

Article

Social and Psychological Consequences of COVID-19 Online Content at a Lockdown Phase—Europe and Asia Comparison

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Abstract: After more than a year in a pandemic world, more than 171 million people worldwide have been infected and over 3.5 million have died. The number of those who have suffered mentally due to the pandemic is well above this number. The virus, lockdowns, forced quarantines, and problems related to jobs and everyday functioning have left their mark on mental health. Additionally, the massive spread of COVID-19 content of varying quality in social media is exacerbating this impact. On the other hand, in times of social distancing, these media are an important link with other people and a source of social support. The impact of the COVID-19 content in social media still requires further exploring. This influence on mental health may also vary geographically. There are more and more reports of discrimination against Asians due to COVID-19. We conducted a survey during lockdown in which 1664 respondents took part. After analyzing the impact of COVID-19 content in social media on the level of life satisfaction, anxiety, and depression, we compared this impact between European and Asian respondents. The results showed that dealing with these contents affects the level of anxiety, depression, and life satisfaction. Although most often these relations turned out to be negative, we have also identified those indicating a positive impact. This was particularly noticeable among Asian respondents, who additionally showed a lower relationship between reading COVID-19 content and their mental well-being than European respondents.

Keywords: society; COVID-19; social media; anxiety; depression; mental health; online behaviors



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1. Introduction

COVID-19 has caused a worldwide health crisis [1] that not only threatens health and life, but exposes individuals to serious complications in everyday life. The disease itself, amplified by lockdowns, may lead to serious mental health problems, increasing anxiety, extreme fright, depression, paranoia, obsessive-compulsive behaviors, or even post-traumatic stress disorder in the long period [2]. Confinement, hygiene precautions, human distancing, fear of morbidity and mortality concomitant with coronavirus disease, financial uncertainty, missed educational opportunities, constant unpredictability, disinformation, fears of infection, social distancing, and frustration also extend to psychological disorders such as anxiety [3–5]. This psychosocial impact even has its own term: “coronophobia” [6]. COVID-19 is not the first critical situation that has contributed to such mental health effects [7]. Still, COVID-19 has arisen it on a new, inexperienced level. The impact of this pandemic on mental health is so significant that it may also affect individuals that have had no history of a mental health condition [3]. The number of research reports that coronavirus disease can bump up levels of anxiety and depression while decreasing life satisfaction and subjective well-being is still growing. The latest research has shown that the experience of COVID-19 anxiety negatively affects the ability to cope with stress in the context of COVID-19 and general health [8–11], and that COVID-19 anxiety syndrome predicted high generalized anxiety and depression scores [12]. Research on the experience

of anxiety and depression during a pandemic has been recently carried out on a variety of groups, including hospitalized patients with COVID-19 [13], teachers [14], students [15], pregnant women [16], and people with chronic illnesses [17], in each case confirming their harmful effects on mental health. Mann, Krueger, and Vohs conducted a study on economic anxiety due to the COVID-19 pandemic, examining demographic and individual correlates of anxiety about financial hardship [18]. The research also suggested that there is a need for expanding mental health services in society during and immediately after the pandemic situation as there is potential for a long-lasting impact on mental health [12,19]. Shevlin and others proved that anxiety associated with COVID-19 makes a unique contribution to somatization, being significantly associated with general somatic symptoms and in particular with gastrointestinal and fatigue symptoms [20]. Finally, Nikčević and her team showed that COVID-19 anxiety partially mediated the relationship between the Big Five personality traits and generalized anxiety and depressive symptoms [21].

In the current situation, scientists have begun to direct their attention to the role of social media during the pandemic. Until 10 years ago, people were more likely to rely on traditional media for accessing information during crisis events, but currently the public turns to use social media instead [22]. The pressing issue is that inaccurate news spreads faster on social media [2,23]. The role of social media is so significant during the COVID-19 pandemic that it has been referred to as the “infodemic” [6,24,25]. As social media use has greatly spiked during the pandemic, we can evidence that it reflects the matters of society [7]. It is not all about this informational burden, though, as user’ activity grows exponentially, mostly due to attempts to remain connected to the close ones during social distancing and lockdowns [26,27].

The use of social media during the pandemic is therefore twofold in nature: it can contribute to mental health problems, and has the potential to improve well-being at the same time. Social media may provide an ample amount of medical content posted by government agencies and offer peer support emerging from caring, trust, empathy, relationships, positive interactions, and solidarity expressions for sharing hope and optimism [22,28,29]. In this case, social media may serve as a welcomed relief and a coping tool to decrease levels of perceived threats, stress, anxiety, and depression. However, despite these benefits, even before the pandemic, social media has been abused for spreading disinformation, hatred, and discrimination [30–32]. Some of the downfalls of social media uses during the pandemic include the possibility to spread disinformation, false rumors, conspiracy theories, and to incite fear and panic [7,33,34]. This may cause nervousness, aggression, fear, worry, anxiety, depression or decrease in life satisfaction that can become contagious to others [2,7]. This panic caused by negative emotions and a persistent plethora of inaccurate news spread faster than the COVID-19 virus itself [6,35,36]. Thus, repeated exposure to social media pandemic elevates anxiety, depression, stress responses, amplifies cyberchondria, and decreases subjective well-being [2,22,24,28,32,37,38]. Nonetheless, other papers examine possible positive results, as social media can be used to process trauma during stressful life events [7] and enhance life satisfaction and subjective well-being during uneasy times [28,39].

