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Social Media Use Types and their Influence on the Mental Health Status of Jamaicans

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Abstract

Introduction: Digital or social media technology is the new face of Communication: instantaneous Communication and global connectivity. On extensively reviewing the literature, studies have yet to emerge on the type of social media usage and its influence on the mental well-being of Jamaicans. This gap in the literature retards knowledge of many challenges in society and the likely solutions to those truths. Jamaica has been experiencing a crime epidemic, and there is a gap in the literature on cyberpsychology.

Objective: This study evaluates cyberpsychology and different social media used by Jamaicans.

Methods and Materials: This study employed an explanatory cross-sectional survey research design. According to the 2019 population projections from the Statistical Institute of Jamaica [STATIN], Jamaica has 2,024,687 people 18 years and older, including 1,032,369 women and 992,318 men. The sample size in this study is calculated using this number, a 95% confidence level, a 5% margin of error, and the gender distribution of the population. Based on the population size and the data previously provided, the sample size is 385 Jamaicans aged 18 years and older, with a response rate of 78.18%.

Findings: The findings revealed that Twitter users experienced the highest level of severe anxiety (13.2%), followed by TikTok users (12.4%) and WhatsApp users (8.2%), and Facebook users experienced the least severe anxiety. TikTok users experienced the highest level of severe depression (4.8%), followed by YouTube users (3.4%) and Instagram users (2.8%), and Facebook users experienced the least severe depression.

Conclusion: This study confirms that social media use significantly influences mental health outcomes among Jamaicans, with varying effects depending on the platform and user behaviour. While the majority of the literature highlights both positive and negative associations, this research aligns with the findings that social media use adversely impacts depression, anxiety, and self-esteem. Notably, Facebook users exhibit the lowest levels of anxiety, depression, and internet addiction while demonstrating the highest self-esteem compared to other platforms. These results underscore the nuanced relationship between social media use and mental well-being, emphasising the need for platform-specific mental health strategies.

Keywords: Anxiety, **c**yberpsychology, cyber threats, depression, self-esteem, social media use type

Introduction

Communication has evolved in the last century from face-to-face interactions, telegraph, letter correspondence, radio, television, fax, landline telephones, mobile telephones, and computers to modern communication technologies, including the internet, artificial intelligence (A.I.), and machine learning (ML) (Amelia & Balqis, 2023; Anderson, 2005; Maryville University, 2020a, 2020b; Odlyzko, 2000; Walker, 2024). Maryville University (2020a) indicated that technology has revolutionised Communication. Fassouli (2016) opined, "Communication is not confined to the media or messages but to their interaction in a network of social relationships. By extension, the reception, evaluation and use of media messages, from whatever source, are as important as their means of production and transmission" (Fassouli, 2016, p. 1). Digital or social media technologyis the new face of communication: instantaneous communicationand global connectivity (Carlow University, 2021). Digital or social media is a new way of communicating with people and has become mainstream usage (Maryville University, 2020a, 2020b; University Canada West, 2024; Wong et al., 2020).

The United Nations (n.d.) reported that the world's human population was 2.5 billion in 1950; in mid-November 2022, the population reached 8.0 billion. New Jersey Institute of Technology (NJIT) (2023) indicated that globally, 5 billion people have access to the internet and spend time on their mobile devices, computers, and other communication technologies (Clement, 2019). Using the previously mentioned statistics, 63 out of every 100 people have access to the Internet or a 63 per cent penetration rate. Kemp (2023) found that 2.33 million Jamaicans use the internet, an 82.4 per cent penetration rate, and 1.4 million social media users, 49.5 per cent of the total population, as of January 2023. In 2022, Kemp found that 2.03 million Jamaicans were using the internet, 68.2 per cent of the total population, and 1.75 million were using social media, 58.7 per cent. At the start of 2024, Kemp (2024) indicated that there were 2.4 million Jamaican internet users, with a penetration rate of 85.1 per cent and 1.65 million social media users (56.9 per cent).

Social media usage is increasing global social connectivity and simultaneously changing people's mental health, which explains the pros and cons of this new modern communication technology (Bekalu, 2020; Karim et al., 2020; Zsila & Reyes, 2023). Many studies have established that social media usage influences users' mental health (Coyne et al., 2020; DeAngelis, 2024; Escobar-Viera et al., 2018; Karim et al., 2020; Khalaf et al., 2023). A study in the United States

found that 40 per cent of teens who had a high usage of social media recorded poor to very poor mental health (DeAngelis, 2024). A national cross-sectional study of Jamaicans revealed an inverse statistical correlation between the number of hours spent on social media and mental health (Bourne, 2024). Mir et al. (2024) study found that social media usage had a dual effect on well-being and mental health. Mir and colleagues found that 32% of adolescents believe that social media has a mostly positive impact on their lives, compared to 9% who report a primarily negative effect, which concurs with findings from the work of Zsila and Reyes(2023). According to Zsila and Reyes (2023), social media significantly influences mental health. It can enhance connection, increase self-esteem, and improve a sense of belonging. However, it can also lead to tremendous stress, pressure to compare oneself to others, and increased sadness and isolation. Mindful use is essential to social media consumption (Zsila & Reyes, 2023).

Despite the works of Zsila and Reyes (2023) and Mir et al. (2024), the preponderance of studies has established the negative effect of social media usage, particularly addiction, on mental health. A self-reported cross-sectional descriptive survey found that 47% of 207 Jamaica who resided in the Kingston Metropolitan Area (KMA) indicated that social media influences their mental health. Bourne's study (2024) went further than the association between mental health and social media usage, as he found that it was not merely using social media that influenced mental health but the number of hours spent on the applications.

Bourne's study brings the type of social media usage and hours utilised into social media and mental health discourse. HelpGuid.org (2024), reporting on a survey conducted by the University of Pennsylvania, indicated that high usage of Facebook, Snapchat, and Instagram increased the feeling of loneliness. This issue explains that social media usage affects one's mental health and well-being. Simultaneously, the study found that lower social media usage reduces loneliness. Bourne (2024) did not examine the type of social media usage and its influence on Jamaicans' mental well-being, and no other study evaluated this fact in Jamaica. The studies of Bourne (2024) and the University of Pennsylvania bring the discourse to cyberpsychology.

According to the New Jersey Institute of Technology (NJIT) (2023), cyberpsychology studies psychological processes related to and underlying all aspects and features of technologically interconnected human behaviour. In other words, the psychology of cyberspace focuses on the intersection of technology and human behaviour. Modern communication technologies influence human cognition, which may account for the crime situation in Jamaica.

Statement of the Problem

In Jamaica, the rise of social media has brought profound changes to how individuals communicate, connect, and engage with the world. While these platforms provide opportunities for self-expression, information sharing, and community building, they also present potential risks to mental health. Social media behaviours, such as passive scrolling, active posting, and the pursuit of validation through likes and shares, can contribute to issues such as anxiety, depression, and diminished self-esteem.The problem is further compounded by Jamaica's unique cultural and socioeconomic landscape, where societal norms, family structures, and economic disparities may amplify the psychological impact of social media use. Despite the growing

prevalence of mental health concerns in Jamaica, such as stress and depression, limited research exists on how different types of social media users-whether observers, engagers, or content creators-are affected. This gap in understanding raises critical questions about how social media behaviours influence mental health outcomes and how cultural factors moderate these effects. Without evidence-based insights, mental health professionals, policymakers, and educators lack the tools to address the challenges posed by social media effectively. This study seeks to investigate these issues, focusing on the relationship between social media user types and their influence on the mental health status of Jamaicans, to inform culturally relevant interventions and public health strategies.

