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Does Social Media Usage provide Health-related Information and increase Self-reported Health Status of Jamaicans during the COVID-19 Pandemic?

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Abstract

The state of health of a person or population is assessed regarding morbidity, impairments, anthropological measurements, mortality, functional status indicators, and quality of life. This study seeks to determine whether or not social media usage influenced Jamaicans' self-reported health status and the effectiveness of using social media for health information. Non-probability sampling technique (convenience sampling) was used to get data from 1082 respondents across the island, using a web-based standardized survey created in Google Forms to collect the data. The data was then converted from Google Forms into IBM Statistical Package for the Social Sciences (SPSS) Version 25 software used to analyze data in Windows. The findings revealed that of the 1082 sampled respondents, 24.3% rely on social media and also deemed it effective for retrieving health information by rating it at an 8/10, while 19.9% did not rely on social media and considered it less effective for retrieving health information by rating it at 5/10. These findings suggest that social media positively influences those who depend on it to retrieve health status information. The model for rating the effectiveness of social media is a statistically significant one $\chi 2$ =210.347, P= 0.001. This study has also proved that social media has somewhat influenced Jamaicans to report their health status. Technology usage has been increasing over the years, and with the advent of the COVID-19 pandemic, fewer persons are

willing to leave their residences and visit health facilities; as such, they rely on social media to contact their doctors, retrieve health information and receive updates on their health status. Social networking is a toolkit for health-related information, e health, or digital health for Jamaicans.

Keywords: Health, health awareness, health-related information, health status, self-reported health, social media.

Introduction

The state of health of a person or population is assessed regarding morbidity, impairments, anthropological measurements, mortality, functional status indicators and quality of life. (Healthy People, 2014; Post, 2014; World Health Organization definitions, 2005, 2015; WHOQOL Group, 1998). According to Tufts University (2022), social media refers to the means of interactions among people in which they create, share, or exchange information and ideas in virtual communities and networks. Social media platforms are considered practical tools that contribute to the real-time dissemination of information to raise public awareness. For example, about COVID-19, Jamaicans can utilize the Jam COVID app developed by the government. They can see the current status of the disease and it gives appropriate advice to the public on how to avoid being infected.

Public health organizations use social media both as a broadcasting platform to amplify messages from traditional media sources (e.g., radio, television, print media) and as an entirely new way of collaborating and co-creating content with target audiences (Berg *et al*., 2021; Gatewood *et al*., 2020; Thackeray *et al*., 2012; Mendoza-Herrera *et al*., 2020). In the future, it will also allow public health communicators to deliver a range of health promotion messages and self-monitoring tools through mobile applications, an innovation that will potentially increase the reach to those without computers and will allow public health messaging to penetrate the day-to-day health conversations and activities of individuals (Schein et al., 2010; Ventola, 2014).

Over the years, technology has revolutionized our world and daily lives (Aginginplace, 2022; Hillyer, 2020). Technology has created unique tools and resources, putting helpful information at our fingertips (Hawkins, 1997).Technology has also made our lives easier, faster, better, and more fun (Wardynski, 2019; Anderson & Raine, 2019). Social media changed the information landscape, influencing people's well-being through health awareness and promotion, health choice, health-related information, social change for health, and health communication (Korda, & Itani, 2013; Ventola, 2014; Yeung, 2018), which means that social media play a critical role in public health (Goodyear*et al*., 2021; Smailhodzic *et al*., 2016; Mendoza-Herrera *et al*., 2020).

The internet focuses more on culture by highlighting challenges and issues in real-time inclusive of best practices. Social media presented the SARs-Cov-2 in real time, and guidelines were offered to users. Social media, therefore, were able aid in reducing the catastrophic effect of the SARs-Cov-2 unlike other pandemics in history (Centers for Disease Control and Prevention, 2018; History, 2020). Despite the role of social media in lowering the mortality associated with SARs-CoV-2, what is absent from the discourse is whether social media usage influence Jamaicans self-reported health status during COVID-19? Hence, this research seeks to determine

how social media influences Jamaicans' self-reported health status. Jamaicans 18 years and older were selectively chosen to help the researchers collected from across the fourteen parishes. Data was collected from 1,082 respondents from across the fourteen parishes of Jamaica, using online questionnaires. The researchers sought answers to the questions (i)Has social media influenced Jamaicans self-reported health status? (ii)How effective are social media usage in providing health-related information for Jamaicans?

Theoretical Framework

Social media have played a critical role in the healthcare sector, and it is also responsible for the shaping of health-related information management (Smailhodzic *et al*., 2016; Zhou *et al*., 2018). As a result, researchers have developed a conceptual framework which is called Social Media-Based Health Information Management (SMHIM)that allows for examining social media and its effect on health-related information management (Figure 1). Social media are reshaping health information management in various ways, ranging from cost-effective ways to improve clinician-patient communication and exchange health-related information and experience to new medical knowledge and information. Zhou *et al*. (2018) refer to social media as internet-based tools or platforms that allow individuals and communities to gather and communicate and generate, share, and distribute information, ideas, and experiences.

The development of the SMHIM stems from epidemiology, sociology, economics, public health research, natural language processing, text mining, machine learning, social network analysis, and statistical modelling (Zhou *et al*., 2018). SMHIM is a set of processes in which participants who are concerned about specific health problems are engaged through social media platforms (4P): Participants, Problem, Platform and Process, to pursue four objectives (4Cs). The 4Cs include improving care quality and safety, communication efficiency, cost-effectiveness, and convenience of access (Figure 1).

The social media platform 4(P) is as follows:

Participants: social media offers a novel perspective to health care because they provide unique communication channels to patients, healthcare professionals, and the general public. Patients often intend to achieve different goals by participating in social media, including acquiring or sharing disease-specific knowledge or information**.**

Problems: social media to seek solutions or feedback for various health problems.

