SELF-CONTROL AND PERSONALITY CHARACTERISTICS AS PREDICTORS OF SOCIAL MEDIA ADDICTION AMONG UNIVERSITY STUDENTS

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ABSTRACT
Social media addiction is an important mental health concern with steadily increasing prevalence in young people along with physical, psychological, and academic issues. To reduce social media addiction, an understanding about its influencing factors is required. A total of 218 participants comprising 115 male and 103 undergraduate students participated in the study. The participants were between the ages of 18-27 years with mean age of 23.17 and standard deviation of 2.33. Participants were selected making use of simple random sampling technique from the population of Natural Science Faculty (107) and Faculty of Social Sciences and Humanities (111) Enugu State University of Science and Technology Agbani, Enugu. Self-Control Scale-Brief Version (Tangney et al., 2004); Big Five Inventory (BFI) and Bergen Social Media Addiction Scale (BSMDS; Andreassen, et al., 2017) were used in the study. The result showed that self control negatively and significantly predicted social media addiction (β = -.87, t = -16.93, at P > .01). The contribution of self control in explaining the variance in social media addiction was 47% (ΔR^2 = .47). Also, Personality characteristics (Extraversion: β = .22, t = 3.75, at P > .01; Agreeableness: β = -.15, t = -6.63, at P > .01 and Neuroticism: β = .76, t = 17.27, at P > .01) predicted social media addiction. The contribution of Personality characteristics in explaining the variance in social media addiction was 26% (ΔR^2 = .26). The findings were discussed in view of literature reviewed and recommendations were made.

Key Words: *Addiction, Personality, Self-Control, Social Media, University*

INTRODUCTION

Background to the Study

In recent years, social media have become an integral part of modern society as they overcome distance and time barriers and have tremendously changed the way people interact and carry on with their everyday lives. The foundations of social media are transparency, personalization, bottom-up communication, collaboration, as well as information and knowledge sharing (Makkonen et al., 2019). Social media platforms can provide a common information environment in which individuals can communicate, collaborate and participate in diverse social and interactive activities (Pallis et al., 2011). These platforms are governed by hybrid media logic and as a result they are interactive, self-directed, and offer multiple types of user experiences (Gil de Zúñiga et al., 2017).

Social media can also be regarded as virtual collections of sharable user profiles (Hughes et al., 2012) or virtual communities (Dwyer et al., 2007) which foster the fundamental motivation factors of a sense of belonging and socialization (Özgüven & Mucan, 2013). Examples of social media include business and social networking sites, blogs, news delivery and collaborative sites, virtual worlds, podcasts, commerce and open-source software communities as well as creativity works and educational material sharing sites (Mangold & Faulds, 2009).The internet, a key technological platform, can be considered a powerful possibility of the 21st century if it is used for due purposes such as accessing information, problem-solving, and personal development (Şimşek et al., 2017). Today, internet technologies have greatly facilitated mass communication by improving communication quality, shortening time, and reducing costs (Saksiriruthai, 2018). The emergence of social media platforms can be regarded as one of the consequences of this convenience. These platforms have increased their popularity day by day, becoming a new world alternative to the real world. Especially in the last decade, the interest in social media platforms has now turned social media into a mass communication tool (Kot et al., 2017).

However, this has caused "excessive use" of the internet in some individuals. It is a fact that some individuals cannot set their internet usage limits in line with their needs. Excessive internet use, known as internet addiction, net addiction, social media addiction, and pathological internet use, results in significant problems in business and social life (Widyanto & Griffiths, 2007). It is well-accepted that personality traits have considerable effects on human behaviour. This acceptance has made the relationships between social media behavior, addiction and personality traits an essential research topic. According to Kırcaburun and Griffiths (2018), "there are several theories suggesting that personality differences play an important role in developing and maintaining addictive use of different online applications." Furthermore, Chen and Roberts (2019) state that "different personalities have different motivations for using social networking sites, which may in turn lead to social networking sites addiction." In a past few decades, to examine the relationships between social media addiction and personality traits, various studies have been conducted, albeit in small numbers.

