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The Impact Of The Communications About The COVID-19 Pandemic On Facebook On Tertiary Students' Mental Health

Nguyen Tan Khang[1] , Tuong, Nguyen Van[1] , Nguyen Hoang Anh Thu[1] , Ly, Dang Thi Mai[2]

[1] *University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City*
[2] *Ho Chi Minh City University of Economics and Finance*
[1]*Email: nguyentankhang@hcmussh.edu.vn*
[1]*Email: tuongnguyen@hcmussh.edu.vn*
[1]*Email: thu.nguyen@hcmussh.edu.vn*
[2]*Email: lydtm@uef.edu.vn*

Abstract:
The article applies a combination of document research methods; survey method by questionnaire; psychological test method and data processing method using mathematical statistics to find out the impact of accessing information about the COVID-19 pandemic on Facebook on the mental health of students from the University of Social Sciences and Humanities, Vietnam National University Ho Chi Minh City during the fourth outbreak period (May to October 2021). Research results have shown that students have fairly frequent access to information about the COVID-19 pandemic on this social platform. At the same time, the majority of students participating in the survey did not experience problems related to stress, anxiety, and depression. Howerver, there was still a small number of students who have problems related to stress, anxiety, and depression from mild to very severe. In addition, the study also showed the influential magnitude of accessing information related to the COVID-19 pandemic on Facebook on the levels of stress, anxiety, and depression of students.

Keywords: Communication, access to information; COVID-19; Social network Facebook; Mental health.

1. INTRODUCTION

So far, the COVID-19 pandemic has claimed the lives of at least 6.5 million people and infected more than 600 million, according to the World Health Organization WHO. The pandemic not only affects the physical health, economic and social life of all countries in the world, but also affects the people's mental health.

In the fight against the epidemic in Vietnam, it is impossible not to mention the communication factor about the COVID-19 pandemic. This factor is extremely important contributing to the success of campaigns to combat the disease. One of the effective communication channels and quick access to the public is social networks particularly Facebook.

However, the prolonged social isolation is a condition that promotes people to access more information about the COVID-19 pandemic on the social network Facebook. Thereby giving rise to problems with the mental health of the public. Among the target groups that regularly access information about the COVID-19 pandemic on Facebook, students are a large and actively interacting force.

From that context, this study aimed to examine the effects of accessing Facebook to get information about the COVID-19 pandemic on the mental health of students in Vietnam.

2. RELATED CONCEPTS

2.1. Media, mass media and communication about the COVID-19 pandemic

According to Nguyen Van Ha (2022), "Communication is a conscious activity of people. It is the process of exchanging and sharing information, knowledge, feelings, skills, etc. by a conventional system of symbols to create

communication with each other, which can lead to changes in perception, attitude and behavior" (Nguyen Van Ha, 2022, pp.4-5).

"In the book Mass Communication Research Methods, first published 1998 by Macmillan Press LMD, England, it is argued that communication is a continuous process by which we understand others and make others understand us. It is a process that is always changing, improvising and responding to situations" (Nguyen Van Dung and Do Thi Thu Hang, 2018, p.12).

"Mass communication is the process by which professional communicators use the media to disseminate messages widely, rapidly, and periodically to a large, diverse audience in an attempt to affect and change their feelings, thoughts, and actions" (Melvin L. DeFleur – Everette E. Dennis, 1991, pp. 19-24).

Using Facebook to communicate about the COVID-19 pandemic is efficient and appropriate nowadays because this social platform has tremendously potent power of spreading, from one source through Facebook, the target communication messages can reach millions of people at the same time.

2.2. Facebook - a type of social network

According to the Oxford Online Dictionary, "a social network is a website or social media application through which users can communicate with each other by adding information, messages, images, etc."

Section 22, Article 3, Decree No. 72/2013/ND-CP on the management, provision and use of Internet services and online information of the Government issued on July 15, 2013 defines: "Network A social network is an information system that provides a community of network users with services to store, provide, use, search, share and exchange information with each other, including services to create and exchange information via personal websites, forums, online chats, audio and video sharing and other similar services".

In February 2004, Mark Zuckerberg, with the help of Andrew McCollum and Eduardo Saverin, launched a very influential website called Facebook. Within 24 hours of its release, Facebook became a community of 1200 Harvard University students. The network expanded and by April 2004, Facebook was available on all Ivy League servers. From May 2006 to May 2007, Facebook traffic increased by 89%. Facebook remained a closed social network until May 2007, when Zuckerberg announced that Facebook would become an open global social network.

