



Does Social Media Influence the Mental Health Status of Jamaicans?

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Abstract

Social networking (media) has radically transformed traditional communication. People can now access immediate correspondence and dialogue with others across a vast geo-political landscape. The new era of social networking brings with it benefits and disbenefits. This means that social media usage affects people's well-being. Studies have found that social networking positively influences people's mental health as well as negatively affects psychological well-being. There is no research-based consensus that social media only positively or negatively influences well-being. There are over 1.4 million social media users in Jamaica, and a search of the literature at the time of this research did not review a single study on whether social media influences Jamaicans' psychological well-being (or mental health). This lack of research-based information retards planning and the implementation of needed interventions if needs be. The objective of this research is to evaluate whether social media usage influences the mental health status of Jamaican social media users, and what is the direction of this relationship if one exists.

A web-based cross-sectional survey was used to examine the research objective. Using Survey Monkey's sample size calculator, the computed sample size was 1,068 Jamaicans. The researcher utilizes social media (WhatsApp, Facebook, X (formerly Twitter)) to obtain the respondents. A team of data collectors was trained and each was responsible for collecting data from social media users for a particular parish. Social media was found to be negatively associated with the mental health status of Jamaicans. On average, youths (ages ≤ 24 years) spent approximately 6 ± 5 hours, adults spent 4 ± 5 hours, and seniors used 3 ± 4 hours on social networking daily. This research provides research-based information on how excessive social media usage is reducing the mental health of Jamaicans. This study is the platform for understanding the effect of social media usage and should be the catalyst for needed change before the matter becomes an epidemic.

Keywords: Social network, social media, social media usage,

Introduction

“Human beings are social creatures. We need the companionship of others to thrive in life, and the strength of our connections has a huge impact on our mental health and happiness” (Robinson & Smith, n.d.).

Social media is a relatively new phenomenon. Maryville University (2020) provided some historical context to the development of social media (see also, Edosomwan, et al., 2011). According to Maryville University, the first true social media platform was launched in 1997; but, that noted that the concept had its genesis on May 2, 1844. “In a sense, social media began on May 24, 1844, with a series of electronic dots and dashes tapped out by hand on a telegraph machine” (Maryville University, 2020) and this highlights the incubation of the social media and not really its true beginning. Shah (2016) clarified the historical development of social media when he articulated that social media began in 1997, but the platform was outlawed in the 1970s when computer interworking began in earnest (see also, Edosomwan, et al., 2011; Jones, 2023).

Social media has changed the landscape of communication. Before the advent of social media, communication was oral, written, and by telephone. Today, communication is instant; and it is used for many things including business, medicine, and people-to-people communication (Dhingra & Mudgal, 2019). Jones (2023) opined that “Social media is understood as the different forms of online communication used by people to create networks, communities, and collectives to share information, ideas, messages, and other content, such as videos” (p.).

The social media era has resorted to a plethora of content creators who are kings of their world, and technology is god in this space. The new era has placed a bridge between people and people, replacing people with technology in many instances. Social media content is created with little interest in the need for personal communication, and this is not in keeping with the nature of humans. Technology has for the most part replaced many of the human-to-human interactions that have resulted in a need for personal communication. This begs the question; does social media influence mental health issues including depression, loneliness and anxiety, and in general negatively influence psychological well-being?

The association between psychological well-being and social media is well-documented in the literature (Harvard T.H. Chan, School of Public Health, 2020; Ostic, et al., 2021; Zhang, et al., 2023; Valkenburg, 2022; Zsila & Reyes, 2023). Some studies have found a positive relationship between social media and psychological well-being (Cingel, et al., 2022; Harvard T.H. Chan, School of Public Health, 2020; Toma & Hancock, 2013; Vaingankar, et al., 2022; Zsila & Reyes, 2023). Others have found a reverse association between social media usage and psychological well-being (Robinson & Smith, n.d.; Zsila & Reyes, 2023). Zsila and Reyes (2023) found a two-way relationship between social media usage and psychological well-being. They argued, “It can enhance connection, increase self-esteem, and improve a sense of belonging. But it can also lead to tremendous stress, pressure to compare oneself to others, and increased sadness and isolation” (p. 201). However, the Harvard T.H. Chan,

School of Public Health postulated, “Our study has brought preliminary evidence to answer this question. Using a nationally representative sample, we assessed the association of two dimensions of social media use—how much it’s routinely used and how emotionally connected users are to the platforms—with three health-related outcomes: social well-being, positive mental health, and self-rated health.” Robinson and Smith (n.d.), on the other hand, stated, “While many of us enjoy staying connected on social media, excessive use can fuel feelings of addiction, anxiety, depression, isolation, and FOMO. Here’s how to modify your habits and improve your mood” (See also, Ostic, et al., 2021).

The literature has shown that there are two sides to the discourse of social media and mental health, which means that there is no single quantitative response to the phenomenon. Some scholars and/or writers went as far as to say that the relationship is a complex one (Nothaft, 2023; Robinson & Smith, n.d.). Those who articulated that the association is a complex one forward the two sides in the discourse. On the negative side, they believed that social media caused addiction, anxiety, loneliness, trauma, and depression (Nothaft, 2023). The positive side had increased self-esteem, bridging social capital and bonding, and suicide prevention (Ostic, et al., 2021; Nothaft, 2023). Ostic et al. (2021) provided the dual nature of social media and mental health and went further to articulate that

The findings point to an overall positive indirect impact of social media usage on psychological well-being, mainly due to the positive effect of bonding and bridging social capital. The empirical model's explanatory power is 45.1%. This paper provides empirical evidence and robust statistical analysis that demonstrates both positive and negative effects coexist, helping to reconcile the inconsistencies found so far in the literature (p. 678766).

A model accounting for 45.1% of a phenomenon is significant and offers a real explanation of the dynamics between the two-sided relationships.

Social media occupies two sides in the mental health discourse, and it must be empirically examined in contemporary society. A study of 6595 US adolescents found a direct relationship between increased usage of social media and comorbid problems (Riehm, et al., 2019). A longitudinal study found a gender disparity between social media or television usage and its influence on mental health (Coyne, et al. (2021). Coyne et al. (2021) found that female adolescents in the United States who use more social media were at a greater risk of being suicidal than those who use it at a lower rate. However, for boys, the researchers opined, “Additionally, video game use (for boys) was associated with suicide risk when cyberbullying was also high” (p. 2324), with no information on social media and mental health phenomenon.

Why should there be a concern about the social media and mental health phenomenon? The answer to this question is embedded in the percentage of people who consume social media and the percentage of people with mental health issues in the world, particularly in the Caribbean. Statistics revealed that 61.4% of people (4.95 billion) across the globe use social media (i.e., October 2023; Datareportal, 2023a). Dixon (2023), who writes for Statista, indicated that 59.4% of people across the globe use a social media platform. Although there

is a disparity between the prevalence/penetration rates for social media consumption between the two authors, the difference is only 2%.

One of the purposes of research is that it brings information to the forefront of people's minds. Research provides knowledge and if this is NOT promulgated to the public, the research has no value to society. This study has provided knowledge on the issue of social media usage and mental health in Jamaica; but the principal purpose of the work is to change the knowledge, attitude and practice of people. Those issues are the driving force behind the researcher using the obtained knowledge from the findings of this study to speak with the media, begin a social media awareness campaign, and framework an awareness for policymakers to include a social intervention programme for social media users.

The main research question of this study is, Do age, gender, and social media usage influence the mental health of Jamaicans?

Related Research Questions

The sub-research questions are as follows:

1. Is there a difference in the mental health status of social media users based on age cohorts among Jamaicans (young people, middle-aged, and elderly)?
2. Is there a difference in the mental health status of male social media users and that of female social media users?
3. Do age, gender, and social media usage influence the mental health status of Jamaicans?

Definition of Terms

Age: The number of years lived by a person as of his/her last birthday.

Gender: For this study, the World Health Organization's (WHO) definition of gender is used. The WHO opined, "Gender refers to the characteristics of women, men, girls and boys that are socially constructed. This includes norms, behaviours and roles associated with being a woman, man, girl or boy, as well as relationships with each other. As a social construct, gender varies from society to society and can change over time" (WHO, 2023a).

Mental health: According to the World Health Organization (WHO), "Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize 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 abilities to make decisions, build relationships and shape the world we live in" (WHO, 2022a).

Social Media: Jones's (2023) definition of social media is used in this study. Jones opined, "Social media is understood as the different forms of online communication used by people to create networks, communities, and collectives to share information, ideas, messages, and other content, such as videos."

