

Does Social Media usage Influence Accepting and Utilizing the established COVID-19 protocols by the Jamaican Government

Paul Andrew Bourne¹, Carlisa Brown², Sandrine Curtis², Zaria Lawson², Shamieka Williams², James Fallah³, Calvin Campbell⁴, Clifton Foster⁵

¹*Department of Institutional Research, Northern Caribbean University, Mandeville, Manchester, Jamaica.*

²*Department of Nursing, Northern Caribbean University, Mandeville, Manchester, Jamaica, WI.*

³*Department of Dental Hygiene, Northern Caribbean University, Mandeville, Manchester, Jamaica, WI.*

⁴*Department of Mathematics and Engineering, Northern Caribbean University, Mandeville, Manchester, Jamaica, WI.*

⁵*Department of Biology, Chemistry, and Environmental Sciences, Northern Caribbean University, Mandeville, Manchester, Jamaica, WI.*

Abstract

The gripping effect of the deadly coronavirus (COVID-19) has forced the hands of the lawmakers globally to impose protocols to contain the disease. Since this outbreak, several quarantine measures have been implemented across the world. Owing to these measures, the use of the internet and social media has reached unrivalled peaks in disseminating information about the pandemic. This research is aimed at examining the usage of social media and its influence on accepting and using the established COVID-19 protocols. Following this, it was hypothesized that 85% of social media users are influenced through this means of communication to accept and utilize the established Covid-19 protocols. A quantitative survey research was designed to collect data from Jamaicans. A convenience non-probability sampling method was used to obtain data from 803 sampled respondents across Jamaica. A standardized survey was created in Google Forms and the data were then analyzed using Statistical Packages for the Social Sciences (SPSS) for Windows, Version 25.0, with a confidence interval of 95%. Of the sampled respondents (n=803), the majority were females (76.9%) compared to males (23.1%), aged 18-22 years with majority (57.7%), and the majority residing in Cornwall (48.5%). 84.8% of the respondents indicated that they accept the protocols compared to 69.7 per cent, which is statistically associated. Therefore, the findings revealed that there is a relationship between the two aforementioned variables (χ^2 critical = 5.024 < χ^2 calculated = 25.804, df=1 with a significance level of

5% (0.025), $P = 0.000$). Based on the finding the χ^2 calculated (25.804) is more than the χ^2 critical value (5.024) therefore we reject the null hypothesis which states there is no statistical relationship between social media influence and accepting the COVID-19 protocols and accept the alternative hypothesis.

Keywords: Social media, COVID-19 protocols, acceptance and utility, social influence theory.

Introduction

Social media has revolutionized communication from the traditional face-face and written communication to a space never before practiced. Tufts University forwards a definition for social media that aptly contextualized the new space of communication, which is “Social media refers to the means of interactions among people in which they create, share, and/or exchange information and ideas in virtual communities and networks. The Office of Communications and Marketing manages the main Facebook, Twitter, Instagram, LinkedIn and You Tube accounts” (Tufts University, 2021). González-Padilla and Tortolero-Blanco opined that “Social media platforms are the most widely used source of information across the world” (González-Padilla and Tortolero-Blanco, 2020). This new communication media has somewhat replaced many of the traditional media approaches, and the many governmental agencies have employed these media in communicating with their desired clients, customers, and association. In fact, since the outbreak of the COVID-19 pandemic, the World Health Organization, the Center of Diseases Control, the government, and other organizations have resorted to using social media to spread their messages to include the protocols.