Based on some of the above definitions, Facebook is a social network with full features to help users interact and communicate with one another over the Internet environment.

2.3. Mental health

World Health Organization (WHO) definition of health: "Health is a state of complete physical, mental and social well-being and not merely a state of health no disease or injury". Mental health plays an important role in the concept of health.

Mental health is considered an integral part of the definition of health (WHO, 2001), in which mental health is not only the absence of mental disorders, but also comfort state function, self-efficacy, self-control, capacity and ability to realize one's potential (WordNet Search, 2014).

Mental health is a state of being not only free from mental disorders or deformities, but also a state of mind that is completely comfortable in life, psychologically balanced, in a situational mood, having emotional equality and harmony between family and social relationships, emotional feelings and behavior in accordance with the needs of society (Dang Ba Lam, Weiss Bahr (editor) and Hoang Cam Tu, 2007).

3. RESEARCH ORGANIZATION AND METHODS

3.1. Research organization

This study was conducted at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City. The survey period is from January to June 2022 to review the status of accessing information related to the COVID-19 pandemic on Facebook and the current status of stress, depression and anxiety of students during the period. Social distancing from May to October 2021. The official sample is a simple random sample of students who are enrolled in the regular program of the standard program at the School for

the school year 2021-2022. The sample size in this study was calculated using the formula: $n = \frac{N}{(1+N*e^2)}$

In which: n is the sample size to be calculated; N is population size (overall); e is the desired error level. In this study, we choose the desired level of error e to be 5% (0.05), ie the corresponding confidence level that we have is 95%; The population size N is 11344 students (according to statistics provided by the Student Affairs Department of the University of Social Sciences and Humanities in the academic year 2021-2022 for students from year 1 to year 4 of full-time system). standard program). Applying the formula below, we have: $n = \frac{11344}{(1+11344*0,05^2)} = 386,38$

Accordingly, the minimum sample size required in this study is about 386 students. The survey is designed on Google Form and randomly sent to students with an introduction about the purpose of the study, the lead agency, the representative, how to respond, the principles of respondent's information privacy and voluntary participation. After nearly 6 months, the research team obtained 525 answer sheets, of which 506 were valid, satisfying the conditions for the analysis of the results. The characteristics of the official survey sample are presented in Table 1:

Table 1. Characteristics of the official survey sample

Objective characteristics			Quantity	Ratio
1	Gender	Male	117	23.1
		Female	389	76.9
2	School year	2018 – 2022	50	9.9
		2019 – 2023	25	4.9
		2020 – 2024	114	22.5
		2021 – 2025	317	62.6
3	Between 5/2021 and 10/2021, your daily Facebook usage time	Less than 2 hours a day	38	7.5
		From 2 hours to less than 4 hours a day	108	21.3
		From 4 hours to less than 6 hours a day	137	27.1
		From 6 am to less than 8 hours a day	114	22.5
		From over 8 hours a day	109	21.5
4	During the period from 5/2021 to 10/2021 you belong to the group related to COVID-19	F0	67	13.2
		F1	105	20.8
		F2	43	8.5
		F3	44	8.7
		Other	247	48.8
Total			**506**	**100%**

3.2. Research Methods

The main research methods used in this study include documentary research methods, survey method by questionnaire, methods of psychological testing and methods of data processing by mathematical statistics.

The content of the survey questionnaire was synthesized, built and developed by the research conductors based on previous studies and adjusted in terms of information to better suit the object and purpose of the study. Accordingly, the questionnaire was built with 3 parts:

Part 1 is about demographic information (table 1);

Part 2 is a scale of access to information related to COVID-19 on Facebook developed by the research team based on the point of view of information classification of author Pham Huy Ky et al (2019). The scale is designed with 5 options for each item, in which, (1): Never; (2): Rarely; (3): Occasionally; (4): Regularly; (5): Very often. Level value = (maximum value - minimum value)/number of levels = (5-1)/5 = 0.8. Therefore, the meaning of the levels is divided as follows: 1.00 to 1.80: Never; 1.81 to 2.60 (Rarely); 2.61 to 3.40

(Occasionally); 3.41 to 4.20 (Regular); 4.21 to 5.00 (Very often). Accordingly, the higher the average score, the more often students access information related to COVID-19 on the social network Facebook.