Psychological well-being: Psychological well-being is the core feature of mental health (Tang, et al., 2019). Dhanabhakym & Sarath (2023) postulated, “Psychological well-being is a multifaceted and multidimensional construct that encompasses an individual’s overall happiness, satisfaction with life, and mental and emotional health” (p. 603). Psychological well-being is widely used and validated in the literature to measure mental health and is equally extended to assess well-being (Abbott, et al., 2006; Burns, 2016; Ryff & Keyes, 1995; Ryff & Singer, 2006; Ryff, 1989; Seifert, 2005; Springer & Hauser, 2006; Springer, et al., 2006).

Limitations of the Study

Several limitations emerged in this study. They are as follows:

1. Non-generalizability: The study is not generalized to all Jamaicans because data were collected from social media users who were 18 years and older. The exclusion of those below 18 years from this study does not provide research-based information on substantive a sub-population in Jamaica.
2. Instrumentation: The use of the 18-item Ryff’s Psychological Well-being Scale (PWBS) was not able to assess the multidimensionality of the mental health of Jamaicans, particularly because the six categories of the general index was not suitable and appropriate to measure the sub-scales. The researcher chose to use the 18-item Ryff’s PWBS because Jamaicans do not like to read lengthy materials, which would increase the non-response rate.
3. Population characteristics: There are no published statistics from any reputable statistical agency in Jamaica on the population characteristics of social media users across the parishes. This retards the accuracy and ability of the researcher to determine social media users scientifically.

Conceptual and Theoretical Framework

A theoretical framework outlines the assumptions and relationships that are explored in a study (Crotty, 2005; Merriam & Tisdell, 2016). The conceptual framework, on the other hand, provides the overall structure of the study (Ravtich & Riggan, 2017). According to Crotty (2005), “[The] Theoretical perspective: the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria (p. 3). The idea is clear that the theoretical framework is subsumed in the conceptual framework. This study provides a theoretical framework that aided the creation of a conceptual framework, and this is summarized in a conceptual map.

The Human Capital Model (HCM) of demand for health is the theoretical framework employed in this study. HCM views durable capital stock that can yield an output of healthy time (Bleakley, 2010; Grossman, 1972, 1999). The HCM is a product like any other that can be improved or otherwise based on the behaviour of the people. One of the principles of HCM is that “Individuals inherit an initial amount of this stock that depreciates with age and can be increased by investment” (Grossman, 1979, p. 102). Grossman was of the view that in

general people begin with good health, and with age, this decreases; and that people's investment can increase as well as reduce the initial good health status.

The Human Capital Model of the demand for health was used by Grossman (1972) to develop a mathematical expression for good health status. He was able to establish a theoretical framework for the biological, psychological, and sociological conditions that influence good health outcomes for people. Grossman theorized that current health status (good health status), H_t , is determined by past health status, H_{t-1} , and other factors.

These are expressed in Equation [1] or Figure 2:

$$H_t = f(H_{t-1}, G_o, B_t, M_{Ct}, ED) \dots\dots\dots (1)$$

Equation 1 depicts the five factors influencing the health outcomes of people. The predicted factors were G_o , B_t , ED , and M_{Ct} , with H_{t-1} being the initial health that people were born with. H_t was the dependent variable that was influenced by the predictors, which were previously stated.

Where:

H_t – current health in period t ,

the stock of health (H_{t-1}) in a period before time t ,

B_t – smoking and excessive drinking, and good personal health behaviours (including exercise – G_o),

M_{Ct} , – use of medical care, education of each family member (ED), and all sources of household income (including current income).

Grossman's pioneer work was the first study to quantitatively assess health and brought health from a concept to an operational phenomenon. Smith and Kington (1997a) expanded on the early work of Grossman (1972). They brought in additional factors of good health status, see Equation 2 or Figure 3).

$$H_t = H^*(H_{t-1}, P_{mc}, P_o, ED, E_t, R_t, A_t, G_o) \dots\dots\dots (2)$$

Where H_t is the current health status (good health status),

H_{t-1} is the initial health status at birth,

P_{mc} is the price of medical care,

P_o is the price of other inputs,

ED is the education of each,

A_t is a family member of all sources of household income,

G_o is family background or genetic endowments,

Rt is retirement-related income, and

At is asset income.

Smith and Kington were not finished with explaining factors that influence the good health status of people. So, they expanded on their earlier work (1997b). The platform was set to evaluate the good health status of people. The term factor was used to explain Grossman's Smith and K'ngton's works. The term social determinants of health were first used by the Commission on Social Determinants of Health (CSDH) and this was spearheaded by Solar and Irwin (2004, 2005; see also, Commission on Social Determinants of Health, 2008). Scholars have used the term social determinants of health to explain factors that influence/determine health outcomes (Braveman, & Gottlieb, 2014; Graham, 2004; Irwin & Scali, 2007). Before the CSDH, the terminology was factors (Grossman, 1997, 1999; Smith & Kington, 1997a, 1997b) and correlates (Hambleton, et al., 2005).

Outside of the conceptual choices used by scholars, many have conducted studies on the social determinants of health (Bourne 2008a, 2008b, 2009a, 2009b, 2009c, 2009d, 2009e, 2009f; 2010a, 2010b, 2010c, 2013a, 2013b; Bourne & McGrowder, 2009a, 2009b, 2010; Bourne & Rhule, 2009; Graham, 2004; Kelly et al., 2007). The theoretical framework from the works of Grossman (1972), Smith and Kington (1997a, 1997b), and others can be conceptually framed in Figure 3, below:

Conceptual Map

The conceptual map (Figure 3) presents the overall structure of this study.

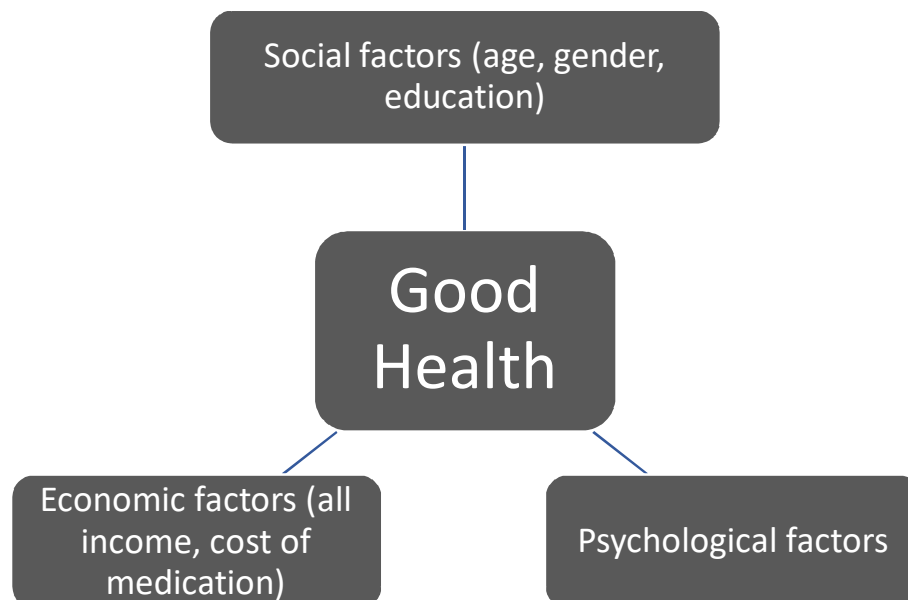


Figure 3: Conceptual Framework Created from the Theoretical Framework

In the literature, health is subjectively measured by way of self-reported happiness, self-reported health, self-reported quality of life, and objectively by way of life expectancy (or

mortality pattern). The issue of subjective health or well-being is discussed further in this chapter of the study. However, the definition of health comprises biological (physical health), social, and psychological well-being, so, the conceptual framework created from the theoretical framework can be disaggregated to be (see Figure 4).