Researchers have argued that the use of social media has an impact on general health knowledge within a country, thus influencing our behavior and the outcomes produced by a nation. These tools have also proven effective in meeting the health needs of individuals and the public as a whole (Al-Dmour et al., 2020). Public awareness about the deadly coronavirus and preventative practices plays a vital role in controlling the disease (Al-Dmour et al., 2020). Social media can play a crucial role by providing a platform for people to share their opinions and to relay facts about the crisis. It was hypothesized that 85% of social media users are influenced through this means of communication to accept and utilize the established Covid-19 protocols. Hence, to establish the validity of the hypothesis; this research attempts to answer the following questions: What quantity of individuals utilizes social media? Which social media platform is utilized the most? And Does the usage of social media have any influence on the population’s acceptance and usage of the established COVID-19 protocols? To confirm the conceptual model of this research and prove this hypothesis, a quantitative approach in the form of a standardized survey consisting of 17 closed ended questions created by Google forms will be employed to collect data from a sample population of 803 Jamaicans aged 18 years and older residing in the counties of Jamaica (Cornwall, Middlesex, and Surrey).

Theoretical Framework

Social influence theory by Helbert Kelman introduced in 1958 states that attitudes, beliefs and behaviours are influenced by the social environment or their socialized experiences. This theory is a collection of three different processes of change: compliance, identification, and internalization. Compliance refers to the case when an individual recognizes the impact of change and expects to gain favorable feedback from another individual or community while identification occurs when an individual perceives influence as a means of maintaining self-defining relationships with others. Internalization on the other hand refers to when the meaning of the induced behavior is rewarding and is congruent with the individual's belief system (Kelman, 1958). Kelman also posits that any process of influence that one engages in usually produces the same behaviour.

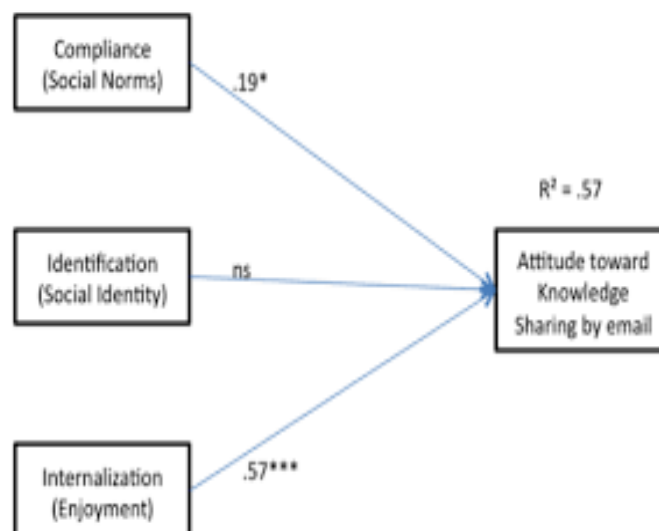


Figure 1. Social influence theory showing three processes of change (Diagram of social influence theory - Google Search, 2019)

Since social influence can shape an individual's attitudes, beliefs and actions, the impact of social influence on information systems such as social media is believed to have an influence on individuals' acceptance and usage of published information, and this has been studied extensively. Kelman's Theory of Social Influence applies to the context of this study because the process of compliance is evident. The researcher discovered that the users of information systems that accept and adapt to its influence, usually seek to gain a reward thus, accepting the COVID-19 protocols help individuals protect themselves and others from contracting the virus. The theory also helps to prove the researcher's hypothesis which states that 85% of social media users are influenced through this means of communication to accept and utilize the established Covid-19 protocols. In addition, the researcher has observed an increase in information about Covid-19 protocols being circulated on social media. The usage of these platforms has influenced many individuals to adhere and accept these protocols; hence, a change in their behaviour or attitudes.

Literature Review

This study focuses on the examination of the usage of social media and its influence on accepting and using the established COVID-19 protocols. In spite of the many literatures that seek to examine the usage of social media in various health contexts, including health surveillance, promotion, and communications, limited insight has been imparted on how usage of social media platforms may vary depending on the usage of particular health objectives and the interventions they govern (Al-Dmour, Masa'deh, Salman, Abuhashesh & Al-Dmour, 2020). A study conducted by Bashed et al, evaluated 100 most viewed Youtube videos with the name coronavirus. Combined, these videos had a total of approximately 165 million views as of March 5, 2020. It was found that one third of all the videos watched were recommendations regarding preventative measures against the deadly coronavirus. The study provided an important reflection on the missed opportunities for dissemination of quality information on the prevention of contagion and frequent symptoms of COVID-19 on platforms such as YouTube, which are being increasingly consulted as an information source (González-Padilla & Tortolero-Blanco, 2020). It has the potential to be harnessed to provide support to the public health response by communicating the COVID-19 protocols and the reasons why they should be utilized thus to reduce the risk of contracting the virus (Topf & Williams, 2021).