Part 3 is a psychological test: Livibond SH's Scale of Depression, Anxiety and Stress (DASS-21) (1995) shortened from DASS - 42 and translated into Vietnamese to assess the value and validity in the study of Tran Duc Thach et al (2013). The DASS-21 scale consists of 21 questions divided into 3 groups: Stress - Anxiety - Depression (7 sentences in each group). The rating scale is divided into 4 levels, in which: 0 - Not right for me at all; 1 - True to me to some extent, or sometimes only; 2 - True to me most of the time; 3 - Absolutely true for me, or most of the time true. The Depression, Anxiety and Stress scores are calculated by adding the scores of the sub-categories, then multiplying by a factor of 2 and dividing them into 5 levels: (1) Normal; (2) Mild; (3) Moderate; (4) Severe and (5) Very severe. The specific rating levels are as follows:

Table 2. Overview of test results for stress, depression and anxiety

Level	Stress	Depression	Anxiety
	Score level	Score level	Score level
Normal	0 – 14	0 – 9	0 – 7
Mild	15 – 18	10 – 13	8 – 9
Moderate	19 – 25	14 – 20	10 – 14
Severe	26 – 33	21 – 27	15 – 19
Very severe	≥34	≥28	≥20

3.3. The results of the analysis of the reliability and validity of the scale

We conducted Cronbach's Alpha reliability test and exploratory factor analysis (EFA) on SPSS 20.0 software with the scale of accessing information related to COVID-19 on Facebook of students at Social Sciences and Humanities University, Vietnam National University, Ho Chi Minh City. The results show that the Cronbach's Alpha coefficient of 0.929 belongs to the Open Social Information Group (from C1.1.1 to C1.1.10) with the variable-total correlation of this information group from 0.635 to 0.786; Cronbach's Alpha coefficient of the State's management support information group (from C1.2.1 to C1.2.8) is 0.940, the variable-total correlation varies from 0.699 to 0.842; means that the scale meets the requirements of reliability, the EFA analysis results of this scale give the coefficient KMO = 0.933, the Barltett test has Sig. = 0.000 (<0.05), indicating that EFA analysis is appropriate. At Eigenvalues = 3.506 (>1), 2 factors were extracted from 18 observed variables with a total extracted variance of 65.51%, the variation of observed variables with factor loading coefficients from 0.697 to 0.869 and no new factors were formed compared to the original proposed theoretical framework.

Continue to conduct reliability test and exploratory factor analysis with psychological test: Stress, Anxiety, Depression Scale (DASS-21) showing the results: Cronbach's Alpha coefficient of the group. Stress is 0.891; the Anxiety group was 0.892 and the Depression group was 0.897; Correlation - total variation in groups from 0.607 to 0.765, respectively; 0.616 – 0.754 and from 0.601 to 0.777 show that the DASS-21 scale is reliable enough.

The results of EFA analysis with the DASS-21 scale also show that the KMO coefficient of the whole scale is 0.951, the Barltett test has Sig. = 0.000 (<0.05) is suitable. At Eigenvalues = 1.618 (>1), 3 factors were extracted from 21 observed variables with a total extracted variance of 61.92%, the variation of observed variables with factor loading coefficients from 0.555 to 0.806 and no new factors were formed compared to the original proposed theoretical framework.

4. PRACTICAL RESEARCH RESULTS

4.1. Mental health status of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City

during the period of social distancing because of the COVID-19 pandemic

The results of show the mental health status during the period of social distancing because of the COVID-19 pandemic of 506 students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City. Most students had no mental health problems (i.e. students' mental health problems are normal). Specifically, most students did not have problems with depression, accounting for 61.1%; students with mild and moderate depression problem was 11.5%; severe was 11.7% and very severe was 4.3%. Next is the level of anxiety, the majority of students rated their own anxiety with a score of normal, that is, students did not have anxiety problems with 44.5%; students with mild anxiety problems was 14.2%; moderate was 20.2%; severe was 8.1% and very severe was 13%. With the level of stress, the results also found that most students did not have stress problems with 73.3%; students with mild stress problem was 10.1%, moderate 11.9%, severe wass 2.8% and very severe was 2.0%.

With this result, it can be seen that, at a normal level, most students did not have stress problems, accounting for a higher rate (73.3%), followed by depression (61.1%) and finally anxiety (44.5%). However, at mild and moderate levels, students had higher levels of anxiety specifically, with mild and moderate levels of 506 students overall, 34.4% of students had anxiety problems; followed by 23% of students with depression problems and 22% of students with mild to moderate stress problems. For the more alarming level (severe and very severe), the same results showed that 21.1% of the students assessed that they had severe and very severe anxiety problems; followed by depression with 16% and finally 4.8% with stress problems.