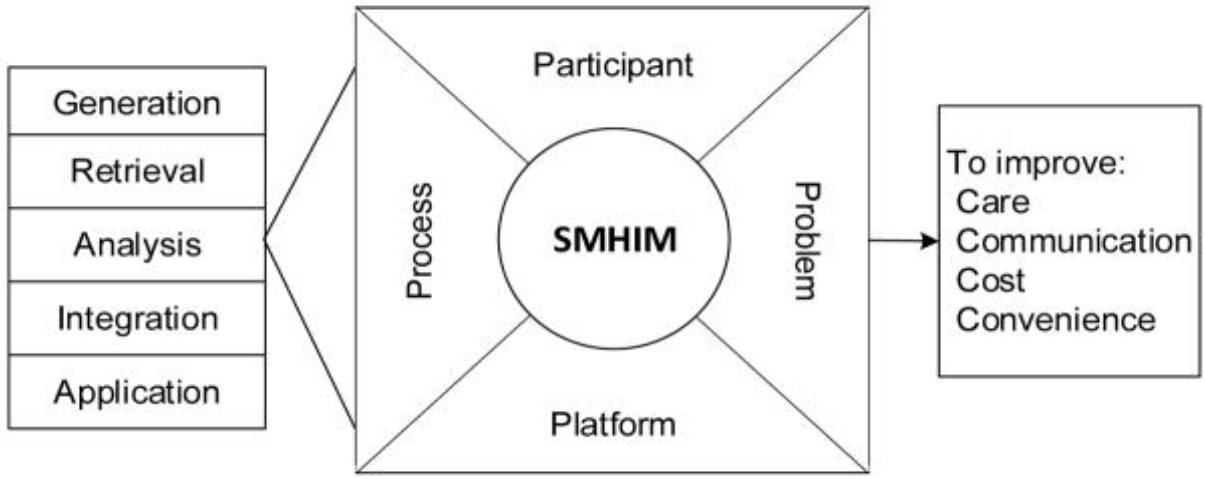
Platforms: Social media platforms, also called social media websites, infrastructure, communication technology. Numerous social media platforms are accessible to the general public, patients, and healthcare professionals.

Process: A knowledge system generally consists of four socially enacted knowledge processes: creation, storage/retrieval, transfer, and application (Alavi and Leidner, 2001; Holzner and Marx, 1979; Pentland, 1995).

Similarly, the process of SMHIM consists of (1) generation, (2) retrieval, (3) extraction, (4) integration, and (5) application. Analytical techniques can play a role across all of these

processes (Figure 1). Advances in analytics of health-focused, natural language data allow for analyzing social media to understand why patients make certain decisions while gaining insights into patients' health needs.

Objectives of the social media platform are as follows: Care: social media are reshaping health care services with the potential to improve the quality and safety of patient care. Communication efficiency: poor patient-physician communication has been a long-standing issue that causes many problems, such as low medication adherence of patients. Cost-effectiveness: social media makes sharing and exchanging health-related information and knowledge (e.g., the appearance of certain symptoms from a disease) much easier and cheaper than ever before. Convenience: social media can serve as a convenient and accessible venue for health intervention, patient education, patient health self-management, advertising drugs and health care services (Zhou *et al.*, 2018). This theory supports the researcher's questions: 1. Has social media influenced Jamaicans to report their health status? 2. How effective are social media apps in reporting the health status of Jamaicans? Researchers expect that most of the participants will be utilizing social media to seek helpful information on their health status and self-report health concerns using social media platforms (Figure 1).



Source: Zhou *et al*. (2018)

Figure 1.Conceptual framework for Social Media-Based Health Information Management (SMHIM)

Literature Review

Previous research focused on social media and self-reported health statuses. Hausmann *et al*. (2017) examined the role of social media on health-related information sharing among a selected population in the United States. The purpose of the research was “to determine how adolescents and young adults (AYAs) use social media to share health-related information and to assess attitudes towards using social media to obtain health-related information and communicate with medical providers” (p. 714). Most participants used social media within the prior month, but only 51.5% had shared health-related information on these networks. The participants shared about mood, wellness, and acute medical conditions. Those with self-reported poor health were more likely to share health-related information than other groups. Only 25% thought social media

could provide them with useful health-related information. Few adolescents and young adults (AYAs) connected with their healthcare team on social media, and most did not want to use this method (Hausmann et al., 2017).

According to Hausmann *et al*. (2017), adolescents and young adults have the highest rates of social media use of any age group. Social media allows us to create, share, and exchange information and ideas in virtual networks, and it has the potential to revolutionize healthcare in a variety of ways (Rolls *et al*., 2016; Smailhodzic *et al*., 2016; Ventola, 2014; Wong *et al*., 2021). Persons may benefit from social media by obtaining health-related information, connecting with others with similar conditions, joining online support groups, enhancing patient empowerment and improving outcomes. Researchers can use social media to recruit patients with rare conditions, estimate the extent of disease outbreaks, and increase understanding of conditions via health behaviours reported online (Househ *et al*., 2014; Roeder, 2020; Smailhodzic *et al*., 2016; Ventola, 2014). Finally, public health departments can distribute messages for staying healthy and increase awareness of various diseases through social media. However, these mentioned benefits of social media rely on the type and quality of information that users voluntarily share and on their perception of the content produced in this medium. How and why adolescents and young adults decide to share information about their health on social media remains an under-explored topic, yet its understanding will be essential if we are to leverage social media to improve health.

Social media is a platform for the public worldwide to discuss their issues and opinions. Social media is a term used to describe the interaction between groups or individuals in which they produce, share, and sometimes exchange ideas, images, videos and many more over the internet and in virtual communities (Akram&Kumar, 2017). Akram & Kumar (2017) contend that some positive effects of social media on health exist, such as consulting doctors online anywhere and anytime, sharing suggestions among friends, relatives and colleagues about various diseases and their symptoms, access to information in developing regions, support and mutual accountability on online health forums (see also, Bakhai *et al*., 2019; Iftikhar& Abaalkhail, 2017; Snyder*et al*., 2011). Some negative effects of social media on health include incorrect self-diagnosis and potential breach of privacy. Social media provides people with tools to share information, promote healthy behaviours, engage with the public, and educate and interact with others with the same condition/ diagnosis (Akram & Kumar, 2017).

Methods and Materials

This current study employed a cross-sectional web-based descriptive quantitative research design to examine the issue of 'Social media and self-reported health status of Jamaicans'. According to McLeod (2019), quantitative research involves collecting and analyzing numbers data to describe or control variables of interest, test causal relationships between variables, make predictions, and generalize results to a broader population (McLeod, 2019).