In addition, Self-control is defined as the ability to initiate actions, resist short-term temptations to achieve long-term goals Yang et al., (2019), and effortful inhibition of destructive behaviours (Gillebaart, 2018), is an important predictor of success and health. In the context of social media use and addiction, low self-control manifests itself in impulsive behaviour and frequent risk-taking, which is linked to the risk of addictions such as social media addiction (Błachnio, & Przepiorka, 2016). Lower levels of self-control have been associated with higher levels of problematic mobile phone use (West et al., 2021; Şakiroğlu, 2019) and smart phone addiction (Gillebaart et al., 2018). It turned out that people with low self-control responded to mobile notifications very quickly after getting a signal (Berger et al., 2019). Self-control seems to be one of the most essential predictors of problematic phone use (Rho et al., 2019). Csibi et al., (2021) analysed the intensity of addiction components (conflict, salience, mood modification, tolerance, withdrawal syndrome, and relapse) across different age groups. They found that young users spent more time than older ones with their mobile phones and scored higher on the tolerance component, which is closely related to self-control ability and is still in its development stage in adolescence and young adulthood.

Hence, the society of today is increasingly connected and digitalized, with algorithms and computers facilitating daily activities (Dufva & Dufva, 2019). Additionally, ICTs have improved access to information and knowledge in terms of scale, scope and speed (Bahrini & Qaffas, 2019). Nowadays, people pursue to be directly connected, require more social interactions and request prompt responses and access to information as they form their personalities in the light of flexible communities (Anastasiadis et al., 2018). Additionally, there is an enormous need for prompt and constant access to personalized and dynamic information as well as for instant and succinct communication. Social media has been increasingly gaining credibility as a bottom-up platform where people can communicate, interact, collaborate, create and share content and information. Consequently, it has become one of the most popular online activities and an integral part of everyday life as it provides solutions to meet the aforementioned needs and requirements.

Social media addiction is indeed considered one of the subtypes or manifestations of internet addiction. Internet addiction is a broader term that encompasses various problematic behaviours related to excessive internet use, and social media addiction is one of the main factors contributing to this issue which may cause psychological disorders like anxiety and destructive effects on personal development (Colwell & Kato, 2003). This addiction can also lead to (i) significant adverse effects such as withdrawal and excessive engagement (Rajesh & Rangaiah, 2020) and (ii) a number of problems such as friendship difficulties, depression, poor quality of sleep, excessive mental occupation, repetitive thoughts about control of use, and failure to prevent access (Andreassen, 2015; Bowden-Green et al.,2021). Thus, the present investigation aimed to ascertain if self-control and personality characteristics will predict social media addiction among university students. Hence, the study answered these pertinent questions:

1. Will Self-Control predict social media addiction among university students
2. Will Personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) predict social media addiction among university students

THEORETICAL REVIEW

Uses and gratifications theory (West & Turner, 2007)

Uses and Gratifications Theory was created in the 1940s, when researchers began to look into why certain people chose to get their information from certain forms or genres of media over others. The theory states that people are motivated to seek out forms of media to satisfy their psychological and social needs (West & Turner, 2007). Although originally conceptualized before the present technological advances and the existence of social media, this theory can easily encapsulate motivations for social media usage and help to explain the threat of addiction. With the inclusion of social media in this theoretical framework, users have accessed a variety of platforms to use to suit their needs**.** If the user is more image driven, they would best communicate through a platform like Pinterest or Instagram, but if a user is text-driven, Reddit or Facebook may be better options to fulfill his or her needs. McQuail (2010) explains, "those who use mass media for their own purposes do hope for some effect (such as persuasion or selling) beyond attention and publicity, gaining the latter remains the immediate goal and is often treated as a measure of success or failure". From a theoretical stand point, this implies that users are consistently looking for their social media presence to have an effect, whether it be selling something or simply gaining attention.

Uses and gratifications theory assumes that there is an active media-consuming audience, the media platforms are competitive and people are self-aware of their usage and interests (West & Turner, 2007). Since social media users have to seek-out the platform and create a profile, they can be considered actively media-consuming. Social media platforms compete when it comes to attracting users. For example, Instagram has been working to create features similar to what a user may find on Snapchat, therefore trying to drive traffic from Snapchat to their own platform. However, the theory very applicable when given the nature of social media and the potential motivations for usage. Since there is a wide variety of platforms that are created with different aesthetics in mind, the uses and gratifications theory allows researchers to view social media addiction in a light that aids them in understanding why users engage in social media interactions and why they choose the platforms they utilize. While some of this can be predicted by looking at factors like age and gender, some of the variation here is based on personality and the social environment that the user prefers.

Media dependency theory (Ball-Rokeach & Delfleur, 1976)

Media dependency theory was created by Ball- Rokeach and Defleur (1976) originally conceptualized around ideas about sociology and large social systems. Media dependency theory requires both a social system and a media system, and the essential idea behind its application to social media is that the social and media systems are combined. This creates a unique take on the theory, as either the media system or the social system can live alone within social media. Media dependency theory outlines three relationships that lay the framework for media dependency; these include society vs. media, media vs. audience and society vs. audience. Users must engage in each of these model relationships to meet their needs. Similarly, the theory also lays out three different media needs. First is surveillance, or needing to understand one's social environment. Second, social utility describes the need to act in a way that is both efficient and significant within that social world. Lastly, the need for an escape, or to get away from the social environment when one feels overwhelmed. Social media allows users to fulfil all of these needs in some way.

