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DJAMEL BENAROUS HAMOOD AL-ENEZI BILAL LOUAIL

The Impact of Social
Media Sites on
Developing Consistently
among Students to
Achieve Responsible
Behaviour: A Field Study
for Students of Northern
Border University

#### 1. Introduction

The coronavirus disease (COVID-19) has captured the media's attention, with information related to the same being shared on news pages and social media. However, there are numerous sources and sites of information, many of which have no credibility. This leads to the spread misleading information and the difficulty of distinguishing between rumours and reality. COVID-19 has become a severe public health problem worldwide, and it is of crucial importance to prevent the further spread of the coronavirus. Social media is one of the most prevalent tools that can effectively meet the awareness and knowledge needs of individuals and societies, specifically due to its ease of use and versatility.

COVID-19 is a newly discovered coronavirus that originated in Wuhan, China, and has caused pneumonia outbreaks all over the world ever since. The rapidly spreading virus appears to be more contagious than the severe acute respiratory syndrome (SARS) coronavirus and the Middle East respiratory coronavirus (Khader et al. 2020).

Djamel, Benarous, Ph.D., Faculty of Economic, Commercial and Management Sciences, University of Batna 1 – Algeria, ORCID: 0000-0001-7957-3466.

Hamood, Al-Enezi, Ph.D., Northern Border University, Saudi Arabia, ORCID: 0000-0003-3573-7777.

Bilal, Louail, Ph.D., Faculty of Economic, Commercial and Management Sciences, University of M'Hamed BOUGARA Boumerdes, Algeria, ORCID: 0000-0002-2383-4329.

Like all the countries of the world, the Kingdom of Saudi Arabia has been subject to closure and precautionary measures owing to the emergence of cases of the COVID-19 infection throughout the country. The Saudi government has also taken exceptional measures, including the implementation of strict laws and imposing restrictions, while cautiously return to universities and schools and diverging in the workplace, to reduce the impact of COVID-19. Many people believe that we should stop controlling the virus and start adapting to it, and that once you accept this, it becomes a little easier (Nabavi, 2020). Public awareness and prevention through knowledge of COVID-19 play essential roles in fighting the disease and stopping the spread of COVID-19 in the Kingdom of Saudi Arabia (Al-Hanawi et al., 2020). Therefore, understanding and evaluating the use of social media platforms for public awareness is essential. Whereas the effectiveness of social media applications has been measured for health, the study under question refers to studies promoting wellness from disease (Korda & Itani, 2013) because it will help in determining the impact of government preventative efforts and measures. It will also measure the need for intervention, especially among youth and university students.

Social media platforms have proven to be an essential source of communication that enables the creation and dissemination of online information regarding crises (Veil et al., 2011). It should be noted that social media platforms allow groups and individuals to exchange information on all topics and issues. Moreover, these platforms include a wide range of networking sites such as Facebook, information-publishing platforms such as YouTube, and microblogging services such as Twitter. These platforms can be used to create and disseminate knowledge and information about potential health and disease risks, interventions and healthy lifestyles, and effective health policies and strategies (Veil & Palenchar, 2011). Unlike campaigns launched with traditional media, campaigns launched via social media platforms often successfully convert knowledge and information on various health topics into daily fruitful discussions and conversations on the internet.

Therefore, the research question in our study is the following: What is the impact of social media on developing awareness of the dangers of COVID-19 among students at Northern Border University?

The importance of the study lies in the fact that raising awareness of the risks and harm caused by the virus requires the integration of theories of behavioural change through information published on social media that can raise awareness and perception among university students, so that they accurately understand the process of changing behaviours and adopt responsible behaviours regarding the virus. Clearly, individuals must understand the basic facts about

the virus related to their health to be able to change their lifestyles as a result of feeling threatened, especially considering that it is an infectious disease. In this context, individuals must learn a set of skills to deal with the virus and be given access to appropriate services. Various social media can achieve this on a general level.

#### 2. Literature reviews

Studies have reported that social media campaigns can lead to positive changes in behaviour and even prevent negative behavioural changes in individuals. Social media platforms can reduce the spread of epidemics, thus reducing levels of fear and anxiety among the general public.

Researchers have argued that communication through social media can convey helpful information about infectious diseases by identifying and tracking users' behavioural patterns (Hassan Zadeh et al., 2019). A model was proposed by Misra and Shukla (2015) to explore the impact of awareness of social media campaigns on the spread of infectious diseases. The results of their study revealed a decrease in the number of infected people with the increasing prevalence. Regarding health campaigns on social media, some studies (Veil et al., 2011) have also indicated how subscribers can adopt social media tools to better manage risks or crises.