The worldwide impact of the coronavirus pandemic on mental health and behavior is unprecedented in recent history [7]. As social media may be a crucial method by which people connect during social distancing, it is important to examine the interaction between social media content and current life satisfaction, as well as feelings of anxiety and depression during these times [7]. Urgent research is needed to better understand the role of repeated media consumption concerning COVID-19 in amplifying anxiety and depression related to COVID-19 [2,38]. As psychological problems caused by social media COVID-19 content may potentially be even more detrimental in the long run than the virus itself, this topic should be under further investigation [6,35]. Whereas social media in times of crisis can also be used to spread hatred and discrimination, groups exposed to such negative effects should be studied [28]. Since COVID-19 contributed to an increase in the discrimination of the inhabitants of Asia, especially China, it is worth examining the

differences between the perception of anxiety and depression in this group compared with other countries [6].

Our article attempted to broaden the knowledge of social media's role during the pandemic on mental health and wellbeing, particularly life satisfaction, anxiety, and depression. As the COVID-19 pandemic impact on mental health is still not fully understood, this article also indirectly contributes to a better understanding of this phenomenon. In the situation of limiting direct contact due to lockdowns, communication via social media has additionally gained in importance. Its effects can be negative (by reinforcing concerns about the pandemic) or positive (by participating in virtual communities and substituting real meetings with virtual ones). This is the area that our research focused on, looking for answers to the question about the impact of COVID-19-related social media activities on wellbeing, including the level of life satisfaction, anxiety, and depression. In addition, the comparison between European and Asian-origin participants aimed to enrich the existing literature with a look at the role of social media during the pandemic in the context of not only common cultural differences, but also the increased discrimination that people in Asia have experienced as a result of the pandemic. The current studies suggest that the inhabitants of Asia are exposed to increased discrimination issues, increasing anxiety, depression, and reduced life satisfaction [6,28]. This, along with different social media habits, cultural considerations, and the varying duration of the pandemic, can cause differences in the comparison between European and Asian-origin participants. Finally, we aimed at researching the effects of yoga practice, meditation, and self-development on lowering the potential negative effects of exposure to social media content. As growing concerns about anxiety and depression associated with COVID-19 have led to recommendations for effective self-care [40], our goal here was to find out if they may be a solution to decrease the negative influence of social media on mental health during social distancing. To the best of our knowledge, such a study has not yet been carried out.

2. Materials and Methods

2.1. Measures

We built a questionnaire to collect data online (see: Supplementary Materials). The online form was selected primarily due to the international character of the study, but the lockdown was also one of the key reasons. The last factor in favor of this solution was that the study was designed for people who use social media, so the online questionnaire should be a convenient form of participation. The questionnaire consisted of three parts. One was designed solely by us, exploring activities evinced during the COVID-19 pandemic. They included social media actions and behaviors related to the lockdown, with a necessity to stay at home. The second part included examination of psychological traits: life satisfaction, anxiety, and depression. Finally, respondents were asked several questions concerning demographic data.

Life satisfaction was assessed with the five-item Satisfaction With Life Scale (SWLS) [41]. It has been deployed widely as a measure of the subjective quality of life, using five statements ("In most ways my life is close to my ideal", "The conditions of my life are excellent", "I am satisfied with my life", "So far I have gotten the important things I want in life", "If I could live my life over, I would change almost nothing"), that respondents answer to using a seven-point Likert scale (from "strongly disagree" to "strongly agree"). Likert scales are the most common way of assessing attitudes, values, mental states, and judgments, thanks to the fact that are easy to write and familiar to the participants [42,43]. As respondents rank their attitude using a limited, ordered set of answers, collected data can be statistically analyzed using ANOVA, which we decided to implement in our research [44]. In our questionnaire, we used a symmetric Likert scale where the position of neutrality lies exactly in between two extremes. This approach allows participants to answer in a more balanced way in any direction [45]. Collected data of each respondent were assigned to the one of seven possible levels of life satisfaction: strongly dissatisfied, dissatisfied, slightly dissatisfied, neutral, slightly satisfied, satisfied, or strongly satisfied. We used

Cronbach's α to determine the reliability of the scale. Its value in the present sample was 0.76, indicating that the study questionnaire was highly reliable, which means that the accuracy, dependability, stability, and consistency of the questionnaire were good.

The Hospital Anxiety and Depression Scale (HADS) was used to assess the levels of these two psychological traits [46,47]. Each trait is represented on a different subscale of this 14-item measure. Some of the questions are reversed, and the pool of ordered answers slightly varies among the questions (i.e., "I feel tense or 'wound up'": "Most of the time", "A lot of the time", "From time to time, occasionally", "Not at all"). Higher scores indicate higher anxiety and depression, assigned to three levels: normal, borderline abnormal, and abnormal. Internal consistency was high in the present sample (Cronbach's $\alpha = 0.83$).

To verify the correctness of the tool, we conducted a pilot study on a sample of $N = 30$. It helped to make minor linguistic corrections, increasing the clarity of the questions without affecting the structure of the questionnaire. In total, the whole research tool comprised of 31 questions (see: Supplementary Materials) and was published in English. Data were collected from April to June 2020. The study was approved by the ethics committee of the University of Lodz (7-8/KBBN-UŁ/II/2020-21).

2.2. Participants and Data Collection

The study comprised 1664 participants. Due to the lockdown, data were collected by snowball sampling, so we did not have full control over the pool of respondents. The nature of snowball sampling is such that it cannot be considered for a representative sample. The study results, therefore, cannot be generalized to the entire population. Of the 1664 participants, 21 were not of European or Asian origin. For this reason, these records were removed from the database at the stage of data preparation and were not taken into account in further analysis. Thus, the total sample amounted to 1643 (European $N = 1145$, Asian $N = 498$). The respondents voluntarily accessed an online MS Forms questionnaire through a link published on social media (Facebook and Instagram). The research was advertised as an anonymous, confidential questionnaire exploring the impact of social media COVID-19 content on mood. The study was addressed to adult respondents, about which they were informed in the invitation. By clicking the button that started the survey, they gave their informed consent to participate in the survey.