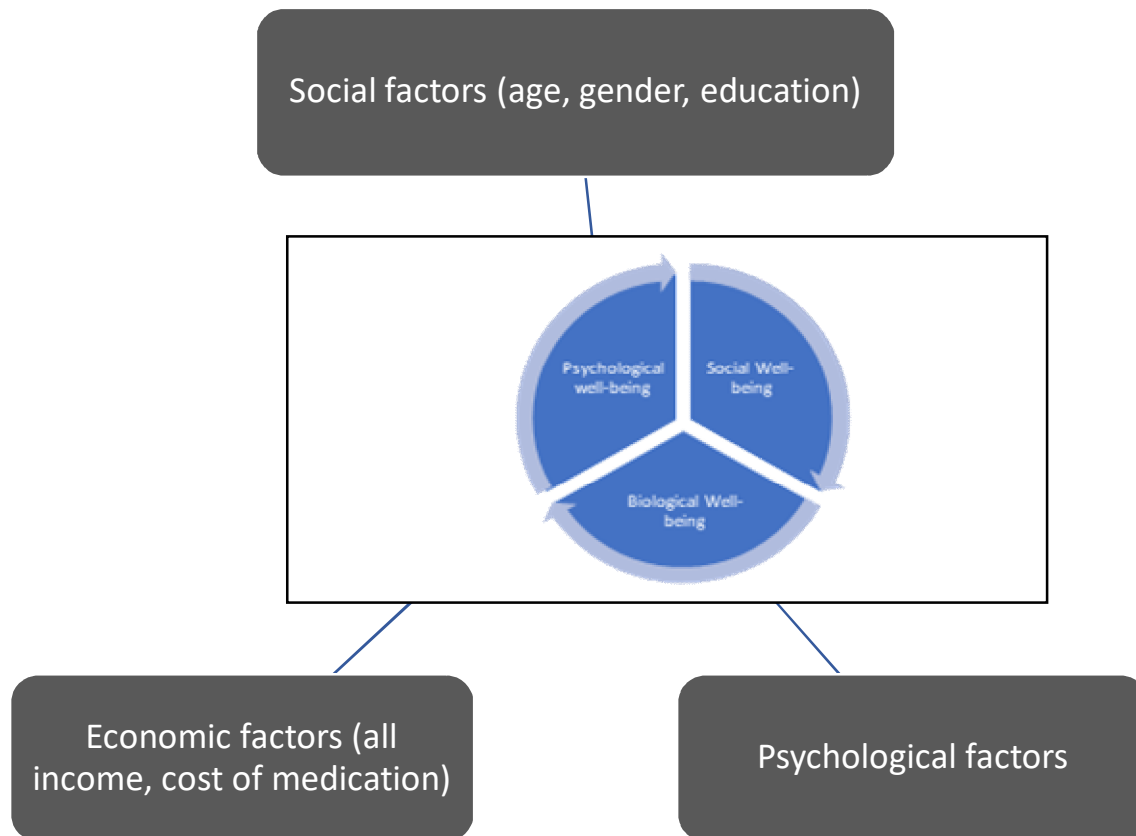


Figure 4: Broadened Definition of Health Conceptual Framework

Based on the extended view of good health status, this study extracts psychological well-being (which is mental health) to create a conceptual framework. The literature established that social media influences mental health and that age and gender are social determinants of health; then this study the researcher creates a single conceptual framework with two separate frameworks. For this study, the researcher's conceptual framework is age, gender, and social media usage influence psychological well-being or mental health (see Figure 5).

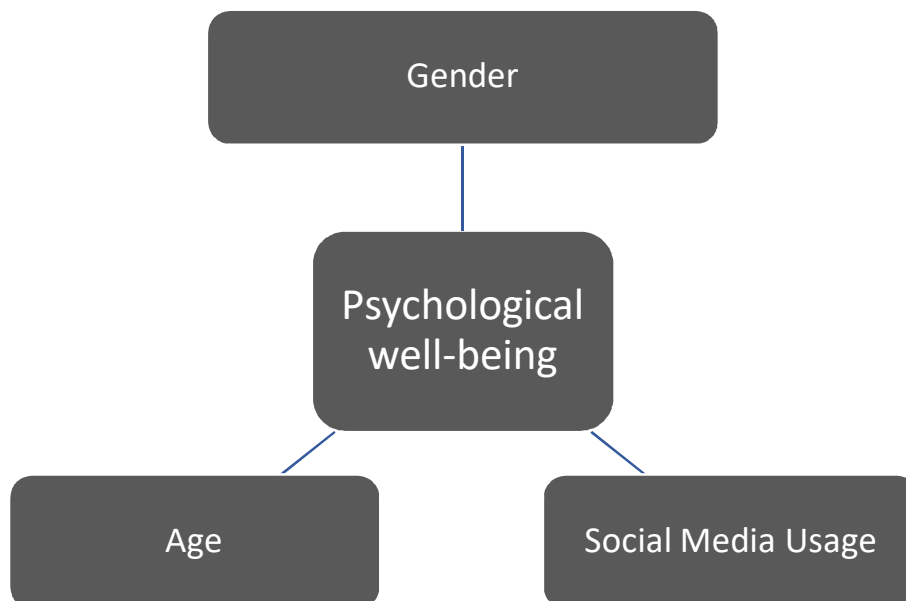


Figure 5: Social Determinants of Mental Health Conceptual Framework

Figure 5 can be depicted as a mathematical equation as outlined by Grossman (1972) or Smith and Kington (1997a, 1997b) as follows:

$$PWB = f(A, G, SMU) \dots \dots \dots \text{Equation [3]}$$

Where

PWB denotes psychological well-being (or mental health)

A symbolizes the age of respondents at the time t

G is the gender of the respondents

SMU is social media usage by Jamaicans.

Methods and materials

This study employed a quantitative cross-sectional design. The quantitative perspective is survey research. The survey research was a web-based non-probability sampling cross-sectional descriptive research design (Babbie, 2010; Polit, 1996; Powell *et al.*, 2007; Rea & Parker, 2005; Neuman, 2014). The researcher utilized a standardized instrument to collect data from Jamaica by way of the Psychological Well-being Questionnaire developed by Ryff; items on social media platforms used, frequency of social media usage, and selected demographic variables.

The data was collected over approximately four-to-six weeks. For the survey research, the instrument was designed using textbooks on survey research and designing surveys (Powell *et al.*, 2007; Rea and Parker, 2005), and the process was in keeping with the research objectives.

This study sought and protected the identity of the respondents by 1. not using any personal identifier except age group, members, educational attainment, area of residence, and nationality, 2. informing respondents that they may withdraw at any time during the process and return their questionnaire without any form of penalization or repercussion, and 3. collecting the data by way of the internet. The standard instrument was designed and uploaded to Survey Monkey. The sample was a purposive one. For the qualitative perspective of the study, the research team employed snowballing to ascertain the participants.

The respondent's consent was based on the completion and submission of the instrument. The researcher examined the IP addresses to ensure that an instrument was completed by only one person. If there were more than one of the same IP addresses, the researcher would allow the first one to remain and delete the second IP address.

A paid Survey Monkey account was used, which allows for the collection of web-based data and the provision of the Statistical Package for the Social Sciences (SPSS) database. The research team downloaded the quantitative data to the SPSS database, where analyses facilitate the answers to the various research questions and objectives using descriptive statistics and percentages (Bryman & Cramer, 2011; Polit, 1996). The findings, therefore, were displayed using graphs and tables. Cross-tabulations to examine the bivariate analyses of non-metric variables (i.e., nominal and ordinal)- (Bourne, 2009g; Bryman & Cramer, 2011; Polit, 1996). A *p*-value of 5 per cent determined the level of significance in a two-tailed test.

The researchers addressed the treatment of missing data in the current study by reviewing the extensive work on missing data to ensure alignment with recommended best practices (Bodner, 2008; Graham, 2009; Kang, 2013; Little et al., 2012); there is no consensus on a rule of thumb on the matter. Hence, the researcher opted to employ two guidelines. These were 1. in the event more than 30% of the data is missing, the variable from analysis, and 2. where there are less than 30% of missing cases, the system missing in the SPSS program was used to assign a value for those cases (Bourne, 2009g).

The Study Population and Sample

The respondents for this study consisted of resident Jamaicans who live in one of the fourteen parishes in Jamaica. Figure 6 provides a map of Jamaica and Table 1 gives a detailed description of the human population of Jamaica disaggregated by parish for the latest published time (2018; STATIN, 2023).