Best practice in risk and crisis communication has been summarized, and examples of social media tools used to manage risks and crises have been demonstrated. This study did not address the impact on awareness of risks (Al-Hanawi et al., 2020), which focused on measuring the impact of the public's commitment to preventative measures by their knowledge and attitude towards COVID-19. This study examined the Saudi public's knowledge, attitudes, and practices towards COVID-19 during the pandemic. The majority of the study participants were aware of COVID-19, indicated fewer optimistic attitudes and good practice towards COVID-19 than females. The study also found that older people were more likely to have better knowledge and practice than younger people. This study supports our current study about the Saudi community's level of awareness of the dangers of the virus. The conclusions in the study indicate that targeted health education interventions should be directed at vulnerable groups in the population which may be at increased risk of contracting COVID-19. For example, knowledge of COVID-19 may increase dramatically if health education programmes specifically target men. This finding is also in agreement with the study by Alhazmi et al. (2020).

## 3. Methodology

## 3.1. The variables of the study

The independent variable (Social Media): Social media has many definitions, but all social media, in its basic concept, are online or mobile platforms that allow two-way interaction through content produced by users, not to mention the communication between them. Therefore, social media is not like the media that comes out only from one source or from a fixed website but instead means of communication through platforms specially designed to allow users to find or produce content themselves and interact with information and its source, including Facebook, Twitter, Instagram. YouTube, Google Plus.

The intermediate variable (Consistently of COVID-19): It is educating people and working to increase their information and health culture to teach them how to deal with some virus and avoid infection with others, by spreading the correct behaviours and avoiding the wrong methods that negatively affect health in general.

The dependent variable (Responsible Behavior): is an innate or acquired willingness represented in the ability. To commit himself first and the ability to fulfil the obligation through efforts subsequently.

## 3.2. The model of study

It is represented in figure 1.

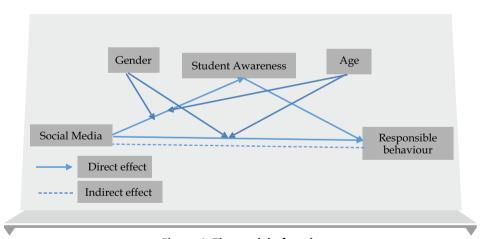


Figure 1. The model of study

Source: prepared by researchers

## 3.3. Sample of the study

The research community was represented in all students (the unit used are individuals) at Northern Border University with its three branches; the estimated number is 5700 students. As for the study sample, the researcher distributed the questionnaire electronically through various communication means, and the answers reached 726 questionnaires valid for analysis, which represent from 10% to 20% (Kotrlik et al., 2001) the condition of society in the thousands. It is very suitable for this type of study: Bachelors or diploma students.

## 3.4. Hypotheses

Through the model, we deduced four hypotheses as follows:

**H1:** Attitudes of the respondents towards the study variables are positive. H2:

- *H2-0*: There is no statistically significant effect between social media and responsible behaviour through awareness among students, the study sample, at a confidence level of 0.05.
- *H2-1*: There is a statistically significant effect between social media and responsible behaviour through students' awareness, the study sample, at a confidence level of 0.05.

H3:

- *H3-0:* There are no statistically significant differences between the study variables due to the gender variable among the students, the study sample at the confidence level of 0.05.
- *H3-1:* There are statistically significant differences between the study variables due to the gender variable among students, the study sample at the confidence level of 0.05.

H4:

- *H4-0:* There are no statistically significant differences between the study variables due to the age variable among the students, the study sample, at the confidence level of 0.05.
- *H4-1:* There are statistically significant differences between the study variables due to the age variable among the students, the study sample, at the confidence level of 0.05.

It should be noted that we relied in the study on the quantitative method (Jayaratne & Stewart, 1991) in analyzing data, obtaining results and interpreting

correlational and impact relationships between the various study variables, in addition to relying on extrapolation in analyzing the results and generalizing them to the study population.

## Tool of study

The questionnaire is the primary tool in collecting data from the study sample, as it was distributed through various means of communication for students of Northern Border University, and (726) responses were received see Appendix No. 01.

The form included 23 paragraphs, divided into three parts as follows:

**The first Part:** Personal Information: This part is devoted to obtaining students 'personal information, which is: gender, age, certificate obtained, and the means of communication used.

The second part: Includes the independent variable, which is: social media, and includes (8) questions

The third part includes the mediating variable: Student awareness, which includes (6) questions.

**The fourth part:** Includes the dependent variable, responsible behaviour, as it contains (9) questions.

The five Likert scales were used in the questionnaire.

#### 3.4. Validation form and statistical method

The tool's validity was confirmed by presenting the questionnaire to a group of specialized professors, where some paragraphs were changed and added, some were reformulated, and other paragraphs added, and thus the questionnaire took its final form (0.948) in table 1. The results indicate that the reliability coefficient for each paragraph is more (0.90) and because this value is higher than the value at which the degree of reliability is accepted, which is (0.70), in the questionnaire.

