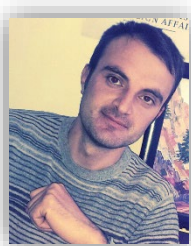


IMPACT OF SOCIAL MEDIA DISINFORMATION AND OF FAKE NEWS OVEREXPOSURE ON THE ACTUAL CAPACITIES AND THE PSYCHOLOGICAL WELLBEING DURING THE COVID-19 PANDEMIC: A SYSTEMIC LITERATURE REVIEW



Alfred Nela

M.Sc., Psychologist (Tirana, Albania)

Email: alfrednela85@gmail.com

ORCID: [0000-0002-0031-3838](https://orcid.org/0000-0002-0031-3838)



Etion Parruca

M.A., Certified Positive Psychotherapist (Mainz, Germany)

Email: etion.parruca@gmail.com | <https://positum-mgs.org>

ORCID: [0000-0003-3915-7278](https://orcid.org/0000-0003-3915-7278)

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Abstract

Massive spread of misinformation over social media during the COVID-19 pandemic has negatively impacted the mental health of populations. Social media are among the cheapest and most quickly accessible information sources for a large section of the public, in search of news that is reliable, true, precise and based on conscientious editing. From a Positive Transcultural Psychotherapy (PPT) viewpoint, these secondary capacities – reliability, honesty, precision and conscientiousness – are among other psychosocial norms that sustain psychological well-being, including primary capacities such as time, trust, hope, security and doubt. Also, from a PPT perspective, the energy and time spent by a person in online spaces and activities affects the well-being in the four life dimensions, while those primary capacities (and emotional needs) remain at the basis of emotional well-being. The research employed the systematic review of literature in several open-access scholarly websites from February 2020 to March 2022. The paper reviews the existing research on how disinformation and excess time in fake news spread over social media has the potential to corrode the abovementioned actual capacities, trigger negative emotions, mislead the public in undertaking wrong decisions for their health and well-being, and constitute a serious threat to both public health and social order, as well as to individuals' sense of security.

Keywords: COVID-19, psychological well-being, mental health, positive psychotherapy, actual capacities, life dimensions, social media, fake news, disinformation, conspiracy theories

“Beautify your tongues ... with truthfulness, and adorn your souls with the ornament of honesty.... Trustworthiness is the greatest portal leading unto the tranquility and security of the people.”

- Bahá'u'lláh

Introduction

Truthfulness or honesty, and trustworthiness or reliability, as synonymous actual secondary capacities, together with trust, hope, doubt and certitude as actual primary capacities, are among key psychosocial norms that are prerequisites of mental health and a balanced well-being (Peseschkian, 1987). Peseschkian continues explaining that the secondary and primary capacities function as both “weapon” and “shield”. These functions depend on their improper or proper use in relationship and interaction with the social milieu – the social environment where people interact and deliberate. They may trigger fear, insecurity, sadness, anger, hopelessness, and powerlessness in the short term, and anxiety disorders and depression in the long term, including psychosomatic reactions and disorders (Peseschkian, 2013). Currently, in the internet age, the social milieu also finds significant expression in the social media and on-line networks.

Unfortunately, in addition to being a space for information and connection, social media has served as a terrain for the spreading of both small-scale and large-scale campaigns of fake and deceptive news, including gossip, misinformation, disinformation and even conspiracy theories since the onset of the SARS-COV-2 and the resulting COVID-19 pandemic. According to Pozios, “fake or misleading news is intended to manipulate public opinion; it is formulated to provoke an emotional response from a reader or viewer; is often provocative in nature and can cause feelings of anger, doubt, anxiety and even depression by distorting our thinking” (Erdelyi, 2020). The amount of information and its quality being absorbed during individual online searching, often with insufficient checking of alternative and more reliable, truthful and precise news distributed by conscientious public or private news media, constituted, and still constitutes, a significant portion of the time and energy spent in the life-dimensions of future (fantasy, meaning) and contact (social relations), as people try to make

sense of what is happening in the world, what future predicts, and what potential hazards are laying there.