Significance of Study

In recent years, social media has become essential to the daily lives of many Jamaicans, affecting communication, socialisation, and information consumption (Fox & Moreland, 2015). Although these platforms have numerous advantages, including improved connectedness and the promotion of self-expression (Anderson & Jiang, 2018), they also pose problems to mental health. Studies have demonstrated correlations between social media usage and mental health, including heightened anxiety, depression, and stress, particularly in young individuals (Fox & Moreland, 2015; Hickling & Gibson, 2012; Keles et al., 2020). Nonetheless, there is a lack of comprehension regarding the influence of various platforms on mental health outcomes, especially within the Jamaican setting. This study seeks to examine the impact of different social media platforms on the mental health of Jamaicans, addressing a deficiency in regional research and fulfilling the demand for specific insights.

The results of this study are noteworthy for multiple reasons. Initially, they will offer insights into the impact of social media engagement on mental health, particularly concerning depression, anxiety, and stress. In nations where mental health concerns are stigmatised and inadequately addressed, such as Jamaica (Hickling & Gibson, 2012), it is crucial to ascertain the dangers and advantages linked to various platforms. This study's evidence may guide public health initiatives to enhance digital literacy and foster healthier social media practices, especially for at-risk groups, such as adolescents and young adults, who are more susceptible to mental health issues stemming from online engagement (Twenge et al., 2018).

This study is practical for policymakers and healthcare practitioners. The growing dependence on social media necessitates that public health institutions comprehend these platforms' hazards and opportunities. Targeted interventions, like school-based mental health programs and public awareness campaigns, could alleviate social media's adverse impacts (Naslund et al., 2020). Furthermore, the findings will furnish empirical proof to bolster mental health advocacy initiatives, mitigate stigma, and prompt policymakers to augment mental health services (Jenkins et al., 2011).

This study enhances academic knowledge by examining mental health in a developing nation. Most current research on social media and mental health has focused on high-income countries, resulting in a lack of awareness of the experiences of persons in Caribbean nations such as Jamaica (Rawal et al., 2020). This study enhances global discourse on the relationship between

social media and mental health by providing region-specific insights, particularly highlighting the circumstances of low- and middle-income countries (LMICs). This research will enable individuals and institutions to make more educated decisions regarding social media utilisation. The results will promote healthy online conduct and stimulate additional discussions around mental well-being in Jamaica and other LMICs, fostering a more psychologically resilient culture.

Rationale of Study

Insufficient prevention, treatment, care, and management of mental health conditions is causing significant human suffering worldwide. It also imposes high economic burdens on countries since individuals who have mental illness are more likely to exit the labour force, miss days of work (absenteeism), or work at a reduced capacity (presenteeism). In Jamaica, the burden of mental illness is considerable. It is predicted to cause US$ 2.76 billion in lost economic output from 2015-2030, a higher financial burden than any category of noncommunicable disease conditions except cardiovascular disease (United et al.[UNIATF] et al., 2019, p. 2). The rationale for this study is encapsulated in the social, psychological, and economic costsassociated with Jamaicans' mental illness and how ignorance of this gap and the different social media technologies will affect all facets of society. By conducting research in this area, policymakers, academicians, social workers, and administrators can institute social and public health programmes and policies to tackle the reality of the findings.

Definition of Terms

The influence of social media on mental health is a multifaceted issue that intersects with various psychological and technological domains (Saraceni,2023). Central to this study are key terms that provide a foundation for understanding the relationship between digital behaviour and mental well-being. Anxiety on social media can be generated by continual exposure to idealised lifestyles, social comparisons, and the fear of missing out (FOMO), which causes pressure to keep up with others' curated lives (Ahmed et al., 2022).Artificial intelligence (AI) plays a significant role in shaping social media experiences. AI-driven algorithms curate content, recommend posts, and enhance engagement on platforms like Facebook and Instagram. While these technologies personalise user experiences, they can also contribute to adverse outcomes, such as excessive screen time or exposure to harmful content, which may indirectly impact mental health (D'Alfonso, 2020; Mousavi et al., 2022).Cyberpsychology examines how individuals interact, communicate, and form relationships online, shedding light on how social media user types experience positive or negative mental health outcomes. Social media has been associated with depression through mechanisms such as exposure to cyberbullying, unrealistic expectations set by influencers, and feelings of inadequacy stemming from social comparison (Almahdi et al., 2023; Caponnetto& Milazzo,2019).

Mental health encompasses emotional, psychological, and social well-being (Raj et al., 2024). It affects how individuals think, feel, behave, handle stress, and relate to others. While social media can provide emotional support and foster community connections, it also poses risks such as addiction, reduced face-to-face interactions, and exposure to harassment, all of which can

compromise mental health. Platformslike Twitter, TikTok, and WhatsApp are integral to modern communication (Abd-Alrazaq et al., 2023;Priyadharshini et al., 2023). However, these platforms expose users to challenges such as misinformation, cyberbullying, and addictive behaviours, which may have profound effects on mental well-being. By understanding these definition terms, we gain deeper insight into the complexities of social media's role in influencing the mental health of Jamaicans. These terms lay the framework for exploring the complex relationship between digital interactions and psychological effects in the context of this study.

Anxiety: Anxiety isan emotion characterised by tension, worried thoughts, and physical changes like increased blood pressure (Encyclopedia of Psychology and the APA Dictionary of Psychology, n.d.).

Artificial Intelligence (A.I.): A.I. enables computers and machines to simulate human learning, comprehension, problem-solving, decision-making, creativity, and autonomy(IBM, 2024).

Cyberpsychology: Cyberpsychology is the study of psychological processes that underpin all dimensions and characteristics of electronically interconnected human behaviour. In other words, cyberspace psychology examines the interface of technology and human behaviour (New Jersey Institute of Technology, 2023).

Depression: Depression, also referred to as major depression, major depressive illness, or clinical depression, is a widespread but significant mood disease. The National Institute of Mental Health (NIMH) reports that severe symptoms might disrupt daily activities like sleeping, eating, and working.

Mental Health: Mental health isa state of mental well-being that enables people to cope with the stresses of life, realise their abilities, learn well and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective skills to make decisions, build relationships and shape our world. Mental health is a fundamental human right. Moreover, it is crucial to personal, community and socio-economic development (World Health Organization [WHO], 2022).

Social Media: Social media isthe means of interaction among people who create, share, and exchange information and ideas in virtual communities and networks (Tufts, 2024). Table 1 shows a list of social media applications available on the internet.

Table 1: List of Social Media Applications Available on The Internet

Social media applications	Examples
Social networks	Facebook, Twitter, Instagram, Snapchat
Media sharing	WhatsApp, Instagram, YouTube, Snapchat, TikTok
Messengers	Facebook Messenger, WhatsApp, Telegram, Viber, iMessage
Blogging platforms	WordPress, Wikipedia
Discussion forums	Reddit, Twitter
Fitness & lifestyle	Fitbit

Source: Khalaf et al. (2023, p. 2)

General Objective

This study evaluates cyberpsychology and different social media used by Jamaicans.

The study will:

1. To investigate the statistical associations between different patterns of social media use and critical mental health outcomes-specifically anxiety, depression, and self-esteem-among Jamaicans.

Specific Objectives

1. 1.Determine the statistical association between social media use and anxiety to analyse the extent to which different patterns of social media use are statistically associated with levels of anxiety among Jamaicans.
2. Determine the statistical association between social media use and depression to evaluate the relationship between various social media behaviours and the prevalence or severity of depressive symptoms in Jamaican individuals.
3. Determine the statistical association between social media use and self-esteem to assess how distinct forms of social media engagement are linked to self-esteem levels among Jamaicans.
4. Determine the relationship between social media type and internet addiction.
5. Evaluate the relationships among depression (PHQ-9), self-esteem, anxiety (GAD-7), and internet addiction scale.

