and viewpoints of others have

a significant impact on one's self-esteem as negative feedback negatively affects self-esteem however; positive feedback significantly raises it. However, gender also predicts how people use social media and how confident they feel about themselves¹⁰⁷.

According to a particular study, women who exhibit high levels of narcissism and low self-esteem are more likely to find the addictive nature of social media use to be the case⁹⁵. Some researchers also found gender differences as women were more likely than men to get addicted to social media not only in terms of their mood modifications but also keeping them busy on social media most of the time⁹⁷. Other studies have also shown that a person's self-esteem is predicted by a number of demographic factors, including age, income, occupation, and mental health issues⁹⁶.

The use of the Internet in educational institutions is dramatically increased in past years and research shows a strong correlation between mental health issues and excessive social media use, and a negative correlation between social media addiction and self-esteem in adolescents and young adults⁹⁸. Individuals who used social media excessively were more socially constrained than non-users and, therefore, tended to have lower self-esteem as around half of the study participants were experiencing a significant decline in self-esteem⁹⁹. Moreover, the findings demonstrated a substantial within-time relationship between inappropriate internet use, low self-esteem, and depressive symptoms. Since billions of people worldwide have active social media accounts and excessive use of social media is found to have a variety of detrimental effects on a person's everyday life in the social, occupational, and academic spheres and having a negative association with the self-esteem of the university students particularly around the globe^{100, 101, 99}. Examining the reason behind

this association and the predictive role of social media usage in self-esteem of the individuals, as one of the possible reasons, can further help curb the excesses in social media usage.

The growing use of social media, driven by various individual and social factors, can lead to several psycho-social issues. Addressing social media addiction, which contributes to social and economic challenges, is a critical concern today. A study carried out aimed to explore how life satisfaction mediates the relationship between self-esteem, education level, and social media addiction among individuals¹⁰². This cross-sectional study involved a sample of 952 volunteers over the age of 15 who use social media in Turkey. Data collection tools included a personal information form, the Bergen Social Media Addiction Scale, the Rosenberg Self-Esteem Scale, and the Satisfaction with Life Scale. Data analysis was conducted using the SPSS software and the PROCESS macro plug-in, with demographic factors such as age, gender, and marital status considered as control variables. The findings indicated that life satisfaction played a mediating role in the relationship between self-esteem and education level on social media addiction. Higher self-esteem and education levels were associated with greater life satisfaction, which in turn led to lower levels of social media addiction. These findings highlighted the need for targeted interventions focused on self-esteem and education, particularly for at-risk populations, to mitigate issues associated with the excessive use of digital applications and social media. As a result, it was understood that social media addiction, which may result in physical, mental, and social health, was influenced by personality traits such as self-esteem, education, and satisfaction with life. For this reason, controlled and responsible social media use is essential for both individual and public health. Furthermore, considering the gender, single, and age variable, the increase in self-esteem in women, single and young, had a more positive effect on their life satisfaction

and had a negative effect on their social media addiction. Social media applications are increasing the number of users day by day by bringing many problems. One of these problems is addiction. Social media addiction is as dangerous for human health as many other addictions. This situation may result from various social, physical health, and psychological problems of individuals. Ultimately, this process leads to an increase or decrease in the satisfaction with the life of individuals¹⁰⁸.

Social media is increasingly integral to the daily lives of modern young adults. With online interactions becoming more prevalent than in-person ones, social media significantly influences individuals' lifestyles, communication styles, language, interests, and psychological well-being. Although the DSM diagnostic criteria do not classify social media and internet addiction as behavioural addictions due to insufficient scientific evidence, the phases associated with these issues-such as conflict and relapse- exhibit characteristics similar to behavioural addictions like shopping or gambling. The study aimed to indicate the psychological dimensions of social media addiction in young adults, to point out their significance, and to produce scientific proofs for the literature, which are needed⁹⁷. In processing the data, normality tests have been applied. Women are more addicted to social media for the purposes of mood modification and being occupied. Social media addiction tends to rise with the number of Instagram followers. Additionally, individuals who own fake accounts and those who in stalking exhibit higher levels of social media addiction compared to others. Furthermore, there is a moderate negative correlation between self-esteem levels and social media addiction¹⁰³. The correlation coefficient rises for users with over 500 followers in terms of relapse and conflict. Salience arises when social media becomes a dominant force in a person's life, making it a crucial aspect of their existence. Mood

modification occurs if social media is used as a strategy for coping with anxiety and stress. Tolerance develops if a social media user gradually increases the time of usage in order to modify his/her mood. Withdrawal problems occur if a person becomes stressed and has unpleasant feelings when one cannot access social media. If one prefers using social media over face-to-face interactions, a hobby, or activity, conflicts occur. Finally, relapse occurs when a person wants to reduce social media usage but cannot manage to do so¹⁰⁰.

A study carried out was aimed at testing a model developed to uncover the relationships among social media addiction, cognitive absorption, and self-esteem¹⁰⁴. The study's sample consisted of 361 university students, 198 of whom were females, and 163 were males. Data were collected using the Social Media Addiction Scale (SMAS), the Cognitive Absorption Scale (CAS), and the Rosenberg Self-Esteem Scale (RSES). Structural Equation Modeling (SEM) was used to analyze the data. The results showed a positive and significant relationship between cognitive absorption and social media addiction; thus, cognitive absorption predicted social media addiction. A negative and significant relationship between self-esteem and social media addiction was also found; thus, self-esteem predicted social media addiction. The young who put social media at the centre of their daily lives use, for example, Instagram for sharing photos, Youtube and Dailymotion for sharing videos, Facebook and LinkedIn for joining social networks, Twitter for sharing posts, and Secondlife for gaming. They shape their own self-concepts with the feedback they receive from social media users. They evaluate their own values; that is, they form self-esteem. How individuals appraise and see themselves significantly affects their mental well-being, social interaction, and self-esteem¹⁰⁹.

In a study conducted, direct and indirect effects of self-esteem, daily internet use and social media addiction to depression levels of adolescents were investigated by testing a model¹⁰⁵. This descriptive study was conducted with 1130 students aged between 12 and 18 who were enrolled at different schools in southern region of Aegean. In order to collect data, “Children's Depression Inventory”, “Rosenberg Self-esteem Scale” and “Social Media Addiction Scale” were used. In order to test the hypotheses Pearson's correlation and structural equation modeling were performed. The findings revealed that self-esteem and social media addiction predict 20% of the daily internet use. Furthermore, while depression was associated with self-esteem and daily internet use directly, social media addiction was affecting depression indirectly¹¹⁰.

This study carried out aimed to investigate the associations between social support, self-esteem, and social media addiction¹⁰⁶. The participants were 383 (55.09% female) adults aged 18–32 years ($M = 21.10$, standard deviation = 4.14). Data were collected using the self-report questionnaire. Correlation analysis was conducted to examine the associations between the variables. The Process Macro was employed to investigate the role of self-esteem to explain the relationship between social support and social media addiction. Bootstrap analysis was performed to investigate the significance of the direct and indirect relations between the variables. The findings indicated that social media addiction was negatively correlated with both social support and self-esteem, while social support was positively correlated with self-esteem. Gender did not significantly influence any of the variables. Even after controlling for age and daily hours spent on social media, the findings revealed that self-esteem plays a significant role in the relationship between social support and social media addiction. Thus, enhancing social support and self-esteem may help

mitigate social media addiction. The communication and support offered through social media cannot substitute for in-person interactions and support, and may even contribute to addiction¹⁰⁶. Therefore, it is crucial to determine protective components so that those with a low perception of social support do not become addicted to social media. Accordingly, this study explored how self-esteem may explain the link between social support and social media addiction. Individuals with low self-esteem may perceive social media as a secure space due to the problems they experience in face-to-face relationships. Hence, they may use it for purposes such as self-expression and escaping from their problems.

It was said that the interaction between a person's behaviour and the way in which that person perceives and judges her/his own behaviour reflects the individual's self-esteem⁸⁷. This explanation suggests means that individuals have low self-esteem when they view themselves negatively and high self-esteem when they hold positive self perceptions. Additionally, a person's self-esteem is shaped by the accumulation of positive or negative feelings they associate with themselves. High self-esteem is a predictor of success and well-being in various aspects of life, including relationships, career, and health. It has been noted that factors like perceived life satisfaction, problem-solving abilities, resilience, secure attachment, self-efficacy and empathy serve as protective elements for self-esteem. In contrast, risk factors include stress, loneliness, depression, anxiety, insecure attachment styles, childhood trauma and concerns about social appearance⁸⁸. While previous studies have explored the psycho-social and demographic factors related to self-esteem, social media addiction and internet addiction among adolescents and young adult, no research was identified that examines these three variables together in adults. The current study aims to fill this gap by investigating the levels of internet addiction, self-esteem, and social media

addiction in adults, which is expected to contribute to the literature and highlight potential areas for future research.

2.3.3 Social Anxiety and Social Media Addiction

Empirical studies examining the relationship between social anxiety and social media addiction have yielded mixed findings, reflecting the heterogeneity of samples, measurement instruments, and methodological approaches. Some studies have found positive associations between social anxiety symptoms and problematic social media use, indicating that individuals with higher levels of social anxiety may be more susceptible to addictive behaviours on social networking platforms¹¹.

On the other hand, some studies have found either insignificant or opposite relationships between social anxiety and social media addiction. This suggests that factors such as individual coping strategies, social support systems, and offline social functioning might influence the strength of this connection. Additionally, longitudinal research has shown a bidirectional relationship between social anxiety and social media addiction, with social anxiety symptoms potentially leading to increased social media use, and increased use, in turn, exacerbating social anxiety¹².

Several mechanisms may underlie the relationship between social anxiety and social media addiction, including social comparison processes, fear of negative evaluation, and reinforcement mechanisms. Individuals with social anxiety may engage in frequent social comparisons with others on social media platforms, leading to feelings of inadequacy, inferiority, and social exclusion. Moreover, fear of negative evaluation and rejection may drive individuals to seek social validation and approval through excessive social media use,

perpetuating addictive patterns of behaviour. The impact of the relationship between social anxiety and social media addiction affects multiple areas of psychological functioning, such as emotional well-being, interpersonal relationships, and academic performance. Individuals with high levels of social anxiety and problematic social media use may experience heightened levels of stress, depression, and loneliness, exacerbating their social difficulties and impairing their quality of life¹¹³.

Over the last two decades, internet addiction has emerged as a psychological and mental health concern, driven by advancements in technology, especially the widespread availability of internet services and the use of computers, smartphones, and related devices. While internet access has been recognized as a vital tool for helping students effectively achieve their academic objectives at all levels of education, its overuse has posed significant challenges¹¹². Professionals have long been concerned about the potential negative impacts of internet usage on students' performance and social lives. Previous research on internet addiction has linked numerous issues to online addiction, particularly among tertiary institution students. Among these problems, low self-esteem is frequently highlighted. low academic performance, substance and drug taking, depression, interpersonal relationship 910 deficits. According to magnitude and trend, meta-analytic research published as of 2014 reported a projected world-wide occurrence of 6.0%¹⁰⁹ and by 2022; it has increased to 8.23%¹¹⁴.

In Sub-Saharan Africa, a study carried out at a Nigerian university found that the prevalence of internet addiction was 14.1%. After some years, the rate of internet addiction had risen, reaching an estimated 30.0%. These trends and figures suggest that internet addiction is rapidly increasing, not only in Africa but all over the world. The rise in increase

in internet addiction can be attributed to several factors including free internet access, quality of life, loneliness and social anxiety¹¹⁵. Research has shown that individuals with deficits in social skills and interpersonal relationships often turn to social media platforms like Facebook, WhatsApp, Instagram, Telegram, Yahoo Messenger, TikTok to compensate for their real-life relationship challenges. Previous studies, particularly those focusing on students, have highlighted a strong link between internet addiction and social anxiety. Excessive use of social media by students, at the cost of their academic responsibilities, can negatively affect both their real-life interpersonal relationship and academic performance. While higher education students heavily rely on the internet for productive tasks like attending classes, conducting research, and submitting assignments, many still spend a significant portion of their time online engaging in unproductive activities, often misusing the internet under the pretence of maintaining a social life¹⁰⁸. This problematic internet behaviour can lead to addiction, with students often staying up late into the night. As a result, they may experience sleep deprivation, which negatively affects their academic performance¹¹¹. Could this unproductive internet use be linked to students' deficits in social skills and interpersonal relationship? Could social anxiety be a contributing factor? These are important questions that require empirical investigation. Moreover, if issues surrounding internet use among students are not adequately addressed, it could lead to an increase in relationship breakdowns, loneliness, depression, poor academic performance, and physical health issues¹¹⁶. Empirical evidence on the relationship between internet addiction and social anxiety is necessary for counselling psychologists to provide effective therapeutic support and to offer informed guidance to education policymakers.

The paper “Correlates of Social Anxiety and Internet Addiction of Higher Education Students” examined the spread of internet addiction among tertiary institution students in Osun State and the connection between social anxiety and internet addiction¹⁰⁷. The research used descriptive survey research methodology. A sample of 1,430 students was picked to be involved in the research using multi-stage sampling methodology. Information was gathered using an instrument titled “Social Anxiety and Internet Addiction Questionnaire (SAIAQ). Information gathered was analysed using descriptive and inferential statistics. Specifically, research questions one, two and three were answered using percentages and frequency counts. Research hypotheses one, two and four were tested using Pearson product moment correlation while hypotheses three, five and six were tested using ordinal logistic regression, multiple regression analysis respectively. The outcome indicated that majority of participants (56.78%) exhibited little degree of internet addiction, while 23.63% and 15.01% exhibited moderate and severe levels of internet addiction respectively. The research also revealed a significant positive relationship between social anxiety and internet addiction among the students ($r=0.261$, $p=0.000$). The research inferred that social anxiety is potent factor that could trigger internet addiction of students and exhibition of internet addiction would reduce more with students’ age¹¹⁷.

The research carried out during the COVID-19 pandemic period, reported that the level of anxiety and the duration of social media use increased in university students. The study aimed to examine the relationship between coronavirus anxiety and social media addiction in university students. The sample consisted of 346 university students in Turkey. The data were collected online using the Socio-demographic Data Form, the Coronavirus Anxiety Scale Short Form and the Social Network Addiction Scale. The data were analysed

using one-way analysis of variance, Mann–Whitney U test, Pearson correlation analysis, chi-square analysis and multiple linear regression analysis. The results showed that the mean coronavirus anxiety score was higher in men than in women. Social media addiction increased as the daily time spent by the students on social media increased. A positive correlation was found between the daily time spent on social media before the pandemic and social media usage during the pandemic. It was concluded that students use social media more during the pandemic than before it and that social media addiction increases as the students' coronavirus anxiety increases¹¹⁸. According to these results, a positive correlation was established between coronavirus anxiety and social media addiction. Young people with an increased level of anxiety enter a vicious circle where they use social media more, which in turn results in an increased risk of social media addiction.

In the area of social anxiety or anxiety, a few indigenous researchers have tried to explore the mechanism of social media addiction in the context of social anxiety or anxiety. For instance, a study examined the role of social anxiety in the association between maladaptive cognition and problematic internet use among Nigerian adolescent students¹¹⁹. Participants were 509 adolescents from schools in South-East Nigeria, the participants completed measures of social anxiety (Social Anxiety Scale for Adolescents), problematic internet use (Problematic Internet Use Questionnaire), and maladaptive cognition (Maladaptive Interpersonal Belief Scale). Regression analyses showed a positive association between students' maladaptive cognition and problematic internet use, as well as between social anxiety and problematic internet use. Additionally, social anxiety mediated the relationship between maladaptive cognition and problematic internet use, increasing the risk of problematic internet use. This implies that social anxiety is a pathway through which

maladaptive cognition influences problematic internet use. Consequently, adolescents who experience social anxiety rely on the use of the web as an escape route to compensate for their poor social relationships and negative evaluations orchestrated by cognitive dysfunctionality. Their findings indicated a need for interventions to reduce the risk of problematic internet use through counselling students for healthy cognition and normative social anxiety¹²⁰.

Social media platforms like Facebook, Instagram, and Twitter typically facilitate social interaction and personal expression. Additionally, these platforms often serve as personal diaries, allowing users to document and share their daily activities through photos, videos, music, and personal opinions on various topics¹²¹. With the wide range of activities available on social media, users often spend extended hours online to fulfill their socializing needs and seek social interaction. Social media allows them to enjoy forming connections, but those who spend excessive time on these platforms may develop internet addiction due to limited traditional social skills. Consequently, users may perceive themselves as better versions of themselves while engaging online.

Social media addiction has become a significant concern today, as nearly everything is shared on social platforms. Online social networking sites, especially Facebook, provide valuable opportunities for interaction, particularly for individuals dealing with social anxiety. Social media addiction can be linked to social anxiety, as individuals with social anxiety tend to prefer interacting through social media, where they can avoid face-to-face interaction. Some researchers agreed that one of the main reasons why texting and other forms of social media are preferable, especially in the case of those struggling with social anxiety, to real-time interactions is that the awkward nature of the conversation in-person is replaced with the

quickly sent text, which can be edited and manipulated before it is sent, thus allowing more control over the interaction than is possible in real-time social situations¹²².

In the domain of mental health, a study conducted, explored the impact of Social Media Addiction in Young Adult Patients with Anxiety Disorders and Depression: This study was carried out with 276 participants between the ages of 18 and 35 in the Psychiatry Outpatient Clinic in Gazi University Hospital, Turkey. Seventy-three patients diagnosed with depression, 80 patients diagnosed with anxiety disorders, and 123 healthy controls were recruited for the study. The SMA Scale, Hospital Anxiety and Depression Scale, and the Personality Belief Questionnaire-Short Form were administered to the participants. Patients with anxiety disorders (PAD) and patients with depression (PD) were more addicted to social media than healthy controls (HC) despite similar frequencies of social media use. Dependent, histrionic, narcissistic, obsessive-compulsive, borderline, and paranoid personality features in HC increased the susceptibility to SMA¹²³. Borderline and dependent personality features comorbid with PAD increased the susceptibility to SMA. None of the personality traits comorbid with PD had an effect on SMA.

Although the frequency of social media use was similar, patients with depression and anxiety disorders showed significantly higher total scores on the Social Media Addiction Scale compared to healthy individuals. The study found that mood modification, conflict, and relapse aspects of social media addiction were more prevalent in those with depression and anxiety disorders than in the healthy control group¹²⁴. The prominent aspect of social media addiction was its greater prevalence among patients with anxiety disorders compared to healthy controls. In healthy individuals, personality traits such as dependent, histrionic, narcissistic, obsessive compulsive, borderline, and paranoid personality characteristics were

linked to increased vulnerability to social media addiction. Similarly, borderline and dependent personality traits in patients with anxiety disorders heightened their susceptibility. Interestingly, none of the personality traits in patients with depression were found to increase their likelihood of developing social media addiction¹²⁶.

The study “The Moderating Role of State Attachment Anxiety and Avoidance between Social Anxiety and Social Networking Sites Addiction” aimed to explore the relationships among social anxiety, social networking sites (SNS) addiction, and SNS addiction tendency, and further to examine the moderating role of state attachment anxiety and state attachment avoidance¹²⁷. A sample of Chinese young adults participated in the study; the data were collected through self-reports. Results revealed that participants’ social anxiety was positively associated with SNS addiction and SNS addiction tendency. State attachment anxiety moderated these two relationships after controlling gender, age, and state attachment avoidance, while state attachment avoidance showed no significant moderating effect. Specifically, the positive relationships between social anxiety and SNS addiction (tendency) were restricted to individuals with low state attachment anxiety. While for individuals with high state attachment anxiety, social anxiety was no longer associated with SNS addiction or SNS addiction tendency¹²⁸.