As we gathered 1643 responses, we analyzed them according to search for abnormal values. As three questions (country, age, and number of people in contact during lockdown) were open, we particularly checked them. As we spotted some typos and abbreviations in country names, the database was corrected and the spelling of countries was harmonized. After this procedure, we assumed that our dataset did not possess abnormal data to reject and the final set comprised of 1643 records. Decomposing the general aim of the study into tasks, we first examined the impact of COVID-19 content published in social media on the level of life satisfaction, anxiety, and depression among the whole sample, and then focused on the comparison between respondents of European and Asian origin.

2.3. Data Analysis

For each respondent, levels of life satisfaction, anxiety, and depression were calculated based on the scales used. For the aims of Asia-Europe comparison, we recoded the "country" variable into "region" comprising of two values: Europe and Asia. As mentioned in the previous subsection, 21 records were excluded from this part of the study as they were from the Americas, Africa, and Oceania.

To check our database for the potential bias caused by the issue of common method variance (CMV), we performed Harman's Single-Factor Test [48]. The CMV can come from a situation when a respondent has a tendency such as giving answers that make him present better, seeking social desirability, or marking only one type of item context. The post hoc Harman's Single-Factor Test investigates the presence of the common-method effect. In its score, all items are loaded into one common factor, and if the total variance

for a single factor is less than 50%, it suggests data is not affected by common-method bias [49,50]. The Harman's Single-Factor score for our data obtained a result of 36.23%.

As the Shapiro-Wilk test rejected the assumption of normality, we performed the non-parametric Kruskal-Wallis H tests and effect analysis was carried out by multiple rank mean comparisons. The Kruskal-Wallis test does not call for the same size of compared groups, their normal distribution, and homogeneous variances. The zero hypothesis here remains the same as in the classical ANOVA: the mean values in populations are the same, and in the alternative hypothesis they differ. The Kruskal-Wallis test is a nonparametric technique which has been reported to be just as efficient as parametric methods [51]. The alpha value for all tests was set at 0.05 and the confidence level was established at 95%. All statistical analyses were carried out with the statistics program Statistica 13.3.0 (Tibco Software Inc., Palo Alto, CA, USA).

3. Results

The study comprised two stages. The first concerned the possible influence of COVID-19 content published in social media on the level of life satisfaction, anxiety, and depression among the all participants. In this part, we were also looking for the positive impact of activities that are proven to improve subjective well-being and life satisfaction, such as yoga practice, meditation, and self-development. The second stage was devoted to a comparison of the analyzed factors between European and Asian origin respondents. Taking the above into account, the results of the study are described in two subsections accordingly, to ensure readability and transparency of the results.

3.1. The Whole Sample Analysis

Descriptive statistics for the sample are presented in Table 1.

Table 1. Descriptive statistics.

Variables (Counts)	Europe	Asia
	N = 1145	N = 498
	N	N
Staying at home	924	461
Quarantined	26	91
Diagnosed COVID-19	1	23
Number of people in contact	15,146	3502
COVID-19 mental discomfort	866	165
Reading COVID-19 SM content	817	465
Facebook	575	53
Instagram	469	26
YouTube	221	42
Twitter	113	31
TikTok	1	151
Whatsapp	0	4
Websites	60	149
Traditional media	17	288
Wechat	0	301
QQ	0	110
COVID-19 SM content causing fear	488	191
COVID-19 SM content causing mood improvement	191	183
Publishing COVID-19 content	64	106

Table 1. *Cont.*

Variables (Counts)	Europe	Asia
	N = 1145	N = 498
	N	N
Gender (Male)	128	216
Gender (Female)	1017	282
Self-development	767	264
Yoga	264	151
Meditation	156	252
Variables (Quantitative)	M (SD)	M (SD)
Age	29.12 (8.34)	33.80 (11.45)
Life satisfaction	20.85 (6.08)	22.07 (7.61)
Anxiety	8.53 (4.09)	6.38 (3.61)
Depression	6.11 (4.13)	6.70 (3.47)

The Kruskal-Wallis test was performed separately for each psychological trait as a grouping variable. Life satisfaction clustered data into seven groups (strongly dissatisfied, dissatisfied, slightly dissatisfied, neutral, slightly satisfied, satisfied, strongly satisfied), while anxiety and depression were clustered into three (normal, borderline abnormal, abnormal). The number of the groups defined the number of degrees of freedom in a later analysis. Dependent variables concerned social media activities related to COVID-19 content, practices serving at improving subjective well-being, as well as age, gender, and health status (diagnosed with COVID-19, quarantined, staying at home due to a lockdown). The Kruskal-Wallis test results were listed in the following Tables 2–4. The *p* values lower than 0.05 indicate that the null hypothesis that all of the population distribution functions are identical has premises to be rejected, thus, the analyzed psychological trait levels for selected dependent variable are not equal, so the levels of these traits differ.

Table 2. The whole sample's Kruskal-Wallis test results for life satisfaction.