Al-Dmour, Masa'deh, Salman, Abuhashesh & Al-Dmour, 2020 referred to a study conducted by Moorhead et al that examined the uses, advantages, and limitations of social media and the recognition of how fruitful communication between health-care professionals, their patients and the general public were. The sudden appearance of coronavirus (COVID-19) has resulted in a public health crisis globally (Abbas, Wang, Su & Ziapour, 2021) and as such the various health professionals are adamant to get it under control. The ongoing pandemic has led countries to impose strict COVID-19 protocols such as daily curfews or lockdowns, social distancing, and frequent proper hand hygiene amongst others. Besides the many benefits of utilizing social media, it has played a critical and positive role in providing information about the pandemic (Abbas, Wang, Su & Ziapour, 2021) and ways in which one can decrease their risk of being infected with the virus. Many individuals worldwide have taken the initiative to share on various social media platforms about their experience after being infected with the COVID-19 virus which has helped to shed some light on its severity. Due to the traumatic experiences that are being shared by infected persons, many are fearful of contracting the virus and as such they have been found to be complying with the COVID-19 protocols established by various health officials.

The theory of social influence by Helbert Kelman examines how an individual's actions, attitudes and beliefs are influenced by social experiments and this occurs through the processes of compliance, identification, and internalization. Kelman postulated that social influence brings about changes in people's behaviour or actions, attitudes, and beliefs as they try to adapt to the social environment they are a part of ("Types of Social Influences and Their Effect on Behavior", 2021). Social media, a type of social influence, has been found to have such an effect on individuals. Like Henderson's research published by the British Journal of Psychology, it was

indicated that “social influence has a large impact on people’s adherence to the COVID-19 guidelines”. In addition, messages conveyed publicly by a reputable source may have influenced or impacted one’s perception of the crisis. Trusted figures demonstrating their obedience to the COVID-19 protocols may persuade one to adhere to the stipulated guidelines (Henderson, 2021).

Methodology

A quantitative method was used to achieve the aim of this study, to examine the usage of social media and its influence on accepting and utilizing the COVID-19 protocols.” According to an introduction to quantitative research scribbr blog, a quantitative method is used in collecting and analyzing numerical data. It can be used to find patterns and averages, make predictions, and generalize results to wider populations. (Bhandari, 2020). The population was selected utilizing a convenience sampling method. Using Jamaica’s estimated population for 2018 (2,727,503), a 95% confidence interval, and a marginal error of 3%, the calculated sample size was 1067 however, the researchers only received a sample total of 803 responses.

The duration of sampling was between May 30, 2021 and June 18, 2021. The sample population included both males and females ages 18 years and older. These individuals reside in the three counties of Jamaica which includes Cornwall, Middlesex, and Surrey. Cornwall County comprises of Hanover, St. Elizabeth, St James, Trelawny, and Westmoreland; Middlesex County accounts for Clarendon, Manchester, St Ann, St. Catherine, and St Mary, and Surrey County constitutes the remaining parishes, Kingston, Portland, St Andrew, and St. Thomas.

Participants were guided on the nature and purpose of the study to which they were not required to reveal their identity that may jeopardize confidentiality and anonymity. Consent to complete the survey was given and confidentiality was maintained. A standardized survey consisting of one (1) section with a total of 17 closed-ended questions was developed using Google forms and were utilized in gathering the data, which was later retrieved, stored, and analyzed using Google form, Microsoft office excel spreadsheet and IBM Statistical Packages for the Social Sciences (SPSS) for Windows 25. In addition, the data were analyzed by way of percentages and frequency tables, and bivariate analysis (chi-square), and. A p-value of 5% was used to determine statistical significance. Both inferential and descriptive statistics were implemented in the data, and the Social Influence Theory by Helbert Kelman was inaugurated.