The theory also mentions the effects that media can have on consumers, noting the strength of the cognitive impacts of media. Within cognitive effects, they acknowledge the impact of media in agenda-setting, attitude formation and uncertainty avoidance and resolution. Social media displays these effects most definitely, demonstrating the power of agenda-setting through trending stories and tweets. Applying media dependency theory suggests that the more dependent a person is on social media, the greater number of opinions they will form about products and services that appear on their feed more often.

Big Five Personality Theory (Costa & Mc Crae, 1992)

These Big Five traits are also referred to as the 'Five Factor Model' (Costa & Mc Crae, 1992). The Big Five Factors are Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (OCEAN).

1. **Openness**: is a general appreciation for art, adventure, unusual ideas, and imagination. People who are open to experience are intellectually curious, appreciative of art, witty and sensitive to beauty. People with low scores on openness tend to have more conventional, traditional interests.
2. **Conscientiousness:** is a tendency to show self discipline, act dutifully and aim for achievement. It includes the factor known as Need for Achievement. People high on this trait are generally achievement oriented, organized, responsible and dependable. On the negative side, they can be perfectionists or workaholic.
3. **Extraversion:** is characterized by positive emotions and the tendency to seek the company of others. Extroverts enjoy being with people and are energetic, dominant, assertive, outgoing, talking, fun-loving. Introverts, on the other hand, are quiet, less involved in external world and prefer to be alone.
4. **Agreeableness:** is a tendency to be compassionate and cooperative. Individuals high on this trait are considerate, friendly, generous, helpful, trustworthy, caring, warm and willing to compromise their interests with others. They hold an optimistic view of human nature. People who score low are suspicious, unfriendly, and uncooperative and place self interest above getting along with others.
5. **Neuroticism:** is the tendency to experience negative emotions, such as anger, anxiety, fear etc. Those who score high on neuroticism are vulnerable to stress, more likely to interpret ordinary situations as threatening, emotionally unstable, anxious, worried, distressed, irritable and hypertensive.

On the other hand, individuals who score low are emotionally stable, calm and free from persistent negative feelings. This model is an important development in personality. It has been found useful in understanding the profile across cultures. Cross cultural research further confirms the utility of five dimensions in populations of old and young, educated and uneducated (Mc Crae & John, 1992).

Resource Model of Self-Control (Baumeister, Tice, & Vohs, 2018)

Perhaps the most well-known model of self-regulation in social psychology, the resource model or strength model, was first celebrated (Baumeister, Tice, & Vohs, 2018) then heavily criticized (Friese, Loschelder, Gieseler, Frankenbach, & Inzlicht, 2019; Inzlicht & Friese, 2019). The resource model makes two broad points about self-control, defined as the capacity to override undesired behavioural tendencies (Tangney, Baumeister, & Boone, 2004). First, self-control is based on some central resource that powers all sorts of controlled behaviour, be that picking broccoli over chocolate, treating a racial out group in an egalitarian fashion despite prejudicial impulses, or naming the color of words despite habitual word-reading responses. Second, this central self-control resource is limited and runs out with use, like a sort of mental fuel that powers the will.

The most celebrated finding of the resource model is the so-called ego depletion effect, whereby engaging control at Time 1 is thought to deplete the central resource and reduce control at Time 2. The resource model is primarily a model about time: self-control wanes over time such that people exert less control at Time 2 if they have been continuously exerting control at Time 1. Though most studies suggest depletion can occur in as little as a few minutes, more rigorous studies suggest that one (Randles, Harlow, & Inzlicht, 2017) or four hours (Blain, Hollard, & Pessiglione, 2016) might be necessary. Likewise, while initial theorizing suggested that what is especially depleting of subsequent control are tasks requiring the inhibition of a learned habit (Baumeister, 2014), more recent work suggests that any effortful task will do (Kool & Botvinick, 2014).

Nonetheless, modern meta-analyses and large pre-registered replications suggest that the ego depletion is either very small or non-existent (Carter, Kofler, Forster, & McCullough, 2015; Hagger et al., 2016). A second controversy concerns how to explain the ego depletion effect, assuming it is real. While the resource model indicates that some real metabolic resource is diminished by control, alternative accounts pin the effect to changes in motivation and willingness (Inzlicht & Schmeichel, 2012; Kool & Botvinick, 2014; Kurzban et al., 2013). Despite the enthusiasm with which the resource model, the model contributes rather narrowly to our understanding of self-regulation. It suggests merely that control wanes with continued use, something anticipated by classic work on mental fatigue (Thorndike, 1900) and the vigilance decrement (Mackworth, 1948).