Theoretical Framework

In the 1990s, Roy Baumeister and colleagues developed the Displaced Behaviour Theory(DBT) (Baumeister et al., 1998). The theory purports that high social media users prefer to spend more time in sedentary activities. These sedentary behaviours explain why they are highly engaged in social media, which requires less face-to-face interaction. Baumeister et al. (1998) believed that self-control is a limited resource, and when people become so involved, it drains over time. They also believed that when self-control resources are low, it is likely that people will become more engaged in impulsive or self-destructive conduct. Initially, people who are highly engaged in using social media are so involved because it protects them against mental disorders. The DBT, therefore, sets the framework for the relationship between social media usage and mental health. This theory sets the premise for examining a relationship between the previously mentioned issues and explains its suitability and appropriateness in the current study.

Displaced Behaviour Theory (DBT) provides a premise for reviewing variables such as social media usage, mental health, types of social media, and the relationship between social media use and mental well-being. This theory guides the employment of an associational cross-sectional research design and lays the foundation for measurement, descriptive statistics, survey methodology, and multivariate analysis (Baumeister et al., 1998).

Methods and Materials

Survey research and phenomenological research methodologies were employed to investigate the topic. Survey research methodology lends itself to a positivistic (and post-positivistic) theoretical framework approach derived from objectivism (Babbie, 2016; Crotty, 2005; Neuman, 2014), which some call quantitative research. The survey method allows for 1) measurement, 2) statistical analyses, and 3) objectivism (Burnham et al., 2004; Blalock & Blalock, 1968; Bastick & Matalon, 2007; Creswell, 2019; Crotty, 2005; Powell et al., 2007; Rea & Parker, 2005; University of Leicester, 2011), which is the focus of this study. It offers a comprehensive coverage of particular issues, which lends itself to 1) numerical description and 2) generalizability of information from collecting data from a population sample (Blalock & Blalock, 1968; Fowler, 2009). Furthermore, on extensively reviewing the literature, studies have yet to emerge on the type of social media usage and its influence on the mental well-being of Jamaicans. This gap in the literature retards knowledge of many challenges in society and the likely solutions to those truths. Jamaica has been experiencing a crime epidemic, and there is a gap in the literature on cyberpsychology. This study evaluates cyberpsychology and Jamaicans' different social media usage. Table 2 represents studies conducted on social media usage on the mental well-being of Jamaicans.

Table 2: Studies on Social Media Usage and Mental Wellbeing of Jamaicans

Years	Author (s)	Topic
2024	Bourne	An Examination of the influence of social media usage on the mental health of Jamaicans
	Jamaica Observer	Misuse of social media worsens adolescent mental health, says psychologist.
	Walker	Social Media's Impact on Jamaican Mental Health
2023	Smith et al.	An exploratory study into the interplay of coolness and maladaptive social media use: Identifying profiles of addiction-like symptoms among Jamaican users
2022	Stubbs et al.	Problematic Internet Use Among University Students in Jamaica
2021	Wellington	Effects of social media on the psychological wellbeing of young people
2020	Maloney et al.	Jamaican adolescents' receptiveness to digital mental health services: A cross-sectional survey from rural and urban communities
2018	UNICEF	Mental Health and Social Media

Research Design

This study employed an explanatory cross-sectional survey research design. According to Bastick and Matalon (2007), descriptive and investigative research measures the characteristics of a sample or population on pre-specified variables. This study fits this design because it typically sought to ascertain respondents' perspectives or experiences on a specified subject in a predetermined structured manner (Bastick & Matalon, 2007; Blalock & Blalock; Creswell, 2019). The survey method allows for 1) measurement, 2) statistical analyses, and 3) objectivism

(Bastick & Matalon, 2007; Blalock & Blalock, 1968; Burnham et al., 2004; Creswell, 2019; Crotty, 2005; Powell et al., 2007; Rea & Parker, 2005; University of Leicester, 2011), which is the focus of this study.

Population and Sampling Design

This study's population includes Jamaicans over the age of 18, Jamaicans who are currently living in the country, and children under the age of 18. According to the 2019 population projections from the Statistical Institute of Jamaica [STATIN], Jamaica has 2,024,687people 18 years and older, including 1,032,369 women and 992,318 men. The sample size in this study is calculated using this number, a 95% confidence level, a 5% margin of error, and the gender distribution of the population. Based on the population size and the data previously provided, the sample size is 385 Jamaicans aged 18 years and older.

This study employed a non-probability (purposive) sampling of Jamaicans. The research team was responsible for selecting geographical locations, and the numbers were given to the team based on the number of people. Datawas collected based on residence. Within the context of truths, the science of research is limited to quantitative sampling design as qualitative methods yield pertinent information and an equal value in truths, which means that non-probabilistic sampling does not remove the value of the data gathered or its scientificity (Babbie, 2007; Crotty, 2005; Neuman, 2006; Peters & Bourne, 2012a, 2012b).

Instrumentation

A comprehensive web-based questionnaire was developed, drawing from various established digital and social media addiction instruments such as the digital addiction scale, the Rosenberg Self-Esteem index, the Patient Health Questionnaire (PHQ-9), and the Generalised Anxiety Disorder Questionnaire (GAD-7). This extensive approach ensures that the survey questionnaires can effectively gather general information on digital addiction from a diverse sample of Jamaicans across different geographical areas.

Rosenberg's Self-Esteem Index constitutes a score on the ten items(Rosenberg, 1965). The scales are scored for items 1, 2, 4, 6, and 7:strongly agree = 3; agree = 2; disagree = 1; and strongly disagree = 0. For items 3, 5, 8, 9, and 10 (which are reversed in valence):strongly agree = 0; agree = 1; disagree = 2; and strongly disagree = 3. The scale ranges from 0 to 30. Scores between 15 and 25 are within the normal range; scores below 15 suggest low self-esteem.

Drs. Spitzer and Williams developed the generalised anxiety disorder (GAD-7 Anxiety, which assesses mental health disorders. The questionnaires are self-administered screeners and diagnostic tools for mental well-being(American Psychological Association (APA),nd;Dhira et al., 2021; Kroenke et al. 2001, 2007; Kroenke & Spitzer, 2002; Plummer et al., 2016; Spitzer et al., 2006). The tools allow for quick and easy assessment of depression and anxiety and facilitate diagnosis and treatment of patients. The generalised anxiety disorder (GAD-7 Anxiety) items are summed and interpreted as follows: 0-4: minimal anxiety; 5-9: mild anxiety; 10-14: moderate anxiety; and more significant than 15: severe anxiety (Anxiety and Depression Association of America (ADAA), n.d.).

The PHQ-9 scores ranged from 0 to 27 since each of the nine items can be scored from 0 (not at all) to 3 (nearly every day). They are categorised as follows: increasing severity: 0-4 (minimal depression), 5-9 (Mild depression), 10-14 (Moderate depression), 15-19 (moderately severe depression), and 20 or greater (severe depression) (Kroenke et al., 2001; Stanford Medicine, 2005). The Digital Addiction Scale is adopted and modified from the Digital Addiction Scale for Children (DASC). The scale, developed by Hawi et al. (2019), consists of 25 items and 9 sub-dimensions (see also Oktay & Ozturk, 2024). The scale is a five-point Likert scale (1: Never-5: Always) with a minimum score of 25 and a maximum score of 125.

