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THERAPY AREA: OTHER

Lockdown, Social Media exposure regarding COVID-19 and the relation with self-assessment depression and anxiety. Is the medical staff different?

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Abstract

Introduction: Locking the humanity in their homes, COVID-19 forced people to use the technology at hand to keep informed about the outbreak and to keep close to their loved ones. During this time, even if physical health is theoretically unaffected, keeping calm and sane can be challenging. The aim of this research was to evaluate whether exposure to COVID-19 information available in the digital space has a different impact on the mental condition of Romanian medical staff, compared with the general population, particularly searching for depression and anxiety symptoms.

Materials and methods: An online survey was conducted from April 6 to 16, 2020 within the Romanian users of Social Media platforms. The questionnaire assessed depression with the WHO-Five Well-Being Index, anxiety with the Generalised Anxiety Disorder Scale and Social Media exposure by asking how often the respondents saw COVID-19 related information on the most popular Social Media channels in Romania. Information about: gender, age, educational level, occupation, area of living and risk category was also collected. The risk categories were defined as no risk, medium risk and medical staff.

Results: Almost 90% of the 402 participants received daily through at least one Social Media channel information related to the COVID-19 outbreak. Social Media Exposure significantly associated with the risk group only for Facebook and LinkedIn. However, exposure to information regarding COVID-19 was neither associated with anxiety nor depression. No significant association was identified neither between age class and self-assessed anxiety nor self-assessed depression. The self-assessment of depression was significantly more frequent as compared with the self-assessment of anxiety.

Conclusion: The results of this research are opposite to most of the already published literature. Depression and anxiety could not be correlated with the context of lockdown and excessive COVID-19-related information.

1 | INTRODUCTION

SARS-CoV-2 or COVID-19 belongs to the *Coronaviridae* family, the same family as the viruses that cause Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS)

and appear to have similar epidemiological characteristics.⁴ Starting December 2019, COVID-19 infection spread around the world from Wuhan, causing a pandemic. Globally, as of May 1, 2020, there were over 3 million confirmed cases of infection, out of which over 200 thousand passed away. The most affected

countries were Italy, France, Spain, Germany, the United States of America and Iran.⁵

The COVID-19 pandemic is the first pandemic of the digital age. Starting the second half of March 2020, GlobalWebIndex showed that 47% of the people surveyed from 17 countries (namely Australia, Brazil, Canada, China, France, Germany, India, Ireland, Italy, Japan, New Zealand, Philippines, Singapore, South Africa, Spain, United Kingdom, USA) used Social Media, following news channels, news websites, news bulletins, government updates, friends/family, or health organisations not only to keep informed.¹⁰ The widespread sharing of pictures, videos and status updates of those who stayed at home has served to create a sense of unity, as well as normalise the behaviour and encourage compliance.¹⁷

The main topics posted in English by Twitter users from February to March 2020 relating to the COVID-19 pandemic were about: the source, the impact and the methods for decreasing the spread,¹ changing through time synchronous with the development of the outbreak and covering across geographies opinions on the severity of the epidemic, the degree of population aggregation and the level of economic growth.¹²

Age is considered an influencer over some behaviours as almost 20% of people aged below 23 years old acknowledged spending more time on platforms such as esports or creating/uploading videos on services such as YouTube or TikTok.¹⁰ Looking only at YouTube visualisations, the number had tripled, if to compare January to March.² Still, the content of the videos on COVID-19 mentioned the number of deaths, mortality rates, suggesting fear and anxiety.³

During the coronavirus crisis of March-April 2020, 54% of internet users in the United Kingdom and 44% in the United States experienced worsening of their mental health status. Anxiety (43%) and stress (42%) were the key factors affecting online adults' mental health for the worse in both countries. Despite that mental health issues are generally associated with older groups, in times of this crisis, the most vulnerable group reported was aged 23 years old and below (34% vs 21% of 57-64 years old). The crisis impacted women's mental health more so than men's, 50% of women reported feeling worse than before with exacerbation of stress, anxiety, depression and panic compared with 40% of men (Global Web Index).