Process Model of Self-Control (Duckworth, et al., 2016)

As the field shifts away from the notion of effortful inhibition, recent theorizing suggests that self-control can also be more effortless as a function of using different strategies that prevent the experience of temptation (or conflict) in the first place (Duckworth, et al., 2016; Gillebaart & De Ridder, 2015; Hofmann & Kotabe, 2012). While there is a lot of emerging work examining which strategies people may use in the pursuit of their goals (e.g., Duckworth, Milkman, & Laibson, 2018; Hennecke et al., 2019; Hofmann & Kotabe, 2012), the most prominent framework that lays the foundation for more strategic self-control is the process model of self-control (Duckworth, et al., 2016).

According to various strategy models, strategies are either preventive (proactive) or interventive (reactive) (Braver, 2012; Hofmann & Kotabe, 2012). Preventive strategies (called situational strategies by the process model) are anticipatory techniques used to minimize the extent to which a desire may emerge at a later point in time. In other words, preventive strategies are tools that people can use to avoid conflict before it ever emerges. According to the process model, such strategies include situation selection (i.e., intentionally choosing to be in an environment that is aligned with one's goal and/or avoids temptation) and situation modification (i.e., changing some aspect of the environment to reduce or remove temptations). For example, a person can avoid the bakery section at the grocery store and simply not buy cookies in the first place (situation selection), or, if the cookies are already in their home (e.g., because their spouse loves cookies), they can be placed in the back of the cupboard so they are "out of sight, out of mind" (situation modification). Because it is not always possible to prevent self-control conflicts entirely, interventive strategies (called intrapsychic/cognitive strategies by the process model) can be used to cope with existing temptations that conflict with important goals. In other words, interventive strategies are tools that people use to manage already existing conflicts.

According to the process model, such strategies include attentional deployment (i.e., directing attention away from a temptation), cognitive change (i.e., focusing on the positive aspects of restraining and/or the negative aspects of giving in), and response modulation (i.e., using willpower or inhibition to simply resist). A core feature of strategy models is their ability to describe an array of tools that people can use in order to regulate or minimize their experience of

temptation and therefore facilitate goal attainment. Another feature that is unique to the process model, and perhaps one of the reasons why it has become so prominent, is the idea that impulse generation develops in an iterative cycle and so the earlier you intervene, the more effective the corresponding strategies should be. This is, the impulse or desire for the temptation becomes stronger as you move throughout the cycle, and so intervening earlier means the desire is weaker and therefore increases your chances of success (e.g., it is easy to not desire cookies that are not in your house compared to when they are staring you down from the countertop). Although there is some evidence supporting this model (Duckworth, White, Matteucci, Shearer, & Gross, 2016), there has yet to be many empirical investigations comparing the effectiveness of different strategies.

Empirical Review

Self Control and Social Media Addiction

Past studies of self-control and Internet addiction have shown mixed results. Some studies have revealed that restraint indicators (e.g., impulse control and resist temptation) are negatively related to Internet addiction (Larose et al., 2003; Kim et al., 2008; Li et al., 2014). Also, other studies have demonstrated that impulsivity indicators (e.g., impulsivity and temper) are positively related to Internet addiction (Gao & Zhao, 2009; Tao & Li, 2009).However, many other studies have shown no significant relationship. Some studies have found no significant link between restraint indicators (e.g., self-control, self-regulation, etc.) and Internet addiction (Lee & Cho, 2015; Błachnio & Przepiorka, 2016). Likewise, other studies have shown no significant link between impulsivity indicators (e.g., impulsivity, dyscontrol, etc.) and Internet addiction (Öğütçü et al., 2016; Zhou, 2017). Although moderators (e.g., culture, age, and gender) might account for some of these differences in results, most studies did not test for them (Teng et al., 2014). Also, some of these differences in results might stem from using different measures (restraint vs. impulsivity indicators, different Internet addiction measures) or across the years of the studies. In addition, studies at home and abroad both have found that those with higher level of Internet addiction always have lower levels of self-control (Qifeng et al., 2013b; Akın et al., 2015). Li et al. (2020) meta-analysis of 83 primary studies with 80,681 participants determined whether students with poor self-control had greater Internet addiction, the results showed that self-control was negatively associated with Internet addiction related. Enyuan & Huiyu (2017) conducted a survey of 1,500 Chinese college students and found that self-control has a significant negative predictive effect on Internet addiction.