This can partly explain that in this 4th outbreak in Vietnam (starting from the end of April 2021), students have better adapted to mental health problems related to COVID-19. However, the lingering effects of COVID-19 on students' mental health in general and issues of anxiety, depression and stress in particular need further attention and research. Understanding the relationships affecting students' mental health has certain implications for prevention and support for mild and moderate students; at the same time, there are solutions to help students, especially students with severe and very severe mental health problems.

Table 3. Mental health status of students during the period of social distancing because of the COVID-19 pandemic

Level	Depression			Anxiety			Stress		
	Level score	Quantity	Ratio	Level score	Quantity	Ratio	Level score	Quantity	Ratio
Normal	0 - 9	309	61.1	0 - 7	225	44.5	0 – 14	371	73.3
Mild	10 - 13	58	11.5	8 - 9	72	14.2	15 – 18	51	10.1
Moderate	14 - 20	58	11.5	10 - 14	102	20.2	19 – 25	60	11.9
Severe	21 - 27	59	11.7	15 - 19	41	8.1	26 – 33	14	2.8
Very severe	≥28	22	4.3	≥20	66	13.0	≥34	10	2.0
Total		506	100.0		506	100.0		506	100.0

4.2. Gender, Facebook time and audience differences relate COVID-19 to student mental health

After analyzing the results, there was a statistically significant difference in the subject related to COVID-19 with the mental health of students. And there were no statistically significant differences in terms of gender, year of study, and duration of Facebook use.

The results show that there is no statistically significant difference in the sex demographic variable (with the significance level $p > 0.05$) with the mental health of students, ie. male or female students. Women also experience

similar levels of stress, depression, and anxiety during COVID-19 social distancing.

The results show that there was no statistically significant difference in the year demographic variable (with a significance level p > 0.05) with the mental health of students. This means even students studying in the 2018-2022 school year through the 2021-2025 school year had the same levels of stress, depression and anxiety during the COVID-19 social distancing period.

The results shows that there is no statistically significant difference in the time of using Facebook during the day (with the significance level p > 0.05) with the mental health of students. This means that students have similar levels of stress, depression, and anxiety during COVID-19 social distancing no matter how much time they spend using the social network Facebook during the day.

Table 4. Differences in subjects related to COVID-19

No.	Mental health	Objective characteristics	M	SD	F/sig. Levene Statistic	Level of significance
4	Stress	F0 (M1)	1.044	0.864	Sig. (Levene's Test) = 0.041 > 0.05	Sig. (Robust Tests) = 0.002 < 0.05 M1>M5 (0.04) M2>M5 (0.00)
		F1 (M2)	1.179	0.773		
		F2 (M3)	1.013	0.668		
		F3 (M4)	1.051	0.657		
		Other (M5)	0.839	0.688		
5	Depression	F0 (M1)	1.053	0.935	Sig. (Levene's Test) = 0.004 < 0.05	Sig. (Robust Tests) = 0.029 < 0.05 M1>M5 (0.01) M2>M5 (0.01) M4>M5 (0.03)
		F1 (M2)	1.002	0.722		
		F2 (M3)	0.916	0.730		
		F3 (M4)	1.055	0.687		
		Other (M5)	0.796	0.721		
6	Anxiety	F0 (M1)	0.829	0.858	Sig. (Levene's Test) = 0.020 < 0.05	Sig. (Robust Tests) = 0.006 < 0,05 M1>M5 (0.01) M2>M5 (0.00) M4>M5 (0.03)
		F1 (M2)	0.850	0.645		
		F2 (M3)	0.737	0.816		
		F3 (M4)	0.847	0.710		
		Other (M5)	0.599	0.639		

After analyzing the results from Table 4, it shows that between the subjects related to COVID-19 and the stress level of students with the significance level p = 0.002 < 0.05. In which, F1 students were dominant over the rest of the group with a mean of 1.17; Standard deviation = 0.77. With the p value of p = 0.04 and p = 0.00 < the significance level of 0.05, respectively, it shows that the students of the University of Social Sciences and Humanities participating in the study of the subjects F0 and F1 have a statistically significant difference with the group of students of the "Other" category. Specifically, the group of students belonging to F0 and F1 subjects, respectively, had a higher average score and a higher average score (with a typical average of F0 = 1.04; Standard deviation of F0 = 0.86 and an average of F1 = 1.17; Standard deviation of F1 = 0.77) that were larger than those of the group of " Other" (with average score = 0.83; Standard deviation = 0.68). That means, the stress level of students when accessing information related to COVID-19 on the social network Facebook of the student group F0 and F1 was higher than "Other" target group.