In a study conducted during the 2019 earthquakes that affected western Albania, and related to fake news and disinformation in the country, where online media were monitored between January and November 2019, some 132 fake news were deemed as problematic (IDMC, 2019). Since quarantine measures were adopted by the Albanian Government in mid-March 2020, considerable fake news, pictures and videos circulated in the networks, by being widely spread on the social media. They contained information on how to heal oneself from the virus infection with home ingredients only, such as garlic, schnapps, paracetamol (Hasanalaj, 2020). This type and other types of disinformation have led to confusion and insecurity, and even distrust in medical expertise and advice.

The paper looks at how navigation over social media has negatively impacted the mental health and psychological well-being of consumers of fake and deceptive news, disinformation and conspiracy theories in many countries. Different studies covering countries and regions were considered for links or correlations between misinformation, emotional and mental states provoked by such news over social media, and the effects on the general psychological well-being.

Methodology

Systematic review of literature was adopted, realized on the open-access databases, including ScienceDirect, PubMed and Google Scholar, from January 2020 through February 2022. To avoid any misunderstandings and prejudices, the study followed the structure based on the guidelines of the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA 2021).

2.1. Research strategy

The study followed several steps by identifying articles with the following search items: “panic and mental health”, “social media and fake news”, “disinformation and psychological distress”, “COVID-19 and stress”, “conspiracy theories and depression”, and “SARS-CoV-2 and anxiety”.

Results

13 research articles were included, based on most appropriate selective criteria. The search strategy flowchart is demonstrated in Figure 1:

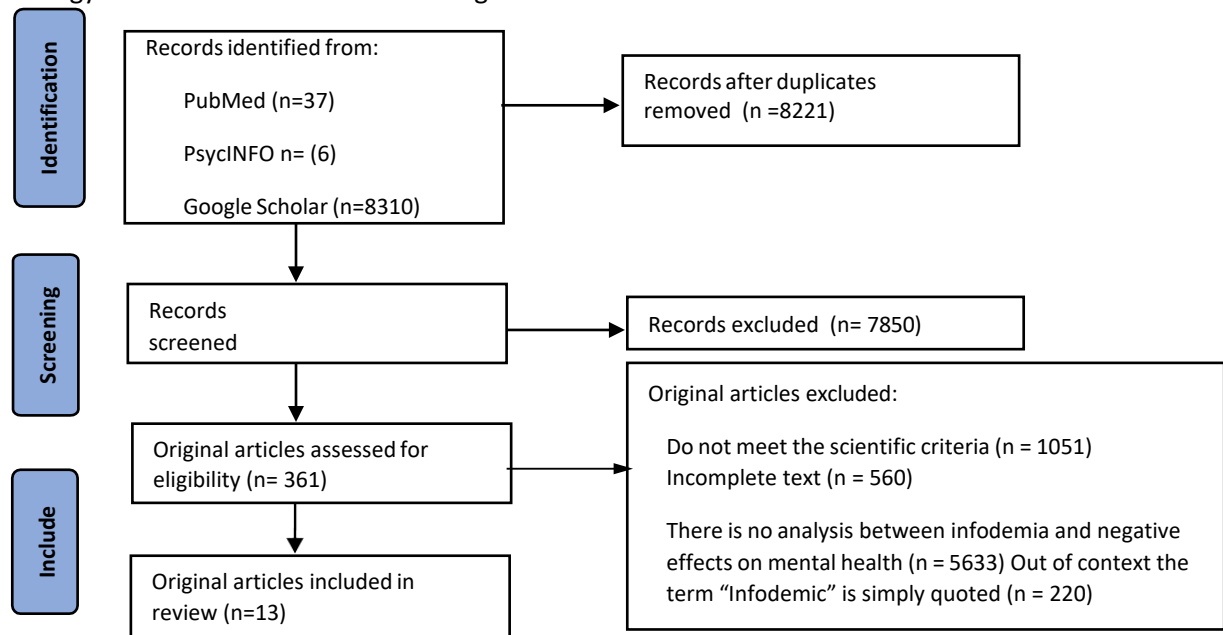


Figure 1. Search strategy flowchart

3.1. Study features

In the selected scientific articles, seven of them used inter-sectional methods, three applied quantitative methods, and two employed the systematic literature review. The total number of the champion is around 1,7 million participants,

aged ≥ 10 and spread over 45 countries. Also, three study reports spread over 35 countries with more than 2520 participants over 18 years old and eight media articles were included. The data from the original research articles are summarized in Table 1.