While the dissemination of the significant risks of the virus to the public is appropriate, excessive disease-related information is likely to cause increased levels of stress, anxiety and worry, and further on, if the quality of information is not reliable, it can lead to confirmation bias or distortion of risk perception. The World Health Organization has recommended minimising exposure to excessive information on COVID-19 to once or twice per day cautioning about the harmful effects of a constant stream of news reports. Even though the relative risk of COVID-19 is low for the individual, the anxiety can cause unnecessary distress that can result in help-seeking behaviour, which may be disproportionate to actual need. This can take the form of inappropriate presentations to emergency departments or general practitioners and demands for COVID-19 testing. These actions strain on an already overwhelmed healthcare system.¹⁷

What's known

Research papers exist about Social Media Exposure and mental health, describing addiction, anxiety, depression, narcissism, neuroticism, eating disorders or bipolar mania. Within the context of COVID-19, there are publications from China, United Kingdom or United States that evaluated depression or anxiety correlated with Social Media Exposure. In Romania, there were two research published partially overlapping the topic: one investigating perceptions and attitudes within the general population and another examining burnout amongst resident doctors.

What's new

The value that this research paper adds is the different views on the matter of mental health status correlated with Social Media Exposure within the context of COVID-19. The results of this paper are opposite to what is already published, creating the context of debate and further investigations. Within the Romanian population, there was not yet published another investigation on the same topics.

As well as the harm that can occur from excessive exposure to accurate information, the COVID-19 pandemic has triggered a fountain of rumors and considerable amounts of false information circulated on Social Media.^{10,14}

A study performed in China during the COVID-19 outbreak showed a high prevalence of mental health problems (anxiety and depression) associated with frequent Social Media exposure.⁹ Social Media supports community surveillance for vulnerable groups,¹⁷ contact tracing, social mobilisation, health promotion, communication with the public and evaluation of public health interventions, but these datasets remain largely inaccessible to researchers and governments.¹⁵

In Romania, the first confirmed case of COVID-19 was registered on February 26. On March 17, the first restrictions were imposed, following curfew on March 24 for 30 days, which further one was prolonged until May 15. Until May 1, 2020, there were confirmed 12,567 cases, with one out of seven cases being a healthcare worker.⁶

With an internet penetration of 80% and having 57% of the Romanian population active on Social Media platforms,⁷ the information received through these channels increased the anxiety amongst the responders of a survey published in April, largely affecting their lives.¹⁹ Half of the responders of the questionnaire issued by the Romanian Institute for Evaluation and Strategy read news about the pandemic through the Internet and Social Media. Out of which, more than two-thirds of the respondents stated that the news on the Internet about the coronavirus pandemic (COVID-19) in Romania is not entirely reliable. Moreover, 13% of respondents

said they did not trust any information found on the internet or social networking sites.¹³

The current study aimed to examine whether there is a difference in the perception of COVID-19 related information received through Social Media by medical staff compared with the general population of Romania, examining two major mental disorders anxiety and depression.

2 | MATERIALS AND METHODS

2.1 | Design and participants

A cross-sectional study was conducted online from April 6 to 16, 2020. The isondaje.ro platform was used for data collection with the option of a one-time fill-in per device connected to the Internet.

The targeted population was the Romanian population, but using an online survey, the available population was limited to Social Media users.⁸

The data were collected using snowball sampling into Social Media users within the Romanian population. The sampling was performed by disseminating a short text message in Romanian that included the link to the questionnaire through Social Media platforms: Facebook (Messenger and Groups), LinkedIn and WhatsApp.

This study has the approval no 158/6 April 2020 of the Ethics Committee of the Iuliu Hațieganu University of Medicine and Pharmacy Cluj-Napoca.