Recent studies consistently highlight the theme of social media and the internet and their impact. One of the most intriguing aspects is the connection between social media and anxiety. While social media is often utilized as a coping mechanism for stress, it frequently leads to increased anxiety in the long run. The use of social media as a maladaptive coping strategy has been associated with psychological disturbances¹²⁹. An increasing number of adolescents are turning to social media for browsing and posting as a way to cope with stress.

While this can serve as a distraction, it often creates a false sense of refuge rather than genuinely alleviating stress. It is easy to see how simply consuming social media can divert attention without addressing negative emotions and may lead to information overload. Research indicates that when social media is used as a means of coping with stress, it can predispose individuals to long-term anxiety. As users become more reliant on social media for stress management, their usage may consume a significant amount of their time. In more serious situations, this may lead to increased anxiety as individuals prioritize social media interactions over their other tasks and responsibilities¹³⁰.

Several studies on social media addiction indicate that anxiety and depression rates among adolescents are at an all-time high, suggesting that social media may be a contributing factor to this trend. “Large-scale empirical work suggests associations between time spent on social media and increased symptoms of depression and anxiety, and decline in subjective well-being”. This research examining the relationship between social media and stress is among the most persuasive pieces supporting the case for social media addiction¹³¹. The authors claim that using multiple social media accounts simultaneously can result in information overload and contribute to identity diffusion, which poses significant challenges to personality development, particularly for young adults have not yet fully formed their identities. On many social media sites, there are posts joking about the different “personalities” a user may display depending on the platform they are utilizing at the time. Users frequently update their profiles and adjust them to align with the specific environment of each platform, which can add another layer of stress. In addition to this, another study focuses on the negative impact of social media usage across multiple platforms, contributing the term media multitasking and explaining that “the frequency of social media usage

exposes users to multi-tasking, either when switching between different social media platforms, or between social media and other daily activities, thus leading to depressive symptoms¹³². Media multitasking has been associated with negative health outcomes. These negative health outcomes lie primarily in the manifestation of anxiety and depressive symptoms. This split-personality experience may also promote attention deficits in young adults.

2.4. Conceptual Framework

(a) The Independent Variables in this study are Social Anxiety, Personality Traits and Self Esteem

(b) The Dependent Variable in this study is Social Media Addiction

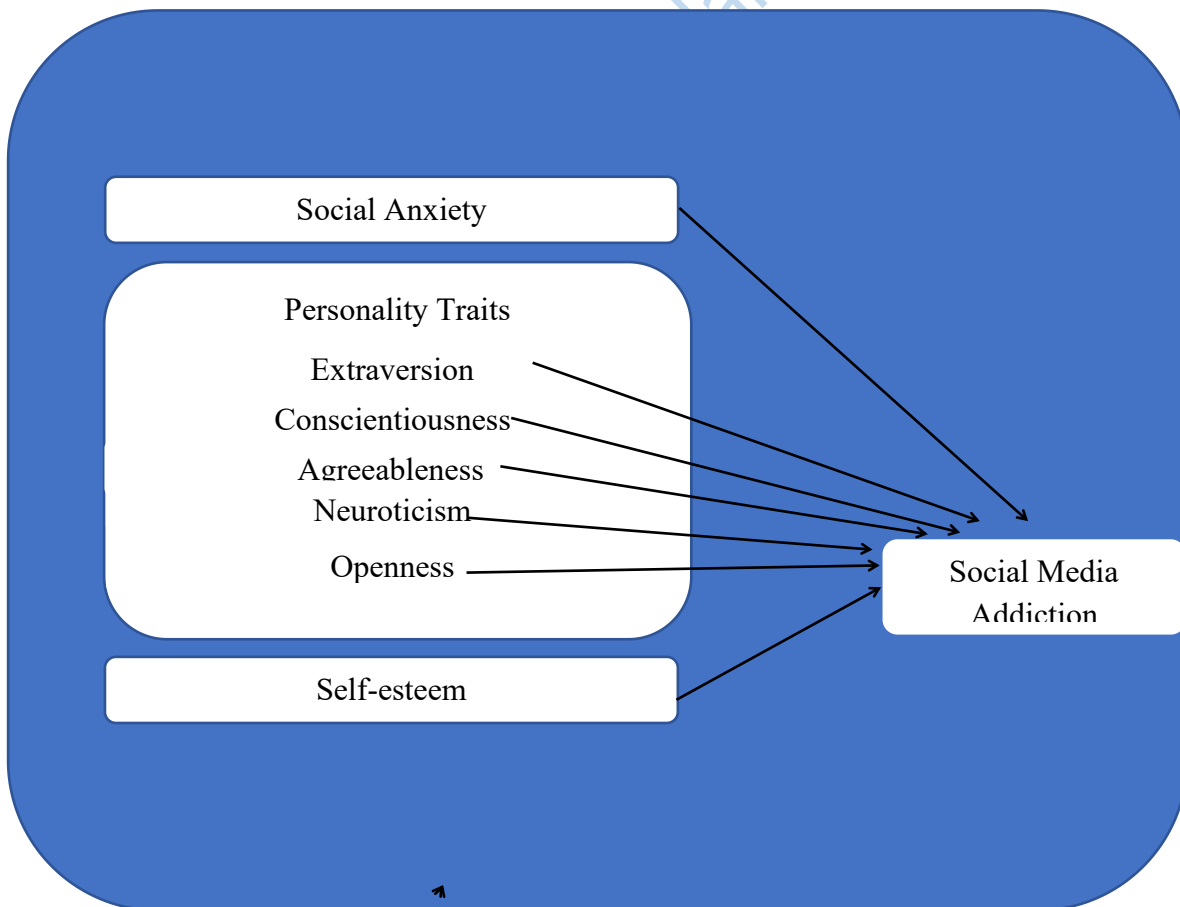


Fig 2.4.1: Conceptual Framework on Social Anxiety, Personality Traits and Self Esteem as Predictors of Social Media Addiction among Undergraduates in Plateau State developed by Researcher, 2024.

2.5 Summary and Appraisal of Literature Review

Social media addiction is a fast-expanding area of study in psychology as digital technologies become more and more integrated into everyday life. Social media addiction is characterized as a maladaptive pattern of excessive and obsessive usage of social media platforms. It has serious consequences for one's psychological health, interpersonal connections, and overall well-being. Psychology is showing increased interest in social media addiction, which is not surprising given how pervasive digital technologies are in daily life and how they affect academic performance. Throughout the empirical review for the current study, the deleterious impacts of the variables implicated in this study have been consistently reported in the hitherto extant literature. Interestingly, even the clinical population is not left out in the reported harmful effects of excessive social media usage. For instance, it was reported that anxiety disorders and depression predicted social media addiction among the clinical sample investigated.

Social media addiction research unfortunately did not commence within the same time the world-over experienced the advent of the internet and advancement in technological innovations. Therefore, research in the domain is still nascent and most researchers in the area are just getting warmed up, most especially in the continent of Africa, and the Nigerian context. It is however, soothing that at least, some of the studies so reviewed were indeed carried out in Nigeria, thus a succinct recap of the studies conducted in Nigeria is warranted here. For instance, representing our understanding of the problem from the southeastern

Nigeria perspective reported how excessive use of the social media and other internet related services impacted negatively not just the health of students, but including their academic performance as it were, stating how worse it would become if left unchecked. Other studies of Nigerian origin with similar results are. Although the forgoing studies concomitantly represent Nigeria and the African continent, they are grossly inadequate, given the vast expanse and swarming populations of the country and continent, compared to the tons of internet users that inhabit not just the country, but the continent in its entirety, more needs to be done in terms of research.

Data on social media abound with a cursory search, one would immediately admit to this fact. However, the available literature is so narrow in scope that it could hardly be representative sample of the world's population. Majority of the studies originated from North America, Europe or the continent of Asia. This is riotously concerning, given that almost all the reviewed literature reported the pernicious nature of excessive internet use and the devastating consequences of social media addiction. For instance, results from previous studies, all reported that social anxiety negatively impacts social media usage. As social anxiety increases the potential for social media reciprocates by going up, which is a phenomenon that should not be taken lightly. Even during the COVID-19, anxiety arising from the measures that were put in place and the possibility of contracting the disease led people to excessively use social media to levels that could be characterized as addiction. In the clinical setting as well, anxiety and depression were found to increase social media usage to alarming level. And outside the clinical population, personality characteristics, self-esteem and social anxiety all had their negative impacts in different parts of the world. There was also a negative impact on personality. Social anxiety on the other hand, also had its impact

and many others were seen to having serious negative consequences on social media addiction. An individual's assessment of their self-worth otherwise known as self-esteem has also been shown to have considerable negative effects on the social media addiction when it is valued in the lower end of the continuum and many more with mirrored conclusions. In order to ensure accuracy of the appraisal of the literature reviewed, it must be stated abundantly clear that the reviewed literature is not in any way sufficient to be seen as exhaustive, as the researcher had no way of knowing whether the literature search indeed yielded exhaustive research data on the variables. Therefore, whatever conclusions or assumptions arrived at should be viewed with the lens of the literature available to the current study and thus reviewed.

Having summarized the empirical evidence from different studies by different researchers that cut across various regions or geographic locations, it is pertinent to evaluate the available evidence in the context of the current research, a process sometimes referred to as critiquing or appraisal. No doubt most of the reviewed literature emanated from seasoned and prolific researchers however, some the researchers are new in the domain of social media addiction. Although a few of the studies reviewed have been carried out in Nigeria, as few as they may seem, they represent the burgeoning interest in social media addiction or problematic internet usage among Nigerian researchers, which is commendable, as there exists a wide gap in the domain that needs filling.

Currently, there is severe dearth of data on the concept from the African and indeed, Nigerian perspective. The African and Nigerian researchers are barely starting out in the race on social media addiction, hence there is little data from these areas on the concept, and something

needs to be done urgently, considering the pervasive and insidious nature of social media addiction.

The fact that most of the studies did not emanate from the African or Nigerian setting has rendered emphasizing that they cannot be extrapolated to these areas moot. It is already self-evident that they cannot, since there are many factors that would hinder such an exercise. For instance, the cultures and thus, values of the researchers differ considerably from what is obtainable on our continent and country, and these differing values may result in different results and varying intervention approaches. Again, most of the instruments that may be ordinarily valid in the researchers' domains may not necessarily be applicable in the African or Nigerian context or population, this single reason could potentially make the outcome of those study unprofitable in other locations, save for the insights gained. One other thing to consider is that, some of the societies from which these studies originated are far more sophisticated compared to our locality, and sometimes most of the conclusions drawn from their perspective may be hardly tenable from due to our less sophistication of our own society. Even within same geographic locations, sometimes it is unrealistic to draw a representative sample during research, which may reduce the external validity of studies and limit their generalizability and real-world applications.

The current research therefore aims to not only add to the data that is indeed grossly insufficient to broaden our understanding of social media addiction, but also to explore the phenomenon in a configuration that is so unique to the current study, which promises new knowledge and understanding. In order to foster a nuanced understanding of the social media addition phenomenon, it is important that every part of the globe be represented in the data on the concept, and researchers of different geographic locations and possibly various fields

come together to understand the dangers and formulate workable strategies to curtail the raging problems that are anchored on excessive social media and internet usages.

One pertinent factor implicated in the development and maintenance of social media addiction is social anxiety. Social anxiety, characterized by fear of negative evaluation and avoidance of social interactions, may drive individuals to seek solace and validation in online environments. This propensity for online engagement as a coping mechanism for social anxiety may contribute to heightened susceptibility to social media addiction among vulnerable populations. Furthermore, personality traits have garnered attention as potential predictors of social media addiction. Research suggests that certain personality traits, such as extraversion, neuroticism, and impulsivity, may predispose individuals to engage excessively in social media use. For instance, individuals high in neuroticism may turn to social media as a means of alleviating distress, while those high in impulsivity may struggle to regulate their online behaviour, leading to addictive patterns of use.

Additionally, self-esteem has been identified as a salient factor in understanding social media addiction. Individuals with low self-esteem may use social media as a platform for seeking validation and affirmation from others, potentially escalating into compulsive and maladaptive usage patterns. The allure of social media as a source of social comparison and self-validation may exacerbate feelings of inadequacy and fuel addictive tendencies among this subgroup of individuals.

Crucially, the complex interactions among personality traits, self-esteem, and social anxiety highlight how complex social media addiction is. Although social anxiety can act as a trigger for overindulgence in social media, personality characteristics and self-worth could limit how quickly people give in to compulsive habits. Again, because social media platforms have

such a strong influence on how interpersonal dynamics and social norms are shaped, a thorough understanding of the psychological mechanisms behind addiction vulnerability is crucial.

Overall, the study underscores the importance of looking into the complicated links between social anxiety, personality traits, self-esteem, and social media addiction among college students. By explaining these elements, psychologists can create targeted therapies to reduce the negative impacts of excessive social media use and increase psychological well-being in this demography.

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Endnotes

- 1 L. Paakkari; J. Tynjälä; H. Lahti; K. Ojala & N. Lyyra, *Problematic social media use and health among adolescents*, **International Journal of Environmental Research and Public Health**, 2021, 18(4), 1885.
- 2 S. Mishra; H. Malathi & P. Deep, *Addictive digital media use and psychiatric symptoms: a cross-sectional study*, **Multidisciplinary Science Journal**, 2023, 5, 5.
- 3 I. Aslan & M.E Yaşar, *Measuring social media addiction among university students*, **International Journal of Contemporary Economics and Administrative Sciences**, 10(2), 2020, 468-492.
- 4 M. Lyvers; A. Salviani; S. Costan & F.A. Thorberg, *Alexithymia, narcissism and social anxiety in relation to social media and internet addiction symptoms*, **International Journal of Psychology**, 57(5), 2022, 606-612.
- 5 T. Luo; L. Qin; L. Cheng; S. Wang; Z. Zhu; J. Xu; H. Chen; Q. Liu; M. Hu; J. Tong & W. Hao, *Determination the cut-off point for the Bergen social media addiction (BSMAS): Diagnostic contribution of the six criteria of the components model of addiction for social media disorder*, **Journal of Behavioural Addictions**, 10(2), 2021, 281-90.
- 6 T. Panova & X. Carbonell, *Social Media Addiction. In Behavioural Addictions: Conceptual, Clinical, Assessment, and Treatment Approaches*, Cham: Springer International Publishing, 69-95, 2022.
- 7 W. Lin; Q. Junping; Y. Su; W. Yuhan & Z. Yuchen, *Does mobile social media undermine our romantic relationships? The influence of fear of missing out (FoMO) on young people's romantic relationship*, In Proceedings of ISIC: The Information Behaviour Conference, Information Research, 27, 2022, 18452/25239.
- 8 S. L. Dailey; K. Howard; S.M. Roming; N. Ceballos & T. Grimes, *A biopsychosocial approach to understanding social media addiction*, *Human Behaviour and Emerging Technologies*, 2(2), 2020, 158-67.
- 9 F.A. Mahamid & D.Z. Berte, *Social media addiction in geopolitically at-risk youth*, **International Journal of Mental Health and Addiction**, 17, 2019, 102-11.
- 10 D. Marengo; I. Poletti & M. Settanni, *The interplay between neuroticism, extraversion, and social media addiction in young adult Facebook users: Testing the mediating role of online activity using objective data*, *Addictive behaviours*, 102, 2020, 106150.
- 11 H. Yue; X. Yue; X. Zhang; B. Liu & H. Bao, *Exploring the relationship between social exclusion and social media addiction: The mediating roles of anger and impulsivity*. *Acta Psychologica*, 2023, 1, 238:103980.

- 12 P. TurhanGürbüz; O.G. Çoban; A. Erdoğan; H. Y Kopuk; A.S. Adanir & A.Önder *Evaluation of internet gaming disorder, social media addiction, and levels of loneliness in adolescents and youth with substance use*, Substance use & misuse, 56(12), 2021, 1874-9.
- 13 D. Demirtepe-Saygili *Stress, coping, and social media use. InThe psychology and dynamics behind social media interactions*, IGI Global, 241-267, 2020.
- 14 G. Tanrikulu & A. Mouratidis, *Life aspirations, school engagement, social anxiety, social media use and fear of missing out among adolescents*, Current Psychology, 42, 2023, 28689–28699, <https://doi.org/10.1007/s12144-022-03917-y>
- 15 H. Kim; R. Schlicht; M. Schardt & A. Florack, *The contributions of social comparison to social network site addiction*, PLoS One, 16(10), 2021, e0257795.
- 16 T. A. Aygul & S. E. Akbay. *Smartphone addiction, fear of missing out, and perceived competence as predictors of social media addiction of adolescents*, **European Journal of Educational Research**, 8(2), 2019, 559-66.
- 17 M. A. Throuvala; M.D. Griffiths; M. Rennoldson & D. J.Kuss, *Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study*, Computers in Human Behaviour, 93, 2019, 164-75.
- 18 M. Stanković & M. Nešić, *Association of internet addiction with depression, anxiety, stress, and the quality of sleep: Mediation analysis approach in Serbian medical students*. Current Research in Behavioural Sciences, 3, 2022, 100071.
- 19 A. Jones; M. Hook; P. Poddaturi; H. McKeen; E. Beitzell & M. Liss, *Mindfulness as a mediator in the relationship between social media engagement and depression in young adults*, Personality and individual differences, 185, 2022, 111284.
- 20 S.Ye; K. K. Ho & A. Zerbe, *The effects of social media usage on loneliness and well-being: analysing friendship connections of Facebook, Twitter and Instagram*, Information Discovery and Delivery, 49(2), 2021, 136-50.
- 21 H. Şimşek, *The Effect of Smartphone Addiction on Attention Level in High School Students*, BağımlılıkDergisi, 24(2), 2023, 113-22.
- 22 Y. Latifeh; Y. Alkhatib; M. Hmidouch; S. Swed; W. Hafez; B. Sawaf & A. Rakab, *Prevalence of internet addiction among Syrian undergraduate medical students*, Medicine, 101(49), 2022.
- 23 S. A. Shukur; S.M Bakar; N.Dzulkalnine; M.D. Zaman; N.F.Omar; S.K Sandhu & B.A. Lansam, *Psychological and Technology Factor Contribute to Social Media Addiction*, Information Management and Business Review, 15(4), 2023, 486-91.