The results from Table 4 also reveal that there was a statistically significant difference between the subjects related to COVID-19 and the level of depression of students with the significance level p = 0.029 < 0.05. In which, F3 students were dominant over the rest of the group with a average mean of 1.055; Standard deviation

= 0.68. With the p value = 0.01 < the significance level of 0.05, it shows that the students of the University of Social Sciences and Humanities participating in the study of the subjects F0 and F1 have a statistically significant difference with the group of students of the "Other"; p = 0.03 < the significance level of 0.05 shows that the students of the University of Social Sciences and Humanities participating in the study belong to and the F3 subject has a statistically significant difference with the group of students in the "Other" group. Specifically, the group of students belonging to subjects F0 and F1 respectively had a higher average score and a higher average score (with an average score of F0 = 1,053; a standard deviation of F0 = 0.93 and an average score of F1 = 1.002; standard deviation of F1 = 0.72) higher than that of the group of " Other" (average = 0.796; Standard deviation = 0.72). That is, the level of depression of students when accessing information related to COVID-19 on Facebook of the group of F0 and F1 students was higher than the group of "Other" and the group of students in the group of F3 with average and standard deviation (average of F3 = 1.055; standard deviation = 0.68) was larger than that of the group of students in the "Other" group (with average of F3 = 0.796; standard deviation = 0.72). That is, the level of depression of students when accessing information Information related to COVID-19 on Facebook of the F3 group of students was higher than that of the "Other" group.

In addition, the results from Table 4 also show that there is a statistically significant difference between the subjects related to COVID-19 and the anxiety level of students with the significance level p = 0.006 < 0.05. In which, F1 students were dominant over the rest of the group with a. average mean of 0.85; Standard deviation = 0.64. With p values of p = 0.01, respectively; p = 0.00 and p = 0.03 < the significance level is 0.05, showing that the students of the University of Social Sciences and Humanities participating in the study belong to the subject F0; F1 and F3 had a statistically significant difference with the group of students in the "Other" group. Specifically, student group F0, F1 and F3 respectively had average and Standard deviation (with average F0 = 0.82; Standard deviation F0 = 0.85; average F1 = 0.85; Standard deviation F1 = 0.64 and average F3 = 0.84; Standard deviation F3 = 0.71) are larger than the group of students belonging to the group. "Other" (with average = 0.59; Standard deviation = 0.63). That is, the anxiety level of students when accessing information related to COVID-19 on the social network Facebook of the student group F0, F1 and F3 were higher than the "Other" group of subjects.

4.3. The reality of students' access to information related to the COVID-19 pandemic on Facebook's social network

The results of Table 5 show that most students self-assessed the level of access to information related to COVID-19 at the level of "regular" with average rating = 3.78 and Standard deviation = 0.63. In which, the level of access to information in the group of open social news information (N1) is more frequent than in the group of information supporting the management of the State (N2) with the average and the standard being: average (N1) = 3.79; Standard deviation (N1) = 0.74 and average (N2) = 3.77; Standard deviation (N2) = 0.77.

In the open news group, most students access information related to the COVID-19 pandemic on the social network Facebook at the most frequent level, the "Information on the number of daily SARS-CoV-2 virus infections" (average = 3.94; Standard deviation = 0.91); next is "Information related to vaccination against COVID-19 according to priority groups" (average = 3.92; Standard deviation = 0.96); "Information on daily number of deaths related to SARS-CoV-2 virus" (average = 3.85; Standard deviation = 0.97), etc. and less often include: "Information about the overload of the health system during the period of strong epidemic outbreaks" (average = 3.73; Standard deviation = 0.92); "Information related to the supply of food and essential food during the time of social isolation and prolonged social isolation" (average = 3.73; Standard deviation = 0.97); followed by "Information related to large-scale COVID-19 testing" (average = 3.68; Standard deviation = 0.97); and finally, "Urgent information on finding people to places with F0, travel schedule of F0" (average = 3.64; Standard deviation = 1.02).