Corrected Cronbach's Scale Variance if Scale Mean if Item-Total Corre-Alpha if Item Item Deleted Item Deleted lation Deleted Q1 96,1732 395,361 0.301 0.953 Q2 96,3991 376,068 0,651 0.95

**Table 1. Item-Total Statistics** 

Q3	96,738	377,768	0,652	0,95
Q4	96,7269	384,535	0,494	0,952
Q5	96,1415	385,396	0,681	0,95
Q6	97,0658	373,641	0,649	0,95
Q7	95,9253	385,453	0,528	0,952
Q8	96,0658	385,832	0,558	0,951
W1	96,2283	386,495	0,498	0,952
W2	96,0382	383,877	0,588	0,951
W3	95,9955	390,071	0,497	0,952
W4	96,0727	383,95	0,638	0,951
W5	96,0727	383,403	0,588	0,951
W6	96,8826	371,057	0,697	0,95
B1	96,1512	380,021	0,614	0,951
B2	97,2256	370,383	0,705	0,95
В3	96,7807	365,325	0,807	0,949
B4	96,7903	368,952	0,785	0,949
B5	97,8261	376,283	0,516	0,952
В6	97,5437	369,044	0,652	0,951
В7	97,4942	368,002	0,688	0,95
B8	95,9005	382,81	0,627	0,951
В9	96,9101	369,273	0,665	0,95
Social media	96,4044	382,369	0,887	0,949
Student awareness	96,215	382,705	0,791	0,95
Behavior	96,958	371,535	0,9	0,948
ALL	96,5716	378,036	1	0,948

#### 3.5. Normal distribution test

It can be considered that the sample follows from a normal distribution; if the sample size is large, one can rely on the Central limit theorem of a normal distribution (Brosamler, 1988).

#### 3.6. The statistical methods used

The SPSS statistical program (24) was used to perform the required statistical analyzes by using the following statistical tools:

- arithmetic means and standard deviation,
- correlation coefficient to determine the interpretation coefficient,
- calculate the value of f and t to prove or disprove the hypotheses,
- using the hierarchical linear regression model (Aiken & West, 1991),
- study the significant differences between the study variables.

## 3.7. Descriptive statistics for the study variables

Table 2 shows the arithmetic averages and standard deviations of all variables, which can be commented on as follows:

If we adopt the rule of arithmetic range, which is: the upper bound - the lower bound / the level where (5-4)/3 = 1.33 and accordingly:

1 to 1.33 weak, 1.34 to 3.67 moderate, 3.68 to 5 strong. For the social media variable, the general arithmetic mean of the variable reached 3.88, which indicates the relative importance of the variable for the respondents at the third (strong) level, a standard deviation of less than 2 (Gaddis & Gaddis, 1990), which indicates that the dispersion is weak in the sample answers. This proposal is consistent with (Glassy 2010) and (Jacobs et al., 2016), while it differed from the study (Nielsen & Schrøder, 2014), which indicated that television is more important in the news compared to social media in the countries under study.

As for the Student awareness variable from COVID-19, the arithmetic mean was 4,0657, the third level (firm) with a standard deviation of less than 1; this was agreed with the study (Alahdal et al., 2020) and (Das et al., 2020) about the level of awareness of their study samples.

For the Behaviour variable, the arithmetic mean was 3,3226, the second level (average) with a standard deviation greater than one and less than 2, also agreed with (Das et al., 2020), but the study (Oosterhoff, 2020). The average of the general calculation for all the answers was 3,7090, which is within the third solid level

range, with a deviation of less than one, which indicates the validity of the first hypothesis, which states that the respondents' attitudes towards the study variables were positive, which we will discuss in the results later.

Table 2. Arithmetic averages and standard deviations

		Descrip	tive Statistics	3	
	N	Minimum	Maximum	Mean	Std. Deviation
Q1		1	5	4,1074	0,95817
Q2		1	5	3,8815	1,19759
Q3		1	5	3,5427	1,1327
Q4		1	5	3,5537	1,13223
Q5		2	5	4,1391	0,81109
Q6		1	5	3,2149	1,29321
Q7		1	5	4,3554	1,02406
Q8		1	5	4,2149	0,95735
W1		1	5	4,0523	1,03191
W2	726	1	5	4,2424	0,99331
W3		1	5	4,2851	0,86302
W4		1	5	4,208	0,91846
W5		1	5	4,208	1,01274
W6		1	5	3,3981	1,30355
B1		1	5	4,1295	1,10786
B2		1	5	3,0551	1,31296
В3		1	5	3,5	1,31909
B4		1	5	3,4904	1,23592
В5		1	5	2,4545	1,46405
B6		1	5	2,7369	1,46063

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В7		1	5	2,7865	1,42872
В8		1	5	4,38	0,9777
В9		1	5	3,3705	1,42554
Social media	726	1,88	5	3,8762	0,71687
Student awareness	720	1,17	5	4,0657	0,78962
Behavior		1	5	3,3226	1,01373
ALL		1,35	5	3,709	0,74976
Valid N (listwise)					

## 4. Hypothesis testing and discussion of results

The second hypothesis:

 $\mathbf{H}_0$ : There is no statistically significant effect between social media and responsible behaviour through awareness among students, the study sample at the confidence level of 0.05.