2.2 | Measurements

2.2.1 | Measurement of depression and anxiety

Two major mental disorders—depression and anxiety were assessed in the current study. Depression was assessed by the Romanian version of the WHO-Five Well-Being Index (WHO-5),¹⁸ which consists of five positively worded items that reflect the presence or absence of well-being rather than depressive symptomatology. Participants were asked to report the presence of these positive feelings in the last two weeks on a 6-point scale ranging from all of the time (5 points) to at no time (0 points). A summed score below 13 indicates depression (Psychiatric Research Unit, WHO Collaborating Centre in Mental Health). Anxiety was assessed with the Romanian version of the generalised anxiety disorder scale (GAD-7),¹⁶ which evaluates seven symptoms. Participants were asked how often they were bothered by each symptom during the last two weeks. Response options were “not at all,” “several days,” “more than half the days,” and “nearly every day,” scored as 0, 1, 2 and 3, respectively. A score higher than 10 represents a reasonable cut point for identifying cases of anxiety.

2.2.2 | Social media exposure

Social Media exposure (SME) was measured by asking how often the respondents were exposed during the past week (relative to the time of participation) to news and information about COVID-19 on the most popular Social Media channels in Romania (eg, YouTube, Facebook (including Facebook Messenger), WhatsApp, Instagram, Tweeter, Pinterest, LinkedIn, Skype, Snapchat, TikTok, or Reddit⁸). Response options were: “More than once per day,” “Once per day,” “More than once per week,” “Once per week,” “Never” and “I do not have an account.”

2.2.3 | Covariates

The following covariates were included in this study: gender, age (10-year categories), educational level (eg, high school, bachelor and higher), occupation (eg, students, employed and not employed), area (eg, urban and rural) and risk category. The risk categories were defined based on the self-assessment of the responder as no risk, medium risk and medical staff. The medium-risk category included people who self-defined themselves as: relatives of a medical professional, patients in risk category COVID-19 (age >65 years, heart disease, respiratory disease, diabetes, diseases that compromise the immune system, or with immunosuppressive treatment), belonging of a patient in the risk category COVID-19, a person who had traveled to/from the red or yellow zone during the beginning of the outbreak in Romania and was placed in isolation or quarantine or belonging of a person who has traveled to/from the red or yellow zone during the last month and was placed in isolation or quarantine.

2.2.4 | Data analysis

The respondents were grouped as per the risk of contracting a COVID-19 infection as follows: medical staff (having a direct risk), medium risk (as previously described) and no risk (all subjects who considered themselves outside any of the previously mentioned categories).

For data analysis purposes, responders were grouped in five decade age categories, the first one including all responders aged below 20 and the last one including all responders above the age of 50. The SME was analyzed after reconciling into “Never” (“Never” and “I do not have an account”), “Weekly” (“More than once per week” and “Once per week”) and “Daily” (“More than once per day” and “Once per day”).

Age, the TAG-7 and WHO-5 scores were tested for normality with the Anderson-Darling test and since proved not to follow the normal distribution were reported as median and interquartile range. The differences between groups were tested with the Kruskal-Wallis test. Z-test for proportions was applied to test the difference between the frequency of self-assessed anxiety and self-assessed depression by age class.

Categorical data were reported as absolute and relative values and association with the risk groups were evaluated with the Chi-square test. The association of self-assessed anxiety and depression was evaluated with the McNemar test, and the paired-matched odd ratio with associated 95% confidence interval was reported. Statistica programme (v.13.5, StatSoft) and open-epi were used for statistical analysis. An adjustment of the significance level of 1.7% was used to test differences between risk groups, while a significance level of 5% was applied to test differences between two groups.

3 | RESULTS

In total, 406 participants took part in the survey. After removing the participants who did not complete the form, 404 participants were involved in the current study.

Four hundred and two subjects, age from 17 to 70 years, were included in the study. More participants from the direct risk group had post-graduate studies and more frequent the participants from the indirect or no risk group were students (Table 1).