Note. Reprinted from: <http://www.electionpassport.com/files/JM-Counties.gif>

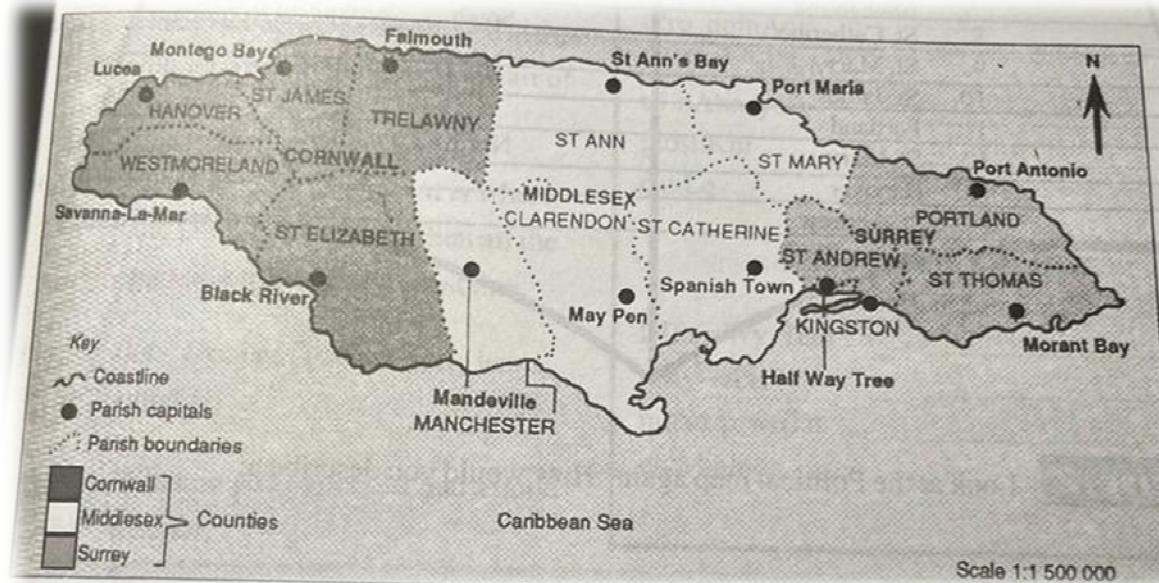


Figure 6: Map of 3 counties in Jamaica.

The sample size was computed based on a 1) population of 2,727,503 resident Jamaicans, 2) a 95% confidence interval, and 3) a 3% margin of error (Babbie, 2010; Hair, Black, Babin, et al., 2018; Neuman, 2014). Using the previously mentioned figures, the Survey Monkey calculator computed a sample size of 1,067 Jamaicans across the fourteen parishes. The researcher disaggregated the 1,067 Jamaicans in the sample based on the same percentage as that of the population (Table 2).

Table 2: Human Population and Sample of Jamaica

Parish	Human Population, 2018	% Population ¹	Human Sample ¹	% Human Sample ¹
Kingston and St Andrew	669,978	24.6	262	24.6
St Thomas	94,968	3.5	37	3.5
Portland	82,669	3.0	32	3.0
St Mary	114,902	4.2	45	4.2
St Ann	174,256	6.4	68	6.4
Trelawny	76,005	2.8	30	2.8
St James	185,753	6.8	73	6.8
Hanover	70,287	2.6	27	2.6
Westmoreland	145,673	5.3	57	5.3
St Elizabeth	151,885	5.6	59	5.6
Manchester	191,940	7.0	75	7.0
Clarendon	247,778	9.1	97	9.1
St Catherine	521,409	19.1	204	19.1
Total	2,727,503	100.0	1067	100.0

Source: Statistical Institute of Jamaica (2023)

¹ The figure was computed by Paul Andrew Bourne

Inclusion Criteria

There are two criteria for inclusion in the current study. The two inclusions are as follows: 1. 18+ years old, and 2. Resident Jamaican. The age condition was simple to remove the need for parent/guardian consent from the respondents. The legal age in Jamaica is 18 years, and so the researcher used this age because people can provide their consent.

Exclusion Criteria

People were excluded from this study based on 1. Being less than 18 years old at the time of the survey, 2. Medically impaired, 3. In hospital or prison, 4. non-Jamaicans, 5. Non-resident Jamaican at the time of the survey, and 6. They were not having a cellular phone.

Instrumentation

A self-administered questionnaire was used to assess the variables. Questionnaires consist of two sections with a total of 41 items. Items 1 to 16 assess the psychological well-being of Jamaicans, 17 to 39 deal with social media networks and usage, and 40 to 43 deal with demographic variables such as age, gender, and nationality as well as whether the individual currently resides in Jamaica. The study variables, knowledge, practice and attitude were measured using 36 items. The first 16 items were used to assess psychological well-being. The scoring of the first 16 items was based on the Autonomy subscale items Q15, Q17, and Q18. The Environmental Mastery subscale items are Q4, Q8, Q9. The Personal Growth subscale items are Q11, Q12, Q14. The Positive Relations with Others subscale items are Q6, Q13, and Q16. The Purpose in Life subscale items are Q3, Q7, Q10. The Self-Acceptance subscale items are Q1, Q2, and Q5. Additionally, Q1, Q2, Q3, Q8, Q9, Q11, Q12, Q13, Q17, and Q18 were reverse-scored.

Reverse-scored items are worded in the opposite direction of what the scale is measuring. The formula for reverse-scoring an item is:

$$((\text{Number of scale points}) + 1) - (\text{Respondent's answer})$$

For example, Q1 is a 7-point scale. If a respondent answered 3 on Q1, there is a re-code of their answer as: $(7 + 1) - 3 = 5$.

In other words, a 5 is entered for this respondent's answer to Q1.

To calculate subscale scores for each participant, sum respondents' answers to each subscale's items. Higher scores mean higher levels of psychological well-being.

Data Collection

Approval was sought from the Department of Ethics at Atlantic International University (AIU). The data collection technique that was used is the web-based standardized questionnaire. The researcher used Survey Monkey and a written questionnaire to collect the information from prospective respondents. A standardized instrument was designed, and placed in Survey Monkey, and was distributed to prospective sampled respondents across the

14 parishes of Jamaica. After receiving approval, the researcher provided the participants with the questionnaires accompanied by an explanation of the study (via Survey Monkey). Assurance of confidentiality and anonymity was upheld by not including any personal identifier on the instrument. The survey was forwarded to respondents' mobile phones or emails. Data collection was carried out over at most four weeks.

Reliability and Validity

Researchers have argued that validation and verification are important issues in scientific research (Kuhn, 1996; Balashov and Rosenberg, 2002), and offer an insight into the science of the study. For research to be credible, reliability and validity must be established and employed in the research process (Babbie, 2010; Creswell, 2014). Babbie (2010) and Neuman (2014) believed that reliability is concerned with the internal consistency of the methods, conditions and results while validity deals with the accurate interpretability of the results and the generalizability of the results.

Reliability

Reliability speaks to the probability that the scale items perform their intended function adequately based on the specified period. Hence, the researcher examined the reliability of the Psychological Well-Being Scale by way of Cronbach's alpha. The general rule of thumb for a good Cronbach is a value of at least 70% (Tavakol & Dennick, 2011), which would measure a good internal consistency of the scale or test items (Cronbach, 1951).

Validity

For this study, the two types of validity that were examined included: 1. Content and 2. Construct validity. Content validity addresses the extent to which the scale (or items) fairly represents the entire domain of test items (Anastasia, 1988; Hair, et al., 2018; Rusticus, 2014; Salkind, 2010). Rusticus (2014) argued that “There are three key aspects of content validity: domain definition, domain representation, and domain relevance” (p. 1). Factor analysis is used to determine content validity (Izquierdo, Olea, & Abad, 2014; Watkins, 2018) by way of The

Screeplot, Eigenvalues (which should be at least 1), and KMO and Bartlett's Test (Bartlett, 1951, 1954; Hair et al., 2018; Kaiser, 1958, 1974; Watkins, 2018).

Construct validity, on the other hand, is the extent to which the measure behaves consistently to the theoretical hypothesis or other internal reliability analysis. Like content validity, factor analysis is used to determine construct validity.

Data Analysis

For this survey instrument (self-administered standardized questionnaire), the large volume of data was stored, retrieved and analyzed using the Statistical Packages for the Social Sciences (SPSS) for Windows version 27.0 (SPSS Inc; Chicago, IL, USA). Descriptive statistics were performed on the data as well as percentage and frequency

distributions. Descriptive statistics allowed the researcher to meaningfully describe the many pieces of data collected Gay, Mills, & Airasian (2009). Statistical significance determined a p-value less than or equal to five percentage points (≤ 0.05) – two-tailed. In addition to descriptive statistics, scatter plots and box plots were also used to analyze the data. The researcher also performed χ^2 tests to compare associations in non-metric variables and Independent sample-t tests (Gay et al., 2009; Polit, 1996). Box plots were used to display a graphic presentation of categorizations of a non-metric variable on a metric variable.

For the Likert scale questions (i.e., 1-16), the researcher employed the scoring design as outlined by Ryff. Following the previous computations, the researcher conducted a factor analysis on the Psychological Well-being Scale, descriptive statistics bivariate Analysis, and multivariate analysis to create the final model.

Ethical Issues

Ethical clearance was solicited from the ethics committees of the Atlantic International University (AIU). Before the researcher began this study, he did a few training in ethics. All the respondents were required to give their consent before being included in the study. Respondents were informed of the study, their roles and duties as well as the right to withdraw at any time if the need arises. The consent form outlined the rights and approach in the overall research process, and no personal identifiers were placed on the questionnaire. All the participants were required to give their consent before being included in the study (See Appendix 1). The researcher sought approval from these institutions before the questionnaires were issued.