The collection of data was from September 21 to December 16, 2021. The research involved collecting data from participants, both female and male, from all three counties in Jamaica: Cornwall, Middlesex, and Surrey. Researchers disseminated a message containing the link for the

survey questionnaire with details of the study on social media platforms to the study population. The participants were informed about the study's purpose and procedure and assured of confidentiality and autonomy. The standardized instrument comprised nineteen closed-ended questions, five of which related to demographics, two requiring the individual to rate their health and the effectiveness of social media and twelve questions regarding the individual's use of social media for health.

A non-probability sampling technique (convenience sampling) provided the means of participant selection. A web-based standardized survey was used to collect data from Jamaicans. Statistics from the Statistical Institute of Jamaica (STATIN) revealed that the mid-year population for Jamaica in 2019 was 2,734,092 people. The sample size for this study was computed using 2019 population for Jamaica, with a 95% confidence interval and 2.89% margin of error, which gives a sample size of 1,082 people (Survey Monkey, 2021).

Retrieved respondent data displayed on pie charts and horizontal bar graphs were analyzed using Google Forms, Microsoft Excel Spreadsheet, and IBM Statistical Packages for the Social Sciences (SPSS) Windows, Version 25.0. Data were analyzed using frequency percentage and bivariate analysis (Chi-square). The acceptable missing data is 30% (Bodner, 2008; Graham, 2009; Kang, 2013). A p-value of 5% was employed to ascertain statistically significant (Bryman & Cramer, 2011; Heiman, 2014; Peck *et al*., 2008).

Results

The demographic characteristics the gender, age cohort, level of education and area of residence of the sampled respondents (n = 1,082) are presented in Table 1. The majority of the respondents' level of education was tertiary (49.8%). The majority of the respondents were females (64.4%), the highest age category 18-27 years (30.0%), and majority of respondents were from Westmoreland (24.4%)

Table 1.Demographic Characteristics of Sampled Respondent

Details	**% (n)**
Gender	
Male	35.6 (385)
Female	64.4 (697)
Age Cohort	
18- 27	30.0 (325)
28- 37	27.0 (292)
38- 47	20.7 (224)
48- 57	12.7 (137)
58- 67	7.4 (80)
68 and over	2.2 (24)
Level of Education	
Primary	3.9 (42)
Secondary	32.6 (353)

Tertiary	49.8 (539)
Other	13.7 (148)
Area of Residence (parish)	
Kingston & St. Andrew	8.0 (87)
St. Catherine	4.0 (43)
Clarendon	7.8 (84)
Manchester	9.9 (103)
St. Elizabeth	11.4 (123)
Westmoreland	24.3 (263)
Hanover	14.0 (151)
St. James	11.3 (122)
Trelawny	3.6 (39)
St. Ann	2.4 (26)
St. Mary	1.4 (15)
Portland	1.2 (13)
St. Thomas	0.8 (9)

The current health status of respondents are presented in Table 2. A scale was created for the respondents to rate their current health status using the numbers 1- 10 with 1 being least healthy and 10 being most healthy. Of the sampled respondents (n=1082),0.5% (5) rated their current health status at 1, 11.2% (121) rated their current health status at 6 and 29.7% (321) rated their current health status at 8.

Table 2.Current Self-reported Health Status of Respondents, n=1,082

Details	**% (n)**
Self-reported current general health status	
1	0.5 (5)
3	0.7 (8)
4	1.6 (17)
5	6.8 (74)
6	11.2 (121)
7	22.7 (246)
8	29.7 (321)
9	16.0 (173)
10	10.8 (117)
Total	**1,082**
Average self-reported current general health status	7.59±2.38
Skewness	-0.670

The results of the effectiveness of social media in assessing the health status of respondents are presented in Table 3. A scale was created for the respondents to rate the effectiveness of social media in assessing their health status using the numbers 1- 10 with 1 being leasteffective and 10

being most effective. Of the sampled respondents (n=1082), 3.6% (39) rated the effectiveness of social media in assessing their health status at 10, 10% (108) rated the effectiveness at 9 and 16.3% (176) rated the effectiveness at 5.

Table 3.Effectiveness of using social media for health-related information

Details	**% (n)**
Rating Effectiveness of using social media for health-related information	
1	7.0 (76)
3	3.8 (41)
4	6.7 (42)
5	10.7 (116)
6	16.3 (176)
7	11.3 (122)
8	15.0 (162)
9	15.7 (170)
10	10.0 (108)
Total	**1,013**
Average rating of effectiveness of using social media to health-related information	5.83±2.41
Skewness	-0.334

H_0: There is no statistical relationship between using social media for health-related information and rating effectiveness of using social media for health-related information.

H_1: There is a statistical relationship between using social media for health-related information and rating effectiveness of using social media for health-related information.

Table 4 presents a cross-tabulation between using social media for health-related information and rating effectiveness of using social media for health-related information. The findings revealed that there is a statistical association between the afore-mentioned variables (χ^2 critical= 21.666< χ^2 calculated= 210.347, p = 0.001).

Table 4.Cross-tabulation between Jamaicans who rely on social media for health-related information and Effectiveness of using social media for health-related information, n= 1082

Details	**Rely on social media for health-related information**			**χ^2; P value**
	Yes	No	Total	
	% (n)	% (n)	% (n)	
Rating Effectiveness of using social media for health-related information				
1	2 (11)	12.1 (65)	7 (76)	210.347; 0.001
2	1.3 (7)	6.3 (34)	3.8 (41)	
3	3.9 (21)	9.5 (51)	6.7 (72)	
4	6.3 (34)	15.2 (82)	10.7 (116)	

5	12.7 (69)	19.9 (107)	16.3 (176)	
6	9.6 (52)	13 (70)	11.3 (122)	
7	21.5 (117)	8.4 (45)	15 (162)	
8	24.3 (132)	7.1 (38)	15.7 (170)	
9	14.9 (81)	5 (27)	10 (108)	
10	3.7 (20)	3.5 (19)	3.6 (39)	
Total	**544**	**538**	**1,082**	

H_0: There is no statistical relationship between 'Do you contact your medical practitioner via social media?' and 'Do you rely on social media to get health-related information?