Regardless of the risk group, almost 90% of participants received daily through at least one Social Media channel information related to the COVID-19 outbreak (93.0% on the group with direct risk, 89.2% on the group with indirect risk and 89.5% on the group with no risk). The SME significantly associated with the risk group only for Facebook and LinkedIn (see Table 2). However, exposure to information regarding COVID-19 on Facebook was neither associated with anxiety ($\chi^2 = 1.6$, $P = 0.4390$) nor with depression ($\chi^2 = 1.4$, $P = 0.4913$). A similar result was also observed for exposure to information regarding COVID-19 on LinkedIn (anxiety: $\chi^2 = 1.0$, $P = 0.6133$; depression: $\chi^2 = 2.6$, $P = 0.2762$).

TABLE 1 Participants' characteristics, self-assessed depression and anxiety per group

Characteristic	All	COVID-19 infection risk			Stat. (P-value)
		Direct (n = 100)	Indirect (n = 93)	No risk (n = 209)	
Gender*					
Male	119 (29.6)	29 (29.0)	21 (22.6)	69 (33.0)	3.4 (.1840)
Female	283 (70.4)	71 (71.0)	72 (77.4)	140 (67.0)	
Age, y**	30 (25 to 38)	30 (28 to 38)	30 (23 to 38)	31 (24 to 37)	3.9 (.1446)
Age class*					
≤20 y	28 (7.0)	1 (1.0)	10 (10.8)	17 (8.1)	17.8 (.0225)
21–30 y	176 (43.8)	52 (52.0)	38 (40.9)	86 (41.1)	
31–40 y	117 (29.1)	25 (25.0)	25 (26.9)	67 (32.1)	
41–50 y	44 (10.9)	16 (16.0)	7 (7.5)	21 (10.0)	
>50 y	37 (9.2)	6 (6.0)	13 (14.0)	18 (8.6)	
Education*					
Up to and including high school	48 (11.9)	3 (3.0)	13 (14.0)	32 (15.3)	18.3 (.0011)
University degree	200 (49.8)	44 (44.0)	45 (48.4)	111 (53.1)	
Postgraduate studies	154 (38.3)	53 (53.0)	35 (37.6)	66 (31.6)	
Area*					
Rural	46 (11.4)	8 (8.0)	8 (8.6)	30 (14.4)	3.7 (.1606)
Urban	356 (88.6)	92 (92.0)	85 (91.4)	179 (85.6)	
Occupation*					
Student	106 (26.4)	15 (15.0)	33 (35.5)	58 (27.8)	18.8 (.0008)
Employee	269 (66.9)	83 (83.0)	51 (54.8)	135 (64.6)	
No current job	27 (6.7)	2 (2.0)	9 (9.7)	16 (7.7)	
Self-rate depression score (DS)					
Median (Q1–Q3)**	15 (11 to 19)	15 (12 to 18)	15 (12 to 18)	16 (11 to 19)	1.9 (.3947)
No. of respondent with DS <13 (%)*	146 (36.3)	34 (34.0)	38 (40.9)	38 (35.4)	1.1 (.5664)
Self-rate anxiety score (AS)					
Median (Q1–Q3)**	4 (2 to 7)	5 (2 to 7)	5 (3 to 8)	4 (1 to 7)	3.2 (.1970)
No. of respondent with AS >10 (%)*	52 (12.9)	14 (14.0)	13 (14.0)	25 (12.0)	0.4 (.8326)

*Data are reported as no (%) and tested by Chi-square test.