Demographic Characteristics of the Sampled Respondents

Table 1 presents the demographic characteristics of the sampled respondents. There are 587 respondents for this study. Of the 587 respondents, the majority were adults (75.3%, n=442), all were Jamaicans, and 97.8% were currently on the Island or residence Jamaicans.

Table 1: Demographic Characteristics of the Sampled Respondents, n= 587

Details	% (N)
Age cohort	
Youth	22.3 (131)
Adults	75.3 (442)
Seniors	2.4 (14)
Gender	
Female	42.3 (96)
Male	57.7 (131)
Jamaican	100.0 (587)
Currently resides in Jamaica	
On the Island	97.8 (574)
Off the Island	2.2 (13)

Table 2 presents issues on social media networking of the sampled respondents. Eight-seven out of every 100 of the sampled respondents had an active social media account with the majority of the sample on average spending less than 5 hours on social media (67.5%).

Table 2: Issues on Social Media Networking, N=587

Details	% (n)
Active Social Media Network Account	
No	12.6 (74)
Yes	87.4 (513)
Daily Time Spent on Social Media Networks	
0 – 4 hours	67.5 (394)
5 – 9 hours	25,2 (147)
10 – 14 hours	4.4 (26)
15 – 19 hours	1.7 (10)
20 – 24 hours	1.2 (7)
Type of Social Media Account Used	
Facebook	74.8
Instagram	99.5
Youtube	30.1
LinkedIn	95.4
WhatsApp	76.7
Tik Tok	35.1
Twitter	6.2
Reddit	42.6
Snapchat	34.1
Quora	68.0
Digg	10.6
Pinterest	0.8
Fancy	1.0
Polyvore	0.4
Etsy	23.0
Tumblr	6.2
WordPress	1.7
Tumblr	0.8
Zinati	5.2
TripAdvisor	0.4

Table 3 presents an analysis of variance for the average daily number of hours spent on social media by age cohort. On average, youth spent 8 hours \pm 5 hours on social media daily compared to 4 hours \pm 3 hours for adults and 2.4 hours \pm 2 for seniors (i.e., 65+ years).

Table 3: Analysis of Variance

Details	Average Daily Number of Hours spent on Social Media
Age cohort¹	Mean±Standard deviation; 95%CI
Youth	5.7± 4.7; 4.5 - 6.82
Adults	3.5±3.0; 3.2 - 3.8
Seniors	2.4±1.7; 0.97 - 3.8

¹F[2,437] = 142.104, *p*-value < 0.001

Confirmatory Factor Analysis

Factor analysis is a statistical tool that is used in examining the psychometric properties of a scale or scale building (Bartlett, 1950, 1954, 1960; Brillinger, et al., 2004; Hair, et al. 2018; Kaiser, 1960, 1970, 1974; Tabachnick & Fidell, 2007). The statistical technique of factor analysis allows for the quantitative assessment of the suitability and appropriateness of scale to measure the intended phenomenon. Ryff Psychological Well-being Scale was developed to evaluate the psychological state of people, and it has been tested and re-tested by many scholars (Ryff, 1989; Ryff & Keyes, 1995; Ryff & Singer, 2006; Springer & Hauser, 2006; Seifert, 2005).

There are three versions of the Ryff Psychological Well-being Scale: 1. Short-version (18 items), 2. medium version (19-to-53 items) and 3. the long-version (54 items). The short version has been widely used to assess psychological or the mental health status of different populations (Ryff, et al., 2010; Ryff & Keyes, 1995). This study examines the psychometric properties of the scale as developed by Ryff, and it is quantitatively validated for suitability and appropriateness before usage.

For the study, the researcher entered, stored, and retrieved the data from the Statistical Package for the Social Sciences, Version 28 for Windows. Before, the psychometric properties assessment, the researcher examines the data to validate whether the assumptions of factor analysis were upheld. The two assumptions of factor analysis are normality and the descriptive statistics for each item being more than 3.

Before performing Principal Component Analysis (PCA), the researcher examined the two main assumptions of factor analysis. Table 4 presents the descriptive statistics for the 7-point Likert scale for the Ryff Psychological Well-being Scale, the Short Version. The mean values range from 3.95 to 6.72. Based on the mean value for each of the 18 items, all the items meet this assumption of factor analysis.

Table 4: Descriptive Item Statistics for 18-Item Ryff Psychological Well-being Scale

Details	Mean	Std. Deviation	N
I like most parts of my personality	6.53	.986	469
When I look at the story of my life, I am pleased with how things have turned out so far	5.99	1.337	469

Some people wander through life, but I am not one of them	6.19	1.445	469
The demands of everyday life often get me down	3.97	2.091	469
"In many ways, I feel disappointed about my achievements in life."	4.95	2.160	469
Maintaining close relationships has been difficult and frustrating for me	4.81	2.251	469
I live life one day at a time and don't think about the future	5.34	1.989	469
In general, I feel I am in charge of the situation in which I live	5.74	1.630	469
I am good at managing the responsibilities of daily life	6.18	1.218	469
I sometimes feel as if I've done all there is to do in life	5.21	2.023	469
For me, life has been a continuous process of learning, changing, and growth	6.72	.818	469
I think it is important to have new experiences that challenge how I think about myself and the world	6.52	1.061	469
People would describe me as a giving person, willing to share my time with others	6.35	1.045	469
I gave up trying to make big improvements or changes in my life a long time ago	5.95	1.730	469
I tend to be influenced by people with strong opinions”	4.77	2.117	469
I have not experienced many warm and trusting relationships with others	4.52	2.204	469
“I have confidence in my own opinions, even if they are different from the way most other people think	6.44	1.046	469
I judge myself by what I think is important, not by the values of what others think is important	6.17	1.373	469

The issue of normality of 18 items was examined, and the results are presented in Table 5. Table 5 presents the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality. All 18 items met the assumption of normal distribution. Ryff Psychological Well-being Scale meets two assumptions for the usage of factor analysis by way of the Principal Component Analysis (PCA).

Figure 7 is a frequency polygon with a superimposed curve on the frequency polygons. The distribution is relatively normal as the skewness valuation was -0.61. For this study, the acceptable skewness is less than 0.7, which means that values below the acceptable number indicate relative normality.

The phase in the preliminary inquiry was the internal reliability of the items, and this was assessed by way of Cronbach alpha. The Cronbach alpha for the 18-item Ryff Psychological Well-being Scale (PWBS) was 0.703. A value of at least 0.7 or 70% indicates that the 18-item scale is suitable for PCA.

Table 5: Correlation Matrix of the 18-item Ryff Psychological Well-being Scale

Correlation Matrix		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18
Correlation	Q1	1.000	.299	.230	.042	.108	.107	.090	.198	.154	-.085	.081	.001	.141	.154	.068	.036	.156	.147
	Q2	.299	1.000	.365	.189	.439	.170	-.007	.363	.257	-.132	.193	-.016	.171	.184	.075	.154	.130	.094
	Q3	.230	.365	1.000	.160	.276	.135	.052	.313	.330	-.076	.202	.048	.109	.153	.125	.133	.101	.051
	Q4	.042	.189	.160	1.000	.384	.275	-.008	.191	.228	.076	.001	-.024	.035	.144	.138	.230	.116	.050
	Q5	.108	.439	.276	.384	1.000	.311	.017	.286	.303	-.008	.164	-.040	.074	.223	.140	.223	.107	-.002
	Q6	.107	.170	.135	.275	.311	1.000	.086	.160	.211	.092	.011	-.065	.147	.230	.203	.426	.052	-.018
	Q7	.090	-.007	.052	-.008	.017	.086	1.000	-.058	.073	.201	.144	.094	.019	.239	.110	.106	-.035	-.104
	Q8	.198	.363	.313	.191	.286	.160	-.058	1.000	.456	-.134	.144	.040	.158	.146	.060	.227	.191	.067
	Q9	.154	.257	.330	.228	.303	.211	.073	.456	1.000	-.175	.090	-.010	.188	.170	.132	.192	.185	.078
	Q10	-.085	-.132	-.076	.076	-.008	.092	.201	-.134	-.175	1.000	.002	.103	-.140	.195	.207	.072	-.025	.010
	Q11	.081	.193	.202	.001	.164	.011	.144	.144	.090	.002	1.000	.260	.056	.182	.007	.034	.120	.036
	Q12	.001	-.016	.048	-.024	-.040	-.065	.094	.040	-.010	.103	.260	1.000	.063	.146	-.021	-.041	.153	.023
	Q13	.141	.171	.109	.035	.074	.147	.019	.158	.188	-.140	.056	.063	1.000	.048	-.025	.138	.094	.134
	Q14	.154	.184	.153	.144	.223	.230	.239	.146	.170	.195	.182	.146	.048	1.000	.164	.222	.099	.033
	Q15	.068	.075	.125	.138	.140	.203	.110	.060	.132	.207	.007	-.021	-.025	.164	1.000	.229	.017	.014
	Q16	.036	.154	.133	.230	.223	.426	.106	.227	.192	.072	.034	-.041	.138	.222	.229	1.000	.048	-.088
	Q17	.156	.130	.101	.116	.107	.052	-.035	.191	.185	-.025	.120	.153	.094	.099	.017	.048	1.000	.358