- 24 T. Touloupis; M. Sofologi. & D. Tachmatzidis, *Pattern of Facebook use by university students during the COVID-19 pandemic: relations with loneliness and resilience*, *Social Network Analysis*. Min, 2023, 13, 64, <https://doi.org/10.1007/s13278-023-01073-0>.
- 25 M. L. Washington; *The Mediated Effect of Social Media Technology Addiction on Productivity*, *Business Management Dynamics*,10(12), 2021, 1.
- 26 G. Fioravanti; G. Flett; P. Hewitt; L. Rugai & S.Casale, *How maladaptive cognitions contribute to the development of problematic social media use*, *Addictive Behaviours Reports*, 11, 2020, 100267.
- 27 B. Ejaz & A. Muazzam, *Self-consciousness in female university students: the predictive role of social anxiety*, *J Pak Med Assoc*, 71(3), 2021, 905-8.
- 28 R. Sigurvinsdottir; K.Soring; K. Kristinsdottir; S.G. Halfdanarson; K. R. Johannsdottir; H. H .Vilhjalmsson & H. B .Valdimarsdottir, *Social anxiety, fear of negative evaluation, and distress in a virtual reality environment*, *Behaviour Change*, 38(2), 2021, 109-18.
- 29 X. Ling, *Research on Social Exclusion Among Adolescents based on Social Anxiety*, ***Journal of Education and Educational Research***, 4(2), 2023, 54-7.
- 30 J. M. Bas-Hoogendam; H. van Steenbergen; N.J. van der Wee & P.M. Westenberg, *Amygdala hyperreactivity to faces conditioned with a social-evaluative meaning—a multiplex, multigenerational fMRI study on social anxiety endophenotypes*, *NeuroImage: Clinical*, 26, 2020, 102247.
- 31 W. LaMorte, *The Social Cognitive Theory*, Boston University School of Public Health, Available Online: <https://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehaviouralChangeTheories/BehaviouralChangeTheories5.html/2022>.
- 32 D. H. Schunk & M. K. DiBenedetto, *Motivation and social cognitive theory*, ***Contemporary Educational Psychology***, 60, 2020, 101832, ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych.2019.101832>.
- 33 H. Braund & K. Timmons, *Operationalization of self-regulation in the early years: comparing policy with theoretical underpinnings*, *ICEP* 15, 8, 2021, <https://doi.org/10.1186/s40723-021-00085-7>.
- 34 J. De la Fuente; J. M. Martínez-Vicente; F. H. Santos; P. Sander; S. Fadda; A. Karagiannopoulou & D. F. Kauffman, *Advances on self-regulation models: A new research agenda through the SR vs ER behaviour theory in different psychology contexts*, ***Frontiers in Psychology***, 13, 861493/2022.

- 35 A. Kaval & D. M. Siyez, *An Internet Addiction Model Based on Cognitive-Behavioural Approach Among Adolescents: Maladaptive Cognitions, Psychopathology, and Situational Cues*, *J Rat-Emo Cognitive-Behav Ther* 42, 2024, 194–213, <https://doi.org/10.1007/s10942-023-00502-5>
- 36 N. K. Sinha, P. Kumar, S. Kumar & P. Priyadarshi, *Problematic Internet Use and Psychosocial Well-being: Role of Mindfulness Mediated by Self-Control and Negative Affect*, *IIM Kozhikode Society & Management Review*, 10(1), 2021, 99-112, <https://doi.org/10.1177/2277975220965346>
- 37 M. R. Mohammadi; M. Salehi; A. Khaleghi; Z. Hooshyari; S. A. Mostafavi; N. Ahmadi; S. K. Hojjat; P. Safavi & M. Amanat, *Social anxiety disorder among children and adolescents: A nationwide survey of prevalence, socio-demographic characteristics, risk factors and co-morbidities*, **Journal of Affective Disorders**, 263, 2020, 450-457, ISSN 0165-0327, <https://doi.org/10.1016/j.jad.2019.12.015>.
- 38 F. Lai; L.Wang; J. Zhang; S. Shan; J. Chen & L.Tian, *Relationship between Social Media Use and Social Anxiety in College Students: Mediation Effect of Communication Capacity*, *National Library of Medicine*, 20(4), 2023, 3657.
- 39 J. B. Guillena *The Effects of Social Networking Sites Needs and Academic Stressors on Academic Motivation of College Students*, **International Journal of Educational Management and Development Studies**, 4 (2), 2023, 138-169, Available Online: <https://doi.org/10.53378/352992>.
- 40 R. She; P. Kit han Mo; J. Li; X. Liu; H. Jiang; Y. Chen; L. Ma & J. Takfai Lau, *The double-edged sword effect of social networking use intensity on problematic social networking use among college students: The role of social skills and social anxiety*, **Computers in Human Behaviour**, 140, 2023, 107555, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107555>.
- 41 C. Adela & R. Nicholas, *Connecting personality traits to social networking site addiction: the mediating role of motives*, **Information Technology & People**, 2019, DOI: 10.1108/ITP-01-2019-0025.
- 42 S. Jiang & A. Ngien, *The Effects of Instagram Use, Social Comparison, and Self-Esteem on Social Anxiety: A Survey Study in Singapore*, **Social Media + Society**, 6(2), 2020, Available Online: <https://doi.org/10.1177/2056305120912488>.
- 43 A. Eldridge, *Instagram| History, Features, Descriptions & Facts*, *Britannica*, 2023, Available online: <https://www.britannica.com/topic/instagram>
- 44 B. O'Connell, *History of Snapchat: Timeline and Facts*, *The Street*, 2020, Available online: <https://www.thestreet.com/technology/history-of-snapchat>

- 45 M. Cristofaro; F. Giannetti & G. Abatecola, *The initial survival of the Unicorns: a behavioural perspective of Snapchat*, **Journal of Management History**, 29(4), 2023, 456-480, <https://doi.org/10.1108/JMH-11-2022-0066>.
- 46 T. Britannica; *Editors of Encyclopaedia*, TikTok | App History, Videos, China, & Controversies, Britannica, 2024, Available online: <https://www.britannica.com/topic/TikTok>
- 47 R. M. Ryan & E. L. Deci, *Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions*, **Contemporary Educational Psychology**, 61, 2020, 101860, ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych.2020.101860>.
- 48 M. Quirin; M. Jais; S. I. Di Domenico; J. Kuhl & R. M. Ryan, *Effortless Willpower? The Integrative Self and Self-Determined Goal Pursuit*, **Frontiers in Psychology**, 12, 2021, 653458. DOI: 10.3389/fpsyg.2021.653458
- 49 R. M. Ryan; E. L. Deci; M. Vansteenkiste & B. Soenens, *Building a science of motivated persons: Self-determination theory's empirical approach to human experience and the regulation of behaviour*, **Motivation Science**, 7(2), 2021, 97–110, <https://doi.org/10.1037/mot0000194>
- 50 M. Gagné; S. K. Parker & M. A. Griffin, et al, *Understanding and shaping the future of work with self-determination theory*, *Nature Reviews Psychology*, 1, 2022, 378–392, <https://doi.org/10.1038/s44159-022-00056-w>
- 51 R. M. Ryan & M. Vansteenkiste, *Self-determination theory: metatheory, methods, and meaning*, In R. M. Ryan (Ed.), *The Oxford handbook of self-determination theory*, 2023, 3–30, <https://doi.org/10.1093/oxfordhb/9780197600047.013.2>
- 52 C. Hayran & L. Anik, *Well-Being and Fear of Missing Out (FOMO) on Digital Content in the Time of COVID-19: A Correlational Analysis among University Students*, **International Journal of Environmental Research and Public Health**, 18(4), 2021, 1974, <https://doi.org/10.3390/ijerph18041974>.
- 53 D. P. Cingel; M. C. Carter & H. V. Krause, *Social media and self-esteem*, **Current Opinion in Psychology**, 45, 2022, 101304, ISSN 2352-250X, <https://doi.org/10.1016/j.copsyc.2022.101304>.
- 54 D. Ostic; S. A. Qalati; B. Barbosa; S. M. M Shah; V. E. Galvan; A. M. Herzallah & F. Liu, *Effects of Social Media Use on Psychological Well-Being: A Mediated Model*, **Frontiers in Psychology**, 12, 2021, 678766, DOI: 10.3389/fpsyg.2021.678766.
- 55 P. Verduyn; N. Gugushvili & E. Kross, *Do Social Networking Sites Influence Well-Being? The Extended Active-Passive Model*, **Current Directions in Psychological Science**, 31(1), 2022, 62-68, <https://doi.org/10.1177/09637214211053637>.

- 56 N. A Crane; F. Chang; K. L Kinney & H. Klumpp, *Individual differences in striatal and amygdala response to emotional faces are related to symptom severity in social anxiety disorder*, *Neuroimage: clinical*, 2021, 30:102615.
- 57 S. Gumusoglu; S. Scroggins; J. Vignato; D. Santillan & M.Santillan, *The serotonin-immune axis in preeclampsia*, *Current hypertension reports*, 2021, 23, 1-0.
- 58 A. Shamsi, D. DasGupta, F.A. Alhumaydhi, M.S Khan, S.A. Alsagaby, W. Al Abdulmonem ,M.I Hassan, D.K. Yadav, *Inhibition of MARK4 by serotonin as an attractive therapeutic approach to combat Alzheimer's disease and neuroinflammation*, *RSC Medicinal Chemistry*, 13(6):737-45,2022.
- 59 K. Petrowski, I. Schmalbach, A. Strunk, J. Hoyer, C. Kirschbaum, P. Joraschky, *Cortisol reactivity in social anxiety disorder: A highly standardized and controlled study*, *Psychoneuroendocrinology*. 2021, 123:104913.
- 60 D. P. Cingel; M. C. Carter & H. V. Krause, *Social media and self-esteem*, **Current Opinion in Psychology**, 45, 2022, 101304, ISSN 2352-250X, <https://doi.org/10.1016/j.copsyc.2022.101304>.
- 61 I. Vaghefi; H. Qahri-Saremi & O. Turel, *Dealing with social networking site addiction: a cognitive-affective model of discontinuance decisions*, **Internet Research**, 30(5), 2020, 1427-1453, <https://doi.org/10.1108/INTR-10-2019-0418>.
- 62 J. Brailovskaia; H. W. Bierhoff; E. Rohmann; F. Raeder & J. Margraf, *The relationship between narcissism, intensity of Facebook use, Facebook flow and Facebook addiction*, **Addictive Behaviours Reports**, 11, 2020, 100265, ISSN 2352-8532, <https://doi.org/10.1016/j.abrep.2020.100265>.
- 63 D. Meshi & M. E. Ellithorpe, *Problematic social media use and social support received in real-life versus on social media: Associations with depression, anxiety and social isolation*, **Addictive Behaviours**, 119, 2021, 106949, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2021.106949>.
- 64 O. Turel & A. Serenko, *The benefits and dangers of enjoyment with social networking websites: Development of a scale*, **Information & Management**, 57(3), 2020, 103168.
- 65 B.Foroughi; M. D. Griffiths; M. Iranmanesh et al, *Associations Between Instagram Addiction, Academic Performance, Social Anxiety, Depression, and Life Satisfaction Among University Students*, **International Journal of Mental Health and Addiction**, 20, 2022, 2221–2242. <https://doi.org/10.1007/s11469-021-00510-5>.
- 66 A. Masood; A. Luqman; Y. Feng & A. Ali, *Adverse consequences of excessive social networking site use on academic performance: Explaining underlying mechanism from stress perspective*, **Computers in Human Behaviour**, 113, 2020, 106476, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2020.106476>.

- 67 H. Yildiz Durak, *Modeling of relations between K-12 teachers' TPACK levels and their technology integration self-efficacy, technology literacy levels, attitudes toward technology and usage objectives of social networks*, **Interactive Learning Environments**, 29(7), 2019, 1136–1162, <https://doi.org/10.1080/10494820.2019.1619591>.
- 68 I. C. Uchegbu, J. U. Igiriogu & C. O. Ngala, *Personality Traits, Social Anxiety And Gender As Predictors Of Smartphone Addiction Among Students In Tertiary Institutions*. **African Journal of Social and Behavioural Sciences (AJSBS)** 11 (1), 2021, 126-136.
- 69 Ö. A. Tekin, & A.A. Turhan, *Does Social Media Addiction Differ by Personality Traits? A Study on Undergraduate Tourism Students*. **Journal of Tourism and Services**, 22(12), 2020, 23-41. doi: 10.29036/jots.v1222.220.
- 70 Y. Sun & Y. Zhang, *A review of theories and models applied in studies of social media addiction and implications for future research*, **Addictive Behaviours**, 114, 2021, 106699, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2020.106699>.
- 71 T. Aslam; R. Ali & M. A. Athar, *Impact of Big Five Personality Traits on E-Wom: Mediation of Brand Addiction and Moderation of Self-Liking*, **Global Social Sciences Review**, 7(1), 2022, 95-105, [https://doi.org/10.31703/gssr.2022\(VII- I\).10](https://doi.org/10.31703/gssr.2022(VII- I).10).
- 72 M. P. Lin, *Prevalence of Internet Addiction during the COVID-19 Outbreak and Its Risk Factors among Junior High School Students in Taiwan*, **International Journal of Environmental Research and Public Health**, 17, 2020, 8547, <https://doi.org/10.3390/ijerph17228547>.
- 73 M. Sánchez-Fernández; M. Borda-Mas & J. Mora-Merchán, *Problematic internet use by university students and associated predictive factors: A systematic review*, **Computers in Human Behaviour**, 139, 2023, 107532, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107532>.
- 74 M. Peris; U. de la Barrera; K. Schoeps & I. Montoya-Castilla, *Psychological Risk Factors that Predict Social Networking and Internet Addiction in Adolescents*, **International Journal of Environmental Research and Public Health**, 17, 2020, 4598, <https://doi.org/10.3390/ijerph17124598>.
- 75 Q. Agbaria & A. A. Mokh, *Coping with Stress During the Coronavirus Outbreak: the Contribution of Big Five Personality Traits and Social Support*, **International Journal of Mental Health and Addiction**, 20, 2022, 1854–1872, <https://doi.org/10.1007/s11469-021-00486-2>.
- 76 A. Chen & N. Roberts, *Connecting personality traits to social networking site addiction: The mediating role of motives*, **Information Technology & People**, 33(2), 2019, 633-656, <https://doi.org/10.1108/ITP-01-2019-0025>

- 77 Y. Sun & Y. Zhang, *A review of theories and models applied in studies of social media addiction and implications for future research*, **Addictive Behaviours**, 114, 2021, 106699, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2020.106699>.
- 78 U. S. Indri; A. Salma; P. D. Fanni & N. Endah, *Personality and Social Media Addiction among College Students*, *Advances in Social Science, Education and Humanities Research: 2nd Social and Humaniora Research Symposium (SoRes 2019)*, 2020, 376-379.
- 79 Z.Liao, Q. Huang; S. Huang; L. Tan; T. Shao; T. Fang; X. Chen; S. Lin; J. Qi; Y. Cai & H. Shen, *Prevalence of Internet Gaming Disorder and Its Association With Personality Traits and Gaming Characteristics Among Chinese Adolescent Gamers*, **Frontiers in Psychiatry**, 11, 2020, 598585, doi: 10.3389/fpsy.2020.598585.
- 80 V. P. Sheinov, *Social Media Addiction and Personality: A Review of Research*, **RUDN Journal of Psychology and Pedagogics**, 18(3), 2021, 607-630, doi: [10.22363/2313-1683-2021-18-3-607-630](https://doi.org/10.22363/2313-1683-2021-18-3-607-630).
- 81 K.L.Chung, I. Morshidi, L.C. Yoong, & K.N. Thian, *The role of the dark tetrad and impulsivity in social media addiction: Findings from Malaysia*. **Personality and Individual Differences**, 143, 2019, 62-67.
- 82 A. Dionigi; M. Duradoni; L. Vagnoli, *Humor and the dark triad: Relationships among narcissism, Machiavellianism, psychopathy and comic styles*, **Personality and Individual Differences**, 197, 2022, 111766, ISSN 0191-8869, <https://doi.org/10.1016/j.paid.2022.111766>.
- 83 C. N. Neculai, *The Relation between the Dark Triad and Social Media Addiction, with the Moderating Role of Social Anxiety in Young People*. **Journal of Experiential Psychotherapy**, 23(3) 2020, 91-98.
- 84 B. Tecimer and S. Balci, *Self-Esteem, Social Media and Internet Addiction Regarding Adult Individuals*. **International Journal of Educational Research Review**, 8(4) 2023, 697-715.
- 85 S. Balci, *Science teacher candidates' opinions on the contribution of guidance course*. **Anemon Muş Alparslan University Journal of Social Sciences**, 7, 2019 159-169.
- 86 T. I. Vaughan-Johnston; L. Lambe; W. Craig & J. A. Jacobson, *Self-esteem importance beliefs: A new perspective on adolescent self-esteem*, **Self and Identity**, 19(8), 2020, 967-988, <https://doi.org/10.1080/15298868.2019.1711157>.
- 87 T. Seki, & B. Dilmaç, *Self-esteem and relational factors: A meta-analysis study*. **Turkish Journal of Educational Sciences**, 18(2), 2020, 853-873.

- 88 H. Leung; A. H. Pakpour; C. Strong; Y. C. Lin; M. C. Tsai; M. D. Griffiths; C. Y. Lin & I. H. Chen, *Measurement invariance across young adults from Hong Kong and Taiwan among three internet-related addiction scales: Bergen Social Media Addiction Scale (BSMAS), Smartphone Application-Based Addiction Scale (SABAS), and Internet Gaming Disorder Scale-Short Form (IGDS-SF9) (Study Part A)*, **Addictive Behaviours**, 101, 2020, 105969, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2019.04.027>.
- 89 U. T. Rao; J. A. Noronha & K. Adiga, *Effect of aerobic exercises on depressive symptoms, anxiety, self-esteem, and quality of life among adults with depression*, **Clinical Epidemiology and Global Health**, 8(4), 2020, 1147-1151, ISSN 2213-3984, <https://doi.org/10.1016/j.cegh.2020.04.006>.
- 90 T. Halkacioglu, *Investigation of the relationship between social phobia symptoms and problematic internet use.* [Master Thesis, Istanbul Gelisim University]. **Institute of Social Sciences, Istanbul**, 2019. <https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp>
- 91 M. Chegeni, P.M. Shahrabaki, M.E. Shahrabaki, N. Nakhaee, & A. Haghdooost, *Why people are becoming addicted to social media: A qualitative study*. **Journal of Education and Health Promotion**, 10(1), 2022, 175-183. https://doi.org/10.4103/jehp.jehp_1109_20.
- 92 A. Aravind, S. Sangeerthana & S. Thomas, *The study on social media addiction and self-esteem among college students*. **International Journal of Indian Psychology**, 9(1), 2021, 907-911. DIP:18.01.096/20210901, DOI:10.25215/0901.096
- 93 A. Nadeem, S. Siddiquee, and N. Liaqat, *Social Networking Addiction and Self-esteem among University Students*. **Online Media & Society**, 4(3) 2023, 1-11.
- 94 Ş. Balcı & S. Y. Karaman, *Social Media Usage, Self-Presentation, Narcissism, and Self-Esteem as Predictors of Instagram Addiction: An Intercultural Comparison*, **Erciyes İletişim Dergisi**, 7(2), 2020, 1213-1239. <https://doi.org/10.17680/erciyesiletisim.719895>.
- 95 W. Bleidorn, A. Kretzschmar, J.F. Rauthmann, U. Orth, J.J. Denissen, & C.J. Hopwood, *Self-Esteem And Income Over Time*. **Psychological Science**, 34(10), 2023, 1163-1172.
- 96 O.B. Köse, & A. Doğan, *The Relationship Between Social Media Addiction And Self-Esteem Among Turkish University Students*. **Addicta: The Turkish Journal on Addictions**, 6, 2019, 175-190.
- 97 A. Awobamise, Y. Jarrar, & G.E. Nweke, *Social Communication Apprehension, Self-Esteem And Facebook Addiction Among University Students In Uganda*. **Contemporary Educational Technology**, 14(2), 2022, 354-363.