The higher the score, the higher the level of addiction or dependencyon digital technology or social media. The nine sub-dimensions are as follows: tolerance, withdrawal, problems, conflict, deception, displacement, relapse, and mood modification (Oktay & Ozturk, 2024; Bağatarhan & Siyez, 2023). The interpretations and psychometric properties are extensively discussed in the literature (Bagatarhan & Siyez, 2023; Cimke et al., 2023; Seema et al., 2021). Öztemel & Traş (2023) opined, “The first factor of the scale consists of 13 items related to conflict (item 9, item 22), problems (item 10, item 13, item 23, item 25), deception (item 4, item 16), displacement (item 6, item 18, item 20), preoccupation (item 14), and relapse (item 17). The second factor consists of12 items related to tolerance (item 2, item 7), withdrawal (item 3, item 8, item 12, item 21), mood modification (item 5, item 15, item 24), preoccupation (item 1, item 11), and relapse (item 19)” (Öztemel & Traş, 2023, p. 19458).Simple modifications were made to the scale, including adding the friend relative to the term parents and removing the word "children" from its title.

The social media addiction scale was developed by Al-Menayes (2015). The SMAS consisted of 32 items. Young (1996, 1997, 1999; Young & Rodger, 1997a, 1997b) developed the Internet Addiction Test, which consisted of 20 items. The 5-point Likert scale index ranged from 1 to 100. The scores are interpreted as follows: 0 to 30 points are considered to reflect an average level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence upon the Internet(see also Staff, 2009; Teo & Kam, 2014).

Pilot Study

Pilot testing was done to validate and ensure the reliability of the data-gathering instrument. The research team pilot-tested the instruments with 20 people from areas across Jamaica, including technocrats. Following the vetting, editing and modification processes with the stakeholders mentioned earlier, the research team again pre-tested the instrument. The exercise lasted for 20 minutes ± 10 minutes, after which the questionnaires were retrieved; the statements were coded and put into the computer for analysis.

Administrative Procedure

The administrative procedure was designed with utmost transparency and respect for participants' rights. The researcher diligently informed participants of their rights and responsibilities, even if they chose to partake in the study. Informed consent was read to each participant, and only those

who voluntarily agreed were allowed to participate. The administrative procedure for completing the questionnaires was clearly explained, and participants were fully informed of their rights and responsibilities for the interviews. Written consent was sought and accepted before participation, and participants were always aware of their right to withdraw.

Method of Analysis

For this survey instrument (questionnaire), a large volume of data was stored, retrieved and analysed using the Statistical Packages for the Social Sciences (SPSS) Version 29 (SPSS Inc; Chicago, IL, USA). Descriptive statistics were conducted on the data, including percentage and frequency distributions and percentage and frequency counts. Descriptive statistics enabled the researchers to understand better the many data points obtained. Statistical significance was determined by a p-value less than or equal to five percentage points (≤ 0.05) - two-tailed. Descriptive statistics, bivariate analysis, and Ordinary Least Square (OLS) regressionwere used to analyse the present data. Cronbach alpha was used to determine the quality of each scale.

Findings

Demographic Characteristics

Table 3 represents the demographic characteristics of the sampled respondents. Of the sampled respondents (n=301), the majority were female (62.2%), ages 18 to 27 years (39.0%), full-time employed (60.3%), tertiary educated (46.9%) and resided in St. Catherine (23.1%).

Table 3: Demographic Characteristics ofSampled Respondents, n=304

Details	% (n)
Gender	
Male	37.5 (109)
Female	62.2 (181)
Non-binary	0.3 (1)
Age cohort	
18 - 27 years	39.0 (113)
28 - 37 years	26.9 (78)
38 - 47 years	16.6 (48)
48 - 57 years	11.4 (33)
58 - 67 years	5.5 (16)
68 - 77 years	0.7 (2)
78+ years	0.0 (0)
Educational attainment (completed)	
None	2 (0.7)
Primary	3 (1.0)
Secondary	25 (8.6)
Tertiary	136 (46.9)
Currently a student (college, university)	124 (42.8)
Union Status	

Employed (Full-time)	60.3 (175)
Employed (Part-time)	8.3 (24)
Student	26.6 (77)
Unemployable (sick)	1.4 (4)
Unemployed (out of a job and seeking work)	3.4 (10)
Area of Residence	
Clarendon	5.5 (16)
Hanover	0.3 (1)
Kingston	17.2 (50)
Manchester	18.6 (54)
Portland	1.4 (4)
St. Andrew	10.7 (31)
St. Ann	2.1 (6)
St. Catherine	23.1 (67)
St. Elizabeth	6.9 (20)
St. James	5.9 (17)
St. Mary	1.7 (5)
St. Thomas	1.7 (5)
Trelawny	1.4 (4)
Westmoreland	3.4 (10)

Reliability Analysis

Table 4 presents the internal consistency reliability analysis for indices employed in this study. Based on the Cronbach alpha values (0.7), the items are highly consistent in assessing the concepts of internet addiction, digital addiction, Patient Health Questionnaire (depression), anxiety, and self-esteem. Hence, all the items in each index measure the same construct.

Table 4: Reliability Analysis of Indices for Sub-Scales and Overall Scale

Details	**Sub-scale Cronbach alpha value**	**Overall Cronbach alpha value**
Internet Addiction		**0.930**
Digital Addiction		**0.960**
Preoccupation	0.614	
Tolerance	0.731	
Withdrawal	0.904	
Problem	0.833	
Conflict	0.898	
Deception	0.879	
Displacement	0.689	
Relapse	0.730	
Mood modification	0.865	

Patient Health Questionnaire		**0.973**
Generalised Anxiety Disorder		**0.913**
Self-Esteem Index		**0.874**

Figure 1 shows the daily hours spent on social media. Of the sampled respondents (n=304), 24.2% spend at least 5 hours daily on the internet, using various social media platforms and online activities, compared to 41.3% with at most 2 hours and 34.7% on 3-to-4 hours.

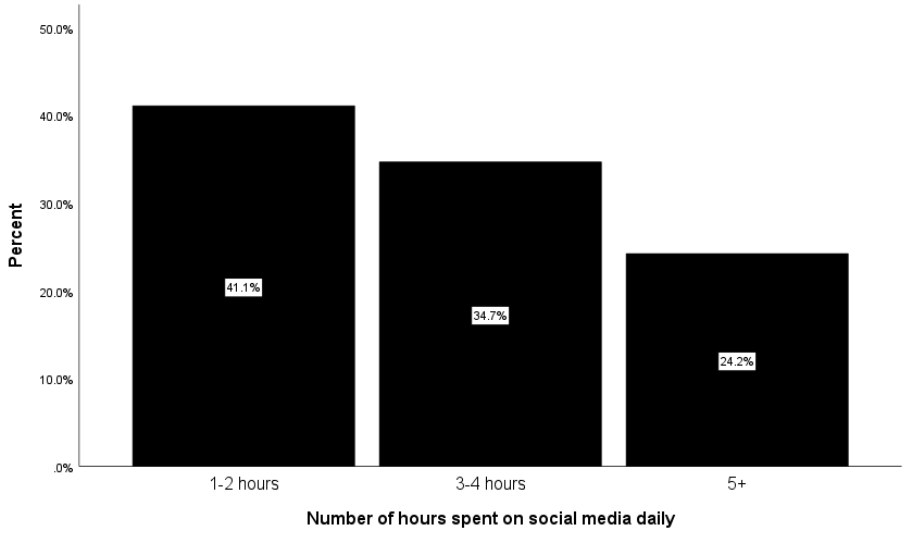

Figure 1: Represents the Daily Hours Spent on Social Media

Table 5 presents the frequencies for the different types of social media used by the respondents. Of the sampled respondents (n=304), 82.9% used WhatsApp, 63.2% used YouTube, 56.9% used Instagram, 46.7% used TikTok, 29.6% used Facebook, and 12.8% used Twitter.