	7																	0	
	Q1	.147	.094	.051	.050	-.002	-.018	-.104	.067	.078	.010	.036	.023	.134	.033	.014	-.088	.358	1.00
	8																		0
Sig. (1-tailed)	Q1		<.001	<.001	.179	.010	.010	.026	<.001	<.001	.032	.039	.492	.001	<.001	.070	.216	<.001	<.001
	Q2	.000		.000	.000	.000	.000	.436	.000	.000	.002	.000	.367	.000	.000	.052	.000	.002	.021
	Q3	.000	.000		.000	.000	.002	.133	.000	.000	.051	.000	.150	.009	.000	.003	.002	.015	.134
	Q4	.179	.000	.000		.000	.000	.434	.000	.000	.050	.491	.300	.222	.001	.001	.000	.006	.139
	Q5	.010	.000	.000	.000		.000	.361	.000	.000	.433	.000	.196	.054	.000	.001	.000	.010	.482
	Q6	.010	.000	.002	.000	.000		.032	.000	.000	.024	.410	.079	.001	.000	.000	.000	.129	.348
	Q7	.026	.436	.133	.434	.361	.032		.103	.057	.000	.001	.021	.339	.000	.008	.011	.225	.012
	Q8	.000	.000	.000	.000	.000	.000	.103		.000	.002	.001	.195	.000	.001	.097	.000	.000	.074
	Q9	.000	.000	.000	.000	.000	.000	.057	.000		.000	.026	.415	.000	.000	.002	.000	.000	.046
	Q10	.032	.002	.051	.050	.433	.024	.000	.002	.000		.481	.013	.001	.000	.000	.060	.293	.418
	Q11	.039	.000	.000	.491	.000	.410	.001	.001	.026	.481		.000	.113	.000	.438	.232	.005	.217
	Q12	.492	.367	.150	.300	.196	.079	.021	.195	.415	.013	.000		.088	.001	.325	.190	.000	.311
	Q13	.001	.000	.009	.222	.054	.001	.339	.000	.000	.001	.113	.088		.149	.296	.001	.021	.002
	Q14	.000	.000	.000	.001	.000	.000	.000	.001	.000	.000	.000	.001	.149		.000	.000	.016	.238
	Q15	.070	.052	.003	.001	.001	.000	.008	.097	.002	.000	.438	.325	.296	.000		.000	.354	.381
	Q16	.216	.000	.002	.000	.000	.000	.011	.000	.000	.060	.232	.190	.001	.000	.000		.150	.028
	Q17	.000	.002	.015	.006	.010	.129	.225	.000	.000	.293	.005	.000	.021	.016	.354	.150		.000
	Q18	.001	.021	.134	.139	.482	.348	.012	.074	.046	.418	.217	.311	.002	.238	.381	.028	.000	
a. Determinant = .065																			

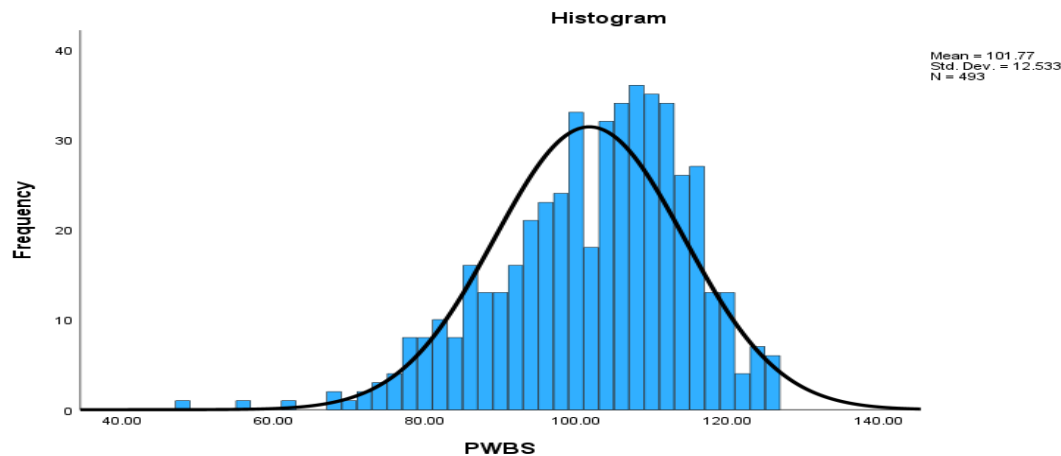


Figure 7: Frequency Distribution Polygon of Ryff Psychological Well-being Scale

Table 5 presents a correlation matrix of the 18-item Ryff Psychological Well-being Scale. An examination of the inter-item correlations between various pair items showed none exceeding 0.5. Those inter-item correlations indicated that each item of the Ryff Psychologic Well-being Scale measured a different concept.

The Kaiser-Myer-Oklin value was 0.757, exceeding the recommended value of 0.6 (Kaise, 1960, 1970, 1974), and Bartlett’s Test of Sphericity (Bartlett, 1950, 1954) reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix (See also Hair et al., 2018; Table 6).

Table 6: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.757
Bartlett's Test of Sphericity	Approx. Chi-Square	1259.325
	df	153
	Sig.	<.001

The Total Variance examination provides a quantitative assessment of the clusters and contribution of each item in the 18-item scale. An Eigenvalue of 1 and beyond indicates that the item making a real contribution to the intended scale. Based on Table 7, six components had an Eigenvalue exceeding 1. The six items explain 56.2% of the variance in the Ryff Psychological Well-being Scale. The Scree plot revealed a clear break after the sixth component, after which the graph flattens (Figure 2), which means the items that fall below this break can be discarded or approached with caution in the analysis.

Table 7: Total Variance Explained for Ryff Psychological Well-being Scale

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.399	18.884	18.884	3.399	18.884	18.884
2	1.793	9.961	28.845	1.793	9.961	28.845
3	1.543	8.572	37.417	1.543	8.572	37.417

4	1.260	7.000	44.417	1.260	7.000	44.417
5	1.086	6.034	50.451	1.086	6.034	50.451
6	1.039	5.772	56.223	1.039	5.772	56.223
7	.904	5.020	61.244			
8	.827	4.593	65.837			
9	.774	4.299	70.136			
10	.746	4.142	74.278			
11	.707	3.930	78.209			
12	.668	3.709	81.918			
13	.639	3.549	85.467			
14	.607	3.370	88.837			
15	.582	3.234	92.071			
16	.540	3.002	95.074			
17	.459	2.551	97.625			
18	.428	2.375	100.000			

Extraction Method: Principal Component Analysis.