Variables	Extremely Dissatisfied		Dissatisfied		Slightly Dissatisfied		Neutral		Slightly Satisfied		Satisfied		Extremely Satisfied		Group Comparisons		
	N = 56		N = 163		N = 405		N = 134		N = 352		N = 393		N = 140				
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.82	0.39	0.89	0.31	0.81	0.39	0.79	0.41	0.84	0.37	0.86	0.35	0.89	0.31	11.58	0.072	-
Quarantined	0.29 e	0.46	0.10	0.30	0.04	0.21	0.06	0.24	0.04 a	0.20	0.08	0.27	0.09	0.28	5.79	0.000	ae 2.926
Diagnosed COVID-19	0.14 e	0.35	0.02	0.13	0.01	0.12	0.01	0.09	0.00 a	0.00	0.01	0.10	0.01	0.12	7.34	0.000	ae 1.719
Number of people in contact	12.54 ce	36.90	26.09	195.62	9.84 a	15.60	7.88	8.79	10.53 a	14.28	9.62	13.72	8.33	1.35	19.70	0.003	ae 3.613 ac 3.301
COVID-19 mental discomfort	0.63	0.49	0.72 g	0.45	0.69 g	0.46	0.57	0.50	0.66 g	0.48	0.58	0.49	0.45 bce	0.50	37.29	0.000	eg 3.574 bg 4.024 cg 4.21
Reading COVID-19 SM content	0.75	0.44	0.79	0.41	0.79	0.41	0.84	0.37	0.75	0.43	0.76	0.43	0.84	0.37	8.21	0.223	-
Facebook	0.23 c	0.43	0.40	0.49	0.44 a	0.50	0.36	0.48	0.37	0.48	0.36	0.48	0.36	0.48	13.49	0.036	ac 2.548
Instagram	0.11 c	0.31	0.032	0.47	0.33 a	0.47	0.28	0.45	0.31	0.46	0.30	0.46	0.27	0.45	13.31	0.038	ac 2.747
YouTube	0.11	0.31	0.13	0.34	0.18	0.39	0.14	0.35	0.17	0.38	0.16	0.36	0.15	0.36	4.26	0.641	-
Twitter	0.09	0.29	0.11	0.31	0.11	0.31	0.07	0.26	0.06	0.24	0.08	0.27	0.10	0.30	7.81	0.253	-
TikTok	0.09	0.29	0.07	0.25	0.07	0.26	0.16	0.37	0.09	0.28	0.10	0.31	0.09	0.29	11.93	0.064	-
Whatsapp	0.00	0.00	0.01	0.08	0.00	0.05	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	3.72	0.714	-
Websites	0.14	0.35	0.10	0.31	0.12	0.33	0.18	0.38	0.16	0.36	0.11	0.32	0.09	0.28	9.95	0.127	-
Traditional media	0.23	0.43	0.13 g	0.34	0.14	0.35	0.23	0.42	0.18	0.38	0.21	0.41	0.27 b	0.45	18.95	0.004	bg 2.143
Wechat	0.32 c	0.47	0.18	0.38	0.14 a	0.35	0.26	0.44	0.15	0.36	0.19	0.39	0.24	0.43	22.98	0.001	ac 2.194
QQ	0.05	0.23	0.04	0.19	0.06	0.24	0.13	0.33	0.06	0.23	0.07	0.26	0.08	0.27	11.40	0.077	-
COVID-19 SM content causing fear	0.41	0.50	0.44	0.50	0.43	0.50	0.40	0.49	0.46	0.50	0.36	0.48	0.36	0.48	1.66	0.099	-
COVID-19 SM content causing mood improvement	0.21	0.41	0.21	0.41	0.19	0.39	0.27	0.44	0.22	0.41	0.26	0.44	0.24	0.43	7.43	0.283	-
Publishing COVID-19 content	0.82	0.39	0.89	0.31	0.81	0.39	0.79	0.41	0.84	0.37	0.86	0.35	0.89	0.31	11.58	0.072	-
Age	0.29 e	0.46	0.10	0.30	0.04	0.21	0.06	0.24	0.04 a	0.20	0.08	0.27	0.09	0.28	5.79	0.000	ae 2.926
Self-development	0.14 e	0.35	0.02	0.13	0.01	0.12	0.01	0.09	0.00 a	0.00	0.01	0.10	0.01	0.12	7.34	0.000	ae 1.719
Yoga	12.54 ce	36.90	26.09	195.62	9.84 a	15.60	7.88	8.79	10.53 a	14.28	9.62	13.72	8.33	1.35	19.70	0.003	ae 3.613 ac 3.301
Meditation	0.63	0.49	0.72 g	0.45	0.69 g	0.46	0.57	0.50	0.66 g	0.48	0.58	0.49	0.45 bce	0.50	37.29	0.000	eg 3.574 bg 4.024 cg 4.21

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from extremely dissatisfied ($p < 0.05$); b—Differs significantly from dissatisfied ($p < 0.05$); c—Differs significantly from slightly dissatisfied ($p < 0.05$); d—Differs significantly from neutral ($p < 0.05$); e—Differs significantly from slightly satisfied ($p < 0.05$); f—Differs significantly from satisfied ($p < 0.05$); g—Differs significantly from extremely satisfied ($p < 0.05$).

Table 3. The whole sample's Kruskal-Wallis test results for anxiety.