H_1: There is a statistical relationship between 'Do you contact your medical practitioner via social media?' and 'Do you rely on social media to get health-related information?

Table 5 presents a cross-tabulation between 'Do you contact your medical practitioner via social media?' and 'Do you rely on social media to get health-related information? Chi-square analysis revealed that there is a significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(1) = 102.064$, $p < 0.001$). Furthermore, 43.9% of those who indicated relying on social media to get health-related information, stated yes to 'do you contact your medical practitioner via social media? compared to 15.8% of those who mentioned no to 'relying on social media to get health-related information'.

Table 5.A Cross-tabulation of 'Do you contact your medical practitioner via social media?' and 'Do you rely on social media to get health-related information?'

Details	**Do you rely on social media to get health-related information?**		
Do you contact your medical practitioner via social media?'	No % (n)	Yes % (n)	Total % (n)
No	84.3 (453)	56.1 (305)	70.1 (758)
Yes	15.8 (85)	43.9 (239)	29.9 (324)
Total	**538**	**544**	**1,082**

H_0: There is no statistical relationship between 'Have you ever started any medication or treatment advised or advertised on social media without asking your physician? and 'Do you rely on social media to get health-related information?

H_1: There is a statistical relationship between 'Have you ever started any medication or treatment advised or advertised on social media without asking your physician? and 'Do you rely on social media to get health-related information?

Table 6 presents a cross-tabulation between 'Have you ever started any medication or treatment advised or advertised on social media without asking your physician? and 'Do you rely on social media to get health-related information? Chi-square analysis revealed that there is a significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(1) = 345.372$, $p < 0.001$). Furthermore, 63.2% of the those who indicated relying on social media to get health-

related information contacted their medical practitioner via social medical compared to 8.9% of those who did not rely on social media to get health-related information.

Table 6.A Cross-tabulation of 'Do you contact your medical practitioner via social media?' and 'Do you rely on social media to get health-related information?'

Details	**Do you rely on social media to get health-related information?**		
Do you contact your medical practitioner via social media?'	No	Yes	Total
	% (n)	% (n)	% (n)
No	91.1 (490)	36.8 (200)	63.8 (690)
Yes	8.9 (48)	63.2 (344)	29.9 (382)
Total	**538**	**544**	**1,082**

H_0: There is no statistical relationship between level of education? and 'How much do you trust the information about your health status on social media?'

H_1: There is a statistical relationship between level of education? and 'How much do you trust the information about your health status on social media?'

Table 7 presents a cross-tabulation between level of education? and 'How much do you trust the information about your health status on social media?' Chi-square analysis revealed that there is a significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(3) = 28.536$, $p < 0.001$).

Table 7.A Cross-tabulation of level of education? and 'How much do you trust the information about your health status on social media?'

Details	**How much do you trust the information about your health status on social media?**			**Total**
Educational Level	Not at all	Not very much	Very much	
	% (n)	% (n)		% (n)
Primary	5.3 (10)	3.4 (22)	4.1 (10)	3.9 (42)
Secondary	33.3 (63)	29.1 9188)	41.5 (102)	32.6 (353)
Tertiary	42.3 (80)	56.0 (362)	39.4 (97)	49.8 (539)
Other	19.0 (36)	11.6 (75)	15.0 (37)	13.7 (148)
Total	**189**	**647**	**246**	**1,082**

Table 8 presents a Pearson's product moment correlation of self-reported health status and the effectiveness of using social media for health-related information. The findings revealed that weak positive statistical correlation between the two afore-mentioned variables ($rxy = 0.104$, $p < 0.001$). It can be deduced from the findings that using social media for health-related information is effective in increasing self-reported health status of Jamaicans.

Table 8.Pearson's Product Moment Correlation between Self-reported health status and rating the effectiveness of using social media for health-related information

		On a scale of 1-10, with 1 being the lowest and 10 being the highest, how healthy do you consider yourself?	On a scale of 1-10, with 1 being the lowest and 10 being the highest, how effective do you think social media is in checking your health status?
On a scale of 1-10, with 1 being the lowest and 10 being the highest, how healthy do you consider yourself?	Pearson Correlation	1	0.104**
	Sig. (2-tailed)		<0.001
	N	1082	1082
On a scale of 1-10, with 1 being the lowest and 10 being the highest, how effective do you think social media is in checking your health status?	Pearson Correlation	0.104**	1
	Sig. (2-tailed)	<.001	
	N	1082	1082
**. Correlation is significant at the 0.01 level (2-tailed).			

H_0: There is no statistical relationship between gender and having a personal medical practitioner

H_1: There is a statistical relationship between gender and having a personal medical practitioner

Table 9 presents a cross-tabulation between gender and having a personal medical practitioner Chi-square analysis revealed that there is a significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(1) = 17.885$, $P < 0.001$). Furthermore, female-Jamaicans were 2.2 times more likely to have a personal healthcare physician compared to male-Jamaicans.

Table 9.A Cross-tabulation of gender and having a personal medical practitioner

Details	Having a personal medical practitioner		Total
Gender	No	Yes	
	% (n)	% (n)	% (n)
Male	44.1 (164)	31.1 (221)	35.6 (385)
Female	55.9 (208)	68.9 (489)	64.4 (697)
Total	**372**	**710**	**1082**

H_0: There is no statistical relationship between gender and frequency of using social media for health-related information

H_1: There is a statistical relationship between gender and frequency of using social media for health-related information

Table 10 presents a cross-tabulation between gender and frequency of using social media for health-related information. Chi-square analysis revealed that there is a significant statistical

relationship between the two afore-mentioned variables (i.e., $\chi^2(4) = 14.031$, $p = 0.007$). Furthermore, female-Jamaicans were more likely to frequently use social media for health-related information during the COVID-19 pandemic than male-Jamaicans.