Findings

Table 1 presents the demographic characteristics of the sampled respondents. Of the sampled respondents (n=803), the majority were females (76.9%) compared to males (23.1%), aged 18-22 years with majority (57.7%), and the majority resides in Cornwall (48.5%).

Table 1. Demographic characteristics of the sample respondents, n=803

Details	% (n)
Gender	
Female	76.9 (618)
Male	23.1 (185)
Age cohort	
18-22years	57.7 (463)
23-27years	21.9 (176)
28-32years	9.1 (73)
33-37years	4.1 (33)
38-42years	2.6 (21)
43+years	4.6 (37)
Area of Residence	
St. James	33.1 (266)
Hanover	3.4 (27)
St. Ann	9.0 (72)
Trelawny	4.5 (36)
St Mary	0.9 (7)
St Thomas	0 (0)
Kingston and St Andrew	8.2 (66)
Manchester	13.4 (108)
St. Catherine	9.6 (77)
Clarendon	9.8 (79)
Westmoreland	3.4 (27)
St. Elizabeth	4.1 (33)
Portland	0.6 (5)

Table 2. Majority of the sampled respondents indicated that they utilize the different social media platforms (99.8%). The research also revealed that the most used social media platform was found to be WhatsApp (88.3%) with LinkedIn with minority (7.0%).

Table 2. Social media utility, n=803

Details	% (n)
Use of any social media platform (Facebook, WhatsApp, Twitter, Youtube, Instagram, LinkedIn etc.)	
Yes	99.8 (801)
No	0.2 (2)
Social media platform utilized the most	
Instagram	75.1 (603)
WhatsApp	88.3 (709)

Snapchat	40.0 (321)
Facebook	30.9 (248)
Tiktok	39.4 (316)
Youtube	68.1 (547)
Twitter	17.7 (142)
LinkedIn	7.0 (56)

Table 3 displays the awareness of the established COVID-19 protocol through the various social media platforms. Majority of the respondents agreed that the selected platform has made them aware of the protocols (91.8%) and 74.8 per cent of respondents also believes there is enough information about the protocols on social media.

Table 3. Awareness of COVID-19, n=803

Details	% (n)
Has the selected social media platform made you aware of the COVID-19 protocols?	
Yes	91.8 (737)
No	8.2 (66)
Do you think there is enough information about the COVID-19 protocols on social media?	
Yes	74.8 (601)
No	25.2 (202)

Table 4. Present information on the Covid-19 protocols. From the findings it is observed that majority of the respondents were able to identify the correct protocols while 6.4% of the total selected two incorrect protocols.

Table 4. COVID-19 protocols, n=803

Details	% (n)
COVID-19 Protocols Getting COVID-19 vaccination	66.1 (531)
Practice proper hand hygiene	96.0 (771)
Social and physical distancing	96.5 (775)
Stay home when sick	94.1 (756)
Do not wear mask when in public spaces	5.4 (43)
Attend parties and funerals anytime	1.0 (8)

Table 5 provides insight into the acceptance of the established COVID-19 protocols. The findings revealed that majority of the sampled respondents accepts the protocols (95.8%), compared to 4.2 per cent who indicated they do not accept. Furthermore, 61.0 per cent of respondents stated they have accepted the established COVID-19 protocols because they believe the protocols will help contain or reduce the spread of the virus while the minority stated that

they accept the protocols because they were forced by influence in their surroundings (3.6%). It was also revealed that only 24.8% of respondents always pay attention to announcements or pop-ups dispersed by health officials on COVID-19 protocols, with 3.5 per cent agreeing they never pay attention.