**Data are reported as median (Q1 to Q3) – Q1 = first quartile, Q3 = third quartile - and tested by Kruskal-Wallis test.

TABLE 2 Social Media exposure and COVID-19 risk

Characteristic	All	COVID-19 risk			Stat. (P-value)
		Direct (n = 100)	Indirect (n = 93)	No risk (n = 209)	
Facebook					
Never	34 (8.5)	2 (2.0)	4 (4.3)	28 (13.4)	31.9 (<.0001)
Weekly	43 (10.7)	9 (9.0)	1 (1.1)	33 (15.8)	
Daily	325 (80.8)	89 (89.0)	88 (94.6)	148 (70.8)	
YouTube					
Never	120 (29.9)	30 (30.0)	23 (24.7)	67 (32.1)	1.8 (.7688)
Weekly	147 (36.6)	35 (35.0)	37 (39.8)	75 (35.9)	
Daily	135 (33.6)	35 (35.0)	33 (35.5)	67 (32.1)	
WhatsApp					
Never	99 (24.6)	27 (27.0)	24 (25.8)	48 (23.0)	1.2 (.8753)
Weekly	127 (31.6)	28 (28.0)	29 (31.2)	70 (33.5)	
Daily	176 (43.8)	45 (45.0)	40 (43.0)	91 (43.5)	
Instagram					
Never	232 (57.7)	69 (69.0)	47 (50.5)	116 (55.5)	7.8 (.0975)
Weekly	77 (19.2)	13 (13.0)	22 (23.7)	42 (20.1)	
Daily	93 (23.1)	18 (18.0)	24 (25.8)	51 (24.4)	
Tweeter					
Never	370 (92.0)	94 (94.0)	87 (93.5)	189 (90.4)	3.3 (.5023)
Weekly	14 (3.5)	4 (4.0)	3 (3.2)	7 (3.3)	
Daily	18 (4.5)	2 (2.0)	3 (3.2)	13 (6.2)	
Pinterest					
Never	371 (92.3)	96 (96.0)	86 (92.5)	189 (90.4)	4.7 (.3234)
Weekly	21 (5.2)	4 (4.0)	5 (5.4)	12 (5.7)	
Daily	10 (2.5)	0 (0.0)	2 (2.2)	8 (3.8)	
LinkedIn					
Never	307 (76.4)	63 (63.0)	72 (77.4)	172 (82.3)	16.6 (.0023)
Weekly	66 (16.4)	25 (25.0)	12 (12.9)	29 (13.9)	
Daily	29 (7.2)	12 (12.0)	9 (9.7)	8 (3.8)	
Skype					
Never	355 (88.3)	87 (87.0)	83 (89.2)	185 (88.5)	0.9 (.9315)
Weekly	23 (5.7)	6 (6.0)	4 (4.3)	13 (6.2)	
Daily	24 (6.0)	7 (7.0)	6 (6.5)	11 (5.3)	
Snapchat					
Never	370 (92)	94 (94.0)	82 (88.2)	194 (92.8)	5.9 (.2080)
Weekly	16 (4.0)	5 (5.0)	4 (4.3)	7 (3.3)	
Daily	16 (4.0)	1 (1.0)	7 (7.5)	8 (3.8)	
TikTok					
Never	347 (86.3)	84 (84.0)	82 (88.2)	181 (86.6)	5.1 (.2763)
Weekly	26 (6.5)	5 (5.0)	4 (4.3)	17 (8.1)	
Daily	29 (7.2)	11 (11.0)	7 (7.5)	11 (5.3)	
Reddit					
Never	377 (93.8)	93 (93.0)	83 (89.2)	201 (96.2)	6.7 (.1509)
Weekly	12 (3.0)	3 (3.0)	6 (6.5)	3 (1.4)	
Daily	13 (3.2)	4 (4.0)	4 (4.3)	5 (2.4)	

Note: Data are expressed as no (%) and the association was tested with the chi-square test.

No significant association was identified neither between age class and self-assessed anxiety ($\chi^2 = 2.6$, $P = 0.6227$) nor between age class and self-assessed depression ($\chi^2 = 1.7$, $P = 0.7870$).

The self-assessment of depression was significantly more frequent as compared with the self-assessment of anxiety excepting the extreme classes of age (Figure 1, ≤ 20 years and > 50 years).

A strong association has been identified between self-reported depression and anxiety regardless of the group of risk (Table 3).

The self-assessment of depression and anxiety was similar to the groups with different occupations (Chi-square test $P > .20$, Table 4).