Table 1

Original Research articles

Year	Data source	Type of article	Sample size	Age of participants	Findings/results	Place/s	Article Metrics
2020	Science Advances	A cross-sectional study	35000	≥ 18 years	Exposure to daily news related to COVID-19, could manifest acute stress and depressive symptoms, in people with previous aggravated mental and physical condition.	USA	241 readers on Mendeley
2020	PLoS ONE	A cross-sectional study	4872	≥ 18 years	The prevalence of depression and anxiety increased due to the long stay on social media.	China	2793 readers on Mendeley
2020	Sage Journal	A cross-sectional study	Three studies (total number =806)	≥ 18 years	COVID-19, believed to be a hoax and was man-made.	USA. UK	365 readers on Mendeley
2020	Journal of Medical Internet Research	Quantitative survey	516	18-35 years	75%, responded that social media has a significant impact on the spread of fear, anxiety and panic.	Kurdistan of Iraq	1041 readers on Mendeley

Year	Data source	Type of article	Sample size	Age of participants	Findings/results	Place/s	Article Metrics
2020	British Journal of Health Psychology	Cross-Sectional Study	501	≥18 years	34% reported positive correlation between exposure to social media news and depressive symptoms.	USA	287 readers on Mendeley
2021	Front Psychiatry	Quantitative survey	1483	≥18 years	Excessive exposure to pandemic-related media was a predictor of acute stress.	China	46 readers on Mendeley
2021	Springer Link	A systematic review	14 studies (total number = 571729)	≥18 years	36% of the authors reported that exposure to infodemic information generated fear, panic, depression, stress and anxiety.	Palestine, Spain, India, Bangladesh, Iraq, Mexico, USA, UK, Ireland, Jordan, China, South Africa, Poland, Romania	66 readers on Mendeley
2021	Front in Psychology	Quantitative survey	3123	≥18 years	Presence of anxiety in students who navigated longer on social media.	Shanghai	176 readers on Mendeley
2021	Int. J. Environ. Res. Public Health	Quantitative survey	3621	18 and 63 years,	1/3, reported difficulties in selecting information that was important to them.	Slovenia	90 readers on Mendeley
2022	Journal of Medical Internet Research	Cross-National Survey	10063	≥18 years	Perceived information overload on social media tended to increase psychological concerns.	Hong Kong, Taiwan, Japan, South Korea, Singapore, and Thailand	4 readers on Mendeley
2022	Elsevier B.V.	Cross-Sectional Study	1102	from 18 to 84 years	People who stayed longer on social media were 93.3% more likely to develop depressive symptoms.	Paraguay	29 readers on Mendeley
2022	Journal of Multidisciplinary Healthcare	A Cross-Sectional Study	993	≥18 years	49% reported poor psychological well-being as a result of long navigation on social networks.	Saudi Arabia, Lebanon, Egypt, Canada, Europe, Australia, USA.	13 readers on Mendeley
2022	ScienceDirect	A systematic review	13 studies (total number=760474)	From 10 to 24 years	Misinformation and low trust of information on social media affect the deterioration of mental health.	USA, China, Iraq, Palestine, Egypt, Canada, Brazil.	21 readers on Mendeley