Table 5. Acceptance of COVID-19 protocols

Details	% (n)
Acceptance of the COVID-19 protocols	
Yes	95.8 (769)
No	4.2 (34)
Acceptance of the COVID-19 protocols because of any of the following reasons.	
Fear of being fined/imprisoned	4.1 (33)
Fear on contracting the virus	31.3 (251)
Forced by influence in my surrounding	3.6 (29)
Believe they will help contain/reduce the spread of the virus	61.0 (490)
Pay attention to the announcements or pop-ups dispersed by health officials about COVID-19 protocols.	
Always	24.8 (199)
Sometimes	57.5 (462)
Rarely	14.2 (114)
Never	3.5 (28)
Do you believe that accepting and adhering to the COVID-19 protocols will help with this pandemic?	
Yes	72.7 (584)
No	5.1 (41)
Maybe	22.2 (178)

Table 6 presents information on the influence and utilization of the COVID-19 protocols. 79.1% of the total sampled respondents revealed that social media has indeed influenced their behavioural changes toward the virus while the remaining 20.9% stated it has no influence on their behavioural change. In addition, 63.3% revealed that they were utilizing some of the protocols before the pandemic compared to the use of these protocols since the pandemic (97.7%). Also 89.4% of respondents stated they do not experience any difficulty in complying with the established COVID-19 protocols.

Table 6. Utilization of COVID-19 protocols through social media influence, n=803

Details	% (n)
Social media platform influence on behavioural change towards COVID-19 as a pandemic disease.	
Yes	79.1 (635)
No	20.9 (168)
Behavioral change	
Increased the practice of social and physical distancing.	
Yes	67.7 (543)
No	32.3 (259)
Practice proper hand hygiene more often	
Yes	67.0 (538)
No	33.0 (265)
Wearing of appropriate face coverings when in public spaces.	
Yes	77.8 (625)
No	22.2 (178)
Obey the curfew hours stipulated by the Prime Minister	
Yes	70.7 (568)
No	29.3 (235)
Not applicable	
Yes	94.6 (759)
No	5.5 (44)
Use of protocols since the pandemic	
Very often	68.1 (547)
Somewhat often	28.9 (232)
Not at all	0.7 (6)
Rarely	2.2 (18)
Use of protocols before the pandemic	
Yes	63.3 (508)
No	36.7 (295)
If yes, have you found it difficult to comply with the COVID-19 protocols?	
Yes	10.6 (85)
No	89.4 (718)

H1: There is no statistical relationship between social media influence and accepting the COVID-19 protocols.

H2: There is a statistical relationship between social media influence and accepting the COVID-19 protocol.

Table 7 presents a cross-tabulation between social media influence in accepting the COVID-19 protocols. 84.8% of the respondents indicated that they accept the protocols compared to 69.7%,

which is statistically associated, therefore the findings revealed that there is a relationship between the two aforementioned variables (χ^2 critical = 5.024 < χ^2 calculated = 25.804, df=1 with a significance level of 5% (0.025), P = 0.000).

Table 7. Cross tabulation between social media influence in accepting the COVID-19 protocols

Details	COVID-19 protocols		Total	X ² P-value
	0.00	1.00		
	% (n)	% (n)		
Social media influence				25.804, 0.000
Yes	69.7 (212)	84.8 (423)	79.1 (635)	
No	30.3(92)	15.2 (76)	20.9 (168)	

n=803

Based on the finding the χ^2 calculated (25.804) is more than the χ^2 critical value (5.024) therefore we reject the null hypothesis which states there is no statistical relationship between social media influence and accepting the COVID-19 protocols.