Table 10.A Cross-tabulation of gender and relying on social media for health-related information

Details	**Gender**		**Total**
Frequency of using social media for health-related information	Male	Female	
	% (n)	% (n)	% (n)
None of the time	12.7 (49)	10.6 (74)	11.4 (123)
A little of the time	32.2 (124)	23.2 (162)	26.4 (286)
Some of the time	31.4 (121)	36.0 (251)	34.4 (372)
Most of time	16.9 (65)	22.4 (156)	20.4 (221)
All of the time	6.8 (26)	7.7 (54)	7.4 (80)
Total	**385**	**697**	**1082**

H_0: There is no statistical relationship between gender and degree of trusting social media for health-related information

H_1: There is a statistical relationship between gender and degree of trusting social media for health-related information

Table 11 presents a cross-tabulation between gender and degree of trusting social media for health-related information. Chi-square analysis revealed that there is no significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(2) = 2.603$, $p = 0.272$).This denotes that statistically, the degree of trusting of social media for health-related information is the same across the genders in Jamacia.

Table 11.A Cross-tabulation of gender and degree of trusting social media for health-related information

Details	Gender		Total
	Male	female	
Degree of trusting social media for health-related information	% (n)	% (n)	% (n)
Not at all	18.4 (71)	16.9 (118)	17.5 (189)
Not very much	56.6 (218)	61.5 (429)	59.8 (647)
Very much	24.9 (96)	21.5 (150)	22.7 (246)
Total	**385**	**697**	**1082**

H_0: There is no statistical relationship between gender and 'have you ever started any medication or treatment advised or advertised on social media without asking your physician?

H_1: There is a statistical relationship between gender and 'have you ever started any medication or treatment advised or advertised on social media without asking your physician?'

Table 12 presents a cross-tabulation between gender and 'have you ever started any medication or treatment advised or advertised on social media without asking your physician?' Chi-square analysis revealed that there is no significant statistical relationship between the two afore-mentioned variables (i.e., $\chi^2(2) = 0.038$, $p = 0.845$).This denotes social media is replacing the traditional healthcare practitioner(s).

Table 12.A Cross-tabulation of gender and 'have you ever started any medication or treatment advised or advertised on social media without asking your physician?'

Details	**Gender**		
Have you ever started any medication or treatment advised or advertised on social media without asking your physician?	Male	Female	Total
	% (n)	% (n)	% (n)
No	64.2 (247)	63.6 (443)	63.8 (690)
Yes	35.8 (138)	36.4 (254)	36.2 (392)
Total	**385**	**697**	**1082**

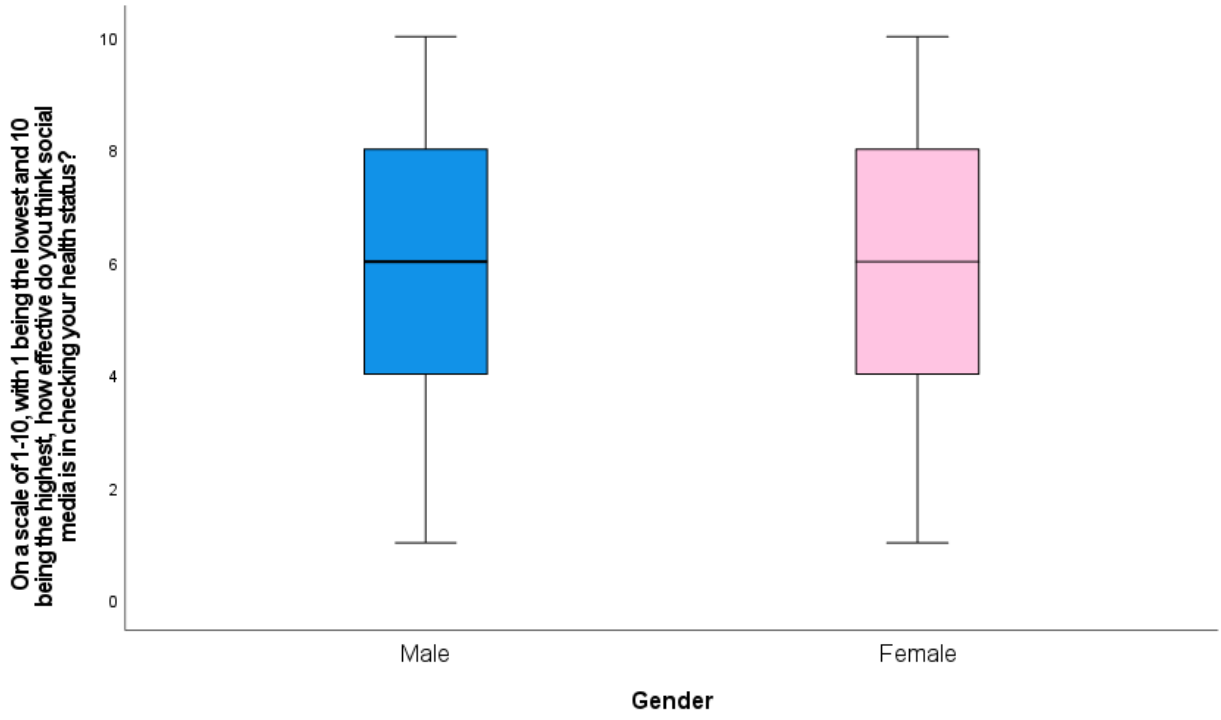


Figure 2.Box-plot of rating the effectiveness of using social media to provide health-related information

Figure 2 depicts a box-plot of rating the effectiveness of using social media to provide health-related information. There existed no statistical difference in females indicating that they use social media to provide health-related information compared to males (t_{1080}=1.379, $p = 0.0840$).

Discussion

Social media is more regularly leveraged by public health professionals and organizations, such as the Centers for Disease Control and Prevention (CDC), state and local health departments, and

other health agencies to enhance existing dissemination of information practices. Scientists are increasingly using social media to share journal articles, promote scientific opinions, post updates from conferences and meetings, and circulate information about professional opportunities and upcoming events (Berg *et al*., 2021; Centers for Disease Control and Prevention (CDC), 2010; Chen& Wang, 2021; Smailhodzic *et al*., 2016; Ventola, 2014). Social media has become a cost-effective way for public health practice to inform audiences of health issues, enhance communication during Public Health emergencies or outbreaks, and respond to public reporting of a particular public health issue(Gatewood *et al*., 2020; Prasetya *et al*., 2020).Although a Jamaican medical practitioner, Dr Karl Exell, warned against the usage of social media for health-related information on COVID-19 (Jamaica National (JN) Group, 2020), the current findings revealed that Jamaicans are using social media for health-related information and that the use of social media is influencing self-reported health status.