 $\mathbf{H}_{\mathrm{I}}$ : There is no statistically significant effect between social media and responsible behaviour through awareness among students, the study sample at the confidence level of 0.05.

Relying on the model (Ryu et al., 2009), (Aiken & West, 1991) to study the effect of the intermediate and intercepting variables on the dependent variable, as the model came according to the following equations.

Initial Model:

$$y_i = \beta_0 + \beta_1 * x_i + \varepsilon_i \tag{1}$$

Shortener Model:

$$y_i = \beta_0 + \beta_1 * x_i + \beta_3 * z_i + \varepsilon_i$$
 (2)

Final Model:

$$y_{i} = \beta_{0} + \beta_{1} * x_{i} + \beta_{3} * z_{i} + \beta_{4} * x_{i} * z_{i} + \varepsilon_{i}$$
(3)

The three models of the hypothesis were tested using the modified coefficient of determination and calculating the value of F and T.

Where: X (the independent variable), Y (the dependent variable), Z (the mediator variable), XZ (the interaction of the independent variable with the mediator).

## 4.1. Initial Model

The correlation coefficient was .70, which indicates that the relationship is a solid and direct correlation, and the value of the adjusted coefficient of determination was R-2 (Adjusted R Square) 0.49. This medium means that social media explains 50% of the variance in student awareness from COVID-19, in addition to the F value of 702,213 at the significance level of 0.000, which means that the prototype is accepted, the value of VIF amounted to 1.000, which indicates the non-interference in the multilinearity between the components of the variables (Liu et al., 2003) and that The regression coefficient for social media with student awareness was,773. The T value was 26,499 at a significant level of 0.000 which is less than 0.01, which means the validity of the model expressed in the equation:

$$y_i = 1.07 + 0.773 * x_i + \varepsilon_i$$
 (1)

The result indicates an effect of the social media variable on the responsible behaviour of COVID-19. The results are in agreement with (Das et al., 2020) and (Al-Dmour et al., 2020). It has shown that social media platforms can positively influence awareness of behavioural changes to public health and public protection from COVID-19 to see tables 3, 4, 5, 6.

Table 3. ANOVA: The (a) crosses the marginality at the bottom of the table

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	222,566	1	222,566	702,213	0,000b
1	Residual	229,471	724	0,317		
	Total	452,037	725			

<sup>a</sup> Dependent Variable: Student awareness <sup>b</sup> Predictors: (Constant), Social media

Source: own study

**Table 4. Model Summary** 

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	0,702ª	0,492	0,492	0,56298

<sup>a</sup> Predictors: (Constant), Social media **Source**: own study

Table 5. Coefficients: The (a) crosses the marginality at the bottom of the table

Мо	del B	Unstand Coeffi		Standardized Coefficients	t	Sig. Tole- rance	Collinea Statist	
	D .	Std. Error	Beta			Tance	VIF	
1	(Constant)	1,07	0,115		9,305	0		
1	Social media	0,773	0,029	0,702	26,499	0	1	1

<sup>a</sup>Dependent Variable: Student awareness

Source: own study

**Table 6. Bootstrap for Coefficients** 

		_			Bootstrap	a	
	Riae		Std.	Sig.	95% Confidence	Interval	
		Dius	Error	(2-tailed)	Lower	Upper	
	(Constant)	1,07	0,002	0,152	0,001	0,777	1,365
1	Social media	0,773	-0,001	0,037	0,001	0,701	0,846

 $^{\rm a}$  Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples  ${\bf Source:}$  own study

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#### 4.2. Shortener Model

In tables 7, 8, 9, 10, the correlation coefficient was 0.70, which indicates that the relationship between social media and student awareness and responsible behaviour is a solid and direct correlation. The value of the adjusted coefficient of determination was R-2 (Adjusted R Square) 0.49, which means that the means of communication and student awareness Together, they explain 49.3% of the variance in the behaviour responsible for COVID-19, and we note that there is no increase in the interpretation coefficient when the two variables are entered together compared to the initial model; Which means that there is no improvement in the relationship when the student awareness is entered as a second variable that affects the responsible behaviour towards Covid 19, in addition to the fact that the F value reached 351,981 at the 0.000 level of significance, which means acceptance of the reduced model. These results confirm the findings of (Das et al., 2020) and (Al-Dmour et al., 2020). Also, the regression coefficient for the intellectual capital on the relationship with the customer was 0.861, and it increased compared to the regression value in the first model; Which means that the entry of the variable awareness of students as a second variable has raised the level of regression between social media and responsible behaviour, which explains the mediation of awareness, and this is according to the interpretation (Baron & Kenny, 1986) of the effect of the mediating variable, where the T value reached 16,382 and 3,376 at the level of significance of 0.000, and 0.001 is less than 0.05; Which means that the model is correct, which is as follows:

$$y_i = 0.668 + 0.861 * x_i + 0.161 * z_i + \varepsilon_i$$
 (2)