- 98 I. Acun, *The Relationship among University Students' Trust, Self-Esteem, Satisfaction with Life and Social Media Use*, **International Journal of Instruction**, 13 (1), 35-52, 2020.
- 99 A. K. Jain; S. R. Sahoo & J. Kaubiyal, *Online social networks security and privacy: comprehensive review and analysis*, **Complex and Intelligent Systems.**, 7, 2021, 2157–2177, <https://doi.org/10.1007/s40747-021-00409-7>.
- 100 A. Tutgun-Ünal, *Social Media Addiction of New Media And Journalism Students*. **Turkish Online Journal of Educational Technology-TOJET**, 19(2), 2020, 1-12.
- 101 O. Koçak, E. Ilme, M.Z. Younis, *Mediating Role of Satisfaction with Life in the Effect of Self-Esteem and Education on Social Media Addiction in Turkey*, **Sustainability**, 13(16), 2021, 90-97.
- 102 C.Z. Akkuş, *Investigating the Relationship Among Social Media Addiction Cognitive Absorption And Self-Esteem*. **Malaysian Online Journal of Educational Technology**, 9(2), 2021, 42-51.
- 103 C. H. Huseyin & U. T. Fadime, *Prevalence and Risk Factors of Problematic Internet Use and Its Relationships to the Self-Esteem and Health-Related Quality of Life: Data From a High-School Survey in Giresun Province, Turkey*, **Journal of Addictions Nursing**, 31(4), 2020, 253-260, 10/12, DOI: 10.1097/JAN.0000000000000365
- 104 O. Hatun, & T. Türk-Kurtça, *Examining the Relationship Between Social Support And Social Media Addiction: Role Of Self-Esteem*. **Addicta: The Turkish Journal on Addictions**, 10(2), 2023, 142-147.
- 105 M.A. Omoyemiju & I.M. Omotosho, *Correlates of social anxiety and internet addiction of higher education students*. **International Journal of Research in Education and Science (IJRES)**, 9(4), 2023, 909-919. <https://doi.org/10.46328/ijres.3259>.
- 106 C. L. Thomas; D. J. Ingels; M. A. Kazmi; E. A. Ohu; C. Belle & C. Spitzmueller, *Adolescents' problematic internet use in secondary school students in Lagos, Nigeria: A preliminary examination of individual and family-based predictors and consequences*, **Computers in Human Behaviour**, 132, 2022, 107247, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107247>.
- 107 S. Q. Meng; J. L. Cheng; Y. Y. Li, X. Q. Yang; J. W. Zheng; X. W. Chang; Y. Shi; Y. Chen; L. Lu; Y. Sun; Y. P. Bao & J. Shi, *Global prevalence of digital addiction in general population: A systematic review and meta-analysis*, **Clinical Psychology Review**, 92, 2022, 102128, ISSN 0272-7358, <https://doi.org/10.1016/j.cpr.2022.102128>.

- 108 F.T. Endomba, A. Demina, V. Meille, A.L. Ndoadoumgue, C. Danwang, B. Petit, & B. Trojak, *Prevalence of internet addiction in Africa: A systematic review and meta-analysis*. **Journal of Behaviour Addiction**. 11(3), 2022, 739-753.
- 109 M. Karimy; F. Parvizi; M. R. Rouhani, M. D. Griffiths, B. Armoon & L. Fattah Moghaddam, *The association between internet addiction, sleep quality, and health-related quality of life among Iranian medical students*, **Journal of Addictive Diseases**, 38(3), 2020, 317–325. <https://doi.org/10.1080/10550887.2020.1762826>.
- 110 Q. Hao, W. Peng, J. Wang, Y. Tu, H. Li, & T. Zhu, *The correlation between internet addiction and interpersonal relationship among teenagers and college students based on Pearson's Correlation Coefficient: A systematic review and meta-analysis*. **Frontiers in Psychiatry**, 13(7) 2022, 241-252.
- 111 A. Jaiswal, S. Manchanda, V. Gautam, A.D. Goel, J. Aneja, & P.R. Raghav, *Burden of internet addiction, social anxiety and social phobia among University students, India*. **Journal of Family Medicine and Primary Care**, 9(7), 2020, 3607-3612.
- 112 M. Khosravi, M. Khosrobaki & A. Foroutan, *Personality traits and college students' internet addiction: The mediating roles of general health and self-esteem*, **Scand J Psychol**, 63, 2022, 689-697, <https://doi.org/10.1111/sjop.12848>.
- 113 I. Raju; M. Khushbu; T. Tanuja; D. Poonam; D. Pratiksha & B.Prawartan, *Correlate the Level of Internet Dependence and Associated Behavioural Problems among the Preschooler Children in the Selected Urban Area of Wardha District*, **Journal of Pharmaceutical Research International**, 33 (52B), 2021, 29-36, ISSN 2456-9119.
- 114 S. Meng, J. Cheng, Y. Li, X. Yang, J. Zheng, X. Chang, Y. Shi, Y. Chen, L. Lu, Y. Sun, Y. Bao, & J. Shi, *Global prevalence of digital addiction in general population: A systematic review and meta-analysis*. **Clinical Psychology Review**, 92, 2022, 102-128. <https://doi.org/10.1016/j.cpr.2022.102128>
- 115 C. Ying Ying; S. M. Awaluddin; L. Kuang Kuay; C. Siew Man; A. Baharudin; L. Miaw Yn; N. Sahril; M. A. Omar; N. A. Ahmad & N. Ibrahim, *Association of Internet Addiction with Adolescents' Lifestyle: A National School-Based Survey*, **International Journal of Environmental Research and Public Health**, 18, 2021, 168. <https://doi.org/10.3390/ijerph18010168>.
- 116 J.I. Nwifo, O.O. Ike, M.B. Nwoke, J. Eze, J.C. Chukwuorji, & G. Chineye-Kanu, *Social anxiety and internet addiction among adolescent students in a sub-Saharan African country: Does family functioning make a difference?*, **South African Journal of Psychology**. 9(13) 2022, 123-130.
- 117 D. Z. Berte; F. A. Mahamid & S. Affouneh, *Internet Addiction and Perceived Self-Efficacy Among University Students*, **International Journal of Mental Health and Addiction**, 19, 2021, 162–176, <https://doi.org/10.1007/s11469-019-00160-8>.

- 118 M. A. Omoyemiju, & B. I. Popoola, *Prevalence of internet addiction among students of Obafemi Awolowo University, Ile-Ife, Nigeria*, **British Journal of Guidance and Counselling**, 49(1), 2021, 132-139.
- 119 X. Xie, H. Cheng, & Z. Chen, *Anxiety predicts internet addiction, which predicts depression among male college students: A cross-lagged comparison by sex*. **Frontiers in Psychology**, 19(6), 2023, 448-497.
- 120 S. Sharma; A. Singh; A. Bhatia; A. Kohli & R. Pandey, *Relationship Of Internet Addiction With Social Connectedness, Self Esteem, Anxiety, Depression, And Insomnia*, **Journal of Positive School Psychology**, 1547-1556, 2022.
- 121 Y. Zenebe, K. Kunno & M. Mekonnen, *Prevalence and associated factors of internet addiction among undergraduate university students in Ethiopia: a community university-based cross-sectional study*, **BMC Psychology**, 9(4) 2021, 213-221.
- 122 H. Parlak-Sert & H. Baskale, *Students' increased time spent on social media, and their level of coronavirus anxiety during the pandemic predicted increased social media addiction*. **Health Information & Libraries Journal**, 9(5) 2022, 1–13.
- 123 M. S. Salim, S.A. Fikri, M.S. Ibrahim, N.Z. Ibrahim, *The preliminary study: social anxiety and social media addiction*. **Jurnal Evolusi**, 2 (1) 2021, 1-13.
- 124 B. Emily O'Day; G. Richard Heimberg, *Social media use, social anxiety, and loneliness: A systematic review*, **Computers in Human Behaviour Reports**, 3, 2021, 100070, ISSN 2451-9588, <https://doi.org/10.1016/j.chbr.2021.100070>.
- 125 A. N. Zsido; N. Arato; A. Lang; B. Labadi; D. Stecina & S. A. Bandi, *The role of maladaptive cognitive emotion regulation strategies and social anxiety in problematic smartphone and social media use*, **Personality and Individual Differences**, 173, 2021, 110647, ISSN 0191-8869, <https://doi.org/10.1016/j.paid.2021.110647>.
- 126 E. Şentürk B. Geniş, & B. Coşar, *Social media addiction in young adult patients with anxiety disorders and depression*. **Alpha Psychiatry**, 22(5) 2021, 257-262.
- 127 N.P. Andrews, K. Yogeeswaran, M.J. Wang, K. Nash, D.R. Hawi, & C.G. Sibley, *Is Social Media Use Changing Who We Are? Examining the Bidirectional Relationship Between Personality and Social Media Use*. **Cyberpsychology, Behaviour, and Social Networking**, 9(4) 2020, 231-242.
- 128 R. Servidio; M. D. Griffiths & Z. Demetrovics, *Dark Triad of Personality and Problematic Smartphone Use: A Preliminary Study on the Mediating Role of Fear of Missing Out*, **International Journal of Environmental Research and Public Health**, 18(16), 2021, 8463. <https://doi.org/10.3390/ijerph18168463>.

- 129 K. Kircaburun; İ. Süral; E. March; S. Balta; E. Emirtekin, & M. D. Griffiths, *Study addiction and 'dark' personality traits: a cross-sectional survey study among emerging adults*, **Journal of Addictive Diseases**, 39(3), 2021, 307–315. <https://doi.org/10.1080/10550887.2021.1872469>.
- 130 Y. Zhang; Q. Ding & Z. Wang, *Why parental phubbing is at risk for adolescent mobile phone addiction: A serial mediating model*, **Children and Youth Services Review**, 121, 2021, 105873, ISSN 0190-7409, <https://doi.org/10.1016/j.chilyouth.2020.105873>.
- 131 T. Smith, *An exploratory analysis of the relationship of problematic Facebook use with loneliness and self-esteem: the mediating roles of extraversion and self-presentation*, **Current Psychology**, 42, 2023, 24410–24424, <https://doi.org/10.1007/s12144-022-03505-0>.
- 132 Y. Chen, R. Li, P. Zhang, and X. Liu, *The Moderating Role of State Attachment Anxiety and Avoidance Between Social Anxiety and Social Networking Sites Addiction*. **Psychological Reports**, 0(0) 2019, 1–15.

Chapter Three

Methodology

3.1 Research Design

The study adopted a cross-sectional survey research design. A cross-sectional survey research design is a type of research design in which the researcher investigates the relationships between variables without controlling or manipulating any of them, using data that was collected across different cohorts at a single point in time. This research design was adopted for this study because it allowed the researcher collect data on social anxiety, personality traits, self-esteem, and social media addiction and analyze the relationships between these variables using statistical techniques like regression.

3.2 Population of the Study

The population of this study comprised of undergraduates from University of Jos, Plateau State and Plateau State Polytechnic. This population was chosen by the researcher to examine if this problem of Social Media Addiction exists in the North, as there has been misconceptions about the North, that Northerners are not exposed to these issues. This study was designed to reveal if they use social media in a maladaptive way or not.

3.3 Sample Size and Sampling Techniques

The sample size for this study was determined using the Krejcie and Morgan table for sample calculation. A widely used method for determining sample size, developed by J. William Krejcie and Daryle W. Morgan in 1970. The formula is:

$$n = \frac{\chi^2 \cdot N \cdot p \cdot (1 - p)}{}$$

$$e^2 \cdot (N - 1) + \chi^2 \cdot p \cdot (1 - p)$$

Where:

(χ^2) = Chi Square coefficient when degree of freedom is 1 at 95% level of confidence = 3.841

(n) = is the sample size

(N) = is the population size = 6,500 (Plateau State Polytechnic) + 22,000 (University of Jos) = 28,500

(p) = is the estimated proportion of the population that has particular characteristics (usually set at 0.50 for maximum variability)

(e) = is the desired level of precision (usually set at 0.05 for a 95% confidence level)

Therefore,

$$n = \frac{3.841 * 28,500 * 0.5 * (1 - 0.5)}{((28,500 - 1) * 0.05^2) + 3.841 * 0.5 * (1 - 0.5)}$$

$$n = \frac{27,367.125}{71.2475 + 0.96025}$$

$$n = \frac{27,367.125}{72.20775} = 379.005$$

$$72.20775$$

The sample size calculated for this research was approximately 379 participants. Due to anticipated attrition, the researcher prepared 400 copies of the questionnaire, out of which 397 were retrieved for data entry and analysis.

3.3.2 Sampling Technique

The sampling technique that was adopted for this study included the Convenience Sampling Technique. A convenience sampling technique is a sampling technique where participants are selected based on their availability and proximity to the researcher. In the research, the tertiary institutions and participants were selected based on proximity and availability of the students to the researcher.

3.4 Description of the Research Instruments

The research instrument adopted for this study was the questionnaire and the following scales were used to measure the constructs; Social Phobia Inventory scale, the Ten Item Personality Inventory, Rosenberg Self Esteem scale and the Social Media Addiction scale - student format. The research instrument was named, “Predictors of Social Media Addiction”.

3.4.1 Questionnaire

For this study, structured questionnaire format was used, as the instrument had both the questions and alternative answers provided. It consisted of several sections which were aligned with the objectives and hypotheses of the study.

3.4.2 Social Phobia Inventory Scale

The social phobia inventory scale is a self-report questionnaire developed by Connor in 2000 to assess the severity of social anxiety disorder. It was designed to be a brief and reliable measure of fear, avoidance, and physiological symptoms related to social situations. The development of the social phobia inventory scale involved several stages. Initially, a pool of items was generated based on a review of existing measures of social anxiety and

input from experts in the field. These items were then pilot tested with individuals with social anxiety disorder to ensure clarity and relevance. The final 17-item scale demonstrated good internal consistency; Cronbach's $\alpha = 0.89$ and test re-test reliability; $r = 0.83$ over a period of two weeks.

3.4.3 Ten Item Personality Inventory

This scale was designed to measure the Big Five personality traits. It was developed by Gosling, Renfrow, and Swann in 2003 as a short and efficient measure of personality. Previous measures of personality were often lengthy and time consuming to administer. It was developed through a process of item selection and validation. Items were selected based on their ability to capture the essence of each personality trait while maintaining brevity. The final scale was found to have good internal consistency and test-retest reliability with Cronbach's alpha coefficient ranging from 0.60 to 0.70 for each of the five personality traits.

3.4.4 Rosenberg Self Esteem scale

The scale was developed by Morris Rosenberg in 1965 and has since been the most popular tool for assessing self-esteem in both research and clinical settings. The scale was developed to address the need for a simple and reliable measure of self-esteem. The scale consists of 10 items, five positively worded and five negatively worded, designed to capture both positive and negative aspects of self-esteem. It has demonstrated good internal consistency, with Cronbach's alpha coefficients ranging from 0.8 to 0.9 thereby correlating positively with measures of wellbeing and negatively with measures of depression and anxiety.

3.4.5 Social Media Addiction scale-student form

The scale was developed by Banyai in 2017 as a brief and reliable measure of social media addiction. It was developed based on the components of addiction outlined in the Diagnostic and Statistical Manual of Mental Disorders and the Yale Food Addiction scale. It was developed in response to the growing concern about the potential negative impact of excessive social media use, particularly among students. The scale has demonstrated good internal consistency, with Cronbach's alpha coefficients ranging from 0.84 to 0.9. It has a good convergent validity with other measures of psychological distress.

Section A of the questionnaire consisted of items relating to demographic information of research participants such as, age, gender, ethnicity, religion, parents' socioeconomic status, family type (polygamy, monogamy), parents' marital status, and educational level.

Section B consisted of items from Social Media Addiction scale. It is a 5-point Likert type scale consisting of 29 items, to measure social media addiction. The response mode ranges from 1 (strongly disagree) to 5 (strongly agree).

Section C consisted of items from the Social Phobia Inventory scale. It is a 17-item scale that measures social anxiety. Items are rated on a 5-point scale ranging from 0 "not at all" to 4 "extremely". It consists of three domains (fear, avoidance and physiological arousal) and consists of questions aimed at assessing each of these domains.

Section D consisted of items from the Ten Item Personality Inventory (TIPI). It is a 10 item self-report measure of the Big Five personality dimensions of agreeableness, conscientiousness, neuroticism, extraversion and openness. Each of the 10 items consists of two descriptors, and each Big Five personality trait is measured by two items. The items in

the TIPI are rated on a 7-point Likert -type scale ranging from 1(strongly disagree) to 7(strongly agree).

Section E consisted of items from the Rosenberg Self Esteem scale. It is a 10-item scale that measures global self-worth by measuring both positive and negative feelings about the self. All items are answered using a 4-point Likert scale format ranging from 1 (strongly agree) to 4 (strongly disagree).

3.5 Validity of Research Instrument

Items on the Social Media Addiction Scale-Student form (SMAS-SF) adequately represent the construct of interest. A study conducted in South Western Nigeria found that the SMAS-SF is a valid measure of social media addiction among adult samples. The study used a sample of 300 adults aged 18-35 years and found that the SMAS-SF demonstrated good construct validity.

Items on the Social Phobia Inventory scale adequately represent the construct of interest. It was developed based on comprehensive reviews of existing literature on social anxiety and consultations with experts contribute to its validity.

Items on the Ten Item Personality Inventory (TIPI) adequately represent the construct of interest. Relevant literatures reviewed found that the TIPI has excellent psychometric properties and is therefore valid for carrying out studies on personality in Nigeria.

Items on the Rosenberg Self Esteem (RSE) scale adequately represent the construct of interest. The RSE demonstrates concurrent, predictive and construct validity using known groups. The RSE correlates significantly with other measures of self-esteem, including the Coopersmith Self Esteem Inventory. In addition, the RSE correlates in the predicted direction

with measures of depression and anxiety (negative direction). This is an indicator of construct validity.

3.6 Reliability of Research Instrument

Items on the Social Phobia Inventory scale are reliable in accordance to the study conducted in Nigeria. The psychometric properties included excellent test-retest reliability (0.78-0.89) and internal consistency (0.87-0.94).

Items on the Ten Item Personality Inventory are reliable as indicated by results of a study conducted in Nigeria. It demonstrated excellent internal consistency with a Cronbach Alpha value of 0.71.

Items on the Rosenberg Self Esteem scale are reliable. According to results of a study, it demonstrates a Guttman scale coefficient of reproducibility of .92, indicating excellent internal consistency. Test re-test reliability over a period of two weeks reveals correlations of .85 and .88, indicating excellent stability.

Items on the Social Media Addiction scale - Student form (SMAS-SF) is reliable from a study conducted, which found that the SMAS-SF demonstrated good internal consistency and test re-test reliability.

3.7 Method of Data Collection

Using the questionnaire, data was collected through self-administered questionnaire to ensure a high response rate and to enable the researcher offer explanations on some questions if need arises.

3.8 Method of Data Analysis

The data obtained from this research were analysed using the Statistical Package for Social Sciences (SPSS) version 25.0. Descriptive statistics such as frequency distribution, mean and standard deviation were computed to summarize the demographic information of the respondents.

Hypothesis One which states that Social anxiety will significantly predict social media addiction among undergraduates in Plateau State was analyzed using Regression Analysis.

Hypothesis Two which states that Undergraduates' personality traits will significantly influence social media addiction was analyzed using Regression Analysis.