Variables	Normal N = 828		Borderline Abnormal N = 403		Abnormal N = 412		H	Group Comparisons	
	M	SD	M	SD	M	SD		p	z
Staying at home	0.84	0.37	0.85	0.36	0.85	0.36	0.29	0.863	-
Quarantined	0.07	0.26	0.06	0.24	0.08	0.26	1.10	0.578	-
Diagnosed COVID-19	0.01	0.12	0.01	0.12	0.01	0.12	0.00	0.999	-
Number of people in contact	12.68	87.81	1.17	15.63	9.84	16.03	3.03	0.220	-
COVID-19 mental discomfort	0.50 bc	0.50	0.68 ac	0.47	0.84 ab	0.37	145.00	0.000	ab 5.232 ac 9.863 bc 3.952
Reading COVID-19 SM content	0.76	0.43	0.80	0.40	0.80	0.40	2.82	0.244	-
Facebook	0.31 bc	0.46	0.42 a	0.49	0.49 a	0.50	39.89	0.000	ab 3.001 ac 5.132
Instagram	0.22 bc	0.41	0.36 a	0.48	0.41 a	0.49	55.30	0.000	ab 3.920 ac 5.468
YouTube	0.15	0.35	0.17	0.37	0.18	0.39	2.79	0.248	-
Twitter	0.07 c	0.26	0.09	0.29	0.11 a	0.32	6.60	0.037	ac 1.230
TikTok	0.14 bc	0.35	0.05 a	0.22	0.03 a	0.18	48.10	0.000	ab 2.543 ac 3.082
Whatsapp	0.00	0.05	0.00	0.07	0.00	0.00	2.06	0.356	-
Websites	0.15	0.36	0.11 c	0.31	0.09 b	0.29	11.65	0.003	bc 0.358
Traditional media	0.25 bc	0.43	0.15 a	0.35	0.09 a	0.29	53.52	0.000	ab 3.0222 ac 4.670
Wechat	0.25 bc	0.44	0.14 a	0.35	0.08 a	0.27	63.17	0.000	ab 3.162 ac 5.088
QQ	0.09 c	0.29	0.05	0.22	0.04 a	0.19	14.23	0.001	ac 1.521
COVID-19 SM content causing fear	0.29 bc	0.45	0.47 a	0.50	0.60 a	0.49	118.54	0.000	ab 5.248 ac 8.963
COVID-19 SM content causing mood improvement	0.24	0.42	0.24	0.42	0.20	0.40	1.76	0.414	-
Publishing COVID-19 content	0.11	0.31	0.10	0.30	0.09	0.29	0.94	0.624	-
Age	31.53 bc	9.75	29.76 a	9.73	29.32 a	9.09	2.12	0.000	ab 3.454 ac 3.834
Self-development	0.66 c	0.48	0.63	0.48	0.57 a	0.50	9.33	0.009	ac 2.557
Yoga	0.27	0.44	0.26	0.44	0.22	0.41	4.04	0.133	-
Meditation	0.30 c	0.46	0.23	0.42	0.17 a	0.38	24.38	0.000	ac 3.583

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

Table 4. The whole sample's Kruskal-Wallis test results for depression.

Variables	Normal		Borderline Abnormal		Abnormal		Group Comparisons		
	N = 1042		N = 335		N = 266				
	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.83 b	0.38	0.88 a	0.33	0.86	0.34	6.17	0.046	ab 1.415
Quarantined	0.06 c	0.23	0.09	0.29	0.11 a	0.31	9.71	0.008	ac 1.226
Diagnosed COVID-19	0.01 c	0.08	0.02	0.13	0.05 a	0.21	23.11	0.000	ac 0.992
Number of people in contact	12.90 bc	78.70	8.12 a	13.91	9.35 a	15.55	19.17	0.000	ab 3.671 ac 3.115
COVID-19 mental discomfort	0.59 c	0.49	0.65	0.48	0.75 a	0.43	25.22	0.000	ac 4.123
Reading COVID-19 SM content	0.76 b	0.43	0.86 a	0.35	0.75	0.43	14.48	0.001	ab 2.585
Facebook	0.38	0.48	0.39	0.49	0.39	0.49	0.59	0.745	-
Instagram	0.29	0.46	0.29	0.45	0.34	0.48	2.54	0.281	-
YouTube	0.16	0.37	0.18	0.38	0.14	0.35	1.51	0.470	-
Twitter	0.08	0.27	0.11	0.31	0.09	0.29	2.61	0.271	-
TikTok	0.10	0.30	0.12 c	0.32	0.04 b	0.20	10.92	0.004	bc 1.583
Whatsapp	0.00	0.03	0.01	0.08	0.00	0.06	2.85	0.241	-
Websites	0.13	0.33	0.15	0.36	0.11	0.31	2.64	0.267	-
Traditional media	0.19	0.39	0.22 c	0.42	0.12 b	0.33	10.88	0.004	bc 2.184
Wechat	0.19	0.39	0.20	0.40	0.14	0.35	3.69	0.158	-
QQ	0.07	0.25	0.10 c	0.29	0.03 b	0.18	9.05	0.011	bc 1.301
COVID-19 SM content causing fear	0.37 bc	0.48	0.50 a	0.50	0.49 a	0.50	26.73	0.000	ab 3.745 ac 3.102
COVID-19 SM content causing mood improvement	0.24	0.42	0.24	0.43	0.18	0.39	3.42	0.181	-
Publishing COVID-19 content	0.10	0.30	0.11	0.32	0.12	0.32	1.33	0.515	-
Age	30.62	9.39	3.52	10.53	30.26	9.41	1.77	0.412	-
Self-development	0.69 bc	0.46	0.56 a	0.50	0.45 a	0.50	61.56	0.000	ab 3.848 ac 6.047
Yoga	0.28 bc	0.45	0.20 a	0.40	0.20 a	0.40	14.08	0.001	ab 2.374 ac 2.019
Meditation	0.26	0.44	0.24	0.43	0.22	0.41	1.77	0.413	-

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

The Kruskal-Wallis test results are listed in Table 2. The p values lower than 0.05 indicate that the null hypothesis, that all of the population distribution functions are identical, has premises to be rejected; thus, the analyzed psychological trait levels for the selected dependent variable are not equal, so the levels of these traits differ. The Kruskal-Wallis test can only say that at least two groups were statistically significantly different from each other, without specifying which one. Therefore, categorized histograms (see: Supporting Information) illustrated the way how, in each group, the selected dependent variable influenced the level of life satisfaction, anxiety, or depression. To increase the readability of results, the tables below show the Kruskal-Wallis test by ranks H statistic and p -value.