Table 7. Model Summary

Model	R	R Square	Adjusted R Square	Std. The error of the Estimate
1	0,702ª	0,492	0,492	0,72258

<sup>a</sup> Predictors: (Constant), Social media

Source: own study

Table 8. ANOVA: The (a) crosses the marginality at the bottom of the table

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	367,556	2	183,778	351,981	0,000 <sup>b</sup>
1	Residual	377,496	723	0,522		
	Total	745,052	725			

<sup>a</sup> Dependent Variable: Student awareness <sup>b</sup> Predictors: (Constant), Social media

Source: own study

Table 9. Coefficients: The (a) crosses the marginality at the bottom of the table

Mo	del B	Unstandardized Coefficients		Standar- dized Coeffi- cients	t	Sig. Tolerance	Collinearity Statistics	
		Std. Error	Beta				VIF	
1	(Constant)	-0,668	0,156		-4,28	0		
1	Social media	0,861	0,053	0,609	16,382	0	0,508	1,97

<sup>a</sup> Dependent Variable: Student awareness

Source: own study

#### 4.3. Final Model

The correlation coefficient reached 0.95, which indicates that the interactive relationship between social media and student awareness and the responsible behaviour towards Covid 19 is a direct and robust correlation. There is no presence of the linear multiplicity of VIF, which amounted to 1.000, which indicates that there is no overlap in the linear multiplicity between the components of the variables (Liu et al., 2003), which has increased compared to the initial and reduced model. This indicates that the interaction between social media and student awareness has improved the association with responsible behaviour towards COVID-19, and the value of the adjusted coefficient of the determination

reached R-2 (Adjusted R Square) is 0.9. This medium means that the interaction between social media and student awareness explains 90% of the variance in responsible behaviour towards COVID-19. Accordingly, a significant increase in the interpretation coefficient was observed when interaction between social media and student awareness is a mediating variable. This means that it affects the responsible behaviour of COVID-19 more effectively. Additionally, the F value reached 6400,410 at the significance level of 0.000, which means that the final model is accepted; this is in agreement with the study of Alahdal et al. (2020). Also, the regression coefficient for the interaction between social media and student awareness on responsible behaviour amounted to 2,5560, which means that the regression of interaction on responsible behaviour towards COVID-19 explains the validity of the student awareness mediation model between social media and responsible behaviour towards COVID-19. This is in accordance with the interpretation of Aiken & West (1991) in addition to the study (Preache et al., 2006) of the interactions of the intervention of the median variable at the level of significance of 0.000, which means that the validity of the model is as follows:

$$y_i = -1.18E - 0.14 + 0.889 * x_i + 0.123 * z_i + 2.556 * x_i * z_i + \varepsilon_i$$
 (3)

From the above, we accept the hypothesis that: There is a statistically significant effect of social media on responsible behaviour towards COVID-19 through student awareness.

## *The third hypothesis:*

H0/ There are no statistically significant differences between the study variables due to the gender variable among the students of the study sample at the confidence level of 0.05

**H1**/ There is a statistically significant effect between the study variables due to the gender variable among the students in the study sample at the confidence level of 0.05.

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Social media	F	532	3,9591	0,66368	0,02877
	M	194	3,6488	0,80478	0,05778

**Table 10. Group Statistics** 

Student awareness	F	532	4,1081	0,83076	0,03602
	M	194	3,9493	0,65172	0,04679
	F	532	3,3954	1,02782	0,04456
Behaviour	M	194	3,1231	0,94831	0,06808

**Table 11. Independent Samples Test** 

F		Levene's Test for Equality of Variances		t-test for Equality of Means							
		Sig.	t	df	Sig. (2-tailed)	Mean Diffe- rence	Std. Error Diffe- rence	95% Confidence Interval of the Difference			
								Lower	Upper		
Social media	Equal variances assumed	2,143	0,07	3,254	724	0,02	0,31028	0,05905	0,19435	0,42621	
	Equal variances not assu- med			3,807	294,028	0,027	0,31028	0,06455	0,18324	0,43731	
Stu- dent awar- eness	Equal variances assumed	1,79	0,181	2,405	724	0,016	0,15877	0,06601	0,02918	0,28836	
	Equal variances not assu- med			2,689	434,093	0,007	0,15877	0,05905	0,04271	0,27483	
Beha- vior	Equal variances assumed	0,828	0,363	3,222	724	0,001	0,27222	0,08448	0,10637	0,43808	

Beha- vior	Equal variances not assu- med			3,345	369,146	0,001	0,27222	0,08137	0,11222	0,43223
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Through tables 10, 11 above, we find no differences in student awareness and responsible behaviour due to the gender variable. It can be said that gender does not constitute differences in awareness and responsible behaviour among students of the northern border, as for the use of social media. Referring to previous studies, we find somewhat different results with the study (Alahdal et al., 2020), and it agreed with (Galasso et al., 2020), where the differences between the sexes in behaviour and attitudes towards COVID-19.