3.2. The spread of COVID-19-related disinformation and conspiracy theories over social media

During the COVID-19 pandemic, Albanian government services were transferred to government online portals, and educational

institutions began to use digital platforms. According to an Albania study report, about 81% of households reported having a smartphone, and confirmed that 82% of Albanian households had internet access (World Vision Albania, 2020). In Albania, the average monthly consumption per

active user of mobile internet services in 2020, increased by 12.4%, compared to the fourth quarter of 2019, and during the first quarter of 2021, the amount of internet traffic increased by 15.5% compared to the fourth quarter of 2020. A study conducted during the earthquake period for fake news and misinformation in Albania by the Institute for Democracy, Media and Culture (2019), where the online media were monitored, in the period from January 2019 to November 2019, have identified 132 fake news items considered problematic. According to data analyzed by BIRN through "Crowdtangle", an application on Facebook, a public activist who opposes vaccination and spreads conspiracy theories has appeared in more than 700 news or videos posted on Facebook by Albanian media on the topic of "COVID-19 vaccines". The videos have generated more than 2.95 million views and the posts more than 85 thousand interactions on the most popular social network in the country (Likmeta, 2021). The Media Literacy Index (2021), which addresses issues of media education, vulnerability to fake news and misinformation, ranks Albania 33rd with 22 points, Bosnia and Herzegovina 34th with 19 points and Northern Macedonia 35th with 15 points. Analysis of a sample of 38 million English-language media reports, through Cision's Next Generation Communications Cloud (2020) platform, from 1 January to 25 May 2020, shows that over 1.1 million individual articles were disinformation about COVID-19. NewsGuard Technologies (2022), an American company that checks news sites and their authenticity, has focused in particular on information circulating on COVID-19 and vaccination during the pandemic. The network has identified 547 websites that published disinformation about COVID-19 in countries such as the United States of America, United Kingdom, Canada, France, Germany and Italy. A cross-sectional survey conducted with 3621 students in Slovenia (2022) showed that, although the level of digital health education among students is sufficient, assessing the reliability of information remains problematic for half of the study participants. (Vrdelja et al., 2022). In a 2021 survey, about 80% of the Balkan's population believed in conspiracy theories. Nearly 59.4% of Albania's residents and 41.5% of Serbian residents believed in conspiracy theories (Çela, 2021).

3.3. Psychological effects of social media during the COVID-19 pandemic

An online survey distributed between June-July 2020 through various social media platforms in the United Arab Emirates and other Arabic-speaking countries, concluded that 49% of the participants reported poor well-being. Low trust in information about COVID-19, long stay on social networks and poor knowledge in general, were associated with deterioration of psychological well-being (Elbarazi, et al., 2022). According to a study conducted at the University of California, people with a previous severe mental and physical condition, after exposure to daily news related to COVID-19, were more likely to exhibit acute stress and depressive symptoms (Holman et al., 2020). Moreover, cross-sectional data collected from the University of Illinois, Chicago, found positive correlations between exposure to COVID-19 news and depressive symptoms in 34% of participants (Olagoke et al 2020). Based on a systematic review of the literature which reviewed 14 studies, the results showed that 36% of authors reported that exposure to disinformation on social media generates fear, panic, depression and stress (Rocha, et al., 2021). A study in China, revealed that the prevalence of depression and anxiety increased due to frequent follow-up to social media (Gao et al., 2020). Similar findings were reflected in another Chinese study, which revealed that overexposure to pandemic-related media was a predictor of acute stress (He et al., 2020). TikTok's popularity grew rapidly at the onset of COVID-19 pandemic, rising up to 180% among users aged 15-25 by 2020. During this time period, the Kaiser Foundation reported an increase in mental health concerns: approximately four in 10 adults in the United States reported symptoms of anxiety or depressive disorder (Wood, 2021). In a study reporting on health workers in Egypt and Saudi Arabia, a link was found between exposure to news about COVID-19, for at least two hours a day, and symptoms of depression, anxiety, stress, and sleep disturbances (Arafa et al., 2021). According to an online survey conducted in Iraqi Kurdistan, 75.7% of participants reported that social media has an impact on spreading fear, anxiety and panic during the outbreak of the COVID-19 pandemic. A study conducted with students at the University of Shanghai, concluded that the part that used the most social media during the COVID-19 pandemic, had the highest presence of anxiety symptoms (Jiang, 2021). According to a systematic analysis based on 13 studies, the findings revealed that disinformation and low trust in information about coronavirus published on social media, affects the