Hypothesis Three which states that self-esteem will significantly predict social media addiction among undergraduates in Plateau State was analyzed using Regression Analysis.

Hypothesis Four which states that demographic variables (age and gender) will significantly influence social media addiction among undergraduates in Plateau State was analysed using Analysis of Variance (ANOVA) and T-test of independent samples.

3.9 Ethical Approval

Ethical principles such as informed consent, anonymity and confidentiality were taken seriously in this study. Participants of this study were properly informed on the purpose of the research, which is to contribute to the body of knowledge. Where necessary the permission of the ruling authorities or leadership was sought for smooth running of the research.

Endnotes

1. C. R. Kothori, *Research Methodology: Methods and Techniques*, New Delhi, New Age International Publisher Limited, ISBN 9788122415223, 8122415229, 2004, pp. 2-3.
2. N. Asika, *Research Methodology in Behavioural Sciences*, Ibadan, Longman Nigeria PLC, 1991.
3. R. V. Krejcie & D. W. Morgan, *Determining Sample Size for Research Activities*, **Educational and Psychological Measurement**, 30,(3) 1970, pp. 607-610, <https://doi.org/10.117/001316447003000308>

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Chapter Four

Results and Discussion of findings

This chapter presents the analysis of the data collected on the respondents. The results were analyzed using descriptive statistics of frequency distribution and while inferential statistics of regression analysis, t-test and analysis of variance were used to test the hypotheses at 0.05 level of significance.

4.1 Demographic Data Analysis

Table 4.1a: Socio Demographic Information (n = 397)

	Frequency	Percent
Institution		
University of Jos	266	67.0
Plateau State Polytechnic	131	33.0
Age		
15-20 years	79	19.9
21-30 years	295	74.3
31-40 years	19	4.8
41-50 years	4	1.0
Gender		
Female	227	57.2
Male	170	42.8
Religion		
Christianity	366	92.2
Islam	31	7.8

Source: Author's Field Work, 2024

Table 4.1a, showing the distribution of the respondents by institution, revealed that 266 (67%) of respondents are from University of Jos and the remaining 131 (33%) are from Plateau State Polytechnic. The age distribution of the respondents is highlighted in the Table above. Their ages ranged from 15 to 50 years. The distribution of gender show that majority 277(57.2%) were female while the remaining 170 (42.8%) were male. Majority, 295(74.3%)

of the respondents fall within the age bracket of 21-30 years, 79(19.9%) of the respondents are within ages of 15-20 years, 19 (4.8%) of the respondents are within age of 31-40 years, while 4(1.0%) are within ages 41-50 years respectively. The distribution of the respondents by religion shows that majority of the respondents 366 (92.2%) practice Christianity and 31 (7.8%) of the respondents practice Islam.

4.2 Presentation of Data

Table 4.2.1: Socio Demographic Information (n = 397)

Variable	Frequency	Percent
Parents' employment status		
Unemployed	59	14.9
Self-employed	208	52.4
Government Institute	94	23.7
Private Institute	36	9.1
Family type		
Polygamy	113	28.5
Monogamy	284	71.5
Parents' marital status		
Married	353	88.9
Divorced	21	5.3
Separated	23	5.8
Level of study		
100 level	42	10.6
200 level	40	10.1
300 level	39	9.8
400 level	123	31.0
500 level	22	5.5
ND I	41	10.3
ND II	22	5.5
HND I	7	1.8
HND II	61	15.4

Source: Author's Field Work, 2024

Table 4.1b, showing the distribution of the respondents by parent's employment status, revealed that parents who were unemployed are 59 (14.9%), 208 (52.4%) of the parents are

self-employed, 94 (23.7%) of the parents work in government institutions, 36 (9.1%) of the parents work in private institution. The analysis also reveals that 284(71.5%) are from monogamous family and 113 (28.5%) are from polygamous family. Respondents' parents' marital status shows that 353 (88.9%) are married, 21 (5.3%) are divorced, and 23 (5.8%) are separated. The respondents' level of study shows that 42 (10.6%) are in 100 level, 40(10.1%) are in 200 level, 39 (9.8%) are in 300 level, 123 (31%) are in 400 level, while 22 (5.5%) are in 500 level. The analysis also shows that 41 (10.3%) are in ND 1, 22 (5.5%) are ND II, 7(1.8%) are in HND 1, and 61 (15.4%) are in HND II.

4.2.1 Research Questions

Question One: What is the relationship between levels of social anxiety and the likelihood of developing social media addiction?

In order answer this question, the data were analyzed using simple linear Regression and the result indicted that social anxiety had no significant influence on social media addiction irrespective of what social anxiety level one has, this means that undergraduates' social anxiety does not predict social media addiction. This question directly aligns with hypothesis one which predicted that social anxiety would significantly influence social media addiction. This result is however different from what some existing studies found as we can see in the empirical review, as all the review on social anxiety or even anxiety disorder revealed statistically significant influence or relationship between social anxiety and social media addiction, or problematic internet usage. The current result does not negate existing findings, as variation in culture and technological differences might have impacted the current study's findings. The indication that university students who scored high on anxiety tended to engage in excessive social media usage or problematic internet usage, which is

contrary to the findings of the current study may probably be due to the forgoing reasons. Due to the unanimity of existing literature pointing to the impact of social anxiety on social media addiction, it is highly recommended to consider factors such as sampling, tools of administration, social desirability bias and a host of other that may have upset the outcome of the current research. Beyond the Nigerian population, many other studies arrived at results that do not align with the result of this hypothesis and thus, answer to our first research question. Finally, the potential impact of social anxiety on social media addiction or problematic internet use is abundantly documented as the literature suggest, whilst many originate outside the African continent, let alone Nigeria. The implication was that, as social anxiety rises, social media addiction is bound to go up, placing people at risk of social relationships and function problems. In the case anxiety disorders, which are not directly under the purview of the current research, problematic internet usage is prevalent among those with anxiety disorders in comparison with those without the condition. Although the findings do not point to social anxiety influencing social media addiction, anxiety being one of the most common mental health issues deserves attention and further probing, cutting across the various regions of the country and beyond the country for proper understanding of the relationship that exists between the variables.

Question Two: Are specific personality traits such as extroversion, introversion and neuroticism more strongly associated with social media addiction?

In order to answer the second research question which aligns with hypothesis two, which stated that personality traits will have a significant joint predictive influence on social media addiction, Multiple Regression analysis was carried out on the research data, with results indicating that undergraduates' personality traits had a significant joint predictive influence

on social media addiction. The implication is that undergraduates' personality traits predicted social media addiction and accounted for 3.2% variance observed in social media addiction. Also, in terms of the dimensions (different traits) the findings indicated that the traits of extraversion and conscientiousness had significant independent influence on social media addiction. This is an indication that higher extraversion predicts lower levels of social media addiction, and higher conscientiousness predicts lower levels of social media addiction. However, neuroticism, agreeableness and openness had no significant independent influence on social media addiction. The research question probing the influence of personality traits therefore has varied answers depending on which dimension of personality one is looking at, based on the Five-Factor Model of personality. A further study of the results based on the dimensions of personality traits indicated that only extraversion and conscientiousness significantly and independently influenced social media addiction, with openness, agreeableness and neuroticism having no significant influence whatsoever. This is to be expected because, the results of previous studies are not in complete agreement, as there are discrepancies in the literature based on the Five Factor model. Although we may have at least answered our research, there is need to explore the dimensions of the Big-Five in more depths before any reasonable conclusions can be made. Many challenges arise during research data collection, as the research process is one without flaws. Again, research in this domain is still very much incipient, and thus only modest conclusion should be drawn by researchers about findings. Although there may be series of inconsistencies in the data available on these concepts, our knowledge of the constructs is enhanced. To close the answer for this research, though just beginning with the Nigerian population, outside the Sub-Saharan Africa and the Five Factor model, it can be observed in the literature that the

Dark Triad (Machiavellianism, Narcissism and Psychopathy) all significantly predicted social media addiction. Again, it is also reported in the literature that personality disorder traits in healthy controls could potentially predict social media addiction. The implication being that personality traits outside the normal traits also have predictive influence on problematic internet usages. This research contributed to our nuanced understanding of the damaging consequences if interventions are not tailored with individual personalities in mind. Strategies for interventions could seamlessly incorporate available research data in the development of psychological interventions to curb excessive and problematic social media usages.

Question Three: Does self-esteem have a predictive outcome on social media addiction?

The data analysis which answered this question was carried out using Multiple Regression and the results indicated that self-esteem had significant predictive influence on social media addiction. This is the finding in hypothesis three which predicted that self-esteem would have a significant influence on social media addiction. The outcome of the analysis which is the answer to this research question three indicated that self-esteem significantly influenced social media addiction. This implies that undergraduates' self-esteem significantly predicted social media addiction, meaning undergraduate who had low self-esteem tended to be addicted to social media. Undergraduates' self-esteem accounted for 1.6% variance observed in social media addiction. The analysis further revealed that higher levels of self-esteem predicted lower levels of social media addiction. Therefore, low self-esteem could potentially place individuals at risk of social media addiction. Hence, undergraduates with diminished self-esteem could be unusually more prone to social media addiction. Extant literature is in agreement with the findings of the current study. Conclusions drawn by previous researchers

closely mirror the current study's about the impact of self-esteem on social media addiction. The current study's findings among undergraduate students are only further confirmation of the previous literature, albeit in a new population and culture. Self-esteem has long been implicated in much other problematic behaviour, not limited to social media usages. To put the current study in the context of existing corroborative evidence, many previous studies revealed similar conclusions. In many studies like the current one, repeated reports on the negative consequences of lowered self-esteem and social media addiction, individuals who felt concerned about appearing unworthy while outside were vulnerable to social media addiction. Unlike in the current study, previous studies also reported that women who had high narcissism trait and low self-esteem were more vulnerable to social media addiction while others appeared to be more addicted to social media as a result of mood changes. Interestingly, a certain study carried out in Nigeria reported that excessive social media users were also more socially constrained and had lower self-esteem levels¹. Another research with similar results as the current study stated that increased self-esteem in women, single and young had a negative impact on social media addiction, indicating a drop in social media addiction in the women². Interventions based on evidence usually have more promising results and better evaluation approaches. Therefore, understanding the impact of self-esteem which is a major contribution made by this study could potentially change the trajectory of intervention efficacy, not just among undergraduates, but various other demographics.

Question Four: Do demographic characteristics (age and gender) demonstrate an influence on social media addiction?

Hypothesis four which answered the last research question stated that demographic variables of age and gender will significantly influence social media addiction. The results of the

analysis however did not support the prediction that demographic variables (age and gender) would significantly influence social media addiction. The analysis indicated there was no significant difference between female undergraduate (Mean = 91.36) and male undergraduates (Mean = 89.51) on social media addiction. The result further revealed that female undergraduates exhibited similar addiction to social media in comparison to their male undergraduate counterparts. Neither did the result agree with prediction that there would be significant difference between age group of undergraduates in Plateau State on social media addiction, as there was no difference. That is to say that age and gender of undergraduates did not significantly influence social media addiction. Therefore, age and gender had no significant influence on social media addiction in the current research. On the contrary, previous research found gender differences on social media addiction, as females were more vulnerable to social media addiction and problematic internet use, in comparison to their male counterpart³. The findings of the current study only but serve as a stepping stone for more research on the constructs utilizing more sophisticated tools of data collection and cutting across different demographics, specifically, because existing literature reports diametrically different findings from the current research, which could attributed to errors during the research process or actual variations due to differences in culture and tools of administration, hence replication is desired.

4.2.2 Hypotheses

Hypothesis One: Social anxiety will significantly predict social media addiction among undergraduates in Plateau State was analyzed using simple linear regression analysis as shown in Table 4.2 below:

Table 4.2: Summary of linear regression showing influence of social anxiety on social media addiction

Model		SS	df	MS	β	R ²	F	P
1	Regression	405.574	1	405.574	.057	.003	1.269	> .05
	Residual	126257.908	395	319.640				
	Total	126663.481	396					

Dependent Variable: Social media addiction

Source: Author's Fieldwork, 2024

The results in Table 4.2 indicate that social anxiety has no significant influence on social media addiction ($\beta = .057$, $R^2 = .014$, $F(1, 395) = 1.269$, $P > .05$), this means that undergraduates' social anxiety does not predict social media addiction. Therefore, hypothesis one is rejected.

Hypothesis Two: Undergraduates' personality traits will significantly influence social media addiction was analyzed using regression analysis as shown in Table 4.3 below:

Table 4.3: Summary of multiple regression showing influence of personality traits on social media addiction

Predictors	B	T	P	R	R ²	F	P
Extraversion	-.112	-2.064	< .05				
Conscientiousness	-.106	-1.906	< .05				
Agreeableness	.011	.179	> .05	.180 ^a	.032	2.579	< .05
Neuroticism	.041	.696	> .05				
Openness	-.072	-1.216	> .05				

Dependent Variable: Social media addiction

Source: Author's Field Work, 2024

The results in Table 4.3 indicate that undergraduates' personality traits have a significant joint predictive influence on social media addiction ($R = .180$, $R^2 = .032$, $F(5, 385) = 2.58$, $P < .05$). This means that undergraduates' personality traits predicted social media addiction and accounted for 3.2% variance observed in social media addiction. Also, the results in Table 4.3 indicate that extraversion personality trait ($\beta = -.112$, $t = -2.064$, $P < .05$) and conscientiousness ($\beta = -.106$, $t = -1.906$, $P < .05$) have a significant independent influence on social media addiction. This means that higher levels of extraversion predict lower levels of social media addiction, and higher levels of conscientiousness predict lower levels of social media addiction. However, agreeableness, neuroticism and openness have no significant independent influence on social media addiction and therefore do not predict social media addiction. Hypothesis two is therefore partially accepted.

Hypothesis Three: self-esteem will significantly predict social media addiction among undergraduates in Plateau State was analyzed using regression analysis as shown in Table 4.4:

Table 4.4: Summary of Linear regression showing influence of self-esteem on social media addiction

Model		SS	df	MS	β	R^2	F	p
1	Regression	2074.204	1	2074.204	-.128	.016	6.566	< .05
	Residual	124140.515	393	315.879				
	Total	126214.719	394					

Dependent Variable: Social media addiction

Source: Author's Fieldwork, 2024

The results in Table 4.4 indicates that self-esteem has significant influence on social media addiction ($\beta = -.128$, $R^2 = .016$, $F(1, 393) = 6.566$, $P < .05$). This means that undergraduates' self-esteem significantly predicted social media addiction, as undergraduates who have low self-esteem are more likely addicted to social media. Self-esteem of undergraduates accounted for 1.6% variance observed in social media addiction. The results further depicts that higher levels of self-esteem predict lower levels of social media addiction. Therefore, hypothesis three is accepted.

Hypothesis Four: Demographic variables (age and gender) will significantly influence social media addiction among undergraduates in Plateau State. The result is presented in the following tables.

Table 4.5: Summary of One-Way ANOVA showing difference between age group of undergraduates on social media addiction

	SS	df	MS	F	P
Between Groups	612.593	3	204.198	.637	> .05
Within Groups	126050.889	393	320.740		
Total	126663.481	396			

Dependent Variable: Social media addiction

Source: Author's Fieldwork, 2024

The result from Table 4.5 shows that there was no significant difference in social media addiction between the age groups of undergraduates in Plateau State; $F(3, 393) = .637$, $p > .05$. This indicated that age of undergraduates does not significantly influence social media addiction.

Table 4.6: Summary of t-test of independent showing difference between male and female on social media addiction

	Gender	N	Mean	SD	df	T	p
Social media addiction	Female	227	91.36	18.99	395	1.017	> .05
	Male	170	89.51	16.28			

The results in Table 4.6 show that there is no significant difference between female undergraduates (Mean = 91.36) and male undergraduates (Mean = 89.51) on social media addiction ($t(397) = 1.017, p > 0.05$). The result shows that female undergraduates exhibit similar addiction to social media with their male undergraduate counterparts. Hypothesis four is therefore rejected.

4.3 Discussion of Findings

Hypothesis one stated that social anxiety will significantly influence social media addiction among undergraduate students in Plateau state. The result indicated that anxiety did not significantly influence social media addiction among undergraduate students. That means that the influence of social anxiety was not statistically significant. This result differs sharply from what is obtainable in the empirical review, as all the review on social anxiety or even anxiety disorder revealed statistically significant influence or relationship between social anxiety and social media addiction, or problematic internet usage. For instance, even in the Nigerian context and interestingly among a similar demography, anxiety significantly predicted social media addiction or problematic internet usage³. The findings of the study indicated that university students who scored high on anxiety tended to engage in excessive social media usage or problematic internet usage, which is contrary to the findings of the

current study. Due to the consensus in existing literature that pointed to the impact of social anxiety on social media addiction, it is pertinent to consider factors such as sampling, tools of data collection, social desirability and many others that may have caused changes in outcome of the current research.

Outside the Nigerian context, many other studies arrived at results that disagree with the finding of this hypothesis. To put them in context, previous studies agreed that social anxiety has a statistically significant association with social media addiction or problematic internet use^{4,5,6}. Furthermore, it was reported that social anxiety is a potent factor that could trigger internet addiction if left unchecked⁷. A host of other studies followed the same path as the previous put it in milder terms, that social anxiety is a pathway through which maladaptive cognitions influence social media addiction⁵. Again, it was reported that socially anxious people prefer to interact with others via the social media or internet, as they are not comfortable with face to face or physical encounters, which increases the potential for social media addiction or problematic internet usage⁸. The potential influence of social anxiety on social media addiction or problematic internet use has been well documented as seen in the literature, with a study reporting a positive association between social anxiety and social media addiction⁹. The implication was that, as social anxiety increases, problematic internet usage or social media addiction skyrocketed. Even COVID-19 anxiety was found to influence social media addiction and problematic internet usage during the pandemic¹⁰. To wrap it up, anxiety disorders have also proved to be potent factors that predict problematic internet usage¹¹. Therefore, future replication of the current study in different regions of the country is warranted, so as to understand the rationale for the contrary finding of the study.

Hypothesis two stated that personality traits will have a significant joint predictive influence on social media addiction. Result of the analysis revealed that personality traits indeed had significant joint predictive influence on social media addiction as predicted by the hypothesis. A close look at the dimensions of personality traits revealed that only extraversion and conscientiousness had significant independent influence of social media addiction, with agreeableness, openness and neuroticism appearing to have no significant influence whatsoever. This is not surprising because, even the results of previous studies are not unanimous as there are differences in their reporting based on the Five Factor model, otherwise known as the Big Five. In some previous studies, all the dimensions showed significant influence on social media addiction^{12,13}. Furthermore, others reported observing influence on some but not all the dimensions with only a few without influence^{14, 15,16}. Yet still, other studies reported no influence on some with other dimensions having significant influence^{17, 18,19}. It is worth mentioning that the findings of the current study partially corresponds with previous studies with others reporting way more dimensional influence than the current study^{12, 18,20}. These differences might have been orchestrated by demography and tool variations, and in other instances participant as well as researcher biases. These differences also point to the fact that many factors play-out during the research process and where the research in the domain is still incipient, only modest conclusion should ever be drawn by researchers about their findings. Although there may be series of inconsistencies in the available, notwithstanding our knowledge of the domain stands enhanced. Interestingly, one study reported that the personality dimensions of extraversion and conscientiousness appeared to be protective factors against social media addiction²¹. Outside the Five Factor model, we also observed in the literature that the Dark Triad (Machiavellianism, Narcissism

and Psychopathy) all predicted social media addiction²². Again, it has also been reported that even personality disorders traits in healthy controls predicted social media addiction¹¹. The implication is that personality traits have potent predictive influence on not only social media addiction, but also on other problematic internet related activities. It is satisfying to know that even though wide spread research in the area is still in the offing, this study would indicate the beginnings of research with a view to nuanced understanding of the adverse nature of the problem at hand, and possible strategy development to curb excessive and problematic social media and internet usages.