Table 5: Types of Social Media Used

Details	**Yes**	**No**
	%	%
Facebook	29.6	70.4
TikTok	46.7	53.3
YouTube	63.2	36.8
Twitter	12.8	87.2
Instagram	56.9	43.1
WhatsApp	82.9	17.1
Total	**304**	**304**

Research Objectives 1

Determine the statistical association between social media use and anxiety to analyse the extent to which different patterns of social media use are statistically associated with levels of anxiety among Jamaicans.

Table 6 presents a cross-tabulation between Facebook Users and Generalised Anxiety Disorder (GAD-7). A significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 10.706, p-value = 0.013), but the association is very weak (contingency coefficient = 0.193). Of those who used Facebook, 33.3% recorded at least mild anxiety compared to 49.4% of non-Facebook users.

Table 6: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and Facebook Users

GAD-7		Facebook Users				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal anxiety	98	50.5%	56	66.7%	154	55.4%
	Mild anxiety	42	21.6%	19	22.6%	61	21.9%
	Moderate anxiety	35	18.0%	7	8.3%	42	15.1%
	Severe anxiety	19	9.8%	2	2.4%	21	7.6%
Total		194	100.0%	84	100.0%	278	100.0%

Table 7 presents a cross-tabulation between TikTok Users and Generalised Anxiety Disorder (GAD-7). A significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 17.050, p-value < 0.001), but the association is very weak (contingency coefficient = 0.240). Of those who used TikTok, 56.6% recorded at least mild anxiety compared to 34.3% of non-TikTokers.

Table 7: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and TikTok Users

GAD-7		TikTok Users				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal anxiety	98	65.8%	56	43.4%	154	55.4%
	Mild anxiety	27	18.1%	34	26.4%	61	21.9%
	Moderate anxiety	19	12.8%	23	17.8%	42	15.1%
	Severe anxiety	5	3.4%	16	12.4%	21	7.6%
Total		149	100.0%	129	100.0%	278	100.0%

Table 8 presents a cross-tabulation between YouTube Users and Generalised Anxiety Disorder (GAD-7). No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 1.674, p-value = 0.643). Of those who used YouTube, 45.6% recorded at least mild anxiety compared to 43.6% of non-YouTube Users.

Table 8: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and YouTuber Users

GAD-7		YouTube Users				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal anxiety	57	56.4%	97	54.8%	154	55.4%
	Mild anxiety	25	24.8%	36	20.3%	61	21.9%

	Moderate anxiety	13	12.9%	29	16.4%	42	15.1%
	Severe anxiety	6	5.9%	15	8.5%	21	7.6%
Total		101	100.0%	177	100.0%	278	100.0%

Table 9 presents a cross-tabulation between Twitter Users and Generalised Anxiety Disorder (GAD-7). No significant statistical association exists between the two previously mentioned variables (χ^2(df = 3) = 3.113, p-value = 0.374). Of those who used Twitter, 55.3% recorded at least mild anxiety compared to 42.9% of non-Twitter Users.

Table 9: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and Twitter Users

GAD-7		**Twitter Users**				**Total**	
		.00		**1.00**			
		N	**%**	**N**	**%**	**N**	**%**
	Minimal anxiety	137	57.1%	17	44.7%	154	55.4%
	Mild anxiety	52	21.7%	9	23.7%	61	21.9%
	Moderate anxiety	35	14.6%	7	18.4%	42	15.1%
	Severe anxiety	16	6.7%	5	13.2%	21	7.6%
Total		240	100.0%	38	100.0%	278	100.0%

Table 10 presents a cross-tabulation between Instagram Users and Generalised Anxiety Disorder (GAD-7). No significant statistical association exists between the two previously mentioned variables (χ^2(df = 3) = 1.424[a], p-value = 0.700). Of those who used Instagram, 47.2% recorded at least mild anxiety compared to 41.0% of non-Instagram Users.

Table 10: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and Instagram Users

GAD-7		**Instagram**				**Total**	
		.00		**1.00**			
		N	**%**	**N**	**%**	**N**	**%**
	Minimal anxiety	69	59.0%	85	52.8%	154	55.4%
	Mild anxiety	22	18.8%	39	24.2%	61	21.9%
	Moderate anxiety	17	14.5%	25	15.5%	42	15.1%
	Severe anxiety	9	7.7%	12	7.5%	21	7.6%
Total		117	100.0%	161	100.0%	278	100.0%

Table 11 presents a cross-tabulation between WhatsApp Users and Generalised Anxiety Disorder (GAD-7). A significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 14.715, p-value = 0.002), but the association is very weak (contingency coefficient = 0.224). Of those who used WhatsApp, 43.3% recorded at least mild anxiety compared to 41.1% of non-WhatsApp users.

Table 11: A Cross-tabulation Between Generalised Anxiety Disorder (GAD-7) and WhatsApp Users

GAD-7		WhatsApp				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal anxiety	22	48.9%	132	56.7%	154	55.4%
	Mild anxiety	6	13.3%	55	23.6%	61	21.9%
	Moderate anxiety	15	33.3%	27	11.6%	42	15.1%
	Severe anxiety	2	4.4%	19	8.2%	21	7.6%
Total		45	100.0%	232	100.0%	278	100.0%

Table 12 presents percentages of social media type users and the generalised anxiety disorder levels from mild-to-severe anxiety. The findings revealed that Twitter users experienced the highest level of severe anxiety (13.2%), followed by TikTok users (12.4%) and WhatsApp users (8.2%), and Facebook users experienced the least severe anxiety.

Table 12: Summary of Generalised Anxiety Disorder (GAD-7) of Social Media UseType

GAD-7	Mild Anxiety	Moderate Anxiety	Severe Anxiety
	%	%	%
Facebook Users	22.6	8.3	2.4
TikTok Users	26.4	17.8	12.4
YouTube Users	20.3	16.4	8.5
Twitter Users	23.7	18.4	13.2
Instagram Users	24.2	15.5	7.5
WhatsApp Users	23.6	11.6	8.2

Research Objectives 2

Determine the statistical association between social media use and depressionto evaluate the relationship between various social media behaviours and the prevalence or severity of depressive symptoms among Jamaicans.

(Patient Health Questionnaire or PHQ-9).Table 13 presents a cross-tabulation between Twitter Users and Patient Health Questionnaire (PHQ-9, which measures depression). No significant statistical association exists between the two previously mentioned variables ($\chi 2$ (df = 4) = 4.178a, p-value = 0.382). Of those who used Facebook, 45.1% recorded at least mild depression compared to 53.2% of non-Facebook Users

Table 13: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and Twitter Users

PHQ-9		Facebook Users				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	89	46.8%	45	54.9%	134	49.3%
	Mild depression	56	29.5%	25	30.5%	81	29.8%

	Moderate depression	28	14.7%	9	11.0%	37	13.6%
	Moderately severe depression	11	5.8%	1	1.2%	12	4.4%
	Severe depression	6	3.2%	2	2.4%	8	2.9%
Total		190	100.0%	82	100.0%	272	100.0%

Table 14 presents a cross-tabulation between TikTok Users and Patient Health Questionnaire (PHQ-9). A significant statistical association exists between the two previously mentioned variables (χ^2(df = 4) = 15.050, p-value = 0.005), but the association is very weak (contingency coefficient = 0.229). Of those who used TikTok, 61.9% recorded at least mild depression compared to 41.1% of non-TikTokers.