The overall dissatisfaction with life significantly differed from higher levels of life satisfaction in cases of: being quarantined or diagnosed with COVID-19 or experiencing high coronavirus mental discomfort. Considering particular social media platforms, WeChat was used the most often by respondents extremely dissatisfied with their lives. The highest number of people in contact was evinced by the respondents most dissatisfied with life. Using Facebook and Instagram was not clearly related to the level of life satisfaction. In both cases, the respondents who were dissatisfied with their own lives used these portals the most often, but those who were extremely dissatisfied used them the least often. Traditional media also exerted an ambivalent influence on the respondents. Both individuals with extremely high and low levels of life satisfaction searched for information about COVID-19 through them. The oldest participants were more satisfied than younger ones. Self-development, meditation, and yoga practice were related to higher life satisfaction.

Anxiety. Most of the relationships between the level of anxiety and the analyzed activities were linear, where the increase in the frequency of performing a given activity translated directly into an increase/decrease in the anxiety level. Thus, the higher the mental discomfort caused by COVID-19 related content, the greater the anxiety among respondents was observed. The same rule applied to the higher frequency of Facebook, Instagram, and Twitter usage. However, not all online media raised the level of anxiety; the higher frequency of TikTok, WeChat, and QQ usage, as well as the other websites, lowered anxiety levels. A similar relation occurred in the case of using traditional media, where participants who most frequently use traditional media had the lowest level of anxiety. Furthermore, respondents with an abnormal level of anxiety declared the occurrence of additional fear after reading COVID-19 content in social media the least frequently; therefore, their exalted levels of anxiety did not increase further after such reading. The anxiety level decreased with increasing age, and female participants most often showed the strongest anxiety. Self-development practices and meditation were linked with lower anxiety.

Depression. The results showed higher levels of depression among respondents staying at home due to lockdowns, those in formal quarantine, and those diagnosed with COVID-19. The level of depression increased with growing feelings of mental discomfort related to COVID-19 and fear after reading about it on social media. Those without depression kept in virtual contact with the largest number of people. Respondents with the highest levels of depression were the least likely to use TikTok, QQ, and use social media as a source of COVID-19 information. Using other social media did not affect this trait. Yoga and self-development practitioners showed lower depressive tendency.

3.2. Asia and Europe Comparison

The second phase of the study showed a comparison in dependencies illustrating the impact of COVID-19 content in social media on the analyzed mental traits among European and Asian origin respondents. Overall, more relations were found with European respondents, and a number of similarities as well as some distinct differences between regions were identified. To perform such a comparison, we ran the Kruskal-Wallis test by ranks using the grouping region variable. The following Tables 5–7 depict results for European-origin respondents and Tables 8–10 for those of Asian origin.

Table 5. European-origin participants' Kruskal-Wallis test results for life satisfaction.

Variables	Extremely Dissatisfied		Dissatisfied		Slightly Dissatisfied		Neutral		Slightly Satisfied		Satisfied		Extremely Satisfied		Group Comparisons		
	N = 23		N = 118		N = 315		N = 83		N = 257		N = 270		N = 79				
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.74	0.45	0.86	0.34	0.78	0.41	0.75	0.44	0.81	0.39	0.83	0.38	0.82	0.38	7.48	0.278	-
Quarantined	0.00	0.00	0.03	0.16	0.02	0.14	0.04	0.19	0.02	0.14	0.03	0.17	0.01	0.11	2.50	0.868	-
Diagnosed COVID-19	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.63	0.853	-
Number of people in contact	8.52	6.24	31.86	229.53	1.68	15.78	9.00	6.73	11.63	13.94	11.79	14.74	11.52	12.38	3.96	0.683	-
COVID-19 mental discomfort	0.83	0.39	0.85 g	0.36	0.77	0.42	0.78	0.41	0.75	0.43	0.73	0.45	0.62 b	0.49	16.14	0.013	bg 0.286
Reading COVID-19 SM content	0.57	0.51	0.75	0.44	0.73	0.44	0.78	0.41	0.69	0.46	0.68	0.47	0.76	0.43	8.92	0.178	-
Facebook	0.48	0.51	0.53	0.50	0.52	0.50	0.57	0.50	0.46	0.50	0.47	0.50	0.54	0.50	5.25	0.513	-
Instagram	0.17	0.39	0.43	0.50	0.40	0.49	0.46	0.50	0.42	0.49	0.39	0.49	0.44	0.50	7.19	0.304	-
YouTube	0.17	0.39	0.15	0.36	0.21	0.41	0.23	0.42	0.20	0.40	0.18	0.39	0.18	0.38	2.94	0.817	-
Twitter	0.09	0.29	0.12	0.32	0.12	0.33	0.11	0.31	0.08	0.27	0.08	0.27	0.09	0.29	5.13	0.527	-
TikTok	0.00	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.70	0.191	-
Whatsapp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
Websites	0.04	0.21	0.07	0.25	0.06	0.23	0.01	0.11	0.07	0.26	0.04	0.19	0.04	0.19	7.47	0.279	-
Traditional media	0.00	0.00	0.01	0.09	0.02	0.14	0.01	0.11	0.02	0.14	0.01	0.09	0.03	0.16	3.08	0.798	-
Wechat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
QQ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
COVID-19 SM content causing fear	0.39	0.50	0.46	0.50	0.42	0.49	0.43	0.50	0.46	0.50	0.38	0.49	0.46	0.50	4.30	0.636	-
COVID-19 SM content causing mood improvement	0.04 fg	0.21	0.14	0.34	0.13	0.34	0.20	0.41	0.15	0.36	0.22 a	0.42	0.22 a	0.41	14.69	0.023	af 1.425 ag 1.255
Publishing COVID-19 content	0.04	0.21	0.03	0.16	0.04	0.21	0.04	0.19	0.07	0.25	0.08	0.27	0.05	0.22	7.44	0.282	-
Age	28.00	8.66	27.50 f	8.43	28.33 f	8.50	29.58	8.09	29.20	8.04	30.43 bc	8.42	29.90	7.97	24.32	0.001	bf 3.917 cf 3.672
Self-development	0.52	0.51	0.57 g	0.50	0.61 g	0.49	0.60	0.49	0.68	0.47	0.75	0.43	0.87 bc	0.33	37.77	0.000	bg 3.640 cg 3.631
Yoga	0.00 g	0.00	0.21	0.41	0.17	0.37	0.16	0.37	0.27	0.45	0.29	0.45	0.34 a	0.48	29.85	0.000	ag 2.497
Meditation	0.13	0.34	0.14	0.34	0.06 g	0.24	0.12	0.33	0.16	0.37	0.17	0.38	0.23 c	0.42	24.86	0.000	cg 2.261