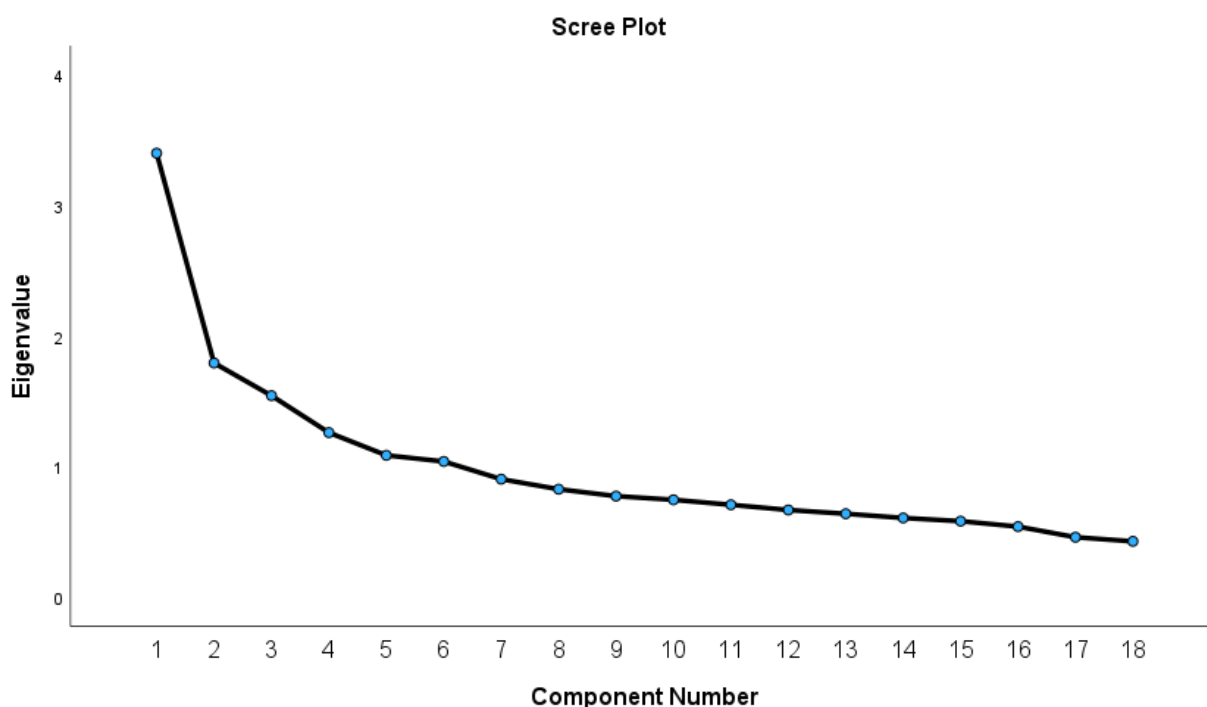


Figure 8: Scree plot of Ryff Psychological Well-being Scale.

Communalities are used to assess the number of variables accounted for in the component captured by each item. Table 8 presented communalities for the 18-item scale. When the value for the communality is less than 50%, the item can be excluded from the indexation. In that case, six items had a value less than 0.5 or 50%. However, on examination of the six items, only item 15 is less than 0.5 as the others could be rounded up to 0.5. Hence, only item 15 should be excluded from the factor analysis indexation.

Table 8: Communalities for Ryff Psychological Well-being Scale

	Initial	Extraction
Q1	1.000	0.644
Q2	1.000	0.561
Q3	1.000	0.477
Q4	1.000	0.540
Q5	1.000	0.593
Q6	1.000	0.568
Q7	1.000	0.556
Q8	1.000	0.489
Q9	1.000	0.449
Q10	1.000	0.607
Q11	1.000	0.567
Q12	1.000	0.641
Q13	1.000	0.644
Q14	1.000	0.459
Q15	1.000	0.412
Q16	1.000	0.591
Q17	1.000	0.620
Q18	1.000	0.702
Extraction Method: Principal Component Analysis.		

Using Promax rotation of factors, the internal reliability of the 18-item was good (> 0.7) and the Total Variance Explained as well as all the other PCA tests supports the suitability and appropriateness of the using the Ryff Psychological Well-being Scale to assess mental health of Jamaican social media users. The Cronbach alpha coefficient was 0.703 which is just above Nunnally’s 0.7 threshold, and this according to many scholars is acceptable reliability statistics (Kraiser, 1958, 1960; Horn, 1965; Tabachnick & Fidell, 1998, 2007; Brillinger et al., 2004). However, on disaggregating the overall 18-item scale into six sub-scales found by this study, the Cronbach alphas were low for all (See Table 9). Based on the short form of the Ryff PWBS, the overall scale can be used to suitably and appropriately measure the mental health of Jamaican social media users, and not sub-scales as none of them are at least moderately good for assessment (> 0.6)

Table 9: Internal Reliability Analysis of the sub-scales and overall scale of the Ryff PWBS

Details	Cronbach alpha
Autonomy	0.294
Environmental Master	0.553
Personal Growth	0.416
Positive Relations	0.486
Purpose in Life	0.194
Self-Acceptance	0.544
Overall (PWBS)	0.703

The Ryff's Psychological Well-being Scale for this study

Table 10 presents the frequencies for the Ryff's Psychological Well-being S for the sampled respondents. Ryff's PWBS ranges from 0 to 126 (the maximum Likert scale value is 7 and there as 18 questions, which means the total possible outcome is 126). Lower interval scores denote lower psychological well-being or mental health and the versa is equally the case Based on the frequencies, the arithmetic mean is 86.9 ± 9.3 , 95%CI: 86.1 - 87.6, with the maximum being 126. Based on the findings, 41.6% (n=224) of the sampled respondents have below-average psychological well-being or mental health status. On the other hand, 58.4% (n=315) of the sampled respondents had at least average psychological well-being or mental health status, with 16.3% (n=88) of the sampled respondents having moderate-to-excellent psychological well-being or mental health status.

Table 10: Ryff's Psychological Well-being Scale or Mental Health Status Scale

Details	n	%
< 61	3	0.56
62 - 64	0	0.00
70 - 74	30	5.57
75 - 79	71	13.17
80 - 84	120	22.26
85 - 89	124	23.01
90 - 94	91	16.88
95 - 99	55	10.20
100 - 104	27	5.01
105 - 109	13	2.41
> 112	5	0.93
		100.0

Multivariate Analysis: Modeling Ryff's Psychological Well-being of Social Media User

The assumptions of multiple linear regression were examined before an ordinary least square regression was modelled with the data. Based on Figures 3 and 4, the assumption of linearity (see also, $F[3, 533] = 5.495$, p-value < 0.001). and normality were met by the data. Two of the critical assumptions of linear regression were upheld, and so this study examines whether social media usage, age, and gender influence Jamaican social media users' psychological well-being or mental health.

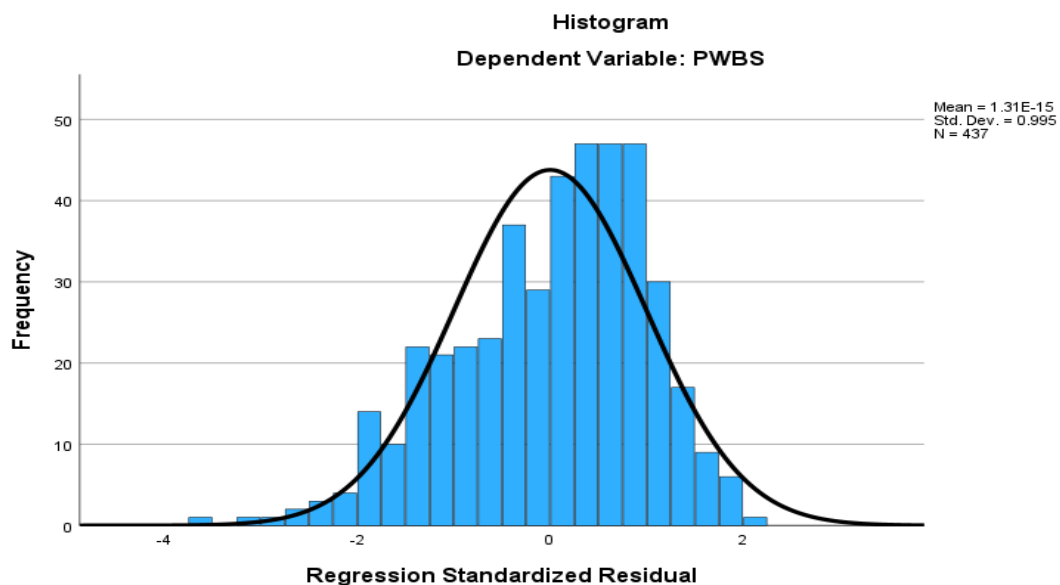


Figure 8: Normality test of Ryff's Psychological Well-being Scale

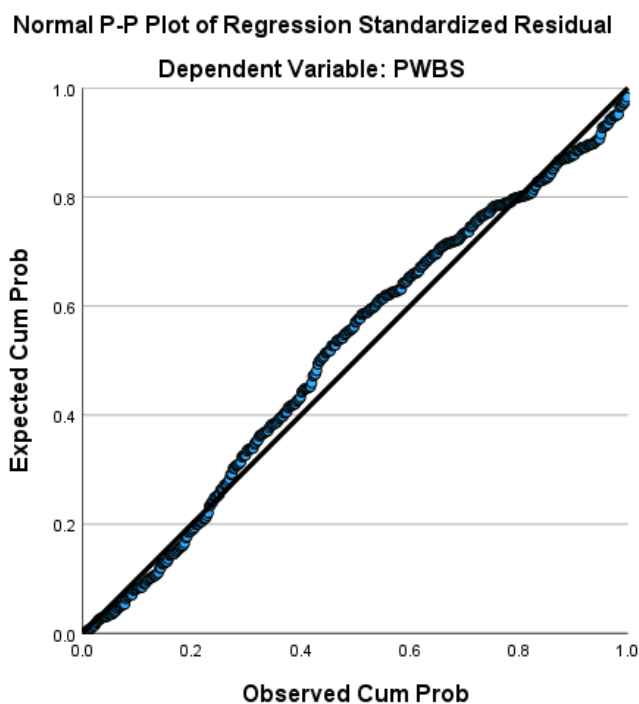


Figure 9: Linearity test for Ryff's Psychological Well-being Scale

With the two critical assumptions of linear regression being upheld, this study test equation [1]:

$$\text{Ryff's Psychological Well-being} = f(\text{Age, Gender, Social Media Usage}) \dots\dots\dots[1]$$

Gender was excluded from the model because it had more than 30% of the data points missing. Using multiple linear regression analysis, age and social media usage can linearly be used to model the psychological well-being or mental health status of social media users in

Jamaica ($F [3, 533] = 5.495$, $p\text{-value} < 0.001$), with the linear factor accounting for 3.0% of the changes in psychological well-being or mental health of Jamaican social media users.