In the group of information to support management of the State, most students rate more often the information including: Information related to Directive 15 of the Prime Minister includes: not gathering more than 10 people in public places, keeping a distance of 2m, restricting travel between localities, temporarily suspending operation of establishments. business services, except for essential services" (average = 3.92; Standard deviation = 0.88); ranked second is "Information related to Directive 16 of the Prime Minister, including: social isolation, not gathering more than 2 people in public places, keeping a distance of 2m, stopping travel activities between localities, except for necessary cases, temporarily suspend the operation of business and service establishments, except for essential services" (average = 3.89; Standard deviation = 0.90); ranked third is "Information related to Directive 19 of the Prime Minister, including: not gathering too many people in public places, stopping festival activities, religious ceremonies, sports events, keeping with a minimum distance of 1m, temporarily suspending the operation of entertainment service establishments, karaoke, massage, bars, dance halls, beauty establishments" (average = 3.83; Standard deviation = 0.88), etc. Information that students rated at a lower level included: "Information related to Directive 10 of the HCMC People's Committee includes: Do not gather more than 3 people in public places. keep a minimum distance of 1.5m; stop non-essential businesses and spontaneous markets; stop public passenger transport activities" (average = 3.67; Standard deviation = 0.95); finally, "Information related to Directive 18 of the HCMC People's Committee includes: allowing conditional opening of all types of business and services, using QR codes to declare domestic movement, step by step recovery, socio-economic development, etc. (average = 3.64; Standard deviation = 0.94) and "Information related to Directive 12 of the HCMC Party Committee includes: Blockade and control the spread of the epidemic, maintain and expand the safe zone and control the spread of high-risk areas by "separating people from people, families isolating from families", tightening the gates and stations at the gateways to Ho Chi Minh City" (average = 3.64; Standard deviation = 0.95).

Table 5. Results of proportion, mean score and standard deviation of information related to the epidemic that students access on Facebook

No.	Information on Facebook	Average	Standard deviation
1	**Open social news group**	3.79	0.74
1.1	Information on the number of daily SARS-CoV-2 virus infections	3.94	0.91
1.2	Information about the number of deaths related to the SARS-CoV-2 virus every day	3.85	0.97
1.3	Information about Daily number of cured SARS-CoV-2 virus infections	3.80	0.93
1.4	Urgent information on finding people going to locations with F0; F0's travel schedule	3.64	1.02
1.5	Information regarding the effectiveness of the COVID-19 vaccine such as the rate of immunity. Complications from vaccination etc.	3.79	0.92
1.6	Information regarding widespread COVID-19 testing	3.68	0.97
1.7	Information regarding post-COVID-19 health issues	3.80	0.92
1.8		3.73	0.97

No.	Information on Facebook Information regarding the food essential food supply during social distancing and prolonged social distancing	Average	Standard deviation
1.9	Information about the overload of the health system during the period of strong epidemic outbreaks	3.73	0.92
1.10	Information related to vaccination against COVID-19 according to priority groups	3.92	0.96
2	**Information group to support the State's management**	3.77	0.77
2.1	Information related to Directive 15 of the Prime Minister	3.92	0.88
2.2	Information related to Directive 16 of the Prime Minister	3.89	0.90
2.3	Information related to Directive 19 of the Prime Minister	3.83	0.88
2.4	Information related to Directive 10 of the People's Committee of Ho Chi Minh City	3.67	0.95
2.5	Information related to Directive 18 of the People's Committee of Ho Chi Minh City	3.64	0.94
2.6	Information related to Directive 12 of the People's Committee of Ho Chi Minh City	3.64	0.95
2.7	Information regarding the establishment and protection of “green zones” in localities	3.77	0.96
2.8	Information related to the use of travel papers, applications to declare population mobility, medical declaration when traveling during the period of social distancing	3.81	0.89
Total		3.78	0.63

4.4. Forecasting changes in the level of Stress, Depression, and Anxiety of students when accessing information related to the COVID-19 pandemic on social networks

The results of the first-order correlation and regression analysis between the access to information on the social network Facebook and the students' levels of Stress, Depression, and Anxiety (Table 6) showed both groups of information: current affairs. open society; State management support and general information are positively correlated with students' levels of Stress, Depression and Anxiety.

In the group of open social news: With the correlation coefficient r, respectively, 0.542**; 0.501** and 0.482** show that the correlation coefficient is quite close. Similar in the group of information to support management of the State: the results show that the correlation coefficient between the levels of Depression, Anxiety, Stress and this information group is relatively close with the correlation coefficient respectively is 0.466**; 0.427** and 0.388**. And at a closer correlation, it shows that general information (including open society news and information to support the State's management) and the level of Depression, Stress, and Anxiety are correlated with the relationship. The numbers are 0.565** (Depression level), 0.553** (Stress level) and 0.552** (Anxiety level). This means that the more often students have access to open social news and information supporting the State's management about COVID-19 on the social network Facebook, the level of Stress; Student anxiety and depression also tend to increase.