Accordingly, there are no statistically significant differences between social media and responsible behaviour due to the gender variable among the study sample students at the confidence level of 0.05.

## Fourth hypothesis:

 $\mathbf{H}_0$ : There are no statistically significant differences between the study variables due to the age variable among the students, the study sample at the confidence level of 0.05.

 $\mathbf{H_{i}}$ : There is a statistically significant effect between the study variables due to the age variable among the students, the study sample at the confidence level of 0.05.

Sum of Mean df F Sig. Square Squares 2 Between Groups 5,002 2,501 4,919 0,008 Social 723 0,508 Within Groups 367,575 media Total 372,577 725 4.033 2 2.017 3,255 0,039 Between Groups Student Within Groups 448,004 723 0.62 awareness Total 452,037 725

**Table 12. ANOVA Test** 

	Between Groups	15,215	2	7,607	7,536	0,001
Behaviour	Within Groups	729,838	723	1,009		
	Total	745,052	725			

Through table 12, we note, according to statistical significance, that there is no difference between the answers of the sample about the means of communication. While there are statistically significant differences in awareness and responsible behaviour, this result is considered very logical. We consider the impact of maturity on individuals' awareness of the virus and their behaviour towards it.

#### 5. Conclusion

The study respondents showed positive attitudes towards the study's variables. Accordingly, it can be stated that the level and practice of social media has become a reality and is tangible in several procedures and processes carried out by individuals as high-impact media sources. This proposal is confirmed by a study by Rapp et al. (2013) which demonstrated the transmission of information through social media, as well as by a study by Budhwani and Sun (2020) in which a total of 16,535 tweets identified COVID-19 as the "Chinese virus" or "China virus" in the initial period, and 177,327 tweets were identified in the subsequent period, a nearly tenfold increase at the national level. All 50 states have seen an increase in the number of tweets that exclusively mention the "Chinese virus" or "China virus" rather than the coronavirus disease, COVID-19, or coronavirus.

An analytical reading shows that the use of social media platforms affects responsible behaviour towards COVID-19 during the level of awareness, which translates into lower infection levels in the region. Increasing people's interest in the content of social media platforms will raise awareness, which will affect students' responsible behaviour. This proposal is also the director of the study (Al-Dmour et al., 2020), as well as the study by Nabity-Grover et al. (2020), whereby our findings indicate that the use of social media platforms could positively impact awareness of behavioural changes for public health and general protection from COVID-19.

The results showed no statistical differences attributed to the gender variable regarding the use of social communication and responsible behaviour towards COVID-19. Therefore it can be said that gender does not make a difference in the responses of male and female students. A significant result is the existence of differences among the sample responses owing to the age variable, which can be linked to the fact that age affects students' awareness and their responsible behaviour towards COVID-19, which is called cognitive maturity.

The research was interested in studying a contemporary phenomenon, which is the use of social media to raise awareness of responsible behaviours regarding COVID-19. This can positively affect the number of infections by improving media messages and awareness on various social media. This medium was significantly observed in the number of injuries for students of the university in question.

## **Summary**

# The Impact of Social Media Sites on Developing Consistently among Students to Achieve Responsible Behaviour: A Field Study for Students of Northern Border University

The aim of this study was to determine the influence of social media on students' awareness of responsible behaviour during the COVID-19 pandemic. The field study was carried out with a sample of 726 students from Northern Border University. Data were collected from electronically retrieved questionnaires via various communication channels and analysed using hierarchical linear regression. The study found a relationship between the use of social media sites and awareness among students, affected by age differences. With the emergence of the COVID-19 pandemic, universities face the challenge of ensuring precautionary guidelines to prevent the virus are followed while educating their students, and social media plays a significant role in disseminating this information. Therefore, studying how social media helps develop students' awareness can contribute to addressing some of the problems faced by decisionmakers in Saudi universities.

**Keywords:** 

Social Media, Consistently, Responsible Behaviour, Northern Border University.

**JEL** 

Classification: M10, D83, L10, M39.

#### References

Aiken, L. S., & West, S. G. (1991). Multiple regression: Testing and interpreting interactions. *Newbury Park, CA: Sage*.