Table 11 presents the ordinary least-square (OLS) regression of the psychological well-being or mental health status of Jamaican social media users. The OLS statistical tool showed that age and social media usage (using an average number of hours spent on social media daily). Therefore, the linear model for PWBS is depicted in equation (2):

$$\text{Ryff's Psychological Well-being} = 97.75 - 0.509\text{Social Media Usage} + 0.177 \text{Age} [2]$$

An interpretation of equation [2] is there is a positive relationship between age and positive psychological well-being and an inverse association between psychological well-being or mental health and social media usage.

Table 11: Ordinary Least-square (OLS) regression of the Psychological Well-being or Mental Health Status of Jamaican Social Media Users

Model	Unstandardized Coefficients		Beta	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error				Zero-order	Partial	Part	Tolerance	VIF
Constant	97.750	3.004		32.542	<.001					
No Of Accounts	-.0060	0.269	-.001	-.0225	0.822	-.0033	-.0011	-.0011	.889	1.124
Age	0.117	0.049	0.118	2.415	0.016	0.147	0.115	.114	.926	1.080
Active Social Media Account	2.331	1.809	0.064	1.289	0.198	0.024	0.062	.061	.897	1.114
Number of hours on social media daily	-.0509	0.168	-.0148	-3.025	0.003	-.0170	-.0144	-.0142	.918	1.089

a. Dependent Variable: PWBS

In summary, the more time Jamaicans spend on social media, the more negatively their psychological well-being influences health.

Interpretation and discussion of findings

In 2005, Owen Morgan editor a book entitled ‘Health Issues in the Caribbean’ and many of the writers, therein, were Caribbean scholars/researchers. Of the thirty (30) articles and an

Introduction as well as the Way Forward, only four (4) were written on healthcare delivery in the Caribbean and the Way Forward. The writers of the four articles on healthcare delivery in the Caribbean and the Way Forward did not include social media and mental health (i.e., Mental Health Policy for the Smaller Caribbean Islands, Emerging Challenges for Mental Health in the Caribbean, and Mental Health in the Caribbean: New Paradigms) by way of a single line. Professor Frederick W. Hickling (2005), a Caribbean psychiatrist, who wrote the article captioned ‘Mental Health in the Caribbean: New Paradigms’ did not envision including social networking as a feature of mental health. Like Prof. Hickling, Sir George Alleyne, former Chancellor of the University of the West Indies, Mona Campus, on examining the health space of the Caribbean, did not see it fitting to include social media and its possible impact on mental health. On examination of the literature on social media usage and/or mental health, no study emerged in the Caribbean on the role that social media usage is having on the populous. This study provides a research-based approach to social media and mental health discourse from a Jamaican perspective.

Discussion

In this study on mental health and social media usage, the Ryff Psychological Well-being Scale (Ryff’s PWBS) plays a critical role in answering the research question as to whether social media usage among Jamaicans influences their mental health, and how it does so. The purpose of Ryff’s PWBS was to assess the mental health status of people. The developer of Ryff’s PWBS (Professor Carol Ryff; Ryff, 1989a, 1989b) along with co-developer/s (Ryff & Singer, 2006; Ryff & Keyes, 1995) argued that greater value-outcome for Ryff’s PWBS means higher psychological well-being or higher mental health status. There are three versions of Ryff’s PWBS: 1. The Short Version has 18 items, 2. The Medium Version has 19-53 items, and the Long Version has 54 items. Many scholars have examined the psychometric properties of Ryff’s PWBS and there were two sides to the discussion, with more studies validating the internal reliability of the scale (Seifert, 2005; Springer & Hauser, 2006; Springer, et al., 2006).

Using a sample of 768 respondents (279 women and 489 men), Garcia et al. (2023) validated the 18-item Swedish version of Ryff’s Psychological Wellbeing Scale. They opined, "The results supported the internal consistency and concurrent validity of the 18-item Swedish version. Moreover, invariance testing showed similar measurement precision by the scale across gender. Finally, we found several items, especially the purpose in life item "I live life one day at a time and do not think about the future," that might need revision or modification to improve measurement (Garcia et al. (2023, pp. 1 & 2). Like Garcia et al. (2023), this study concurs with the overall suitability and appropriateness of using Ryff’s PWBS to assess psychological or mental health status (Cronbach alpha equals 0.7 or 70% and the analysis in the Principal Component Analysis (PCA)); but that one item could be deleted from the indexation, “I tend to be influenced by people with strong opinions” and it Garcia et al.’s work it was "I live life one day at a time and do not think about the future".

Springer, et al. (2006) questioned the validity of the 6-item subscale of Ryff’s PWBS. They postulated that the Short Version of Ryff’s PWBS is not sufficient for building those main

subscales such as autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. In Garcia et al.'s (2023) work, all the subscales were robust enough to adequately assess the previously stated concepts. The multi-dimensional psychometric properties analysis in a study is contrary to the findings in Garcia et al.'s (2023) study. The table, below, presents the findings for the Cronbach alphas for the subscales of this study, and there is evidence that none of the subscales are suitable and appropriate to measuring the subscales. Generally, Ryff's PWBS psychometric properties of 18-item are good to measure overall PWBS or mental health status; but not the subscales. This study concurs with Springer, et al. (2006) findings that the subscales for Ryff's 18-item Version of the PWBS are insufficient items to mean the various intended concepts. This brings into question the validity and internal reliability of the psychometric properties of even the 33-item Ryff's PWBS (i.e. Gao & McLellan, 2018) as they lack enough items in the subscales; but not for the overall multidimensionality of the 33 items. According to Gao and McLellan (2018), "Findings of the present study echoed several previous studies which report inadequate reliability and validity of Ryff's scales. Given the evidence, it was suggested that future adolescent studies should seek to develop more age-specific and context-appropriate items for a better operationalisation of Ryff's theoretical model of psychological well-being" (p. 1), This study concurs with the general literature that 18 items Ryff's PWBS is generally valid and reliable; which is not the case for the subscales.

Table: Psychometric Properties of the Subscales and Overall Scale of Ryff's PWBS

Details	Cronbach alpha
Autonomy	0.294
Environmental Mastery	0.553
Personal Growth,	0.416
Positive Relations with Others	0.486
Purpose in Life,	0.194
Self-acceptance	0.544
Overall	0.703

This research only utilises Ryff's Psychological Well-being Scale (PWBS) to assess mental health, and the subscales were not used because of the low reliability found in psychometric properties. The findings that emerged from this study concur with the literature that social media use influences one's mental health. Zsila & Reyes. (2023) found that social media usage plays a dual role in mental health status. They opined, "The use of social media significantly impacts mental health. It can enhance connection, increase self-esteem, and improve a sense of belonging. But 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" (p. 1).

This study clarifies the relationship between social media usage and mental health status. The current findings revealed that the number of social media accounts does not impact Jamaicans' mental health, but the number of hours spent on social media networks adversely influences the mental health of Jamaicans. Social media usage is creating stressors among

Jamaicans as they continue to consume more of this product. The five major social networking sites visited by Jamaicans are Instagram, LinkedIn, WhatsApp, Facebook and Quora, and these are enlarged non-research truth-based educational networks.

In conclusion, it is not merely using social media that negatively influences Jamaicans' mental health status; but it is the excessive usage that creates this challenge. On average, Jamaican youths (less than 25 years old) consume between 5 and 12 hours of social media daily and this offers an insight into excessive usage of social networking platforms. Jamaican adults, on the other hand, consume between 3 and 7 hours of social media daily, and seniors between 2 and 5 hours daily. Jamaican society is at a crossroads as there are no plans afoot to address the social media addiction among young people, and how to deal with the declining mental health because of the excessive usage of the various platforms.

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