Discussion

Coronavirus (COVID-19) has become the new normal since its outbreak worldwide. In the process of fighting COVID-19, the WHO and health authorities worldwide have been working closely with social media platforms, including Facebook, Google, Twitter, and YouTube, to provide evidence-based information to the public to actively counter the rumors that have been circulating (Han & Jiang, 2021). “During the COVID-19 pandemic, social distancing and stay-at-home restrictions caused the public to be fully exposed to social media; during this time, people actively searched or passively received a large amount of health-related information to prevent and treat diseases” (Han & Jiang, 2021). With this being said, the current researchers can agree that social media platforms have played a critical and major role in this pandemic. Almost everyone has a cell phone with at least one social media account, as depicted in Table 2 of which 99.8% of respondents had attested to. Ever since the first case was reported in China, the media has been used as a tool for public education.

In table 3 we see where the majority of the respondents agreed that the selected social media platform has made them aware of the protocols (91.8%) and 74.8% of respondents also believe there is enough information about the protocols on social media. In a research done on Creative social media use for Covid-19 prevention in Bangladesh, it was highlighted that social media has become a source of disseminating information to the public during the Covid-19 pandemic. They continued to say that most people choose social media platforms to seek information because of the convenient use and availability of multifarious instructive data relating to diseases (Ahmad and Murad 2020). Awareness of issues in our society is paramount and from the research findings, the current researcher discovered the level of awareness of the sampled population where the majority of the respondents were able to identify the correct protocols while 6.4% of

the total displayed uncertainty. This shows that even though individuals are aware of the established guidelines, they still desire more information. In addition to the awareness of the stipulated protocols, the findings revealed that the majority of the sampled respondents readily accepts the protocols (95.8%), compared to 4.2% who indicated they do not accept. Furthermore, 61.0% of respondents stated they have accepted the established COVID-19 protocols because they believe the protocols will help contain or reduce the spread of the virus while the minority stated that they accept the protocols because they were forced by influence in their surroundings (3.6%). It was also revealed that only 24.8% of respondents always pay attention to announcements or pop-ups dispersed by health officials on COVID-19 protocols, with 3.5 per cent agreeing that they never pay attention.

As the theory of social influence states, attitudes, beliefs, and behaviors are influenced by the social environment or their socialized experiences. Protocol non-compliance could threaten the effectiveness of measures to combat this virus and keep it under control. The process of change in this theory; compliance, is depicted when an individual recognizes the impact of change in return of a favorable reward (Kelman, 1958). Therefore, if one accepts these protocols in relations to environmental influences or socialized experiences, it will produce a change. Even though there was no research found on the acceptance of the Jamaican COVID-19 protocols, a research was conducted on the Acceptance and attitudes toward COVID-19 vaccines in Jordan where almost two-thirds (66.5%) of the participants strongly agreed that it is important to get a vaccine to protect people from COVID-19 (El-Elimat, Almomani, Al-Sawalha & Alali, 2021).

Referred to table 6, social media has indeed influenced behavioural changes of the sampled population towards the virus despite the fact that some remained unchanged. In addition, the use of these regulations can be indicative of an individual's broader willingness to accept formal directives that will be beneficial in the future.

A test was conducted to determine the association between two variables, and it was discovered that there is a statistical relationship that exists between social media and its influence on the general population. 84.8% of the respondents indicated that they accept the protocols compared to 69.7%, which is statistically associated. Therefore, the findings revealed that there is a relationship between the two aforementioned variables (χ^2 critical = 5.024 < χ^2 calculated critical= 25.804, df=1 with a significance level of 5% (0.025), P = 0.000). With this finding, the researchers accept our research hypothesis. Though it does not tell us how likely it is that people will follow whatever guidelines are hurled across YouTube, Tik Tok, Instagram or Twitter, it is without a doubt that these two variables are related in the population.

Conclusion

Social media is considered one of the most invaluable tools in gaining access to information across the globe. The ease of disseminating information across the World Wide Web has become a driving factor in making social media one of the most accessible modes of communication at

the medium for rapid dispersion of protocols at regional, national, and international levels (González-Padilla and Tortolero-Blanco, 2020). The usage of social media has been found to have an influence on the acceptance of the established COVID-19 protocols. Based on the finding the χ^2 calculated (25.804) is more than the χ^2 critical value (5.024), therefore the researchers reject the null hypothesis which states there is no statistical relationship between social media influence and accepting the COVID-19 protocols and accept the alternative hypothesis.