Self-control is an individual's ability to modify or suppress dominant responses and thereby regulate his or her thinking, feelings, and behaviour to meet the standards of personally set goals (Duckworth & Kern, 2011). High self-control can help individuals maintain healthy eating habits (Haynes, Kemps & Moffitt, 2016) and reduces the risk of substance abuse (Malouf et al., 2014). Low self-control, on the other hand, is a root cause of many social and psychological problems, such as substance abuse (Baumeister & Vonasch, 2015) and impulsive decision-making (Achtziger et al., 2015). A meta-analysis confirmed a significantly negative correlation between students' self-control and internet addiction (Li et al., 2021). Improving self-control is a very effective way to intervene in and treat addiction (Tang et al., 2015).

Personality Characteristics and Social Media Addiction

Earlier research has studied the connection between Big five personality characteristics and Facebook usage (Ryan &Xenos, 2011). Conscientiousness, extraversion and emotional stability negatively related to Facebook addiction (Błachnio et al., 2017). Extraversion is positively

linked and conscientiousness and openness to experience were negatively linked to Facebook addiction (Atroszko et al. 2018; Balcerowska et al. 2020). Rosales, Guajardo & Medrano (2021) found that only neuroticism among the big five personality traits was significantly correlated with Facebook addiction. Horzum et al (2022) found that conscientiousness, agreeableness, openness to experience have significantly predicted Facebook addiction whereas extraversion and neuroticism did not. In their study, Sheldon et al. (2020) found that none of the big five traits displayed significant relationship with Facebook addiction. Miceli, Cardaci, Scrima & Caci (2022) found that neuroticism moderated the link between past negative time perception and Facebook addiction. Sindermann et al. (2020b) found that extraversion and neuroticism were positively related to the Facebook use disorder and conscientiousness was negatively related to Facebook use disorder. In another study conducted by Sindermann et al. (2020a) found that conscientiousness was negatively correlated and neuroticism was positively correlated with Facebook use disorder.

Similar to the research that shown the high level of extraversion and neuroticism personality, and lower level of Agreeableness, Openness, and Conscientiousness were able to predict problematic used if internet (Alonso, & Romero, 2018). Another finding has different conclusion, Carlisle stated the significant predictor on (Internet Gaming Disorder) were neurotic and introverted personalities (Carlisle, 2018). Müller et al. (2018), stated the lower level of conscientious and high level of neuroticism can predict problematic internet use. These findings are supported by research data from Stavropoulos et al. (2016) that Contentiousness as the safety factor of internet addiction. Findings from Zhou et al. (2017) shown openness to experience, extraversion, and neuroticism has positive association with internet addiction. These findings were different with Kayiş et al., (2016) about opens to experience because it was negatively correlated with internet addiction. From all the above research findings there are differences about types of personality that related to internet addictions. More specifically on social media users, extraverted and neurotic personality were more addicted to social media Wang, (2015). Neurotic, introvert and conscientious personalities were easier to become problematic Facebook user (Marino, 2019). Introverted individual, lack of emotional stability were correlated with Facebook addiction moreover introverted students, less agreeable and less conscientious were addicted to twitter (Błachnio, 2017; Kircaburun, 2016).

In their study, Gil de Zúñiga et al. (2017) used data from 20 different countries to look into the relationship between people's personality traits and social media use. Based on their results, people who are more extraverted, agreeable, open and conscientious are likely to use social media more frequently. Additionally, they highlighted that the more emotionally stable people are, the less time they spend on social media consuming information and/or socializing.

Hypotheses

These hypotheses were tested in the study:

1. Self control will significantly predict social media addiction among University Students.
2. Personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) will significantly predict social media addiction among University Students.

METHOD

Participants

A total of 218 participants were selected for the study, consisting of 115 males and 103 females, all of whom were undergraduate students. The participants' ages ranged from 18 to 27 years, with a mean age of 23.17 years and a standard deviation of 2.33. They were chosen using a simple random sampling technique from the populations of the Faculty of Natural Science, which

had 107 participants, and the Faculty of Social Sciences and Humanities, which had 111 participants, at the Enugu State University of Science and Technology in Agbani, Enugu.