Table 14: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and TikTok Users

PHQ-9		TikTok				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	86	58.9%	48	38.1%	134	49.3%
	Mild depression	34	23.3%	47	37.3%	81	29.8%
	Moderate depression	20	13.7%	17	13.5%	37	13.6%
	Moderately severe depression	4	2.7%	8	6.3%	12	4.4%
	Severe depression	2	1.4%	6	4.8%	8	2.9%
Total		146	100.0%	126	100.0%	272	100.0%

Table 15 presents a cross-tabulation between YouTube Users and Patient Health Questionnaire (PHQ-9). No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 4) = 3.103, p-value = 0.541). Of those who used YouTube, 54.6% recorded at least mild depression compared to 43.9% of non-YouTube Users.

Table 15: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and YouTuber Users

PHQ-9		YouTube				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	55	56.1%	79	45.4%	134	49.3%
	Mild depression	26	26.5%	55	31.6%	81	29.8%
	Moderate depression	11	11.2%	26	14.9%	37	13.6%
	Moderately severe depression	4	4.1%	8	4.6%	12	4.4%
	Severe depression	2	2.0%	6	3.4%	8	2.9%
Total		98	100.0%	174	100.0%	272	100.0%

Table 16 presents a cross-tabulation between Twitter Users and Patient Health Questionnaire (PHQ-9). No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 4) = 5.187, p-value = 0.269). Of those who used Twitter, 66.7% recorded at least mild depression compared to 48.3% of non-Twitter Users.

Table 16: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and Twitter Users

PHQ-9		Twitter Users				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	122	51.7%	12	33.3%	134	49.3%
	Mild depression	68	28.8%	13	36.1%	81	29.8%
	Moderate depression	30	12.7%	7	19.4%	37	13.6%
	Moderately severe depression	9	3.8%	3	8.3%	12	4.4%
	Severe depression	7	3.0%	1	2.8%	8	2.9%
Total		236	100.0%	36	100.0%	272	100.0%

Table 17 presents a cross-tabulation between Instagram Users and Patient Health Questionnaire (PHQ-9). No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 4) = 8.438, p-value = 0.077). Of those who used Instagram, 55.4% recorded at least mild depression compared to 44.3% of non-Instagram Users.

Table 17: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and Instagram Users

PHQ-9		Instagram				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	64	55.7%	70	44.6%	134	49.3%
	Mild depression	24	20.9%	57	36.3%	81	29.8%
	Moderate depression	16	13.9%	21	13.4%	37	13.6%
	Moderately severe depression	7	6.1%	5	3.2%	12	4.4%
	Severe depression	4	3.5%	4	2.5%	8	2.9%
Total		115	100.0%	157	100.0%	272	100.0%

Table 18 presents a cross-tabulation between WhatsApp Users and Patient Health Questionnaire (PHQ-9). No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 4) = 0.822[a], p-value = 0.985). Of those who used WhatsApp, 50.0% recorded at least mild depression compared to 54.5% of non-WhatsApp Users.

Table 18: A Cross-tabulation Between Patient Health Questionnaire (PHQ-9) and WhatsApp Users

PHQ-9		WhatsApp				Total	
		No		Yes			
		N	%	N	%	N	%
	Minimal depression	20	45.5%	114	50.0%	134	49.3%
	Mild depression	13	29.5%	68	29.8%	81	29.8%
	Moderate depression	7	15.9%	30	13.2%	37	13.6%
	Moderately severe depression	2	4.5%	10	4.4%	12	4.4%
	Severe depression	2	4.5%	6	2.6%	8	2.9%
Total		44	100.0%	228	100.0%	272	100.0%

Table 19 presents percentages of social media type users and the Patient Health Questionnaire (PHQ-9) from mild to severe depression. The findings revealed that TikTok users experienced the highest level of severe depression (4.8%), followed by YouTube users (3.4%) and Instagram users (2.8%), and Facebook users experienced the least severe depression.

Table 19: Summary of the Patient Health Questionnaire (PHQ-9 or Depression Index) of Social Media Type Users

PHQ-9	Mild Depression	Moderate Depression	Moderately Severe Depression	Severe Depression
	%	%		%
Facebook Users	30.5	11.0	1.2	2.4
TikTok Users	37.3	13.5	8.3	4.8
YouTube Users	31.6	14.9	4.6	3.4
Twitter Users	36.1	19.4	8.3	2.8
Instagram Users	36.3	13.4	3.2	2.5
WhatsApp Users	29.8	13.2	4.4	2.6

Research Objective 3

Determine the statistical association between social media use and self-esteem to assess how distinct forms of social media engagement are linked to self-esteem levels among Jamaicans.

Table 20 presents a cross-tabulation between Facebook Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 2) = 2.662, p-value = 0.264). Of those who used Facebook, 16.3% had low self-esteem compared to 24.1% of non-Facebook Users.

Table 19: A Cross-tabulation between Self-Esteem and Facebook Users

SELF ESTEEM SCALE		Facebook				Total	
		No		Yes			
		N	%	N	%	N	%
	Feelings of incompetence, inadequacy, and difficulty facing life's challenge	47	24.1%	14	16.3%	61	21.7%
	Fluctuating between feelings of approval and rejection	35	17.9%	14	16.3%	49	17.4%
	Confidence, competence, and self-judgement of value	113	57.9%	58	67.4%	171	60.9%
Total		195	100.0%	86	100.0%	281	100.0%

Table 20 presents a cross-tabulation between TikTok Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2(df = 2) = 0.027[a], p-value = 0.987). Of those who used TikTok, 21.7% had low self-esteem compared to 21.7% of non-TikTok Users.

Table 20: A Cross-tabulation Between Self-Esteem and TikTok Users

SELF ESTEEM SCALE	TikTok				Total	
	No		Yes			
	N	%	N	%	N	%
Feelings of incompetence, inadequacy, and difficulty facing life's challenge	33	21.7%	28	21.7%	61	21.7%
Fluctuating between feelings of approval and rejection	26	17.1%	23	17.8%	49	17.4%
Confidence, competence, and self-judgement of value	93	61.2%	78	60.5%	171	60.9%
Total	152	100.0%	129	100.0%	281	100.0%

Table 21 presents a cross-tabulation between YouTube Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 2) = 0.195, p-value = 0.907). Of those who used YouTube, 21.3% had low self-esteem compared to 22.3% of non-YouTube Users.

Table 21: A Cross-tabulation Between Self-Esteem and YouTube Users

SELF ESTEEM SCALE	YouTube				Total	
	No		Yes			
	N	%	N	%	N	%
Feelings of incompetence, inadequacy, and difficulty facing life's challenge	23	22.3%	38	21.3%	61	21.7%
Fluctuating between feelings of approval and rejection	19	18.4%	30	16.9%	49	17.4%
Confidence, competence, and self-judgement of value	61	59.2%	110	61.8%	171	60.9%
Total	103	100.0%	178	100.0%	281	100.0%

Table 22 presents a cross-tabulation between Twitter Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 2) = 1.573, p-value = 0.471). Of those who used Twitter, 28.9% had low self-esteem compared to 20.6% of non-TikTok Users.

Table 22: A Cross-tabulation Between Self-Esteem and Twitter Users

SELF ESTEEM SCALE	Twitter				Total	
	No		Yes			
	N	%	N	%	N	%
Feelings of incompetence, inadequacy, and difficulty facing life's challenge	50	20.6%	11	28.9%	61	21.7%
Fluctuating between feelings of	42	17.3%	7	18.4%	49	17.4%

	approval and rejection						
	Confidence, competence, and self-judgement of value	151	62.1%	20	52.6%	171	60.9%
Total		243	100.0%	38	100.0%	281	100.0%

Table 23 presents a cross-tabulation between Instagram Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 2) = 0.351, p-value = 0.839). Of those who used Instagram, 20.5% had low self-esteem compared to 23.3% of non-Instagram Users.