Studies have shown that the majority of healthcare decisions for the family (Health ware system, 2020; Lincoff, 2014; Matoff-Stepp *et al*., 2014; World Health Organization, 2019). The U.S. Department of Labor statistics show that women make approximately 80% of healthcare decisions and that a part of the rationale for this is their reproductive health needs (U.S. Department of Labor, 2016; see also, Lincoff, 2014). The current research also supports gender-based healthcare seeking behaviour among Jamaicans. Now that social media has become an important part of our daily routine, it is even more critical for healthcare organizations to relate to their female audience (Patowary, 2016) and the general populace (Huo *et al*., 2019) using social media.

The current research showed that social media is used by Jamaicans for health information. Though social media influence did not indicate a strong relationship with how Jamaicans report their health status, the data suggests that social media positively influences Jamaicans' decisions to report their health status. 11.2% (121) rated their current health status at 6, and 29.7% (321) rated them at 8. The study has shown that while social media apps are being used to report health status in some instances, 16.3% (176) of the respondents who rated their current health status at five also stated that they would not recommend family and friends to check their health status. However, the study indicates that average respondents determined that social media effectively assessed their health status. Therefore, social media effectively change Jamaicans' well-being by providing health awareness, concurs with the established literature (Griffiths *et al*., 2015; Li & Liu, 2020; Japhet, 2014; Merolli *et al*., 2013).

In Western Europe, hospitals' use of social media is also growing, but there are significant differences between countries (Van de Belt *et al*., 2012).Van de Belt *et al*. (2012) found that social media usage by hospitals in Western European nations remains small, except for the Netherlands and the United Kingdom. Social media usage has increased from 2009 to 2011 on Facebook (from 10% to 67%), LinkedIn (from 20% to 31%), and YouTube (from 2% to 19%). Furthermore, Fernández-Luque, & Bau, 2015) found an increase in social media usage to search for health-related information

The present research revealed that social media usage effectively provides health-related information for Jamaicans. Jamaicans over 18 were allowed to rate social media by using a scale.

The respondents were also asked to indicate whether they rely on social media to get health-related information, determined by yes or no. Of the 1082 sampled respondents, 24.3% rely on social media and deemed it effective for retrieving health-related information by rating it at 8/10 while 19.9% did not rely on social media and considered it less effective for retrieving health-related information by rating it at 5/10. Therefore, the findings revealed a statistical association between the variables. (χ^2 critical= 21.666< χ^2 calculated= 210.347, P= 0.001). A deduction from the current study is that social networking is a toolkit for health-related information, ehealth, or digital health for Jamaicans, which is equally the case across other societies (AlMuammar*et al*., 2021; Chen & Wang, 2021; Huo *et al*., 2019; Smailhodzic *et al*., 2016;The University of Scranton, 2022; Ventola, 2014).

Conclusion

Social networking is a toolkit for Jamaicans' health-related information, ehealth, or digital health, equally the case across other societies. Social media is not only providing greater access to health-related information to the Jamaicans, but it is also equally improving their well-being, which is a positive in the transparent dual health-related information market.

References

Aginginplace. (2022). *Technology In Our Life Today And How It Has Changed*. https://aginginplace.org/technology-in-our-life-today-and-how-it-has-changed/#:~:text=Modern%20technology%20has%20paved%20the,%2C%20better%2C%20and%20more%20fun.

Akram, W., & Kumar, R. (2017). A Study on Positive and Negative Effects of Social Media on Society. *International Journal of Computer Sciences and Engineering*, *5*(10). 350-351. doi:10.26438/ijcse/v5i10.351354.

Alavi, M., & Leidner, D.E. (2001). Review: Knowledge management and knowledge management systems: conceptual foundations and research issues. *MIS Quarterly*, 25, 107-136.

AlMuammar, S.A, Noorsaeed, A.S, Alafif, R.A., Kamal, Y.F., & Daghistani, G.M. (2021). The Use of Internet and Social Media for Health Information and Its Consequences Among the Population in Saudi Arabia. Cureus 13(9): e18338. doi:10.7759/cureus.18338

Anderson, J., & Raine, L. (2019, October 28). *The internet will continue to make life better*. Pew Research Center . . https://www.pewresearch.org/internet/2019/10/28/4-the-internet-will-continue-to-make-life-better/ net will continue to make life better.

Bakhai, M., Croney, L., Waller, O., Henshall, N., & Felstead, C. (2019). Using Online Consultations In Primary Care. NHS England. https://www.england.nhs.uk/wp-content/uploads/2020/01/online-consultations-implementation-toolkit-v1.1-updated.pdf.

Berg, S.H., O'Hara, J.K., Shortt, M.T. et al. (2021). Health authorities' health risk communication with the public during pandemics: a rapid scoping review. BMC Public Health 21, 1401. https://doi.org/10.1186/s12889-021-11468-3

Bodner, T.E. (2008) What Improves with Increased Missing Data Imputations? Structural Equation Modeling: A Multidisciplinary Journal, 15:4, 651-675, DOI: 10.1080/ 107055 10802339072.

Bryman, A., & Cramer, D. (2011). *Quantitative Data Analysis with IBM SPSS 17, 18 & 19: A Guide for Social Scientists* (1st ed.). Routledge. https://doi.org/10.4324/9780203180990

Centers for Disease Control and Prevention (CDC). (2010). The Health Communicator's Social Media Toolkit. Washington DC: U.S. Department of Health & Human Services. https://www.cdc.gov/healthcommunication/toolstemplates/socialmediatoolkit_bm.pdf

Centers for Disease Control and Prevention (CDC). (2018, August 10). *Past pandemics*. Washington DC: U.S. Department of Health & Human Services.

Chen, J.,& Wang, Y. (2021). Social Media Use for Health Purposes: Systematic Review. J Med Internet Res 2021;23(5):e17917. DOI: 10.2196/17917.