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold.

a—Differs significantly from extremely dissatisfied ($p < 0.05$); b—Differs significantly from dissatisfied ($p < 0.05$); c—Differs significantly from slightly dissatisfied ($p < 0.05$); d—Differs significantly from neutral ($p < 0.05$); e—Differs significantly from slightly satisfied ($p < 0.05$); f—Differs significantly from satisfied ($p < 0.05$); g—Differs significantly from extremely satisfied ($p < 0.05$).

Table 6. European-origin participants' Kruskal-Wallis test results for anxiety.

Variables	Normal		Borderline Abnormal		Abnormal		Group Comparisons		
	N = 506		N = 295		N = 344				
	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.78	0.41	0.83	0.38	0.83	0.38	3.46	0.177	-
Quarantined	0.03	0.17	0.01	0.12	0.02	0.14	2.29	0.318	-
Diagnosed COVID-19	0.00	0.00	0.00	0.06	0.00	0.00	2.88	0.237	-
Number of people in contact	16.64 c	111.45	10.42	11.02	10.63 a	16.53	6.23	0.045	ac 2.478
COVID-19 mental discomfort	0.61 bc	0.49	0.81 ac	0.39	0.93 ab	0.26	121.17	0.000	ab 4.888 ac 7.943 bc 2.482
Reading COVID-19 SM content	0.65 bc	0.48	0.75 a	0.43	0.78 a	0.41	20.91	0.000	ab 2.432 ac 3.363
Facebook	0.46 c	0.50	0.51	0.50	0.56 a	0.50	7.50	0.024	ac 2.348
Instagram	0.34 bc	0.47	0.46 a	0.50	0.47 a	0.50	20.42	0.000	ab 2.955 ac 3.416
YouTube	0.19	0.39	0.19	0.40	0.20	0.40	0.41	0.814	-
Twitter	0.09	0.29	0.08	0.28	0.12	0.33	3.10	0.212	-
TikTok	0.00	0.00	0.00	0.00	0.00	0.05	2.33	0.312	-
Whatsapp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
Websites	0.05	0.21	0.05	0.21	0.07	0.25	2.08	0.353	-
Traditional media	0.02	0.12	0.01	0.10	0.02	0.13	0.63	0.729	-
Wechat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
QQ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
COVID-19 SM content causing fear	0.24 bc	0.43	0.51 ac	0.50	0.64 ab	0.48	143.61	0.000	ab 6.332 ac 9.897 bc 6.332
COVID-19 SM content causing mood improvement	0.15	0.35	0.21	0.41	0.16	0.37	4.97	0.084	-
Publishing COVID-19 content	0.05	0.21	0.06	0.24	0.06	0.25	1.26	0.534	-
Age	29.71 b	8.26	28.53 a	8.22	28.79	8.54	6.39	0.041	ab 2.242
Self-development	0.74 c	0.44	0.66	0.47	0.58	0.49 a	24.89	0.000	ac 4.052
Yoga	0.24	0.43	0.25	0.43	0.19	0.40	3.61	0.164	-
Meditation	0.16	0.37	0.13	0.34	0.11	0.31	4.98	0.083	-

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

Table 7. European-origin participants' Kruskal-Wallis test results for depression.

Variables	Normal		Borderline Abnormal		Abnormal		Group Comparisons		
	N = 749		N = 206		N = 190				
	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.79	0.41	0.84	0.37	0.85	0.36	6.00	0.050	-
Quarantined	0.02	0.14	0.02	0.15	0.03	0.16	0.20	0.907	-
Diagnosed COVID-19	0.00	0.00	0.00	0.07	0.00	0.00	4.56	0.102	-
Number of people in contact	15.13 bc	92.09	8.63 a	8.59	10.69 a	15.66	17.69	0.000	ab 3.752 ac 2.608
COVID-19 mental discomfort	0.71 bc	0.46	0.82 a	0.38	0.88 a	0.32	31.60	0.000	ab 2.511 ac 3.792
Reading COVID-19 SM content	0.69 b	0.46	0.82 a	0.39	0.71	0.45	13.21	0.001	ab 2.845
Facebook	0.48	0.50	0.56	0.50	0.51	0.50	3.56	0.169	-
Instagram	0.39	0.49	0.44	0.50	0.46	0.50	4.09	0.130	-
YouTube	0.19	0.39	0.22	0.42	0.17	0.38	1.97	0.373	-
Twitter	0.09 b	0.28	0.15 a	0.35	0.09	0.29	6.22	0.045	ab 1.266
TikTok	0.00	0.04	0.00	0.00	0.00	0.00	0.53	0.768	-
Whatsapp	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
Websites	0.05	0.21	0.06	0.24	0.06	0.23	0.87	0.646	-
Traditional media	0.01	0.11	0.02	0.14	0.02	0.12	0.42	0.811	-
Wechat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
QQ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.000	-
COVID-19 SM content causing fear	0.37 bc	0.48	0.53 a	0.50	0.55 a	0.50	3.98	0.000	ab 3.564 ac 3.841
COVID-19 SM content causing mood improvement	0.18	0.39	0.14	0.35	0.13	0.33	4.88	0.087	-
Publishing COVID-19 content	0.06	0.23	0.07	0.26	0.03	0.18	3.28	0.194	-
Age	29.53 b	8.29	28.28 a	8.81	28.46	7.97	9.00	0.011	ab 2.802
Self-development	0.76 bc	0.43	0.55 a	0.50	0.45 a	0.50	80.70	0.000	ab 4.617 ac 6.516
Yoga	0.27 b	0.44	0.13 a	0.34	0.19	0.39	19.32	0.000	ab 3.021
Meditation	0.16 b	0.37	0.08 a	0.27	0.10	0.30	12.19	0.002	ab 1.846