Table 23: A Cross-tabulation Between Self-Esteem and Instagram Users

SELF ESTEEM SCALE		Instagram				Total	
		No		Yes			
		N	%	N	%	N	%
	Feelings of incompetence, inadequacy, and difficulty facing life's challenge	28	23.3%	33	20.5%	61	21.7%
	Fluctuating between feelings of approval and rejection	20	16.7%	29	18.0%	49	17.4%
	Confidence, competence, and self-judgement of value	72	60.0%	99	61.5%	171	60.9%
Total		120	100.0%	161	100.0%	281	100.0%

Table 24 presents a cross-tabulation between WhatsApp Users and the Rosenberg Self-Esteem Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 2) = 2.736, p-value = 0.255). Of those who used WhatsApp, 20.4% had low self-esteem compared to 28.3% of non-Instagram Users.

Table 24: A Cross-tabulation Between Self-Esteem and WhatsApp Users

SELF ESTEEM SCALE		WhatsApp				Total	
		No		Yes			
		N	%	N	%	N	%
	Feelings of incompetence, inadequacy, and difficulty facing life's challenge	13	28.3%	48	20.4%	61	21.7%
	Fluctuating between feelings of approval and rejection	1	21.7%	39	16.6%	49	17.4%
	Confidence, competence, and self-judgement of value	23	50.0%	148	63.0%	171	60.9%
Total		46	100.0%		100.0%	281	100.0%

Table 25 presents percentages of social media users by self-esteem. The findings revealed that Twitter users recorded the highest level of feelings of incompetence, inadequacy, and difficulty facing life's challenges, followed by TikTok users (21.7%), YouTube users (21.3%), and Instagram users (2.8%).Instagram users (20.5%) and Facebook users recorded the least low self-

esteem. Those findings mean that Facebook users recorded the highest level of self-esteem, followed by WhatsApp users.

Table 25: Summary of the Self-Esteem of Social Media Type Users

Details	Feelings of incompetence, inadequacy, and difficulty facing life's challenge	Fluctuating between feelings of approval and rejection	Confidence, competence, and self-judgement of value
	%	%	%
Facebook Users	16.3	16.3	67.4
TikTok Users	21.7	17.8	60.5
YouTube Users	21.3	16.5	61.8
Twitter Users	28.9	18.4	52.6
Instagram Users	20.5	18.0	61.5
WhatsApp Users	20.4	16.6	63.0

Research Objective 4

Determine the relationship between social media type and internet addiction.

Table 26 presents a cross-tabulation between Facebook Users and the Internet Addiction.

Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 3.926, p-value = 0.270). Of those who used Facebook, 36.0% reported experiencing mild-to-severe internet dependence compared to 46.3% of non-Facebook Users.

Table 26: A Cross-tabulation between Internet Addiction Scale and Facebook Users

INTERNET ADDICTION SCALE		Facebook				Total	
		No		Yes			
		N	%	N	%	N	%
	Normal level	109	53.7%	57	64.0%	166	56.8%
	Mild level	75	36.9%	25	28.1%	100	34.2%
	Moderate level	17	8.4%	5	5.6%	22	7.5%
	Severe dependence	2	1.0%	2	2.2%	4	1.4%
Total		203	100.0%	89	100.0%	292	100.0%

Table 27 presents a cross-tabulation between TikTok Users and the Internet Addiction Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df= 3) = 12.146, p-value = 0.007). Of those who used TikTok, 53.6% reported experiencing mild-to-severe internet dependence compared to 33.8% of non-TikTok Users.

Table 27: A Cross-tabulation Between Internet Addiction Scale and TikTok Users

INTERNET ADDICTION SCALE		TikTok				Total	
		No		Yes			
		N	%	N	%	N	%
	Normal level	102	66.2%	64	46.4%	166	56.8%
	Mild level	42	27.3%	58	42.0%	100	34.2%
	Moderate level	9	5.8%	13	9.4%	22	7.5%
	Severe dependence	1	0.6%	3	2.2%	4	1.4%
Total		154	100.0%	138	100.0%	292	100.0%

Table 28 presents a cross-tabulation between YouTube Users and Internet Addiction.

Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 0.485, p-value = 0.922). Of those who used YouTube, 43.3% reported experiencing mild-to-severe internet dependence compared to 42.9% of non-YouTube Users.

Table 28: A Cross-tabulation Between Internet Addiction Scale and YouTube Users

INTERNET ADDICTION SCALE		YouTube				Total	
		No		Yes			
		N	%	N	%	N	%
	Normal level	60	57.1%	106	56.7%	166	56.8%
	Mild level	35	33.3%	65	34.8%	100	34.2%
	Moderate level	9	8.6%	13	7.0%	22	7.5%
	Severe dependence	1	1.0%	3	1.6%	4	1.4%
Total		105	100.0%	187	100.0%	292	100.0%

Table 29 presents a cross-tabulation between Twitter Users and the Internet Addiction

Scale. No significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 4.750, p-value = 0.191). Of those who used Twitter, 46.8% reported experiencing mild-to-severe internet dependence compared to 41.2% of non-Twitter Users.

Table 29: A Cross-tabulation Between Internet Addiction Scale and Twitter Users

INTERNET ADDICTION SCALE		Twitter				Total	
		.00		1.00			
		N	%	N	%	N	%
	Normal level	150	58.8%	16	43.2%	166	56.8%
	Mild level	82	32.2%	18	48.6%	100	34.2%
	Moderate level	20	7.8%	2	5.4%	22	7.5%
	Severe dependence	3	1.2%	1	2.7%	4	1.4%
Total		255	100.0%	37	100.0%	292	100.0%

Table 30 presents a cross-tabulation between Instagram Users and the Internet Addiction

Scale. A significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 16.548, p-value < 0.001), with the relationship being a weak one (contingency coefficient = 0.232). Of those who used Instagram, 51.5% reported experiencing mild-to-severe internet dependence compared to 31.7% of non-Instagram Users.

Table 30: A Cross-tabulation Between Internet Addiction Scale and Instagram Users

INTERNET ADDICTION SCALE		Instagram				Total	
		No		Yes			
		N	%	N	%	N	%
	Normal level	84	68.3%	82	48.5%	166	56.8%
	Mild level	28	22.8%	72	42.6%	100	34.2%
	Moderate level	11	8.9%	11	6.5%	22	7.5%
	Severe dependence	0	0.0%	4	2.4%	4	1.4%
Total		123	100.0%	169	100.0%	292	100.0%

Table 31presents a cross-tabulation between WhatsApp Users and the Internet Addiction

Scale. A significant statistical association exists between the two previously mentioned variables (χ^2 (df = 3) = 11.246, p-value = 0.010), with the relationship being a very weak one (contingency coefficient = 0.193). Of those who used WhatsApp, 40.0% reported experiencing mild-to-severe internet dependence compared to 59.6% of non-WhatsApp Users.

Table 31: A Cross-tabulation Between Internet Addiction Scale and WhatsApp Users

INTERNET ADDICTION SCALE		WhatsApp				Total	
		No		Yes			
		N	%	N	%	N	%
	Normal level	19	40.4%	147	60.0%	166	56.8%
	Mild level	20	42.6%	80	32.7%	100	34.2%
	Moderate level	8	17.0%	14	5.7%	22	7.5%
	Severe dependence	0	0.0%	4	1.6%	4	1.4%
Total		47	100.0%	245	100.0%	292	100.0%

Table 32 summarises internet addiction among social media users. The findings revealed that Twitter users experienced the highest level of internet addiction (56.7%), followed by TikTok users (53.6%) and Instagram users (51.5%), and Facebook users experienced the least.