6. Results of first-order correlation coefficient and regression between access to information on Facebook and students' levels of Stress, Depression, and Anxiety

No.	Impact variable	Dependent variable					
		Stress		Depression		Anxiety	
		Correlation coefficients r	R^2	Correlation coefficients r	R^2	Correlation coefficients r	R^2
1	Open social news group	0.542**	0.293***	0.482**	0.231***	0.501**	0.249***
2	Information group to support the State's management	0.388**	0.149***	0.466**	0.215***	0.427**	0.181***
3	General information	0.553**	0.304***	0.565**	0.318***	0.552**	0.304***

Note: ** when $p < 0.01$, *** when $p < 0.001$

In the correlation between the level of Stress, Depression, Anxiety and access to information on Facebook, it is found that, in the two groups of information, "Open social news group" is the more effective variable, explaining 29.3% of the changes in the expression of students' stress levels; explained 23.1% of the changes in the expression of Depression level and explained 24.9% of the changes in the expression of the students' anxiety level, Impact variable "Supporting information group State management" explained 14.9% of the changes in the expression of students' stress levels; 21.5% of the changes in the expression of depression and 18.1% of the changes in the expression of anxiety of the students.

However, in reality, it is difficult for only one variable to have an independent impact on the level of Stress, Depression and Anxiety of students without being confounded by other variables. Therefore, the stepwise multiple regression analysis (increasingly introducing the influencing variables and gradually excluding those that are no longer significant) was used to detect the optimal and realistic regression models. more economical.

All two groups of factors affecting the stress level of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City were included in multiple regression analysis with the highest correlation between These impact variables have a value of 0.542. The results of stepwise multiple regression analysis (Table 6) show that there are two optimal predictive models, in which the model explains less than the change in stress level of students at University of Social Sciences and Humanities, Ho Chi Minh City National University is model 1 (Open social news group), explained 29.3% of the changes in students' stress levels. The model that explains more than the change in stress levels of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City is model 2 (Open social news group, Information group to support the State's management), explained 32.5% of the changes in students' stress levels. In this model, students' access to "Open social news group" is the most influential variable (Beta = 0.461) and "State management support information group" is the most influential variable. weaker effect (Beta = 0.201) on the stress level of students. With multiple regression analysis, it can be seen that, when both influencing variables are selected to be processed, the impact of 2 factors "Open social news group" and "Support information group" State management assistance" are statistically significant. Details as in Table 7 below:

Table 7. Model for predicting the change of students' stress level when changing the level of access to information related to the pandemic on Facebook

Two models for predicting the change of students' stress level		Beta	Level of significance (p)
Model 1: $R^2 = 0.293$; constant = -1.066; F = 209.986***			
1	Open social news group	0.542	0.000
Model 2: $R^2 = 0.325$; constant = -1.481; F = 122.595***			
1	Open social news group	0.461	0.000
2	Information group to support the State's management	0.201	0.000

Note:
Dependent variable: Stress level of students
Impact variable: Open social news group; Information group to support the State's management
Model 1: Open social news group
Model 2: Open social news group; Information group to support the State's management

Next, all two groups of factors affecting the level of depression of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City were included in multiple regression analysis with correlation. The highest correlation between these variables is 0.428. The results of the stepwise multiple regression analysis show that there are 2 optimal predictive models, in which the model that explains more than the change in students' Depression level is model 2, which explains 31.7% of the changes in the level of depression of students and the model that explained less than the change in the level of depression of students was model 1 with 23.1%. In model 2, students' access to "Open social news group" is the most influential variable (Beta = 0.351) and "State management support information group" is the most influential variable. weaker effect (Beta = 0.323) on the level of depression of students. With multiple regression analysis, it can be seen that, when both influencing variables are selected to be processed, the impact of 2 factors "Open social news group" and "Support information group" State management assistance" are statistically significant.