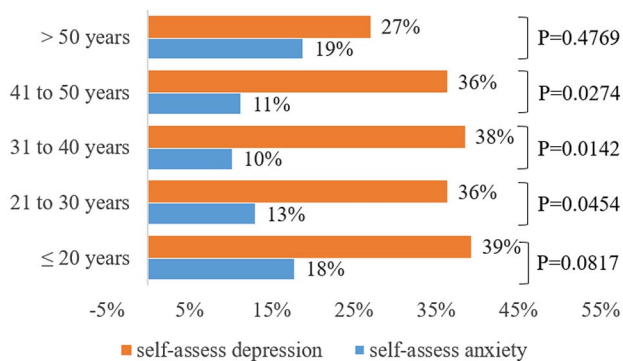


FIGURE 1 Self-assessment of depression and anxiety by age groups

4 | DISCUSSION

Neither anxiety nor depression could be associated with daily exposure to COVID-19 information of 90% of the participants in this survey.

Across the globe, people spent more time than before on Social Media¹⁰ sharing pictures, videos and status updates,¹⁷ but during a crisis, public opinion is volatile and vulnerable to external influences.¹

Almost 90% of participants in this survey received daily COVID-19 related information through a minimum of one Social Media platform (Table 2), which might have helped in normalising the behaviour and encourage compliance.^{15,17} World Health Organization recommended the minimisation of SME to information on COVID-19. These platforms are not considered a trustworthy source of information because of their inability to convey fact-checked content nor filter “fake news”.^{10,14,17} Not promoting prevention behaviours, Social Media influences rational thinking and allies unrealistic or excessive fears that may lead to maladaptive, socially irresponsible behaviours.^{3,9}

Even though excessive disease-related information was shown to increase the levels of anxiety and depression in populations in China,⁹ the United Kingdom and United States,¹⁷ this was not the case with the responders of this questionnaire. Specifically, neither anxiety nor depression was associated with exposure to COVID-19 information on Facebook or LinkedIn. Younger Romanian population, mostly university students that answered a questionnaire at the beginning of the outbreak in Romania¹⁹ (in March) follow the

Number of subjects with	COVID-19 risk		
	Direct (n = 100)	Indirect (n = 93)	No risk (n = 209)
Depression and anxiety	11	12	23
No depression and no anxiety	63	54	133
Depression and no anxiety	23	26	51
No depression and anxiety	3	1	2
OR [95% CI]	15.4 (<0.0001)	23.2 (<0.0001)	45.3 (<0.0001)
McNemar test (P-value)	7.7 [2.3 to 25.5]	26 [3.5 to 191.6]	25.5 [6.2 to 104.7]

Note: 95% CI, lower and upper bound of the 95% confidence interval for the pair-matched odds ratio.

TABLE 3 Self-assessment of depression and anxiety by the risk group

Characteristic	COVID-19 risk			Stat. (P-value)
	Direct	Indirect	No risk	
Self-assessed anxiety				
Student (n = 106)	4 (26.7)	3 (9.1)	7 (12.1)	2.9 (.2318)
Employee (n = 269)	10 (12.0)	42 (17.6)	14 (10.4)	1.9 (.3825)
No current job (n = 27)	0 (0.0)	1 (11.1)	4 (25.0)	2.3 (.3650)
Self-assessed depression				
Student	6 (40.0)	12 (36.4)	21 (36.2)	0.1 (.9620)
Employee	28 (33.7)	24 (47.1)	47 (34.8)	2.9 (.2379)
No current job	0 (0.0)	2 (22.2)	6 (37.5)	2.0 (.5344)

TABLE 4 Association between occupation and self-assessed anxiety and depression

international trend, in contrast with the participants of this research, mostly holding already a university degree. This emphasises the fact that age is an influencer over Social Media behaviours.¹⁰

Furthermore, age is an influencer of mental health¹¹ status also. In contrast, the results of this paper show no direct association between age and self-assessed anxiety ($P > 0.6$) nor between age class and self-assessed depression ($P > 0.7$).

Non-pandemic related research generally highlighted that mental health conditions raised with age. In times of lockdown and social isolation, the most vulnerable group are the youngsters. This trend can be observed through the Romanian population depicted through this research as almost 4 in 10 participants from the ≤ 20 years age group self-assess as depressed and 2 in 10 self-report signs of anxiety, while in the age group ≥ 50 years only 2 in 10 report signs of depression. Through the other age groups, the responders assessed themselves more as depressive than anxious (see Table 3).