Table 32: Summary of Internet Addiction of Social Media Type Users

Details	Mild Addiction	Moderate Addiction	Severe Addiction	Total
	%	%		%
Facebook Users	28.1	5.6	2.2	35.9
TikTok Users	42.0	9.4	2.2	53.6
YouTube Users	34.8	7.0	1.6	43.4
Twitter Users	48.6	5.4	2.7	56.7
Instagram Users	42.6	6.5	2.4	51.5
WhatsApp Users	32.7	5.7	1.6	40.0

Research Objective 5

Evaluate the relationships among depression (PHQ-9), self-esteem, anxiety (GAD-7), and internet addiction scale.

Table 33 presents the statistical correlation and the strength of the bivariate relationship between 1. PHQ and GAD-7, 2. PHQ-9 and internet addiction, 3. PHQ-9 and self-esteem, 4. GAD-7 and self-esteem, 5. GAD-7 and internet addiction, 6. Self-esteem and internet addiction. The findings revealed a significant statistical correlation with all the previously mentioned bivariate analyses (p-value less than 0.05). The strongest bivariate correlation exists between GAD-7 and PHQ-9. This means that depression strongly positively influences anxiety and vice versa. Additionally, an inverse relationship exists between depression (PHQ-) and self-esteem (r_{xy} = -4.426, p-value < 0.001), indicating that people with low self-esteem are likely to be depressed, and those with high self-esteem are less likely to be depressed. The findings also reveal an inverse statistical relationship between self-esteem and anxiety. This means that people with high self-esteem are less likely to be anxious, and those with low self-esteem are more likely to be anxious. Other information findings are that the more people are dependent on the internet, the more likely they are to be depressed, anxious and have low self-esteem.

Table 33: Pearson's Product Moment Correction of Depression (PHQ-9), Self-esteem, Anxiety (GAD-7), and Internet Addiction scale

		PHQ-9	GAD-7	Self Esteem	Internet Addiction scale
PHQ-9	Pearson Correlation	1	.774**	-.426**	.486**
	Sig. (2-tailed)		<.001	<.001	<.001
	N		271	272	272
GAD-7	Pearson Correlation		1	-.402**	.461**
	Sig. (2-tailed)			<.001	<.001
	N			277	275
Self Esteem	Pearson Correlation			1	-.326**
	Sig. (2-tailed)				<.001
	N				278
Internet Addiction Scale	Pearson Correlation				1
	Sig. (2-tailed)				
	N				
**Correlation is significant at the 0.01 level (2-tailed)					

The Analysis of Variance indicates that a linear examination can be done with PHQ-9 and three independent variables (GAD-7, self-esteem and internet addiction scale, F [3, 267] = 153.034, p-value < 0.001). Additionally, the three independent variables account for 62.8% of the variance in depression (PHQ-9). The OLS values showed that GAD-7 and internet addiction positively influence depression, and self-esteem negatively influences PHQ-9. Furthermore, anxiety

contributes the most to depression, followed by internet addiction. Table 34 depicts the OLS regression of PHQ-9 by three correlates.

Table 34: Ordinary Least Square (OLS) Regression of Patient Health Questionnaire (PHQ-9) by Three Correlates

Model		Unstandardised Coefficients		Standardised Coefficients	t	p-value	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	Constant	3.555	1.427		2.490	0.013		
	GAD-7	0.685	.045	0.660	15.053	<0.001	0.716	1.396
	Self-Esteem	-0.107	.036	-0.121	-2.935	0.004	0.813	1.231
	Internet Addiction Scale	0.060	.018	0.142	3.346	<0.001	0.764	1.309
a. Dependent Variable: Patient Health Questionnaire (PHQ-9)								

Discussion and Conclusion

The impact of social media use on mental health has been extensively studied (Beyari, 2023; Naslund et al., 2020; Robinson & Smith, n.d.; UC Regents, 2024; Zsila & Reyes, 2023). However, a study conducted by Ferguson et al. (2024) found no relationship between social media use and mental health, which is contrary to the preponderance of literature on either the positive or negative effect of social media use on mental health (Schønning et al., 2020; Tudehope et al., 2024).This study establishes that 1. Internet addiction directly explains depression and anxiety among Jamaicans, and 2. social media use is inversely influencing Jamaica's mental health (i.e., depression and anxiety). That particularuser type has a different effect on mental well-being.

Furthermore, a potent issue that must be addressed is whether there is a psychological behind social anxiety. This research generally establishes that social media use has adverse effects on depression, anxiety, and self-esteem, which are indicators of mental wellness. A meta-analysis of some 232 studies found negative statistical relationships between Facebook use and eight major psychological domains (anxiety, loneliness, eating disorders, self-esteem, life satisfaction, insomnia, and stress (Stangl et al., 2023). This study concurs with the literature that Facebook use negatively influences anxiety, depression, and self-esteem (Brailovskaia et al., 2019).

This study goes further to demonstrate that Facebook users are less nervous, hooked to social media, and depressed than other social network users. Currently,the research establishes that Facebook users recorded the lowest level of anxiety (i.e., mild-to-severe anxiety, 33.3%) compared to other social media users (WhatsApp, 43.4%; YouTube, 45.2%; Instagram, 47.2%; Twitter, 55.3%; TikTok, 56.6%). Facebook users recorded the lowest level of internet addiction (i.e., mild-to-severe addiction, 35.9%) compared to other social media users (WhatsApp, 40.0%; YouTube, 43.4%; Instagram, 51.5%; TikTok, 53.6%; Twitter, 56.7%). Facebook users recorded the lowest level of depression (i.e., mild-to-severe depression, 45.1%) compared to other social media users (WhatsApp, 50.0%; YouTube, 54.5%; Instagram, 55.4%; TikTok, 61.9%; Twitter,

66.6%), and recorded the highest level of self-esteem (i.e., Confidence, competence, and self-judgement of value, 67.4%) compared to other social media users (WhatsApp, 63.0%; YouTube, 61.8%; Instagram, 61.5%; TikTok, 6.5%; Twitter, 52.6%).

Social media use does more than influence people's mental health (depression and anxiety); it will be a future public health concern in Jamaica. With the current study establishing that social media influences mental health outcomes and that internet addiction is directly related to depression and anxiety in Jamaica, policymakers and healthcare must include this phenomenon in public health planning and intervention programmes. Public health planning and intervention programmes must be framed based on the new insights of this study, and social media use types should be brought into the discourse of psychiatry and public health.

This study indicates that social media use has a significant impact on Jamaicans' mental health outcomes, with different effects depending on the platform and user activity. While the majority of the literature highlights both positive and negative associations, this research aligns with the findings that social media use adversely impacts depression, anxiety, and self-esteem. Notably, Facebook users exhibit the lowest levels of anxiety, depression, and internet addiction while demonstrating the highest self-esteem compared to other platforms. These results underscore the nuanced relationship between social media use and mental well-being, emphasising the need for platform-specific mental health strategies.

In conclusion, this study confirms that social media use significantly influences mental health outcomes among Jamaicans, with varying effects depending on the platform and user behaviour. While the majority of the literature highlights both positive and negative associations, this research aligns with the findings that social media use adversely impacts depression, anxiety, and self-esteem. Notably, Facebook users exhibit the lowest levels of anxiety, depression, and internet addiction while demonstrating the highest self-esteem compared to other platforms. These results underscore the nuanced relationship between social media use and mental well-being, emphasising the need for platform-specific mental health strategies.

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