Table 8. The model predicts the change in the level of depression of students when changing the level of access to information related to the pandemic on Facebook

Two models predict the change in the level of depression of students		Beta	Level of significance (p)
Model 1: $R^2 = 0.231$; constant = -0.951; F = 152.591***			
1	Open social news group	0.428	0.000
Model 2: $R^2 = 0.317$; constant = -1.637; F = 118.143***			
1	Open social news group	0.351	0.000
2	Information group to support the State's management	0.323	0.000

Note:
Dependent variable: Stress level of students
Impact variable: Open social news group; Information group to support the State's management
Model 1: Open social news group
Model 2: Open social news group; Information group to support the State's management

And finally, all two groups of factors affecting the anxiety level of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City are included in multiple regression analysis with the relationship between the two groups of factors. The highest

correlation between these variables is 0.501. The results of stepwise multiple regression analysis show that there are 2 optimal predictive models, in which the model that can explain the least change in students' anxiety level is model 1 with 24.9% of the changes in students' Anxiety levels and the model that most explained the change in students' Anxiety levels was model 2 with 30.8%. In this model, students' access to "Open society news information group" is the most influential variable (Beta = 0.392) and "State management support information group" is the most influential variable. weaker action (Beta = 0.267) on the anxiety level of the students. With multiple regression analysis, it can be seen that, when both influencing variables are selected to be processed, the impact of 2 factors "Open social news group" and "Support information group" State management support" are statistically significant.

Table 9. The model predicts the change in the level of anxiety of students when changing the level of access to information related to the pandemic on Facebook

Two models predicting changes in students' anxiety levels		Beta	Level of significance (p)
Model 1: $R^2 = 0.249$; constant = -1.076; $F = 168.749^{***}$			
1	Open social news group	0.501	0.000
Model 2: $R^2 = 0.308$; constant = -1.602; $F = 113.263^{***}$			
1	Open social news group	0.392	0.000
2	Information group to support the State's management	0.267	0.000

5. CONCLUSION

The results show that the mental health status during the period of social distancing because of the COVID-19 pandemic of 506 students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City, most of them do not. have mental health problems (i.e., students' mental health problems are normal). And there was a statistically significant difference in subjects regarding COVID-19 with students' mental health and no statistically significant differences in terms of gender, year of study, and duration of Facebook use.

Most students self-rated their access to COVID-19-related information as “regular”. In the open news group, most students accessed information related to the COVID-19 pandemic on the social network Facebook at the most frequent level, the "Information on the number of daily SARS-CoV-2 virus infections"; next is “Information related to vaccination against COVID-19 according to priority groups”; followed by “Information on the number of daily SARS-CoV-2 virus-related deaths”, etc. and, less frequently, include: “Information about the overload of the health system during the period of strong epidemic outbreaks”; “Information related to the supply of food and essential food during the period of social isolation and prolonged social isolation; next is “Information related to large-scale COVID-19 testing” and finally “Urgent information on finding people to F0 locations, F0 travel schedule”. In the group of information to support the State's management, most students rated the information more often, including: "Information related to Directive 15 of the Prime Minister includes: do not gather more than 10 people in public places, keep a distance of 2 meters, limit travel between localities, and temporarily suspend operations of business and service establishments except for essential services; ranked second is “Information related to Directive 16 of the Prime Minister including: social isolation, not gathering more than 2 people in public places, keeping a distance of 2m, stopping travel activities between localities, except for necessary cases, temporarily suspend the operation of business and service establishments, except for essential services; ranked third is “Information related to Directive 19 of the Prime Minister, including: not gathering too many people in public places, stopping festival activities, religious ceremonies,

sports events, keeping With a minimum distance of 1m, temporarily suspending the operation of entertainment service establishments, karaoke, massage, bars, discos, beauty establishments. Information that students rated at a lower level included: “Information related to Directive 10 of the HCMC People's Committee includes: Do not gather more than 3 people in public places. keep a minimum distance of 1.5m; stop non-essential businesses and spontaneous markets; stop public passenger transportation”; finally, “Information related to Directive 18 of the HCMC People's Committee includes: allowing the conditional opening of all types of business and services, using QR codes to declare domestic movement, step by step recovery, socio-economic development, etc. (Average = 3.64; Standard Deviation = 0.94) and “Information related to Directive 12 of the Ho Chi Minh City Party Committee includes: Blockade and control the spread of the epidemic; maintain and expand the safe zone and control the spread of high-risk areas by "separating people from people, families isolating from families", tightening the gates and stations at the gateways to the city. Ho Chi Minh City”.

In addition, when analyzing the correlation and first-order regression between the access to information on the social network Facebook and the level of stress, depression and anxiety of students, it was shown that both groups of information: open society news; State management support and general information were positively correlated with students' levels of Stress, Depression and Anxiety. The model to predict the change of stress level of students at the University of Social Sciences and Humanities, Vietnam National University, Ho Chi Minh City was included in multiple regression analysis with the highest correlation between groups. This information had an impact of 0.542; the level of depression had a value of 0.428; the anxiety level was equal to 0.501 of the students when accessing information related to the pandemic on the social network Facebook.

6. GRATITUDE

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