Through the clustering of the participants in three groups as per their risk of infection with COVID-19, it is notable that more participants from the direct risk group possess post-graduate diplomas and the responders from the two other groups were mostly students (Table 1). Despite this fact, the self-assessment of depression and anxiety showed similar results, irrespective of occupation or education ($P > .20$, Table 4).

4.1 | Study limitations

The advantage of the online survey is the low cost, requiring only an Internet connection, but at the same time, this has disadvantages. First, access to online surveys limits the available population to the population that has access to the Internet. In the case of this paper, the available population is narrowed even more to the population that has access to a limited number of Social Media platforms (Facebook, LinkedIn, WhatsApp) where the questionnaire was disseminated. This provides the possibility of evaluating what might be an unrepresentative sample of the target population. Second, filling in an online questionnaire is an impersonal action, triggering a low response rate. Third, if the respondents do not understand the questions, their answers will not be valid.²⁰

4.2 | Importance in practice

The results of our study were in contrast with most of the already published literature. Depression and anxiety could not be correlated with the context of lockdown and excessive COVID-19-related information through the Romanian population. At this time of social distancing and isolation, Social Media is an invaluable tool for keeping in touch with friends, loved ones and the world, and it is important to be mindful of how SME influences the state of mind. If spending time on Social Media exacerbates anxiety or depression, taking steps to limit engagement can be helpful. Furthermore, constant validation of the sources of information,

before believing or sharing any rumors can be beneficial not only for the individual but also for the virtual community surrounding the individual.

5 | CONCLUSION

The results of this research are opposite to most of the already published literature. Depression and anxiety could not be correlated with the context of lockdown and excessive COVID-19-related information.


DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, AAC, upon reasonable request.

DISCLOSURE

No conflict of interest has been declared by the authors.

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REFERENCES

1. Abd-Alrazaq A, Alhuwail D, Househ M, Hamdi M, Shah Z. Top Concerns of tweeters during the COVID-19 pandemic: infoveillance study. *J Med Internet Res*. 2020;22(4):e19016. <https://doi.org/10.2196/19016>
2. Basch C, Basch C, Hillyer G, Jaime C. The role of Youtube and the entertainment industry in saving lives by educating and mobilizing the public to adopt behaviors for community mitigation of COVID-19: successive sampling design study. *JMIR Public Health Surveill*. 2020;6(2):e19145. <https://doi.org/10.2196/19145>
3. Basch C, Hillyer G, Meleo-Erwin Z, Jaime C, Mohlman J, Basch C. Preventive behaviors conveyed on Youtube to mitigate transmission of COVID-19: cross-sectional study. *JMIR Public Health Surveill*. 2020;6(2):e18807. <https://doi.org/10.2196/18807>
4. Centrul National de Supraveghere si Control al Bolilor Transmisibile. Covid 19 Raport saptamanal de supraveghere. 2020. <https://www.cnscbt.ro/index.php/analiza-cazuri-confirmate-covid19/1710-raport-saptamanal-episaptamana17/file>. Accessed May 5, 2020
5. Centrul National de Supraveghere si Control al Bolilor Transmisibile. Infectii cu coronavirus (COVID-19) – 1.05.2020 ora 9:00. 2020. <https://www.cnscbt.ro/index.php/situatia-la-nivel-global-actualelizata-zilnic/1702-situatie-infectii-coronavirus-covid-19-1-05-2020/file>. Accessed May 5, 2020
6. Centrul Național de Supraveghere și Control al Bolilor Transmisibile. (2020). Întrebări și răspunsuri despre noul coronavirus (SARS-CoV-2). <http://www.cnscbt.ro/index.php/informatii-pentru-populatie/1350-intrebari-si-raspunsuri-despre-noul-coronavirus-2019-ncov/file>. Accessed April 1, 2020.
7. DataReportal – Global Digital Insights. DIGITAL 2020: ROMANIA. 2020. <https://datareportal.com/reports/digital-2020-romania>. Accessed June 20, 2020
8. DIGITAL 2020: ROMANIA. 2020. https://datareportal.com/reports/digital-2020-romania?fbclid=IwAR13uJsAJ9puzvgsdh5Gls6CSTjU2qdvFvI2KlKmuU9B_zLpqtH6xRzS5O0Q. Accessed Apr 29, 2020.
9. Gao J, Zheng P, Jia Y, et al. Mental health problems and social media exposure during COVID-19 outbreak. *PLoS One*. 2020;15(4):e0231924. <https://doi.org/10.1371/journal.pone.0231924>