Hypothesis three, which predicted that self-esteem will have a significant influence on social media addiction was confirmed and accepted, as result of the analysis revealed that self-esteem significantly influenced social media addiction. The implication being that low self-esteem potentially places individuals in danger of social media addiction. Therefore, undergraduates with low self-esteem are more susceptible or vulnerable to social media addiction or problematic internet use. Existing literature is consistent in the conclusion that the researchers tended to draw about the impact of self-esteem on social media addiction or problematic internet usage. The current study confirms these conclusions to be so in the current demography, and adds to the voices of existing researchers¹⁸. To put the current study in the perspective existing corroborative data, a look at some of the studies showing similar conclusions in thus warranted. In a study with a similar conclusion on the impact of lowered self-esteem and social media addiction, it reported that individuals who were concerned about appearing unworthy while outside were prone to social media addiction²³. Women who had high narcissism trait and low self-esteem were reported to be more vulnerable to social media addiction and others appeared to be more addicted to social media as a result of mood

changes²⁴. A similar corroborating study, carried out in Nigeria reported that excessive social media users were also more socially constrained and had lower self-esteem levels¹. Another research with similar findings as the current study stated that increased self-esteem in women, single and young had a negative impact on social media addiction, indicating a drop in social media addiction in the women². Furthermore, others reported that self-esteem predicted daily social media usage²⁵ and that social support and self-esteem were negatively correlated with social media addiction²⁶. The negative influence of self-esteem has been abundantly demonstrated by not just the current study, but also by using corroborative research evidence from extant literature on the construct, an indication that undergraduate, and by extension individuals with low self-esteem are in danger of social media addiction or problematic internet usage, which should signal urgency of action.

Hypothesis four which is the last stated that demographic variables of age and gender will significantly influence social media addiction; the result of the analysis however did not support the hypothesis. Therefore, age and gender had no significant influence on social media addiction in the current study. Contrary to the forgoing, previous study reported gender differences on social media addiction, as females were more prone to social media addiction and problematic internet usage, compared to their male counterpart³. The findings of the current study need replication with more sophisticated tools of data collection and varying demographics, especially because existing literature disagrees with the current findings, which could be pointing to errors in the process or actual differences in population.

Endnotes

- 1 Awobamise, Y. Jarrar, & G.E. Nweke, *Social Communication Apprehension, Self-Esteem And Facebook Addiction Among University Students In Uganda*. **Contemporary Educational Technology**, 14(2), 2022, 354-363.
- 2 O. Koçak, E. Ilme, M.Z. Younis, *Mediating Role of Satisfaction with Life in the Effect of Self-Esteem and Education on Social Media Addiction in Turkey*, **Sustainability**, 13(16), 2021, 90-97.
- 3 C. Uchegbu, J. U. Igiriogu & C. O. Ngala, *Personality Traits, Social Anxiety And Gender As Predictors Of Smartphone Addiction Among Students In Tertiary Institutions*. **African Journal of Social and Behavioural Sciences (AJSBS)** 11 (1), 2021, 126-136.
- 4 M. Khosravi, M. Khosrobaki & A. Foroutan, *Personality traits and college students' internet addiction: The mediating roles of general health and self-esteem*, **Scandinavian Journal of Psychology**, 63, 2022, 689-697, <https://doi.org/10.1111/sjop.12848>.
- 5 D. Z. Berte; F. A. Mahamid & S. Affouneh, *Internet Addiction and Perceived Self-Efficacy Among University Students*, **International Journal of Mental Health and Addiction**, 19, 2021, 162–176, <https://doi.org/10.1007/s11469-019-00160-8>.
- 6 S. Sharma; A. Singh; A. Bhatia; A. Kohli & R. Pandey, *Relationship Of Internet Addiction With Social Connectedness, Self Esteem, Anxiety, Depression, And Insomnia*, **Journal of Positive School Psychology**, 1547-1556, 2022.
- 7 C. L. Thomas; D. J. Ingels; M. A. Kazmi; E. A. Ohu; C. Belle & C. Spitzmueller, *Adolescents' problematic internet use in secondary school students in Lagos, Nigeria: A preliminary examination of individual and family-based predictors and consequences*, **Computers in Human Behavior**, 132, 2022, 107247, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107247>.
- 8 D. Z. Berte; F. A. Mahamid & S. Affouneh, *Internet Addiction and Perceived Self-Efficacy Among University Students*, **International Journal of Mental Health and Addiction**, 19, 2021, 162–176, <https://doi.org/10.1007/s11469-019-00160-8>.
- 9 N. Zsido; N. Arato; A. Lang; B. Labadi; D. Stecina & S. A. Bandi, *The role of maladaptive cognitive emotion regulation strategies and social anxiety in problematic smartphone and social media use*, **Personality and Individual Differences**, 173, 2021, 110647, ISSN 0191-8869, <https://doi.org/10.1016/j.paid.2021.110647>.

- 10 H. Jordan; V. Zeigler-Hill & J. J. Cameron, *Self-Esteem*. In: Zeigler-Hill, V., Shackelford, T.K. (eds) *Encyclopedia of Personality and Individual Differences*, Springer, Cham, 2020, https://doi.org/10.1007/978-3-319-24612-3_1169.
- 11 M. S. Salim, S.A. Fikri, M.S. Ibrahim, N.Z. Ibrahim, *The preliminary study: social anxiety and social media addiction*. **Journal of Evolution**, 2 (1) 2021, 1-13.
- 12 N.P. Andrews, K. Yogeeswaran, M.J. Wang, K. Nash, D.R. Hawi, & C.G. Sibley, *Is Social Media Use Changing Who We Are? Examining the Bidirectional Relationship Between Personality and Social Media Use*. **Cyberpsychology, Behavior, and Social Networking**, 9(4) 2020, 231-242.
- 13 U. S. Indri; A. Salma; P. D. Fanni & N. Endah, *Personality and Social Media Addiction among College Students*, *Advances in Social Science, Education and Humanities Research: 2nd Social and Humaniora Research Symposium (SoRes 2019)*, 2020, 376-379
- 14 Ö. A. Tekin, & A.A. Turhan, *Does Social Media Addiction Differ by Personality Traits? A Study on Undergraduate Tourism Students*. **Journal of Tourism and Services**, 22(12), 2020, 23-41. doi: 10.29036/jots.v1222.220.
- 15 Z.Liao, Q. Huang; S. Huang; L. Tan; T. Shao; T. Fang; X. Chen; S. Lin; J. Qi; Y. Cai & H. Shen, *Prevalence of Internet Gaming Disorder and Its Association With Personality Traits and Gaming Characteristics Among Chinese Adolescent Gamers*, **Frontiers in Psychiatry**, 11, 2020, 598585, doi: 10.3389/fpsy.2020.598585.
- 16 Y. Sun & Y. Zhang, *A review of theories and models applied in studies of social media addiction and implications for future research*, **Addictive Behaviors**, 114, 2021, 106699, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2020.106699>.
- 17 V. P. Sheinov, *Social Media Addiction and Personality: A Review of Research*, **RUDN Journal of Psychology and Pedagogics**, 18(3), 2021, 607-630, doi: 10.22363/2313-1683-2021-18-3-607-630.
- 18 K. Kircaburun; İ. Süral; E. March; S. Balta; E. Emirtekin, & M. D. Griffiths, *Study addiction and 'dark' personality traits: a cross-sectional survey study among emerging adults*, **Journal of Addictive Diseases**, 39(3), 2021, 307–315. <https://doi.org/10.1080/10550887.2021.1872469>.
- 19 Q. Agbaria & A. A. Mokh, *Coping with Stress During the Coronavirus Outbreak: the Contribution of Big Five Personality Traits and Social Support*, **International Journal of Mental Health and Addiction**, 20, 2022, 1854–1872, <https://doi.org/10.1007/s11469-021-00486-2>.

- 20 M. P. Lin, *Prevalence of Internet Addiction during the COVID-19 Outbreak and Its Risk Factors among Junior High School Students in Taiwan*, **International Journal of Environmental Research and Public Health**, 17, 2020, 8547, <https://doi.org/10.3390/ijerph17228547>.
- 21 C. N. Neculai, *The Relation between the Dark Triad and Social Media Addiction, with the Moderating Role of Social Anxiety in Young People*. **Journal of Experiential Psychotherapy**, 23(3) 2020, 91-98.
- 22 M. Chegeni, P.M. Shahrabaki, M.E. Shahrabaki, N. Nakhaee, & A. Haghdooost, *Why people are becoming addicted to social media: A qualitative study*. **Journal of Education and Health Promotion**, 10(1), 2022, 175-183. https://doi.org/10.4103/jehp.jehp_1109_20
- 23 Ş. Balcı & S. Y. Karaman, *Social Media Usage, Self-Presentation, Narcissism, and Self-Esteem as Predictors of Instagram Addiction: An Intercultural Comparison*, **Erciyes İletişim Dergisi**, 7(2), 2020, 1213-1239. <https://doi.org/10.17680/erciyesiletisim.719895>.
- 24 Awobamise, Y. Jarrar, & G.E. Nweke, *Social Communication Apprehension, Self-Esteem And Facebook Addiction Among University Students In Uganda*. **Contemporary Educational Technology**, 14(2), 2022, 354-363.
- 25 O. Koçak, E. Ilme, M.Z. Younis, *Mediating Role of Satisfaction with Life in the Effect of Self-Esteem and Education on Social Media Addiction in Turkey*, **Sustainability**, 13(16), 2021, 90-97.
- 26 O. Hatun, & T. Türk-Kurtça, *Examining the Relationship Between Social Support And Social Media Addiction: Role Of Self-Esteem*. **Addicta: The Turkish Journal on Addictions**, 10(2), 2023, 142-147.
- 27 M.A. Omoyemiju & I.M. Omotosho, *Correlates of social anxiety and internet addiction of higher education students*. **International Journal of Research in Education and Science (IJRES)**, 9(4), 2023, 909-919. <https://doi.org/10.46328/ijres.3259>.

Chapter Five

Conclusion

5.1 Summary of Findings

This section discusses the findings of the current study in the context of existing literature on the variables as reviewed earlier in a previous chapter. The study utilized a cross-sectional quantitative survey method to investigate the influence of social anxiety, personality traits and self-esteem on social media addiction as well as differences in demographic variables of age and gender on the construct among undergraduate students in Plateau state. In order to investigate the phenomenon, four hypotheses were tested using data obtained from the demography, and the results are discussed thus, with specific and appropriate reference to existing literature on the variables.

The impact of social anxiety, personality traits and self-esteem on social media addiction among undergraduate students in Plateau State has been investigated in the current study through the cross-sectional quantitative survey method.

Demographic variables of age and gender and an independent factor; social anxiety had no significant influence on social media addiction. However, existing literature reported on the contrary, this may be as a result of differences in instruments, researcher or participant biases or inadequate sampling. Therefore, more probing is required in the form of future research incorporating other factors and possible replications.

Personality traits had joint predictive influence on social media addiction which aligns with existing data on the construct, however only the traits of extraversion and conscientiousness had independent predictive influence on social media addiction. Although,

previous research indicated that all traits in the Five Factor model were significant predictors of social media addiction. This calls for more research in this area while strategies tailored according to each trait or dimension to tackle social media addiction and problematic internet use are been developed and put in place to tame the tide of social media addiction and excessive internet usage.

Self-esteem proved to be a potent predictive factor of social media addiction and problematic internet usage not only in the findings of the current research, but also abundantly in existing literature. This calls for concerned because, when an individual feels less and less worthy of themselves, they become a burden not only upon themselves but the society at large. Developing and implementing self-esteem and self-worth building strategies among not only the undergraduate demography, but across the population could potentially curtail social media excesses and problematic internet usages.

Overall, this study is an indication though research interest in social media addiction is merely burgeoning, gradually a wealth of data representing not only Nigerian but the African population will soon accumulate and the understanding of the mechanisms and processes implicated in the phenomenon will drastically be changed. This in turn will stimulate researchers of indigenous origin to formulate policies, strategies, assessment and intervention approaches that are a better suited for our cultures in Nigeria, and Africa as whole. The contributions of the current study therefore, heavily depends on whether data gleaned from the effort is truly and effectively put to good use, for it is in the application that the most can be made of the research process and outcome.

5.2 Conclusion

This research utilized a cross-sectional design to investigate the influence of social anxiety, personality traits and self-esteem on social media addiction among undergraduate students in Plateau State. Four (4) hypotheses were tested, answering four aligned research questions. Social anxiety did not influence undergraduates' social media usage, while personality traits had a joint significant influence on undergraduates' social media addiction tendencies. More specifically, the Big-Five dimensions of Extraversion and conscientiousness had significant independent influence on social media addiction among undergraduate students, with higher extraversion increasing undergraduates' vulnerability to social media addiction, while higher levels of conscientiousness served as a safeguard against social media addiction. The dimensions of agreeableness, openness and neuroticism had no influence on social media addiction among undergraduates in the current study. Furthermore, self-esteem also had a significant influence on social media addiction as lowered self-esteem predicted social media addiction among undergraduates. Finally, gender and age were insignificant in their predictive influence. This research work calls for further probe of the constructs using different demographics to better understand the influence of these variable and gather data that would inform tailored interventions, to more effectively combat the rise in social media addiction, not just among undergraduates but all those who have been hit by the social media addiction pandemic.

5.3 Recommendations

1. Social media addiction is a complex phenomenon, owing to the fact that there has been rapid proliferation of social media applications and internet related activities with high potential for not only abuse and addiction, but real-world harm to other. It is thus highly recommended that there should be expedited effort to curb the raging tide of excessive social media and internet usage, while trying through research to uncover the mechanism that are responsible for initiating, developing and sustaining the addiction to social media or internet.
2. The current study revealed a lack social anxiety influence on social media addiction however, previous studies are of the contrary opinion that social anxiety in fact influences social media addiction. In light of the forgoing, developing strategies and interventions that target individuals with social anxiety is highly recommended. This is important because, persons who have social anxiety tend to prefer less physical interactions but more of virtual relations. In the physical world, socially anxious individuals feel a gross lack of control, compared to virtual, where they have almost full control as to how they present themselves, an opportunity they are usually denuded of in physical interactions.
3. The impact of personality traits based on the Big Five or Five Factor model has also been observed in the findings of this study. Tailoring interventions based on scientifically informed policies would enhance the chances that whatever intervention that is employed will be inclusive enough to cover an array of different personalities, which could potentially yield the desired outcomes. Even as further investigation of

- personality traits is highly suggested, actions towards checking social media addiction and problematic internet use should be highly coveted.
4. Tertiary institutions and other citadels of learning from which much of the scientific enquiries most often emanate should become creative in not just carryout research, but in active, innovative and creatively pragmatic ways of consuming research data for the purposes of improving the lives of individuals in the society, where they are at least situated. This can be accomplished in the form of interventions, policies, strategies and practical programs that are anchored of research, thus making research more worthwhile an endeavor.
 5. Overall, policy makers are critical in the practical applications of research data and findings. Stakeholders who are involved in policy formulation could do much by incorporating research findings during the formulation stages and beyond.

5.4 Contribution to Knowledge

Scientific knowledge is accumulation of individual research over time, research projects undertaken by researchers in different fields of study, and on different topics or phenomena that calls for scientific enquiry. This study is yet another contribution to that existing body of knowledge, and it is a vital contribution to nuance understanding of the topic of social media addiction in the context of social anxiety, personality traits and self-esteem. Most importantly, given the nascent nature of the phenomenon in the context Nigeria, the study is indeed a timely contribution to our understanding of the consequences that are lurking behind the variables so explored. This research not only serves to enhance and broaden our knowledge of the menacing nature of social media addiction, and the harm it

could potentially impart. Hence our understanding of the pernicious and deleterious nature of the problem is greatly enhanced, and will facilitate the formulation of policies and strategies targeted at curbing the negative influences that may arise from lack of knowledge and awareness.

5.5 Suggestion for Further Studies

The process of research is a continuous one; research on any given topic cannot be conclusive in just a single shot. Again, research on social media addiction menace is still incipient and way more is needed, this could be in the form of replications of the current study in different regions across Nigeria, consideration of other variables that may be influencing social media addiction, use of advanced technologies to explore the phenomenon, employment of well-established psychometrically sound instruments, recruitment of more representative samples, and the use of sound methodological procedures so as to enhance the quality of research in the future, based on the forgoing considerations.

Bibliography

Books

- Abbott, T., *Social and personality development*, **Routledge, London**, ISBN: 9781003209300, pp. 208, 2021.
- Bhugra, D., Moussaoui, D., & Craig, T. J., *Oxford textbook of social psychiatry*, Oxford University Press, ISBN: 0198861478-9780198861478, **PP. 673** 2022,
- Demirtepe-Saygili, D., *Stress, coping, and social media use. In The psychology and dynamics behind social media interactions*, IGI Global, 241-267, 2020, DOI 10.4018/978-1-6684-5594-4.ch053
- First, M. B., *Psychiatric Classification*, In: Tasman, A., *Tasman's Psychiatry*, **Springer, Cham**, ISBN: 978-3-030-51366-5, pp. 1465-1491, 2024
- Panova, T., & Carbonell, X., *Social Media Addiction. In Behavioural Addictions: Conceptual, Clinical, Assessment, and Treatment Approaches*, **Cham: Springer International Publishing**, 69-95, 2022.
- Ryan, R. M., & Vansteenkiste, M., *Self-determination theory: metatheory, methods, and meaning, in the Oxford handbook of self-determination theory*, **Oxford Printing Press**, ISBN: 9780197600078, 2023, 3–30
- Kothori, C. R., *Research Methodology: Methods and Techniques*, New Delhi, New age International Publisher Limited, ISBN 9788122415223, 8122415229, 2004, pp. 2-3,
- Asika, N., *Research Methodology in Behavioural Sciences*, Ibadan, Longman Nigeria PLC, 1991,

Conference proceedings

- Indri, U. S., Salma, A., Fanni, P. D., & Endah, N., *Personality and Social Media Addiction among College Students*, *Advances in Social Science, Education and Humanities Research: 2nd Social and Humaniora Research Symposium (SoRes 2019)*, 2020, 376-379.
- Lampropoulos, G., Makkonen, K., & Siakas, E., *Security and Privacy Issues and Concerns About The Use of Social Networking Services*, *E-Learn: World Conference on e-Learning in Corporate, Government, Healthcare, and Higher Education*, 2019, 457–466.
- Lin, W., Junping, Q., Su, Y., Yuhan, W., & Yuchen, Z., *Does mobile social media undermine our romantic relationships? The influence of fear of missing out (FoMO) on young people's romantic relationship*, In *Proceedings of ISIC: The Information Behaviour Conference*, *Information Research*, 27, 2022, 18452/25239.