Instrument

Three research instruments were used in the study, they are: Self-Control Scale-Brief Version (Tangney et al., 2004); Big Five Inventory (BFI; Costa & McCrae, 1992) and Bergen Social Media Addiction Scale (BSMDS; Andreassen, et al., 2017)

Self-Control Scale-Brief Version (Tangney et al., 2004)

Self-Control was assessed using the Self-Control Scale-Brief Version (Tangney et al., 2004). The scale includes 13 items and uses a 5-point Likert scale that ranges from not at all like me to very much like me. This measure assesses people's general ability to override or change inner responses and to interrupt/refrain from undesired behavioural tendencies. Example of the scale item are; "I have a hard time breaking bad habits", "People would say that I have iron self-discipline", and "Sometimes I can't stop myself from doing something, even if I know it is wrong". The responses to each item are summed (using reverse coding where appropriate) for a total self control score. Higher scores are indicative of greater self-control. In two studies Tangney et al. (2004) found Cronbach's alphas of .83 and .85 for this scale. Additionally, Tangney et al. (2004) demonstrated concurrent validity of the scale through its negative association with impulse control problems such as alcohol abuse (r = -.32) and binge eating (r = -.32) and positive association with academic performance (r = -.32). In the current study the scale showed high reliability (α = .84) using 40 University Students of University of Nigeria Enugu Campus.

Big Five Inventory (BFI; Costa & McCrae, 1992)

Big five inventory is a 44-items inventory designed by Costa and McCrae (1992) to assess personality from a five-dimensional perspective which are distinct from one another. The five sub scales are extraversion, agreeableness, conscientiousness, neuroticism and openness. It is administered individually or in group after establishing adequate rapport with the clients. The young and the semi-illiterates' clients are helped to carry out the instructions. There are no right or wrong answer and no time limit for completing BFI. Direct scoring is used for all the items. The value of the number shaded in each item is added to obtain the clients score in each of the subscales. Items 1-8 measures extraversion; items 9-17 measures agreeableness; items 18-26 measures conscientiousness, items 27-34 measures neuroticism while items 35-44 measures openness. Costa and McCrae (1992) obtained convergent validity coefficient of .75 while Umeh (2004) obtained divergent validity coefficient of .05 = extraversion; .13 = agreeableness; .11 = conscientiousness; .39 = neuroticism and .24 = openness with University Maladjustment Scale (UMS) Also, Umeh (2004) provided norm for Nigeria samples using 60 participants (Extraversion, Male = 28.45, Female = 27.10; Agreeableness, Male = 29.75, Female = 24.74; Conscientiousness, Male = 29.10, Female = 27.60; Neuroticism, Male = 23.43, Female = 24.48 and Openness, Male = 38.07, Female = 35.18). Cronbach Alpha coefficient of .73 = Agreeableness, .83 = Conscientiousness, .85 = Extraversion, .87 = Neuroticism and .86 = Openness, was obtained in a pilot test by the Researcher using 60 Adolescent participants from using 40 University Students of University of Nigeria Enugu Campus.

Bergen Social Media Addiction Scale (BSMDS; **Andreassen, et al., 2017)**

The 6-item Bergen Social Media Addiction Scale (BSMAS; Andreassen, et al., 2017) was used to measure the participants' addictive use of social media. The items concern experiences occurring over the past year and are rated on 5-point scales ranging from 1 =Very rarely; 2=Rarely, 3=Sometimes, 4=Often, 5 = Very Often. Examples of items in social media addiction are; "I spend

a lot of time thinking about social media or planning how to use it*"* and "I become restless or troubled if you are prohibited from using social media" A highest possible score of 30 and a least possible score of 6 could be obtained by any given respondent. Participants' ratings were summed across the 6 items to form a social media addiction score, with higher scores indicating greater social media addiction. The Cronbach's alpha of 0.81 was obtained by Andreassen, et al., (2017) while in the current study the scale showed a reliability coefficient was found to be .87 using 40 University Students of University of Nigeria Enugu Campus.

Procedure

A total of 289 copies of the research instruments were administered by the researchers within a period of 4 weeks to the target population. The administration of the instrument took the form of group testing in their respective class rooms. The researchers introduced themselves to the students in their respective classes and informed them what the research is all about, that the research is for knowledge purpose. There was no time limit and correct or wrong answers to the items of the instruments. However, out of the number distributed 261 copies were collected while 218 (84%) copies correctly filled were scored and analyzed whereby 43 (16%) copies were discarded.

Design and Statistics

The design for the study is correlation design. Therefore, the statistics for the study was Hierarchical Multiple Regression to help the researcher account for the contribution of self control each of the dimensions of personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) on social media addiction.