Fernández-Luque, L., & Bau, T. (2015). Health and social media: perfect storm of information. *Healthcare informatics research*, *21*(2), 67-73. https://doi.org/10.4258/hir. 2015.21.2.67

Gatewood, J., Monks, S.L., Singletary, C.R., Vidrascu, E., & Moore, J.B. (2020). Social Media in Public Health: Strategies to Distill, Package, and Disseminate Public Health Research, *Journal of Public Health Management and Practice*, *26*(5), 489-492. doi: 10.1097/ PHH.0000000000001096

Goodyear, V.A., Boardley, I., Chiou, SY.et al.(2021). Social media use informing behaviours related to physical activity, diet and quality of life during COVID-19: a mixed-methods study.*BMC Public Health 21*, 1333. https://doi.org/10.1186/s12889-021-11398-0

Graham JW. (2009). Missing data analysis: making it work in the real world. Annual Review of Psychology, 60:549-576.

Griffiths, F., Dodermann, T., Cave, J.A.K., Thorogood, M., Johnson, S., Salamatian, K., Gomez Olive, F.X., & Goudge, J. (2015). The Impact of Online Social Networks on Health and Health Systems: A Scoping Review and Case Studies. *Policy & Internet, 7(4)*, 473-496.

Hausmann, J. S., Touloumtzis, C., White, M. T., Colbert, J. A., & Gooding, H. C. (2017). Adolescent and Young Adult Use of Social Media for Health and Its Implications. The Journal of adolescent health: official publication of the Society for Adolescent Medicine, 60(6), 714-719. https://doi.org/10.1016/j.jadohealth.2016.12.025.

Hawkins, J. (1997, July 1). *The world at your fingertips: education technology opens the door. Technology integration allows for limitless learning*. https://www.edutopia.org/world-your-fingertips.

Healthwaresystem. (2020, January 22). The crucial role of women as healthcare decision makers. https://healthwaresystems.com/2020/01/22/women-as-healthcare-decision-makers/

Healthy People. (2014). *Health-Related Quality of Life and Well-Being.* http://healthypeople.gov/2020/about/QoLWBabout.aspx.

Heiman, G.W. (2014). *Basic statistics for the behavioral sciences*, 7th edition. California: Wadsworth.

Hillyer, M. (2020, November 18). *How has technology changed-and changed us-in the past 20 years*? https://www.weforum.org/agenda/2020/11/heres-how-technology-has-changed-and-changed-us-over-the-past-20-years/

History. (2020, January 30). *Pandemics that changed history: As human civilizations rose, these disease struck them down*. https://www.history.com/topics/middle-ages/pandemics-timeline

Holzner, B, & Marx, J. (1979). *The Knowledge Application: The Knowledge System in Society*. Allyn-Bacon; Boston.

Househ, M., Borycki, E., & Kushniruk A.(2014). Empowering patients through social media: The benefits and challenges. *Health Informatics Journal, 20(1),* 50-58. doi:10.1177/1460458213476969.

Huo, J., Desai, R., Hong, Y-R., Turner, K., Mainous, A.G., & Bian J. (2019). Use of Social Media in Health Communication: Findings From the Health Information National Trends Survey 2013, 2014, and 2017. *Cancer Control*, *26*(1):1073274819841442. doi:10.1177/1073274819841442

Iftikhar, R., & Abaalkhail, B. (2017). Health-Seeking Influence Reflected by Online Health-Related Messages Received on Social Media: Cross-Sectional Survey. Journal of medical Internet research, 19(11), e382. https://doi.org/10.2196/jmir.5989.

Li, X, & Liu, Q. (2020). Social Media Use, eHealth Literacy, Disease Knowledge, and Preventive Behaviors in the COVID-19 Pandemic: Cross-Sectional Study on Chinese Netizens

Journal of Medical Internet Research, 22(10):e19684. DOI: 10.2196/19684

Jamaica National (JN) Group. (2020, April 1). Medical practitioner warns against social medical information on COVID-19 in light of wide impact. Kingston: JN Group. https://www.jngroup.com/medical-practitioner-warns-against-social-media-information-on-covid-19-in-light-of-wide-impact/

Japhet, G. (2014, June 23). Six ways social media can improve your health. World Economic Forum. https://www.weforum.org/agenda/2014/06/social-media-health/

Kang H. (2013). The prevention and handling of the missing data. Korean Journal of anesthesiology, 64(5), 402-406. https://doi.org/10.4097/kjae.2013.64.5.402.

Korda, H., & Itani, Z. (2013). Harnessing Social Media for Health Promotion and Behavior Change. *Health Promotion Practice*, *14*(1), 15-23. http://www.jstor.org/stable/26740853

Lincoff, N. (2014, *December 8). Women make 80 percent of health decisions, are targets of open enrollment*. Healthline Media. https://www.healthline.com/health-news/women-make-80-percent-of-health-decisions-120314#:~:text=According%20to%20the%20U.S.%20Department,80%20percent%20of%20the%20time.

Matoff-Stepp, S., Applebaum, B., Pooler, J., & Kavanagh, E. (2014). Women as health care decision-makers: implications for health care coverage in the United States. *Journal of Health Care for the Poor and Underserved*, 25(4):1507-13. doi: 10.1353/hpu.2014.0154. PMID: 25418222.

Mcleod, S. (2019). *Qualitative vs Quantitative Research | Simply Psychology*. Simply psychology.org. Retrieved June 28 2021, from https://www.simplypsychology.org/qualitative-quantitative.html

Mendoza-Herrera, K., Valero-Morales, I., Ocampo-Granados, M.E., Reyes-Morales, H., Arce-Amaré, F., & Barquera, S. (2020). An Overview of Social Media Use in the Field of Public Health Nutrition: Benefits, Scope, Limitations, and a Latin American Experience. *Preventing Chronic Disease, 17*:200047. DOI: http://dx.doi.org/10.5888/pcd17.200047external icon

Mendoza-Herrera, K., Valero-Morales, I., Ocampo-Granados, M.E., Reyes-Morales, H., Arce-Amaré, F., & Barquera, S. (2020). An Overview of Social Media Use in the Field of Public Health Nutrition: Benefits, Scope, Limitations, and a Latin American Experience. *Preventing Chronic Disease, 17*, 200047. DOI: http://dx.doi.org/10.5888/pcd17.200047external icon.