Journals

- Adela, C., & Nicholas, R., *Connecting personality traits to social networking site addiction: the mediating role of motives*, **Information Technology & People**, 2019, DOI: 10.1108/ITP-01-2019-0025.
- Agbaria, Q., & Mokh, A. A., *Coping with Stress During the Coronavirus Outbreak: the Contribution of Big Five Personality Traits and Social Support*, **Int J Ment Health Addiction**, 20, 2022, 1854–1872, <https://doi.org/10.1007/s11469-021-00486-2>.
- ALDayel & Magdy, W., *Stance detection on social media: State of the art and trends*, **Information Processing & Management**, 58, (4), 2021, 102597, ISSN 0306-4573, <https://doi.org/10.1016/j.ipm.2021.102597>.
- Andrews, N.P., Yogeeswaran, K., Wang, M.J., Nash, K., Hawi, D.R., & Sibley, C.G., *Is Social Media Use Changing Who We Are? Examining the Bidirectional Relationship Between Personality and Social Media Use*. **Cyberpsychology, Behaviour, and Social Networking**, 9(4) 2020, 231-242.
- Andrews, N.P., Yogeeswaran, K., Wang, M.J., Nash, K., Hawi, D.R., & Sibley, C.G., *Is Social Media Use Changing Who We Are? Examining the Bidirectional Relationship Between Personality and Social Media Use*. **Cyberpsychology, Behavior, and Social Networking**, 9(4) 2020, 231-242.
- Aslam, T., Ali, R., & Athar, M.A., *Impact of Big Five Personality Traits on E-Wom: Mediation of Brand Addiction and Moderation of Self-Liking*, **Global Social Sciences Review**, 7(1), 2022, 95-105, [https://doi.org/10.31703/gssr.2022\(VII- I\).10](https://doi.org/10.31703/gssr.2022(VII- I).10).
- Aslan, I., & Yaşar, M.E., *Measuring social media addiction among university students*, **International Journal of Contemporary Economics and Administrative Sciences**, 10(2), 2020, 468-492.
- Awobamise, Y. Jarrar, & Nweke, G.E., *Social Communication Apprehension, Self-Esteem And Facebook Addiction Among University Students In Uganda*. **Contemporary Educational Technology**, 14(2), 2022, 354-363.
- Aygul, T. A., & Akbay, S.E., *Smartphone addiction, fear of missing out, and perceived competence as predictors of social media addiction of adolescents*, **European Journal of Educational Research**, 8(2), 2019, 559-66.
- Aygul, T.A., & Akbay, S.E., *Smartphone addiction, fear of missing out, and perceived competence as predictors of social media addiction of adolescents*, **European Journal of Educational Research**, 8(2), 2019, 559-66.
- Bas-Hoogendam, J.M., van Steenbergen, H., van der Wee, N.J., & Westenberg, P.M., *Amygdala hyperreactivity to faces conditioned with a social-evaluative meaning—a multiplex, multigenerational fMRI study on social anxiety endophenotypes*, **NeuroImage: Clinical**, 26, 2020, 102247.

- Berte, D. Z., Mahamid, F. A., & Affouneh, S., *Internet Addiction and Perceived Self-Efficacy Among University Students*, **Int J Ment Health Addiction**, 19, 2021, 162–176, <https://doi.org/10.1007/s11469-019-00160-8>.
- Bloemen, N., & De Coninck, D., *Social media and fear of missing out in adolescents: The role of family characteristics*, **Social Media+ Society**, 6(4):2056305120965517, 2020.
- Brailovskaia, J., Bierhoff, H. W., Rohmann, E., Raeder, F., & Margraf, J., *The relationship between narcissism, intensity of Facebook use, Facebook flow and Facebook addiction*, **Addictive Behaviours Reports**, 11, 2020, 100265, ISSN 2352-8532, <https://doi.org/10.1016/j.abrep.2020.100265>.
- Brailovskaia, J., Bierhoff, H.W., Rohmann, E., Raeder, F., & Margraf, J., *The relationship between narcissism, intensity of Facebook use, Facebook flow and Facebook addiction*, **Addictive Behaviors Reports**, 11, 2020, 100265, ISSN 2352-8532, <https://doi.org/10.1016/j.abrep.2020.100265>.
- Braund, H., & Timmons, K., *Operationalization of self-regulation in the early years: comparing policy with theoretical underpinnings*, **ICEP** 15, 8, 2021, <https://doi.org/10.1186/s40723-021-00085-7>.
- Cao, X., Gong, M., Yu, L., & Dai, B., *Exploring the mechanism of social media addiction: An empirical study from WeChat users*, **Internet Research**, 22, 2020, 30(4):1305-28
- Chen, A., & Roberts, N., *Connecting personality traits to social networking site addiction: The mediating role of motives*, **Information Technology & People**, 33(2), 2019, 633-656, <https://doi.org/10.1108/ITP-01-2019-0025>
- Chen, Y., Li, R., Zhang, P., and Liu, X., *The Moderating Role of State Attachment Anxiety and Avoidance Between Social Anxiety and Social Networking Sites Addiction*. **Psychological Reports**, 0(0) 2019, 1–15.
- Cheng, C., Lau, Y.C., Chan, L., & Luk, J.W., *Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values*, **Addictive behaviors**, 117, 2021, 106845.
- Cingel, D. P., Carter, M. C., & Krause, H. V., *Social media and self-esteem*, **Current Opinion in Psychology**, 45, 2022, 101304, ISSN 2352-250X, <https://doi.org/10.1016/j.copsyc.2022.101304>.
- Costa, P.T., McCrae, R. R., & Löckenhoff, C. E., *Personality across the life span*, **Annual Review of Psychology**, 4, 70, 2019, 423-48.
- Crane, N.A, Chang, F., Kinney, K. L, & Klumpp, H., *Individual differences in striatal and amygdala response to emotional faces are related to symptom severity in social anxiety disorder*, **Neuroimage: clinical**, 2021, 30:102615.

- Cristofaro, M., Giannetti, F., & Abatecola, G., *The initial survival of the Unicorns: a behavioural perspective of Snapchat*, *Journal of Management History*, 29(4), 2023, 456-480, <https://doi.org/10.1108/JMH-11-2022-0066>.
- Dai, B., Ali, A., & Wang, H., *Exploring information avoidance intention of social media users: a cognition–affect–conation perspective*, *Internet Research*, 30 (5), 2020, 1455-1478, DOI: <https://doi.org/10.1108/INTR-06-2019-0225>
- Dailey, S.L., Howard, K., Roming, S.M., Ceballos, N., & Grimes, T., *A biopsychosocial approach to understanding social media addiction*, *Human Behaviour and Emerging Technologies*, 2(2), 2020, 158-67.
- Dalvi-Esfahani, M., Niknafs, A., Kuss, D. J., Nilashi, M., & Afrough, S., *Social media addiction: Applying the DEMATEL approach*. *Telematics and Informatics*, 1, 43, 101250, 2019.
- De la Fuente, J., Martínez-Vicente, J. M., Santos, F. H., Sander, P., Fadda, S., Karagiannopoulou, A., & Kauffman, D. F., *Advances on self-regulation models: A new research agenda through the SR vs ER behaviour theory in different psychology contexts*, *Frontiers in Psychology*, 13, 861493/2022.
- Ejaz, B., & Muazzam, A., *Self-consciousness in female university students: the predictive role of social anxiety*, *J Pak Med Assoc*, 71(3), 2021, 905-8.
- Ejaz, B., Muazzam, A., Anjum, A., Pollock, G., & Nawaz, R., *Measuring the scale and scope of social anxiety among students in Pakistani higher education institutions: An alternative social anxiety scale*, *Sustainability*, 11, 12(6), 2020, 2164.
- Emily O'Day, B., Richard Heimberg, G., *Social media use, social anxiety, and loneliness: A systematic review*, *Computers in Human Behaviour Reports*, 3, 2021, 100070, ISSN 2451-9588, <https://doi.org/10.1016/j.chbr.2021.100070>.
- Fan, M., Qalati, S. A., Khan, M. A. S., Shah, S. M. M., Ramzan, M., & Khan, R. S., *Effects of entrepreneurial orientation on social media adoption and SME performance: The moderating role of innovation capabilities*, *PLoS ONE* 16(4), 2021, e0247320, DOI: [doi:10.1371/journal.pone.0247320](https://doi.org/10.1371/journal.pone.0247320).
- Fioravanti, G., Flett, G., Hewitt, P., Rugai, L., & Casale, S., *How maladaptive cognitions contribute to the development of problematic social media use*, *Addictive Behaviours Reports*, 11, 2020, 100267.
- Foroughi, B., Griffiths, M. D., Iranmanesh, M., *Associations Between Instagram Addiction, Academic Performance, Social Anxiety, Depression, and Life Satisfaction Among University Students*, *Int J Ment Health Addiction*, 20, 2022, 2221–2242. <https://doi.org/10.1007/s11469-021-00510-5>.
- Gagné, M., Parker, S.K., & Griffin, M. A., et al, *Understanding and shaping the future of work with self-determination theory*, *Nat Rev Psychol*, 1, 2022, 378–392, <https://doi.org/10.1038/s44159-022-00056-w>

- Gong, M., Yu, L., & Luqman, A., *Understanding the formation mechanism of mobile social networking site addiction: evidence from WeChat users*, **Behaviour & Information Technology**, 1, 39(11):1176-91, 2020.
- Guillena, J.B., *The Effects of Social Networking Sites Needs and Academic Stressors on Academic Motivation of College Students*, **International Journal of Educational Management and Development Studies**, 4 (2), 2023, 138-169, Available Online: <https://doi.org/10.53378/352992>.
- Gumusoglu, S., Scroggins, V., Vignato, J., Santillan, D., & Santillan, M., *The serotonin-immune axis in preeclampsia*, **Current hypertension reports**, 2021, 23, 1-0.
- Hayran, C., & Anik, L., *Well-Being and Fear of Missing Out (FOMO) on Digital Content in the Time of COVID-19: A Correlational Analysis among University Students*, **International Journal of Environmental Research and Public Health**, 18(4), 2021, 1974, <https://doi.org/10.3390/ijerph18041974>.
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q., *Social media addiction: Its impact, mediation, and intervention*, **Cyberpsychology: Journal of psychosocial research on cyberspace**, 21, 2019, 13(1).
- Jiang, S., & Ngien, A., *The Effects of Instagram Use, Social Comparison, and Self-Esteem on Social Anxiety: A Survey Study in Singapore*, **Social Media + Society**, 6(2), 2020, <https://doi.org/10.1177/2056305120912488>.
- Jones, A., Hook, M., Podduturi, P., McKeen, H., Beitzell, E., & Liss, M., *Mindfulness as a mediator in the relationship between social media engagement and depression in young adults*, **Personality and individual differences**, 185, 2022, 111284.
- Jordan, H., Zeigler-Hill, V., & Cameron, J.J., *Self-Esteem*. In: Zeigler-Hill, V., Shackelford, T.K. (eds) *Encyclopedia of Personality and Individual Differences*, Springer, Cham, 2020, https://doi.org/10.1007/978-3-319-24612-3_1169.
- Kaval, A., & Siyez, D. M., *An Internet Addiction Model Based on Cognitive-Behavioural Approach Among Adolescents: Maladaptive Cognitions, Psychopathology, and Situational Cues*, **J Rat-Emo Cognitive-Behavioural Therapy** 42, 2024, 194–213, <https://doi.org/10.1007/s10942-023-00502-5>
- Khosravi, M., Khosrobaki, M., & Foroutan, A., *Personality traits and college students' internet addiction: The mediating roles of general health and self-esteem*, **Scand J Psychol**, 63, 2022, 689-697, <https://doi.org/10.1111/sjop.12848>.
- Kim, H., Schlicht, R., Schardt, M., & Florack, A., *The contributions of social comparison to social network site addiction*, **PLoS One**, 16(10), 2021, e0257795.
- Kircaburun, K., Alhabash, S., & Tosuntaş, Ş.B., *Uses and Gratifications of Problematic Social Media Use Among University Students: a Simultaneous Examination of the Big Five of Personality Traits, Social Media Platforms, and Social Media Use Motives*,

- International Journal of Mental Health Addiction**, 18, 2020, 525–547, <https://doi.org/10.1007/s11469-018-9940-6>
- Kircaburun, K., Süral, İ., March, E., Balta, S., Emirtekin, E., & Griffiths, M. D., *Study addiction and 'dark' personality traits: a cross-sectional survey study among emerging adults*, **Journal of Addictive Diseases**, 39(3), 2021, 307–315. <https://doi.org/10.1080/10550887.2021.1872469>.
- Koçak, O., Ilme, E., Younis, M.Z., *Mediating Role of Satisfaction with Life in the Effect of Self-Esteem and Education on Social Media Addiction in Turkey*, **Sustainability**, 13(16), 2021, 90-97.
- Krejcie, R.V., Morgan, D.W., *Determining Sample Size for Research Activities*, **Educational and Psychological Measurement**, 30(3) 1970, pp. 607-610, <https://doi.org/10.1177/001316447003000308>
- Lai, F., Wang, L., Zhang, J., Shan, S., Chen, J., & Tian, L., *Relationship between Social Media Use and Social Anxiety in College Students: Mediation Effect of Communication Capacity*, **National Library of Medicine**, 20(4), 2023, 3657.
- Lampropoulos, G., Anastasiadis, T., Siakas, K., & Siakas, E., *The impact of personality traits on social media use and engagement: An overview*, **International Journal on Social and Education Sciences (IJonSES)**, 4(1), 2022, 34-51, DOI: <https://doi.org/10.46328/ijonses.264>
- Lampropoulos, G., Siakas, K.M., Makkonen, P., & Siakas, E., *A 10-Year Longitudinal Study of Social Media Use in Education*, **International Journal of Technology in Education**, 4(3), 2021, 373–398.
- Latifeh, Y., Alkhatib, Y., Hmidouch, M., Swed, S., Hafez, W., Sawaf, B., & Rakab, A., *Prevalence of internet addiction among Syrian undergraduate medical students*, **Medicine**, 101(49), 2022.
- Liao, Z., Huang, Q., Huang, S., Tan, L., Shao, T., Fang, T., Chen, X., Lin, S., Qi, J., Cai, Y., & Shen, H., *Prevalence of Internet Gaming Disorder and Its Association With Personality Traits and Gaming Characteristics Among Chinese Adolescent Gamers*, **Front. Psychiatry**, 11, 2020, 598585, doi: 10.3389/fpsy.2020.598585.
- Lin, M.P., *Prevalence of Internet Addiction during the COVID-19 Outbreak and Its Risk Factors among Junior High School Students in Taiwan*, **Int. J. Environ. Res. Public Health**, 17, 2020, 8547, <https://doi.org/10.3390/ijerph17228547>.
- Ling, X., *Research on Social Exclusion Among Adolescents based on Social Anxiety*, **Journal of Education and Educational Research**, 4(2), 2023, 54-7.
- Liu, H., Yu, C., Wu, H., Duan, Z., & Yan, G., *A new hybrid ensemble deep reinforcement learning model for wind speed short term forecasting*, **Energy**, 202, 2020, 117794, ISSN 0360-5442, <https://doi.org/10.1016/j.energy.2020.117794>.

- Luo, T., Qin, L., Cheng, L., Wang, S., Zhu, Z., Xu, J., Chen, H., Liu, Q., Hu, M., Tong, J., & Hao, W., *Determination the cut-off point for the Bergen social media addiction (BSMAS): Diagnostic contribution of the six criteria of the components model of addiction for social media disorder*, **Journal of behavioural addictions**, 10(2), 2021, 281-90.
- Lyvers, M., Salviani, A., Costan, S., & Thorberg, F.A., *Alexithymia, narcissism and social anxiety in relation to social media and internet addiction symptoms*, **International Journal of Psychology**, 57(5), 2022, 606-612
- Mahamid, F. A., Berte, D.Z., *Social media addiction in geopolitically at-risk youth*, **International Journal of Mental Health and Addiction**, 15, 17, 2019, 102-11.
- Mahamid, F.A., & Berte, D.Z., *Social media addiction in geopolitically at-risk youth*, **International Journal of Mental Health and Addiction**, 17, 2019, 102-11.
- Marengo, D., Poletti, I., & Settanni, M., *The interplay between neuroticism, extraversion, and social media addiction in young adult Facebook users: Testing the mediating role of online activity using objective data*, **Addictive behaviours**, 102, 2020, 106150.
- Masood, A., Luqman, A., Feng, Y., & Ali, A., *Adverse consequences of excessive social networking site use on academic performance: Explaining underlying mechanism from stress perspective*, **Computers in Human Behaviour**, 113, 2020, 106476, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2020.106476>.
- Meshi, D., & Ellithorpe, M. E., *Problematic social media use and social support received in real-life versus on social media: Associations with depression, anxiety and social isolation*, **Addictive Behaviours**, 119, 2021, 106949, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2021.106949>.
- Mishra, S., Malathi, H., & Deep, P., *Addictive digital media use and psychiatric symptoms: a cross-sectional study*, **Multidisciplinary Science Journal**, 2023, 5, 5.
- Mohammadi, M. R., Salehi, M., Khaleghi, A., Hooshyari, Z., Mostafavi, S. A., Ahmadi, N., Hojjat, S. K., Safavi, P., & Amanat, M., *Social anxiety disorder among children and adolescents: A nationwide survey of prevalence, socio-demographic characteristics, risk factors and co-morbidities*, **Journal of Affective Disorders**, 15;263:450-7, 2020.
- Mohammadi, M.R., Salehi, M., Khaleghi, A., Hooshyari, Z., Mostafavi, S. A., Ahmadi, N., Hojjat, S.K., Safavi, P., & Amanat, M., *Social anxiety disorder among children and adolescents: A nationwide survey of prevalence, socio-demographic characteristics, risk factors and co-morbidities*, **Journal of Affective Disorders**, 263, 2020, 450-457, ISSN 0165-0327, <https://doi.org/10.1016/j.jad.2019.12.015>.
- Moore, K., & Craciun, G., *Fear of Missing Out and Personality as Predictors of Social Networking Sites Usage: The Instagram Case*, **Psychological Reports**, 124(4), 2021, 1761-1787, DOI: <https://doi.org/10.1177/0033294120936184>
- Nwafor, C. E., Ugwu, P. C., Okoye, C. A., & Ofoma, B. E., *Social Media Addiction Moderates the Relationship between Interpersonal Isolation and Suicidal Ideation among Undergraduates*, **Journal of Psychology and Allied Disciplines**, 29, 2023, 2(1).