10. Global Web Index. GWI. Coronavirus Research. Multi-market research wave 2. 2020. [https://www.globalwebindex.com/hubfs/1.%20Coronavirus%20Research%20PDFs/GWI%20coronavirus%20findings%20April%202020%20-%20Multi-Market%20Research%20\(Release%205\).pdf](https://www.globalwebindex.com/hubfs/1.%20Coronavirus%20Research%20PDFs/GWI%20coronavirus%20findings%20April%202020%20-%20Multi-Market%20Research%20(Release%205).pdf). Accessed May 5, 2020
11. Global Web Index. Coronavirus Research. Series 8: Health. n.d. [https://www.globalwebindex.com/hubfs/1.%20Coronavirus%20Research%20PDFs/GWI%20coronavirus%20findings%20April%202020%20-%20Health%20\(Release%208\).pdf](https://www.globalwebindex.com/hubfs/1.%20Coronavirus%20Research%20PDFs/GWI%20coronavirus%20findings%20April%202020%20-%20Health%20(Release%208).pdf). Accessed May 5, 2020.
12. Han X, Wang J, Zhang M, Wang X. Using social media to mine and analyze public opinion related to COVID-19 in China. *Int J Environ Res Public Health*. 2020;17(8):e2788. <https://doi.org/10.3390/ijerph17082788>
13. Institutul Român pentru Evaluare și Strategie. STUDIU NAȚIONAL - Partea I Atitudini și comportamente ale românilor în perioada pandemiei. 2020. https://ires.ro/uploads/articole/ires_rom%2082nia-st%204%82-acas%204%82_studiu-na%20c8%9aional_partea-i_25.03.2020.pdf. Accessed May 20, 2020
14. Larson H. Blocking information on COVID-19 can fuel the spread of misinformation. *Nature*. 2020;580(7803):306. <https://doi.org/10.1038/d41586-020-00920-w>
15. McKendry R, Rees G, Cox I, et al. Share mobile and social-media data to curb COVID-19. *Nature*. 2020;580(7801):29. <https://doi.org/10.1038/d41586-020-00908-6>
16. MINISTERUL SĂNĂTĂȚII AL REPUBLICII MOLDOVA. Tulburările de anxietate. 2017. http://89.32.227.76/_files/15439-PCN%2520-278%2520Tulburari%2520de%2520anxietate%2520la%2520adult.pdf. Accessed April 1, 2020.
17. O'Brien M, Moore K, McNicholas F. Social media spreading during COVID-19: the pros and cons of likes and shares. *Ir Med J*. 2020;113(4):52.
18. Psychiatric Research Unit. WHO Collaborating Centre in Mental Health. Chestionarul OMS al celor 5 criterii de apreciere a stării de bine. n.d. https://www.psykiatri-regionh.dk/who-5/Documents/WHO5_Romanian.pdf. Accessed April 1, 2020.
19. Rus M, Sandu L, Tanase T. Covid-19 crisis in Romania - between perception and attitude. *Tech Soc Sci J*. 2020;6(1):69-87.
20. Wright K. Researching internet-based populations: advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *J Comp Med Commun*. 2005;10. [https://doi.org/10.1111/j.1083-6101.2005.tb00259.x\(3\)](https://doi.org/10.1111/j.1083-6101.2005.tb00259.x(3))

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