Alahdal, H., Basingab, F., & Alotaibi, R. (2020). An analytical study on the awareness, attitude and practice during the COVID-19 pandemic in Riyadh, Saudi Arabia. *Journal of infection and public health*, 13(10), 1446-1452. doi:https://doi.org/10.1016/j.jiph.2020.06.015

Al-Dmour, H., Salman, A., Abuhashesh, M., & Al-Dmor, 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 behavioural changes: an integrated model. *Journal of medical Internet research*, 22(8), DOI:10.2196/19996

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A. M., Helmy, H. Z., Abudawood, Y., & Alsharqi, O. (2020). Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: a cross-sectional study. *Frontiers in Public Health*, 8. doi:10.3389/fpubh.2020.00217

Alhazmi, A., Ali, M. H., Mohieldin, A., Aziz, F., Osman, O. B., & Ahmed, W. A. (2020). Knowledge, attitudes and practices among people in Saudi Arabia regarding COVID-19: A cross-sectional study. *Journal of Public Health Research*, *9*(3, 2. DOI:10.4081/jphr.2020.1867

Ameri, F., & Dutta, D. (2005). product Lifecycle Management: Closing the Knowledge Loops. *Computer-Aided Design and Applications*, 577–590.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 1173.

Brosamler, G. A. (1988, November). *In Mathematical Proceedings of the Cambridge Philosophical Society (Vol. 104, No. 3,)*, 561-574. doi:https://doi.org/10.1017/S0305004100065750

Budhwani, H., & Sun, R. (2020). Creating COVID-19 Stigma by Referencing the Novel Coronavirus as the "Chinese virus" on Twitter: Quantitative Analysis of Social Media Data. *Journal of Medical Internet Research*, 22(5), e19301. DOI:10.2196/19301

Das, D., Shenoy, R., Mukherjee, M., Unnikrishnan, B., & Rungta, N. (2020). Awareness Among Undergraduate Students of Mangalore City Regarding Novel Coronavirus (COVID-19): A Questionnaire Study. *Disaster Med*-

icine and Public Health Preparedness, 1-4. DOI: https://doi.org/10.1017/dmp.2020.204

Gaddis, G. M., & Gaddis, M. L. (1990). Introduction to biostatistics: Part 2, descriptive statistics. *Annals of Emergency Medicine*, 19(3), 309-315. doi:https://doi.org/10.1016/S0196-0644(05)82052-9

Galasso, V., Pons, V., Profeta, P., & Becher, M. B. (2020). Gender differences in COVID-19 attitudes and behaviour: Panel evidence from eight countries. *Proceedings of the National Academy of Sciences*, 117(44), 27285-27291. doi:https://doi.org/10.1073/pnas.2012520117

Glassy, E. F. (2010). The rise of the social pathologist: the importance of social media to pathology. *Archives of pathology & laboratory medicine, 134*(10), 1421-1423. doi:https://doi.org/10.1043/2010-0255-ED.1

Hennig-Thurau, T., & Klee, A. (1997). The impact of customer satisfaction and relationship quality on customer retention: A critical reassessment and model development. *Psychology & Marketing*, 14(8), pp. 737-764.

Jacobs, R., Boyd, L., Brennan, K., & Sinha, C. K. (2016). The importance of social media for patients and families affected by congenital anomalies: A Facebook cross-sectional analysis and user survey. *Journal of pediatric surgery*, *51*(11), 1766-1771. doi:https://doi.org/10.1016/j.jped-surg.2016.07.008

Jayaratne, T. E., & Stewart, A. J. (1991). Quantitative and qualitative methods in the social sciences. *Beyond methodology: Feminist scholarship as lived research*, 85-106.

Khader, Y., Al Nsour, M., Al-Batayneh, O. B., Saadeh, R., Bashier, H., Alfaqih, M., & Al-Azzam, S. (2020). Dentists' awareness, perception, and attitude regarding COVID-19 and infection control: a cross-sectional study among Jordanian dentists. *JMIR public health and surveillance*, 6(2), e18798. DOI:10.2196/18798

Korda, H., & Itani, Z. (2013). Harnessing social media for health promotion and behaviour change. *Health promotion practice*, 14(1), 15-23. doi:doi. org/10.1177/1524839911405850

Kotrlik, J. W., Bartlett, J. E., & Higgins, C. C. (2001). Organizational research: Determining the appropriate sample size in survey research appropriate sample size in survey research. Information technology. *Learning, and performance journal*, 19(1), 43.

Liu, R. X., Kuang, J., Gong, Q., & Hou, X. L. (2003). Principal component regression analysis with SPSS. *Computer methods and programs in biomedicine*, 71(2), 141-147. doi:https://doi.org/10.1016/S0169-2607(02)00058-5

Misra, A., & Shukla, J. (2015). Stability analysis and optimal control of an epidemic model with awareness programs by media. *Biosystems* 2015 *Dec;*138, 53-62.