References

1. Al-Dmour, H., Masa'deh, R., Salman, A., Abuhashesh, M., & Al-Dmour, R. (2020). Influence of Social Media Platforms on Public Health Protection against the COVID-19 Pandemic via the Mediating Effects of Public Health Awareness and Behavioral Changes: Integrated Model. *Journal of Medical Internet Research*, 22(8), e19996. doi: 10.2196/19996.
2. Abbas, J., Wang, D., Su, Z., & Ziapour, A. (2021). The Role of Social Media in the Advent of COVID-19 Pandemic: Crisis Management, Mental Health Challenges, and Implications. *Risk Management and Healthcare Policy*, Volume 14, 1917-1932. doi: 10.2147/rmhp.s284313.
3. Bhandari, P. (2020). What Is Quantitative Research? | Definition, Uses and Methods. Retrieved 17 June 2021, from <https://www.scribbr.com/methodology/quantitative-research/>.
4. Das, R., & Ahmed, W. (2021). Despite concerns, COVID-19 shows how social media has become an essential tool in the democratization of knowledge. Retrieved 13 June 2021, from <https://blogs.lse.ac.uk/impactofsocialsciences/2020/06/05/despite-concerns-covid-19-shows-how-social-media-has-become-an-essential-tool-in-the-democrat>.
5. Diagram of social influence theory - Google Search. (2019). Retrieved 24 June 2021, from https://www.google.com/search?q=diagram+of+social+influence+theory&rlz=1C1CHBD_enJM915JM916&sxsrf=ALeKk03qNsMUFkwspjEyPvPoKqbYgEOH5w:1624596002840&tbm=isch&source=iu&ictx=1&fir=l38YYNmC2KePOM%252CNzG90pnTJvM0wM%252C_&vet=1&usg=AI4_-kQrK3GvQRjk5RzQECCObZ_wy3QprQ&sa=X&ved=2ahUKEwjlhZzd-7HxAhV5SjABHSVTDeQQ9QF6BAgMEAE#imgrc=8OWphJwTgVJFIM.
6. González-Padilla, D., & Tortolero-Blanco, L. (2020). Social media influence in the COVID-19 Pandemic. *International Braz J Urol*, 46(suppl 1), 120-124. doi: 10.1590/s1677-5538.ibju.2020.s121.
7. Han, Y., & Jiang, B. (2021). Factors Affecting Public Adoption of COVID-19 Prevention and Treatment Information during an Infodemic: Cross-sectional Survey Study. *Journal of Medical Internet Research*, 23(3), e23097. doi: 10.2196/23097.
8. Henderson, E. (2021). Social influence has a large impact on people's adherence to COVID-19 guidelines. Retrieved 16 June 2021, from <https://www.news-medical.net/news/20210121/Social-influence-has-a-large-impact-on-peoples-adherence-to-COVID-19-guidelines.aspx>.

9. Islam, M., Islam, M., Ahmed, F., & Rumana, A. (2021). Creative social media use for Covid-19 prevention in Bangladesh: a structural equation modeling approach. *Social Network Analysis and Mining*, 11(1). doi: 10.1007/s13278-021-00744-0.
10. Kelman, H. C. (1958). Compliance, identification, and internalization are three processes of attitude change. *Journal of Conflict Resolution*, 2(1), 51-60. <https://doi.org/10.1177/002200275800200106>.
11. Topf, J., & Williams, P. (2021). COVID-19, Social Media, and the Role of the Public Physician. *Blood Purification*, 1-7. doi: 10.1159/000512707.
12. Tufts University. (2021). Social media overview. Retrieved from <https://communications.tufts.edu/marketing-and-branding/social-media-overview/>.
13. Types of Social Influences and Their Effect on Behavior. (2021). Retrieved 28 June 2021, from <https://online.rider.edu/blog/types-of-social-influence/>.