worsening of mental health (Strasser et al., 2022). An international survey conducted with 10,063 participants over the age of 18 in six Asian jurisdictions, found that perceived information overload on social media tended to increase psychological concerns and people with higher economic status were more vulnerable to problems of mental health (Chen, 2022). A descriptive and cross-sectional study conducted in Paraguay with 1102 participants surveyed aged 18-84, concluded that people who stayed long while navigating around the COVID-19 news were 93.3% more likely to develop depressive symptoms (Torales et al., 2022).

Conclusions

The use of social media during the COVID-19 pandemic increased significantly, especially in the adult age group. The Balkan region, including Albania, ranks among the lowest levels of media education and is vulnerable to false news and misinformation. Research findings indicated that prolonged exposure to fake news over social media has effects on the onset of psychological symptoms and disorders, such as depression, anxiety, stress, fear and insomnia. The data adopted in this paper indicate that the large amount of unchecked and unprofessional information in the form of disinformation, fake news and conspiracy theories has created panic and negatively affected the psychological well-being, especially of vulnerable groups among the populations. In Albania there are no genuine studies on the impact of social media and especially misinformation on mental health, but according to statements and media reports, the large amount of information with false news, misinformation and misunderstandings has affected the psychological well-being of the population. Although several studies have been conducted on the effects of disinformation on mental health, the number of researches is still limited both in time and geography. Globally, the cited studies mainly focus on the age group over 18 years and the two-year time segment. The findings of the cited research indicate that fake news, disinformation and conspiracy theories, being spread over the social media and networks, during the COVID-19 pandemic, have negatively impacted the psychological well-being of populations, by directly affecting in a harmful way the life-dimension of future, fantasy and meaning, as more fear of the present and future, resulting in anxiety

and panic, as well as more psychological distress and depression. From a Positive Transcultural Psychotherapy perspective, the effects were harmful because the expectations of the public that the social media display the secondary capacities – social norms – of truthfulness, honesty, reliability, precision and conscientiousness, were not generally met. If they had been met, they would have strengthened the individual emotional domain, by “shielding” the primary capacities of security, safety, trust and hope. The latter are prerequisites to good mental health and a balanced well-being. Instead, misinformation over social media has led to their inadequate differentiation, and thus, caused them to become conflict potentials. Furthermore, based on the research cited, there is still no conclusive and longitudinal explanation for the long-term negative effects of social media during epidemics and pandemics. Finally, it is suggested that individuals take a more balanced approach when navigating social media, by consulting with multiple sources of information, diverse media platforms, and enlarging their contact in the life-dimension of relationships, as activities and areas of expanded and reliable information, in order to promote better mental health. It is necessary for the competent bodies to develop strategies on how information related to health should be reliable, available, understandable and accessible especially for vulnerable social groups. Governments and social media management should exercise more conscientiousness, as well as greater oversight and a moderating role in social media content, in order to ensure that true, reliable, and precise information is accessible both on-line and off-line.

References

- [1] AHMAD, A.R., MURAD, H.R. (2020). The Impact of Social Media on Panic During the COVID-19 Pandemic in Iraqi Kurdistan: Online Questionnaire Study. *Journal of Medical Internet Research*, 22(5), 1. <https://doi:10.2196/19556>
- [2] BAHÁ'U'LLAH (1988). *Tablets of Bahá'u'lláh revealed after the Kitáb-i-Akdas*, 4. US Bahá'í Publishing Trust.
 - a. _____. Gleanings from the Writings of Bahá'u'lláh. 136.
 - b. <https://www.bahai.org/library/authoritative-texts/bahauallah/gleanings-writings-bahauallah/1#529444114> [accessed: 15 November 2022]
- [3] CHEN, X., LIN F., CHENG, E. W. (2022). Stratified Impacts of the Infodemic During the COVID-19 Pandemic: Cross-sectional Survey in 6 Asian Jurisdictions. *Journal of Medical Internet Research*, 24, 6. <https://doi:10.2196/31088>
- [4] ÇELA, E. (2021). *COVID-19: Addressing the impact of*