Merolli, M., Gray, K., & Martin-Sanchez, F.M. (2013). Health outcomes and related effects of using social media in chronic disease management: a literature review and analysis of affordances. *Journal of Biomedical Informatics, 46(6)*, 957-969.

Patowary, H. (2016). Media And Women Question: The Contradiction Between 'Real' and 'Ideal' Women. *IOSR Journal Of Humanities And Social Science, 21*(08), 54-57. doi: 10.9790/0837-2108075457

Peck, R., Olsen, C., & Devore, J. (2008). *Introduction to statistics and data analysis*, 3rd edition. California: Thomson Brooks/Cole.

Pentland, B.T. (1995). Information systems and organizational learning: The social epistemology of organizational knowledge systems. *Accounting, Management and Information Technologies, 5*, 1-21.

Post M. W. (2014). Definitions of quality of life: what has happened and how to move on. *Topics in spinal cord injury rehabilitation*, *20*(3), 167-180. https://doi.org/10.1310/sci2003-167

Prasetya, F., Saifuddin, D., & Ansir, N. (2020). Patient's Perception of Waiting Time in the Outpatient Unit at the Kendari Regional Public Hospital. International Journal Of Scientific & Engineering Research, 11(04), 1801-1806. doi: 10.14299/ijser.2020.04.06

Roeder, A. (2020). Social media use can be positive for mental health and well-being. Massachusetts: School of Public Health, Harvard University. https://www.hsph.harvard.edu/news/features/social-media-positive-mental-health/

Rolls, K., Hansen, M., Jackson, D., & Elliott, D. (2016). How Health Care Professionals Use Social Media to Create Virtual Communities: An Integrative Review. *Journal of Medical Internet Research, 18*(6):e166. DOI: 10.2196/jmir.5312

Schein, R., Wilson, K., & Keelan, J. (2010). *Literature Review on Effectiveness of the Use of Social Media: a Report for Peel Public Health*. Peel Public Health. https://www.peelregion.ca/health/resources/pdf/socialmedia.pdf

Smailhodzic, E., Hooijsma, W., Boonstra, A, &Langley, D.L. (2016). Social media use in healthcare: A systematic review of effects on patients and on their relationship with healthcare professionals. *BMC Health Serv Res* 16**,** 442. https://doi.org/10.1186/s12913-016-1691-0.

Smailhodzic, E., Hooijsma, W., Boonstra, A., & Langley, D.J. (2016). Social media use in healthcare: A systematic review of effects on patients and on their relationship with healthcare professionals. *BMC Health Serv Res 16*, 442. https://doi.org/10.1186/s12913-016-1691-0

Snyder, C. F., Wu, A. W., Miller, R. S., Jensen, R. E., Bantug, E. T., & Wolff, A. C. (2011). The role of informatics in promoting patient-centered care. Cancer journal (Sudbury, Mass.), 17(4), 211-218. https://doi.org/10.1097/PPO.0b013e318225ff89

Statistical Institute of Jamaica (STATIN). (2021). *Population statistics*. Kingston: STATIN. https://statinja.gov.jm/Demo_SocialStats/PopulationStats.aspx

Survey monkey. (2021). Sample size calculator. https://www.surveymonkey.com/mp/sample-size-calculator/

Thackeray, R., Neiger, B.L., Smith, A.K, & Van Wagenen, S.B. (2012). Adoption and use of social media among public health departments. *BMC Public Health* 12, 242 (2012). https://doi.org/10.1186/1471-2458-12-242.

The University of Scranton. (2022). Top 5 Ways Social Media is Used by Healthcare Professionals. Pennsylvania: The University of Scranton.https://elearning.scranton.edu/resources/article/top-5-ways-social-media-is-used-by-healthcare-professionals/

Tufts University. (2022). *Social media overview.* https://communications.tufts.edu/marketing-and-branding/social-media-overview/#:~:text=Social%20media%20refers%20to%20the,in%20virtual%20communities%20and%20networks.

U.S. Department of Labor. (2016). *Fact sheet: General Facts on Women and Job Based Health*. Washington DC: U.S. Department of Labor.

Van de Belt, T.H., Berben, S.A., Samsom, M., Engelen, L.J., &Schoonhoven, L. (2012). Use of social media by Western European hospitals: longitudinal study. Journal of Medical Internet Research, 14(3):e61. doi: 10.2196/jmir.1992. PMID: 22549016; PMCID: PMC3799605.

Ventola C. L. (2014). Social media and health care professionals: benefits, risks, and best practices. *P & T : a peer-reviewed journal for formulary management*, *39*(7), 491-520.

Ventola C. L. (2014). Social media and health care professionals: benefits, risks, and best practices. *P & T : a peer-reviewed journal for formulary management*, *39*(7), 491-520.

Wardynski, D.J. (2019, October 24). *Technology and society: How technology changes our lives.*https://www.brainspire.com/blog/technology-and-society-how-technology-changed-our-lives.

What is Health status - Meaning and definition - Pallipedia. (2021). https://pallipedia.org/health-status/

WHOQOL Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychol Med*. 28:551-558.

Wong, A., Ho, S., Olusanya, O., Antonini, M.V., & Lyness, D. (2021). The use of social media and online communications in times of pandemic COVID-19. *Journal of the Intensive Care Society*,*22*(3):255-260. doi:10.1177/1751143720966280.

World Health Organization (WHO). (2015). *Global reference list of 100 core health indicators*. Geneva: WHO.

World Health Organization (WHO). (2019). Delivered by women, led by men: A gender and equity analysis of the global health and social workforce. Geneva: World Health Organization (Human Resources for Health Observer Series No. 24). Licence: CC BY-NC-SA 3.0 IGO.

World Health Organization. (2005). The World Health Organization Quality of Life assessment (WHOQOL): position paper from the World Health Organization. Social Science and Medicine, 41(10):1403-1409.

Yeung D. (2018). Social Media as a Catalyst for Policy Action and Social Change for Health and Well-Being: Viewpoint. *Journal of medical Internet research*, *20*(3), e94. https://doi.org/10.2196/jmir.8508

Zhou, L., Zhang, D., Yang, C., & Wang, Y. (2018). Harnessing social media for health information management. *Electronic commerce research and applications*, *27*, 139-151. https://doi.org/10.1016/j.elerap.2017.12.003.