RESULTS

Table 1: Zero order correlation coefficient matrix showing Self Control and Personality Characteristics as predictors of Social Media Addiction

	M	SD	1	2	3	4	5	6	7	8	9
Age	23.17	2.33	1								
Gender	.47	.50	-.21**	1							
Self Control	39.72	10.62	-.44**	-.33**	1						
Openness	38.18	6.54	.15*	-.01	.28**	1					
Conscientiousness	13.50	3.99	.17*	.33**	-.57**	-.27**	1				
Extraversion	32.10	7.50	-.08	.19*	.34*	.84**	-.37**	1			
Agreeableness	33.06	7.15	-.09	.07	.48**	.68**	-.40**	.83**	1		
Neuroticism	14.99	5.93	.10	.34**	-.64**	-.33**	.85**	-.41	-.46**	1	
Social Media Addiction	11.89	4.10	.20**	.33**	**-.79**	**-.32****	**.76****	**-.39****	**-.51****	**.91****	1
Determinant of Coefficient (r^2)					**.62**	**.10**	**.58**	**.15**	.26	.83	

***Note**p<.01; *p<.05* Bold are relevant coefficient for the research hypotheses

The result shows that Self Control significantly correlated with Social Media Addiction (r = -.79, P < .01, r^2 = .62) among University Students.

In addition, the result shows that Personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) significant correlated with Social Media Addiction among University Students. Correlation coefficients were as follows; Openness and Social Media Addiction, r = -.32, P < .01, r^2 = .10; Conscientiousness and Social Media Addiction, r = .76, P < .01, r^2 = .58; Extraversion and Social Media Addiction, r = -.39, P < .01, r^2 = .15; Agreeableness

and Social Media Addiction, r = -.51, P < .01, r^2 = .26; Neuroticism and Social Media Addiction, r = .91, P < .01, r^2 = .83

Table 2: Summary of Hierarchical Multiple Regression Analysis for Variables Predicting Social Media Addiction (N= 218)

	STEP 1		STEP 2		STEP 3	
	β	***t***	**B**	***t***	**β**	***t***
Age	.28	4.40**				
Gender	.38	6.06**				
Self Control			-.87	-16.93**		
Openness					-.08	-1.73
Conscientiousness					-.06	-1.40
Extraversion					.22	3.75**
Agreeableness					-.15	-3.63**
Neuroticism					.76	17.27**
R	.42		.81		.96	
R^2	.18		.65		.91	
ΔR^2	.18		.47		.26	
F	23.55(2,215)		286.71(1,214)		128.50(5,209)	

*Note*p<.05;**p<.01*

Results of the hierarchical multiple regression for the test of the first factor of Social Media Addiction index is shown in the Table 1 above. The variable was entered in stepwise models. The demographic variable (age) in the Step 1 of the regression analysis significantly predicted Social Media Addiction (β = .28, t = 4.40, p>.01). Also the demographic variable gender significantly predicted social media addiction (β = .38, t = 6.06, p>.01). Hence, the demographic variables (age, gender) serve as control variables in the study and that is why they are keyed in step 1

In step 2, Self-Control was entered. The result shows that self control negatively and significantly predicted social media addiction (β = -.87, t = -16.93, at P > .01). The contribution of self-control in explaining the variance in social media addiction was 47% (ΔR^2 = .47). Therefore, self-control is a significant predictor of social media addiction among University Students.

In step 3, Personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) was entered. Only Extraversion (β = .22, t = 3.75, at P > .01); Agreeableness (β = -.15, t = -6.63, at P > .01) and Neuroticism (β = .76, t = 17.27, at P > .01) predicted social media addiction while Openness (β = -.08, t = -1.73, at P.<05) and conscientiousness (β = -.06, t = -1.40, at P.<05) did not predict social media addiction. The contribution of Personality characteristics in explaining the variance in social media addiction was 26% (ΔR^2 = .26). Therefore, Personality characteristics (Extraversion, Agreeableness, Neuroticism) is a significant predictor of social media addiction.

DISCUSSION

The finding of this study revealed that the hypothesis tested which stated that “self control will significantly predict social media addiction among university students” was accepted. This means that self-control significantly predicted social media addiction among university students. Some studies have revealed that restraint indicators (e.g., impulse control and resist temptation) are negatively related to Internet addiction (Larose et al., 2003; Kim et al., 2008; Li et al., 2014). Also,

other studies have demonstrated that impulsivity indicators (e.g., impulsivity and temper) are positively related to Internet addiction (Gao & Zhao, 2009; Tao & Li, 2009).