- disinformation and conspiracy theories through education on media and information* [Covid-19: Adresimi i ndikimit të dezinformacioneve dhe teorieve konspirative përmes edukimit mbi median dhe informacionin] [in Albanian] URL: <https://www.institutemedia.org/wp-content/uploads/2021/11/Cela-Covid-Final-me-ISBN-1.pdf> [accessed: 15 November 2022].
- [5] **ELBARAZI, I., SADDIK, B., GRIVNA, M., AZIZ, F., ELORI, D., STIP, E., BENDAK, E.** (2022). The Impact of the COVID-19 "Infodemic" on Well-Being: A Cross-Sectional Study. *Journal of Multidisciplinary Healthcare*, 15, 293. <https://doi.org/10.2147/JMDH.S346930> [accessed: 15 November 2022]
- [6] **EVANEGA, S., LYNAS, M., ADAMS, J., SMOLENYAK, K.** (2020). Coronavirus misinformation: quantifying sources and themes in the COVID-19 'infodemic' 3. URL: https://allianceforscience.org/wp-content/uploads/2020/10/Evanega-et-al-Coronavirus-misinformation-submitted_07_23_20-1.pdf [accessed: 15 November 2022]
- [7] **ERDELYI, K. M.** (2020). The Psychological Impact of Information Warfare & Fake News. *PSYCOM*. URL: <https://www.psycom.net/iwar.1.html> [accessed: 15 November 2022]
- [8] **GAO, J., ZHENG, P., JIA, Y., CHEN, H., MAO, Y., CHEN, S., WANG, Y., FU, H., DAI, J.** (2020). Mental health problems and social media exposure during COVID-19 outbreak. *PLoS ONE*, 15, 3-5. <https://doi.org/10.1371/journal.pone.0231924>
- [9] **HE, X., ZHANG, Y., CHEN, M., ZHANG, J., ZOU, W., LUO, Y.** (2020). Media exposure to COVID-19 predicted acute stress: a moderated mediation model of intolerance of uncertainty and perceived social support. *Front Psychiatry*, pp. 5-8. <https://doi.org/10.3389/fpsy.2020.613368>
- [10] **HASANALIAJ, I.** (2020). *The Fake News that Circulated the most about COVID-19*, [Lajmet e rreme që qarkulluan më shumë për COVID-19]. *Faktoje.al*. [in Albanian] URL: <https://faktoje.al/lajmet-e-rreme-qe-qarkulluan-me-shume-per-covid-19/> [accessed: 15 November 2022]
- [11] **HOLMAN, E. A., THOMPSON, R.R., GARFIN, D. R., SILVER, R. C.** (2020). The unfolding COVID-19 pandemic: A probability-based, nationally representative study of mental health in the United States. *Science Advances*, 6, (42), pp. 2-3. DOI: [10.1126/sciadv.abd53901](https://doi.org/10.1126/sciadv.abd53901)
- [12] **JIANG, Y.** (2021). Problematic Social Media Usage and Anxiety Among University Students During the COVID-19 Pandemic: The Mediating Role of Psychological Capital and the Moderating Role of Academic Burnout. *Front in Psychology*, No. 12, 6. DOI: <https://doi.org/10.3389/fpsyg.2021.612007>
- [13] **LIKMETA, B.** (2021). *Televisions Spread the 'red carpet' to Conspiracy Theories against Vaccines*. [Televizionet i shtruan 'tapetin e kuq' teorieve konspirative]. *Reporter.al*. [in Albanian] URL: <https://www.reporter.al/2021/09/14/televizionet-i-shtruan-tapetin-e-kuq-teorive-konspirative-kunder-vaksinave/> [accessed: 15 November 2022]