- Ostic, D., Qalati, S. A., Barbosa, B., Shah, S. M., Galvan, V. E., Herzallah, A. M., & Liu, F., *Effects of Social Media Use on Psychological Well-Being: A Mediated Model*, **Front. Psychol**, 12, 2021, 678766, DOI: 10.3389/fpsyg.2021.678766.
- Paakkari, L., Tynjälä, J., Lahti, H., Ojala, K., & Lyyra, N., *Problematic social media use and health among adolescents*, **International Journal of Environmental Research and Public Health**, 2021, 18(4), 1885.
- Peris, M., de la Barrera, U., Schoeps, K., & Montoya-Castilla, I., *Psychological Risk Factors that Predict Social Networking and Internet Addiction in Adolescents*, **International Journal of Environmental Research and Public Health**, 17, 2020, 4598, <https://doi.org/10.3390/ijerph17124598>.
- Petrowski, K., Schmalbach, I., Strunk, A., Hoyer, J., Kirschbaum, C., Joraschky, P., *Cortisol reactivity in social anxiety disorder: A highly standardized and controlled study*, **Psychoneuroendocrinology**. 2021, 123:104913.
- Pickering, L., Hadwin, J. A., & Kovshoff, H., *The role of peers in the development of social anxiety in adolescent girls: A systematic review*, **Adolescent Research Review**, (5), 2020, 341-62.
- Quirin, M., Jais, M., Di Domenico, S. I., Kuhl, J., & Ryan, R.M., *Effortless Willpower? The Integrative Self and Self-Determined Goal Pursuit*, **Frontiers in Psychology**, 12, 2021, 653458. DOI: 10.3389/fpsyg.2021.653458
- Ryan, R.M., & Deci, E.L., *Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions*, **Contemporary Educational Psychology**, 61, 2020, 101860, ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych.2020.101860>.
- Ryan, R.M., Deci, E. L., Vansteenkiste, M., & Soenens, B., *Building a science of motivated persons: Self-determination theory's empirical approach to human experience and the regulation of behaviour*, **Motivation Science**, 7(2), 2021, 97–110, <https://doi.org/10.1037/mot0000194>
- Salim, M. S., Fikri, S.A., Ibrahim, M.S., Ibrahim, N.Z., *The preliminary study: social anxiety and social media addiction*. **Jurnal Evolusi**, 2 (1) 2021, 1-13.
- Sánchez-Fernández, M., Borda-Mas, M., & Mora-Merchán, J., *Problematic internet use by university students and associated predictive factors: A systematic review*, **Computers in Human Behaviour**, 139, 2023, 107532, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107532>.
- Schunk, D. H., & DiBenedetto, M. K., *Motivation and social cognitive theory*, **Contemporary Educational Psychology**, 60, 2020, 101832, ISSN 0361-476X, <https://doi.org/10.1016/j.cedpsych.2019.101832>.

- Şentürk, E., Geniş, B., & Coşar, B., *Social media addiction in young adult patients with anxiety disorders and depression*. **Alpha Psychiatry**, 22(5) 2021, 257-262.
- Servidio, R., Griffiths, M. D., & Demetrovics, Z., *Dark Triad of Personality and Problematic Smartphone Use: A Preliminary Study on the Mediating Role of Fear of Missing Out*, **International Journal of Environmental Research and Public Health**, 18(16), 2021, 8463. <https://doi.org/10.3390/ijerph18168463>.
- Shamsi, A., DasGupta, D., Alhumaydhi, F.A., Khan, M.S, Alsagaby, S.A., Al Abdulmonem, W., Hassan, M.I., Yadav, D.K., *Inhibition of MARK4 by serotonin as an attractive therapeutic approach to combat Alzheimer's disease and neuroinflammation*, **RSC Medicinal Chemistry**, 13(6):737-45,2022.
- Sharma, S., Singh, A., Bhatia, A., Kohli, A., & Pandey, R., *Relationship Of Internet Addiction With Social Connectedness, Self Esteem, Anxiety, Depression, And Insomnia*, **Journal of Positive School Psychology**, 1547-1556, 2022.
- She, R., Kit han Mo, P., Li, J., Liu, X., Jiang, H., Chen, Y., Ma, L., & Takfai Lau, J., *The double-edged sword effect of social networking use intensity on problematic social networking use among college students: The role of social skills and social anxiety*, **Computers in Human Behaviour**, 140,2023,107555,ISSN 0747-5632,<https://doi.org/10.1016/j.chb.2022.107555>.
- Shukur, S. A., Bakar, S.M, Dzulkalnine, N., Zaman, M.D., Omar, N.F., Sandhu, S.K, & Lansam, B.A., *Psychological and Technology Factor Contribute to Social Media Addiction*, **Information Management and Business Review**, 15(4), 2023, 486-91.
- Sigurvinsdottir, R., Soring, K. Kristinsdottir, K., Halfdanarson, S.G., Johannsdottir, K. R., Vilhjalmsson, H. H., & Valdimarsdottir, H. B., *Social anxiety, fear of negative evaluation, and distress in a virtual reality environment*, **Behaviour Change**, 38(2), 2021, 109-18.
- Şimşek, H., *The Effect of Smartphone Addiction on Attention Level in High School Students*, **Bağımlılık Dergisi**, 24(2), 2023, 113-22.
- Sinha, N. K., Kumar, P., Kumar, S., & Priyadarshi, P., *Problematic Internet Use and Psychosocial Well-being: Role of Mindfulness Mediated by Self-Control and Negative Affect*, **IIM Kozhikode Society & Management Review**, 10(1), 2021, 99-112, <https://doi.org/10.1177/2277975220965346>
- Smith, T. *An exploratory analysis of the relationship of problematic Facebook use with loneliness and self-esteem: the mediating roles of extraversion and self-presentation*, **Curr Psychol**, 42, 2023, 24410–24424, <https://doi.org/10.1007/s12144-022-03505-0>.

- Stănculescu, E., & Griffiths, M. B., *Social media addiction profiles and their antecedents using latent profile analysis: The contribution of social anxiety, gender, and age*, **Telematics and Informatics**, 1, 74, 2022, 101-879.
- Stanković, M., & Nešić, M., *Association of internet addiction with depression, anxiety, stress, and the quality of sleep: Mediation analysis approach in Serbian medical students*, **Current Research in Behavioural Sciences**, 3, 2022, 100071.
- Sun, Y., & Zhang, Y., *A review of theories and models applied in studies of social media addiction and implications for future research*, **Addictive Behaviours**, 114, 2021, 106699, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2020.106699>.
- Sun, Y., & Zhang, Y., *A review of theories and models applied in studies of social media addiction and implications for future research*, **Addictive Behaviours**, 114, 2021, 106699, ISSN 0306-4603, <https://doi.org/10.1016/j.addbeh.2020.106699>.
- Sun, Y., & Zhang, Y., *A Review of Theories and Models Applied in Studies of Social Media Addiction and Implications for Future Research*, **Addictive Behaviors**, 2020, 106699, DOI:10.1016/j.addbeh.2020.106699.
- Tanrikulu, G., & Mouratidis, A., *Life aspirations, school engagement, social anxiety, social media use and fear of missing out among adolescents*, **Current Psychology**, 42, 2023, 28689–28699, <https://doi.org/10.1007/s12144-022-03917-y>
- Tekin, Ö. A., & Turhan, A.A., *Does Social Media Addiction Differ by Personality Traits? A Study on Undergraduate Tourism Students*, **Journal of Tourism and Services**, 22(12), 2020, 23-41. doi: 10.29036/jots.v1222.220.
- Tekin, Ö.A., & Turhan, A.A., *Does Social Media Addiction Differ by Personality Traits? A Study on Undergraduate Tourism Students*, **Journal of Tourism and Services**, 22(12), 2020, 23-41. doi: 10.29036/jots.v1222.220.
- Thomas, C. L., Ingels, D. J., Kazmi, M. A., Ohu, E. A., Belle, C., & Spitzmueller, C., *Adolescents' problematic internet use in secondary school students in Lagos, Nigeria: A preliminary examination of individual and family-based predictors and consequences*, **Computers in Human Behavior**, 132, 2022, 107247, ISSN 0747-5632, <https://doi.org/10.1016/j.chb.2022.107247>.
- Throuvala, M. A., Griffiths, M.D., Rennoldson, M., & Kuss, D. J., *Motivational processes and dysfunctional mechanisms of social media use among adolescents: A qualitative focus group study*, **Computers in Human Behaviour**, 93, 2019, 164-75.
- Touloupis, T., Sofologi, M., & Tachmatzidis, D., *Pattern of Facebook use by university students during the COVID-19 pandemic: relations with loneliness and resilience*, **Social Network Analysis and Mining**, 2023, 13, 64, <https://doi.org/10.1007/s13278-023-01073-0>.

- Turel, O., & Serenko, A., *The benefits and dangers of enjoyment with social networking websites: Development of a scale*, **Information & Management**, 57(3), 2020, 103168.
- TurhanGürbüz, P., Çoban, O.G., Erdoğan, A., Kopuk, H.Y, Adanir, A.S., & Önder, A., *Evaluation of internet gaming disorder, social media addiction, and levels of loneliness in adolescents and youth with substance use*, **Substance use & misuse**, 56(12), 2021, 1874-1879.
- Uchegbu, C., Igirioogu, J. U., & Ngala, C. O., *Personality Traits, Social Anxiety And Gender As Predictors Of Smartphone Addiction Among Students In Tertiary Institutions*. **African Journal of Social and Behavioural Sciences (AJSBS)** 11 (1), 2021, 126-136.
- Uchegbu, I. C., Igirioogu, J. U., & Ngala, C. O., *Personality Traits, Social Anxiety And Gender As Predictors Of Smartphone Addiction Among Students In Tertiary Institutions*. **African Journal of Social and Behavioural Sciences (AJSBS)** 11 (1), 2021, 126-136.
- Vaghefi, I., Qahri-Saremi, H., & Turel, O., *Dealing with social networking site addiction: a cognitive-affective model of discontinuance decisions*, **Internet Research**, 30(5), 2020, 1427-1453, <https://doi.org/10.1108/INTR-10-2019-0418>.
- Verduyn, P., Gugushvili, N., & Kross E., *Do Social Networking Sites Influence Well-Being? The Extended Active-Passive Model*, **Current Directions in Psychological Science**, 31(1), 2022, 62-68, <https://doi.org/10.1177/09637214211053637>.
- Washington, M. L., *The Mediated Effect of Social Media Technology Addiction on Productivity*, **Business Management Dynamics**,10(12), 2021, 1.
- Ye, S., Ho, K. K., & Zerbe, A., *The effects of social media usage on loneliness and well-being: analysing friendship connections of Facebook, Twitter and Instagram*, **Information Discovery and Delivery**, 49(2), 2021, 136-50.
- Yildiz Durak, H., *Modeling of relations between K-12 teachers' TPACK levels and their technology integration self-efficacy, technology literacy levels, attitudes toward technology and usage objectives of social networks*, **Interactive Learning Environments**, 29(7),2019, 1136–1162, <https://doi.org/10.1080/10494820.2019.1619591>.
- Yue, H., Yue, X., Zhang, X., Liu, B., & Bao, H., *Exploring the relationship between social exclusion and social media addiction: The mediating roles of anger and impulsivity*. **ActaPsychological**, 2023, 1, 238:103980.
- Zhang, Y., Ding, Q., & Wang, Z., *Why parental phubbing is at risk for adolescent mobile phone addiction: A serial mediating model*, **Children and Youth Services Review**, 121, 2021, 105873, ISSN 0190-7409, <https://doi.org/10.1016/j.childyouth.2020.105873>.
- Zsido, A.N., Arato, N., Lang, A., Labadi, B., Stecina, D., & Bandi, S. A., *The role of maladaptive cognitive emotion regulation strategies and social anxiety in problematic smartphone and social media use*, **Personality and Individual Differences**, 173, 2021, 110647, ISSN 0191-8869, <https://doi.org/10.1016/j.paid.2021.110647>.

Zsido, N., Arato, N., Lang, A., Labadi, B., Stecina, D., & Bandi, S.A., *The role of maladaptive cognitive emotion regulation strategies and social anxiety in problematic smartphone and social media use*, **Personality and Individual Differences**, 173, 2021, 110647, ISSN 0191-8869, <https://doi.org/10.1016/j.paid.2021.110647>.

Zubairu, N., *The impact of social media platforms amongst tertiary institutions student in dutsejigawa state, Nigeria*, **International Journal of Social Sciences and Humanity Studies**, 13(1), 2021, 79-101.

Websites

Auxier, B., & M. Anderson, *Social Media Use in 2021*, Pew Research Center, Available Online: <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021>

Britannica, T., *Editors of Encyclopaedia*, TikTok | App History, Videos, China, & Controversies, Britannica, 2024, Available online: <https://www.britannica.com/topic/TikTok>

Eldridge, A., *Instagram| History, Features, Descriptions & Facts*, Britannica, 2023, Available online: <https://www.britannica.com/topic/instagram>

LaMorte, W., *The Social Cognitive Theory*, Boston University School of Public Health, Available Online: <https://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehaviouralChangeTheories/BehaviouralChangeTheories5.html/2022>

O'Connell, B., *History of Snapchat: Timeline and Facts*, *The Street*, 2020, Available online: <https://www.thestreet.com/technology/history-of-snapchat>

Appendix I

Lead City University, Ibadan

Faculty of Management and Social Sciences

Department of Psychology

Questionnaire

My name is Owlama Rachel AJEGENA. I am a student of the Department of Psychology, Lead City University, Ibadan. I am conducting a study on Social Anxiety, Personality Traits and Self-Esteem as Predictors of Social Media Addiction among Undergraduates in Plateau State. I seek for your consent and cooperation in filling this questionnaire. Information received will be strictly used for academic purpose and will be treated with absolute confidentiality.

Instruction: please tick { } appropriately

Section A: Bio Data

1. Age (years): 15-20{ } 21-30{ } 31-40{ } 41-50{ }
2. Gender : Female{ } Male{ }
3. Religion: Christianity { } Islam { }
4. Parents' socioeconomic status: Unemployed { } Self-Employed { } Government Institute { } Private Institute { }
5. Family type : Polygamy { } Monogamy { }
6. Parents' marital status : Married { } Divorced { } Separated { }

7. Level: 100 { } 200 { } 300 { } 400{ } 500{ }

Section B:

Social Media Addiction Scale Student Form (SMAS-SF)

Different states related to social media use on the internet are given below. You are asked to read each expression carefully and tick the box for the expression you deem the most correct for you. Do not skip any item and mark each state please.

1 = Strongly agree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly disagree

S/N	Variables	1	2	3	4	5
1	I am eager to go on social media.					
2	I look for internet connectivity everywhere so as to go on social media					
3	Going on social media is the first thing I do when I wake up in the morning.					
4	I see social media as an escape from the real world.					
5	A life without social media becomes meaningless for me					
6	I prefer to use social media even there are somebody around					

	me.					
7	I prefer the friendships on social media to the friendships in the real life.					
8	I express myself better to the people with whom I get in contact on social media.					
9	I am as I want to seem on social media.					
10	I usually prefer to communicate with people via social media.					
11	Even my family frown upon, I cannot give up using social media.					
12	I want to spend time on social media when I am alone.					
13	I prefer virtual communication on social media to going out					
14	Social media activities lay hold on my everyday life.					
15	I pass over my homework because I spend much time on social media					
16	I feel bad if I am obliged to decrease the time I spend on social media					
17	I feel unhappy when I am not on social media.					
18	Being on social media excites me.					
19	I use social media so frequently that I fall afoul of my family.					
20	The mysterious world of social media always captivates me					
21	I do not even notice that I am hungry and thirsty when I am on social media					

22	I notice that my productivity has diminished due to social media.					
23	I have physical problems because of social media use.					
24	I use social media even when walking on the road in order to be instantly informed about developments.					
25	I like using social media to keep informed about what happens.					
26	I surf on social media to keep informed about what social media groups share.					
27	I spend more time on social media to see some special announcements (e.g. birthdays).					
28	Keeping informed about the things related to my courses (e.g. homework, activities) makes me always stay on social media.					
29	I am always active on social media to be instantly informed about what my kith and kin share.					

Section C

Social Phobia Inventory (SPIN)

Please indicate how much the following problems have bothered you.

Mark only one box for each problem, and be sure to answer all items.

0 = Not at all 1 = A little bit 2 = Somewhat 3 = Very much 4 = Extremely

S/N	Variables	0	1	2	3	4
1	I am afraid of people in authority					
2	I am bothered by blushing in front of people					
3	Parties and social events scare me					
4	I avoid talking to people I don't know					
5	Being criticized scares me a lot					
6	Fear of embarrassment causes me to avoid doing things or speaking to people					
7	Sweating in front of people causes me distress					
8	I avoid going to parties					
9	I avoid activities in which I am the centre of attention					
10	Talking to strangers scares me					
11	I avoid having to give speeches					
12	I would do anything to avoid being criticized					
13	Heart palpitations bother me when I am around people					
14	I am afraid of doing things when people might be watching					
15	Being embarrassed or looking stupid is among my worst fears					
16	I avoid speaking to anyone in authority					
17	Trembling or shaking in front of others is distressing to me					

Section D

Ten-Item Personality Inventory-(TIPI)

Here are a number of personality traits that may or may not apply to you. Please tick a box to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

Disagree strongly (1), Disagree moderately (2), Disagree a little (3), Neither agree nor disagree (4), Agree a little (5), Agree moderately (6), Agree strongly (7)

I see myself as:

S/N	Variables	1	2	3	4	5	6	7
1	Extraverted, enthusiastic.							
2	Critical, quarrelsome.							
3	Dependable, self-disciplined.							
4	Anxious, easily upset.							
5	Open to new experiences, complex							
6	Reserved, quiet.							
7	Sympathetic, warm.							
8	Disorganized, careless.							
9	Calm, emotionally stable.							
10	Conventional, uncreative.							

Section E

Rosenberg Self-Esteem Scale (RSE)

Please record the appropriate answer for each item, depending on whether you strongly agree, agree, disagree, or strongly disagree with it.

1 = Strongly agree 2 = Agree 3 = Disagree 4 = Strongly disagree

S/N	Variables	1	2	3	4
1	On the whole, I am satisfied with myself.				
2	At times I think I am no good at all				
3	I feel that I have a number of good qualities.				
4	I am able to do things as well as most other people.				
5	I feel I do not have much to be proud of.				
6	I certainly feel useless at times.				
7	I feel that I'm a person of worth.				
8	I wish I could have more respect for myself.				
9	All in all, I am inclined to think that I am a failure.				
10	I take a positive attitude toward myself.				

Biodata

A. Personal Data

Full Name: Owlama Rachel AJEGENA

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Nasarawa State

Email: owlamaa@gmail.com

Phone No: 09063213502

Date of Birth: November15, 1998

Place of Birth: Bukan Sidi, Lafia, Nassarawa State

Nationality: Nigerian

Next of Kin: Daniel Ajegena

B. Educational Background

Educational Institutions Attended with Dates and Qualifications

- M.Sc. Clinical Psychology (In View)
Lead City University, Ibadan, Oyo State
- B.Sc Psychology (2019)
University of Jos, Jos, Plateau State
- S.S.C.E (2015)
Emmanuel International College, Jos, Plateau State

C. Working Experience with Dates

- Family Healthcare Foundation (FAHCI), Lafia, Nasarawa State July 2020- January
Volunteer 2021
- Tachyon Pros LTD, Jos, Plateau State October 2023 - Date
Social Media Manager

D. Awards and Fellowship

N/A

E. Membership of Academic/Professional Bodies

Nil

F. Publications

- Social Anxiety and Personality traits as predictors of Social Media Addiction among undergraduates in Plateau State (In View)

G. Major Conferences Attended

National Association of Clinical Psychologists (NACP) Continuing Education
Training: Diagnosis and Management of Anxiety and Depression, Jos, Plateau State

H. Referees

- Margaret Akogun (PhD)
HOD

Jos University Teaching Hospital

- Peter Ashlame Agu (PhD)

Professor

Nasarawa State University, Keffi

Signature

Date

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The University Compliance Certification

This is to certify that this thesis written by Owlama Rachel AJEGENA with matric number LCU/PG/003771 in the Department of Psychology, Faculty of Management and Social Sciences, Lead City University, Ibadan and is in full compliance with the approved University format and style.

Signature

Date

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