However, some studies have found no significant link between restraint indicators (e.g., self-control, self-regulation, etc.) and Internet addiction (Iftikhar & Tariq, 2014; Lee & Cho, 2015; Błachnio & Przepiorka, 2016). Likewise, other studies have shown no significant link between impulsivity indicators (e.g., impulsivity, dyscontrol, etc.) and Internet addiction (Choi et al., 2013; Öğütçü et al., 2016; Zhou, 2017). Although moderators (e.g., culture, age, and gender) might account for some of these differences in results, most studies did not test for them (Teng et al., 2014). Also, some of these differences in results might stem from using different measures (restraint vs. impulsivity indicators, different Internet addiction measures) or across the years of the studies. In addition, studies at home and abroad both have found that those with higher level of Internet addiction always have lower levels of self-control (Qifeng et al., 2013b; Akın et al., 2015). Li et al. (2020) meta-analysis of 83 primary studies with 80,681 participants determined whether students with poor self-control had greater Internet addiction, the results showed that self-control was negatively associated with Internet addiction related. Enyuan&Huiyu (2017) conducted a survey of 1,500 Chinese college students and found that self-control has a significant negative predictive effect on Internet addiction.A meta-analysis confirmed a significantly negative correlation between students' self-control and internet addiction (Li et al., 2021). Improving self-control is a very effective way to intervene in and treat addiction (Tang et al., 2015).

. Also, the second hypothesis tested which stated that "personality characteristics (Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism) will significantly predict social media addiction among university students" was accepted. Hence, only Extraversion, Agreeableness, and Neuroticism revealed a significant outcome whereby agreeableness predicted social media addiction negatively while extraversion and neuroticism predicted social media addiction positively.

Earlier research has studied the connection between Big five personality characteristics and Facebook usage (Ryan and Xenos, 2011). Conscientiousness, extraversion and emotional stability negatively related to Facebook addiction (Błachnio et al., 2017). Extraversion is positively linked and conscientiousness and openness to experience were negatively linked to Facebook addiction (Atroszko, et al. 2018; Balcerowska, et al. 2020). In another study conducted by Sindermann et al. (2020a) found that conscientiousness was negatively correlated and neuroticism was positively correlated with Facebook use disorder.

Amiel and Sargent (2004) also suggested that individuals with high extraversion may use computer mediated communication as a social tool but not as a substitute for real-world social interactions. Additionally, they reported that individuals with high neuroticism use the Internet to be informed and feel a sense of belonging. Ross et al. (2009) highlighted that high level of openness was associated with greater online sociability function use. In addition, they reported that although individuals with high extraversion were part of more online groups, this specific trait was not significantly related to the time spent online, the use of the communicative Facebook features or the number of online friends. Finally, the finding of the study indicated that the more neuroticism, agreeableness, and extraversion the more addiction to social media.

Implications of the Finding

In view of the finding of this study, one may observe that Self-control was negatively linked to Internet addition, supporting Ainslie's (1975) theory of impulsiveness. This result suggests a possible intervention; specifically, future studies can determine whether interventions to enhance

students' self-control can reduce their social media addiction. However, A plan of self-control treatment for excessive users of social media is required.

Also, the result revealed that individual's personality characteristics predicted social media addiction. Some dimensions of big five personality characteristics like Extraversion, Agreeableness and neuroticism are more prone to social media addiction. This could help health care providers build more effective screening tools to guide subsequent therapy for social media addicted people. Identifying personality variables that act as risk factors for social media addiction is important not only for better understanding of the addiction, but also for prevention and therapy. Since it indicates key personality factors that should be addressed in such interventions. Understanding this topic will help determine the future directions of therapeutic activities. The presented research is of great practical significance, as any successful addiction treatment requires identifying useful and effective focal points for intervention. This insight could also be helpful to clinicians to deal with individuals who are addicted to social media. Finally, this study results also can have implications on how the social media features are designed; especially not to encourage addictive level usage.

Limitations of the Study

Despite the numerous exciting results that obtained in the study, it must be acknowledged that the study is not free from limitations. Its results should be interpreted in light of these limitations. Firstly, the study had a cross-sectional design, so no causal conclusions should be drawn. In the future, it is recommended to conduct longitudinal studies with repeated measurement or diary studies.

Also, only one school participated in the study out of numerous institutions in Enugu State, therefore the sample size, geographical area and age group should be enhancing for the more precise results so that one can generalize and validate on larger population.

Suggestions for Further Study

Based on the findings of the study, the researcher recommends the inclusion of additional research fields for further exploration. This interdisciplinary approach could enhance the understanding of the factors influencing social media addiction and lead to more comprehensive insights. Study of human behaviour inevitably requires a multi-disciplinary approach, including consumer behaviour, psychology, sociology, environmental sciences, neurobiology, and neuromarketing. All these standpoints will make it possible to connect various perspectives to bring the bigger picture into focus and define innovative, efficient self-control techniques.

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