- [14] **LESSENSKI, M.** (2021). Double Trouble: Resilience to Fake News at the Time of Covid-19 Infodemic. *OSIS, Open Society Institute-Sofia*, No. 9. URL: https://osis.bg/wp-content/uploads/2021/03/MediaLiteracyIndex2021_EN_G.pdf [accessed 15 November 2022]
- [15] **NewsGuard.** (2022). Coronavirus Misinformation Tracking Center. *NewsGuard*. <https://www.newsguardtech.com/special-reports/coronavirus-misinformation-tracking-center> [accessed: 15 November 2022]
- [16] **OLAGOKE, A.A., OLAGOKE, O.O., HUGHES, A.M.** (2020). Exposure to coronavirus news on mainstream media: The role of risk perceptions and depression. *British Journal of Health Psychology*, 25, 869. <https://doi.org/10.1111/bjhp.12427>
- [17] **PESESCHKIAN, N.** (1987). *Positive Psychotherapy: Theory and Practice of a New Method*. Springer-Verlag Berlin Heidelberg, Germany, 1987. pp. 55-59; pp. 413-430.
- a. _____ (2013). *Positive Psychotherapy in Psychosomatic Medicine*. International Academy for Positive and Transcultural Psychotherapy – Professor Peseschkian Foundation, Wiesbaden, Germany. ISBN 978-3-00-042013-9. p. 59, 174.
- [18] **PRISMA** (2021). PRISMA Statement. Access in: systematic reviews. *BMC Health Serv Res* 14(1), pp. 1–10. URL: <http://www.prisma-statement.org/> [accessed: 15 November 2022]
- [19] **ROCHA, Y.M., ACÁCIO DE MOURA, G., DESIDÉRIO, G.A., HENRIQUE DE OLIVEIRA, C., LOURENÇO, F.D., NICOLETE DEADAME DE FIGUEIREDO, L.** (2021). The impact of fake news on social media and its influence on health during the COVID-19 pandemic: a systematic review. *Springer Link*, 7-8. <https://doi.org/10.1007/s10389-021-01658-z>
- [20] **STRASSER, M.A., SUMMER, P.J., MEYER, D.** (2022). COVID-19 news consumption and distress in young people: A systematic review. *Journal of Affective Disorders*, 300, 489. <https://doi.org/10.1016/j.jad.2022.01.007>
- [21] **TORALES, J., BARRIOS, I., O'HIGGINS, M., ALMIRÓN-SANTACRUZ, J., GONZALEZ-URBIETA, I., GARCÍA, O., RIOS-GONZÁLES, C., CASTALDELLI-MAIA, J. M., VNTIGRIGLIO, A.** (2022). COVID-19 infodemic and depressive symptoms: The impact of the exposure to news about COVID-19 on the general Paraguayan population. *Elsevier*, 298, 601. <https://doi.org/10.1016/j.jad.2021.11.036>
- [22] **VRDELJA, M., VRBOVŠEK, S., KLOPČIČ, V., DADACZYŃKI, K., OKAN, O.** (2021). Facing the growing COVID-19 infodemic: digital health literacy and information-seeking behaviour of university students in Slovenia. *Int. J. Environ. Res. Public Health*, 18(16), pp. 10- 11. <https://doi.org/10.3390/ijerph18168507>
- [23] **WOOD, J.** (2021). Managing Mental Health Misinformation on Social Media, *Penn Medicine News*. URL: <https://www.pennmedicine.org/news/news-blog/2021/october/managing-mental-health-misinformation-on-social-media> [accessed: 15 November 2022]
- [24] **WORLD VISION.** (2020). Impact assessment of the COVID-19 outbreak on wellbeing of children and families in Albania. *World Vision*. 14. URL: [https://www.wvi.org/sites/default/files/2020-06/COVID Assesment Report WVA final.pdf](https://www.wvi.org/sites/default/files/2020-06/COVID%20Assesment%20Report%20WVA%20final.pdf) [accessed: 15 November 2022]