Nabavi, N. (2020). Long covid: How to define it and how to manage it. *BMJ Webinar*. DOI: https://doi.org/10.1136/bmj.m3489

Nabity-Grover, T., Cheung, C. M., & Thatcher, J. B. (2020). Inside out and outside in: How the COVID-19 pandemic affects self-disclosure on social media. *International Journal of Information Management*, 55, 102188. doi:https://doi.org/10.1016/j.ijinfomgt.2020.102188

Nielsen, R. K., & Schrøder, K. C. (2014). The relative importance of social media for accessing, finding, and engaging with news: An eight-country cross-media comparison. *Digital journalism*, 2(4), 472-489. doi:https://doi.org/10.1080/21670811.2013.872420

Oosterhoff, B. (2020). Psychological correlates of news monitoring, social distancing, disinfecting, and hoarding behaviors among US adolescents during the COVID-19 pandemic. doi:10.31234/osf.io/rpcy4

Preache, K. J., Curran, P. J., & Bauer, D. J. (2006). Computational tools for probing interactions in multiple linear regression, multilevel modeling, and latent curve analysis. *Journal of educational and behavioral statistics*, 437-448.

Rapp, A., Beitelspacher, L. S., Grewal, D., & Hugh. (2013). Understanding social media effects across seller, retailer, and consumer interactions. *Journal of the Academy of Marketing Science*, 41(5), 547-566.

Ryu, E., West, S. G., & Sousa, K. H. (2009). Mediation and moderation: Testing relationships between symptom status, functional health, and quality of life in HIV patients. *Multivariate behavioral research*, 213-232.

Thompson, S. K. (2012). sampling. (Third Edition ed.). Hoboken: WILEY.

Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A work-in-process literature review: Incorporating social media in risk and crisis communication. *Journal of contingencies and crisis management, 19*(2), 110-122. doi:https://doi.org/10.1111/j.1468-5973.2011.00639.x

West, S. G., Ryu, E., Kwok,, O. M., & Cham, H. (2011). Multilevel modeling: Current and future applications in personality research. *Journal of Personality*, 2-50.

## Appendix No. 01: Study Questionnaire

#### Part 01: General data

The social media used

Twitter

Facebook

Instagram

YouTube

Google Plus

Other

University Stage

diploma

Bachelor of

Master

Other

Gender

Male

feminine

Age

Less than 20 years old

20 to 30 years old

More than 30 years

#### Part 2: Social Media

We receive virus awareness notifications through the social media I use

Always

frequently

sometimes

Scarcely

Start

Check all the notifications I receive about the virus through the social media that we

use

Always

frequently

sometimes

Scarcely

Please rely on the information I receive from social media about The virus: Always frequently sometimes Scarcely Start Messages we receive on social media remind us of the dangers of the virus: Totally OK OK neutral not agree We disagree We follow developments on the virus through social media Always frequently sometimes Scarcely Start Spend enough time browsing social media for virus updates: Always frequently sometimes Scarcely Start Social media made it easier for us to get information about the virus: Always frequently sometimes Scarcely Start We interact with all the information I receive through social media about the virus: Always frequently sometimes

Start

Scarcely Start

#### Part 03: Student Awareness

We have enough information about the virus:

Totally OK

OK

neutral

not agree

Totally disagree

We have a culture of dealing with the virus:

totally OK

OK

neutral

not agree

Totally disagree

We are fully aware of the dangers of the virus:

totally OK

OK

neutral

not agree

Totally disagree

We know the reasons for the spread of the virus:

totally OK

OK

neutral

not agree

Totally disagree

We have a comprehensive picture of the virus:

totally OK

OK

neutral

not agree

Totally disagree

We know how to avoid the spread of the virus:

totally OK

OK

neutral

not agree

Totally disagree

## Part 04: Responsible Behavior

We avoid gatherings and contact with people: Always frequently sometimes Scarcely Start
We spread the dangers of the virus through the groups we are a member of: Always
frequently sometimes Scarcely
Start
We participate in educating individuals about the dangers of the virus: Always
frequently sometimes
Scarcely Start
We offer tips on how to avoid the virus and limit its spread: Always
frequently sometimes
Scarcely Start
Create pages to educate the community about the dangers of the virus:
Always frequently
sometimes Scarcely
Start We contribute to publishing photos and compelling posts about the dangers of the
virus: Always
frequently sometimes
Scarcely

Start

We contribute to publishing photos and videos on how to deal with the virus:

Always

frequently

sometimes

Scarcely

Start

A mask and sanitiser accompany us whenever we go outside the house:

Always

frequently

love us

Scarcely

Start

We offer tips and advice for those who do not wear masks:

Always

always

sometimes

Scarcely

Start