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

Table 8. Asian-origin participants' Kruskal-Wallis test results for life satisfaction.

Variables	Extremely Dissatisfied		Dissatisfied		Slightly Dissatisfied		Neutral		Slightly Satisfied		Satisfied		Extremely Satisfied		Group Comparisons		
	N = 33		N = 45		N = 90		N = 51		N = 95		N = 123		N = 61				
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.88	0.33	0.96	0.21	0.93	0.25	0.86	0.35	0.92	0.28	0.93	0.26	0.98	0.13	7.75	0.257	-
Quarantined	0.48 e	0.51	0.29	0.46	0.13	0.34	0.10	0.30	0.11 a	0.31	0.20	0.40	0.18	0.39	31.37	0.000	ae 3.250
Diagnosed COVID-19	0.24 e	0.44	0.07	0.25	0.06	0.23	0.02	0.14	0.00 a	0.00	0.03	0.18	0.03	0.18	35.57	0.000	ae 2.076
Number of people in contact	15.33	47.89	10.96	22.09	6.91	14.65	6.06	11.22	7.55	14.82	4.87	9.61	4.20	4.23	9.41	0.152	-
COVID-19 mental discomfort	0.48 g	0.51	0.38	0.49	0.39	0.49	0.24	0.43	0.40	0.49	0.27	0.44	0.23 a	0.42	14.47	0.025	ag 2.045
Reading COVID-19 SM content	0.88	0.33	0.91	0.29	0.98	0.15	0.92	0.27	0.92	0.28	0.94	0.23	0.93	0.25	5.58	0.471	-
Facebook	0.06	0.24	0.09	0.29	0.16	0.36	0.02	0.14	0.12	0.32	0.11	0.31	0.13	0.34	7.67	0.264	-
Instagram	0.06	0.24	0.02	0.15	0.09	0.29	0.00	0.00	0.02	0.14	0.08	0.27	0.05	0.22	10.08	0.121	-
YouTube	0.06	0.24	0.09	0.29	0.09	0.29	0.00	0.00	0.09	0.29	0.10	0.30	0.11	0.32	6.10	0.412	-
Twitter	0.09	0.29	0.09	0.29	0.07	0.25	0.02	0.14	0.01	0.10	0.07	0.26	0.11	0.32	10.10	0.121	-
TikTok	0.15	0.36	0.22	0.42	0.33	0.47	0.43	0.50	0.32	0.47	0.33	0.47	0.21	0.41	12.26	0.056	-
Whatsapp	0.00	0.00	0.02	0.15	0.01	0.11	0.00	0.00	0.00	0.00	0.02	0.13	0.00	0.00	4.22	0.646	-
Websites	0.21	0.42	0.20	0.40	0.34	0.48	0.45 g	0.50	0.38	0.49	0.28	0.45	0.15 d	0.36	19.62	0.003	dg 2.767
Traditional media	0.39	0.50	0.44	0.50	0.58	0.50	0.59	0.50	0.61	0.49	0.64	0.48	0.59	0.50	10.41	0.108	-
Wechat	0.55	0.51	0.64	0.48	0.63	0.48	0.69	0.47	0.57	0.50	0.60	0.49	0.56	0.50	3.60	0.730	-
QQ	0.09	0.29	0.13	0.34	0.28	0.45	0.33	0.48	0.21	0.41	0.23	0.42	0.18	0.39	11.34	0.079	-
COVID-19 SM content causing fear	0.42	0.50	0.40	0.50	0.48 g	0.50	0.33	0.48	0.47	0.50	0.32	0.47	0.25 c	0.43	14.63	0.023	cg 2.419
COVID-19 SM content causing mood improvement	0.33	0.48	0.42	0.50	0.40	0.49	0.37	0.49	0.40	0.49	0.35	0.48	0.28	0.45	3.82	0.701	-
Publishing COVID-19 content	0.21	0.42	0.29	0.46	0.23	0.43	0.12	0.33	0.18	0.39	0.21	0.41	0.26	0.44	6.07	0.416	-
Age	34.24	11.94	34.09	1.43	32.54	11.31	3.02	10.33	35.45	11.27	34.66	11.09	34.02	13.51	10.86	0.093	-
Self-development	0.55	0.51	0.58	0.50	0.48	0.50	0.51	0.50	0.55	0.50	0.54	0.50	0.54	0.50	1.68	0.947	-
Yoga	0.27	0.45	0.27	0.45	0.20 e	0.40	0.27	0.45	0.25	0.44	0.41 c	0.49	0.39	0.49	14.85	0.022	ce 2.576
Meditation	0.52	0.51	0.62	0.49	0.41	0.49	0.53	0.50	0.48	0.50	0.54	0.50	0.51	0.50	6.43	0.377	-

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from extremely dissatisfied ($p < 0.05$); b—Differs significantly from dissatisfied ($p < 0.05$); c—Differs significantly from slightly dissatisfied ($p < 0.05$); d—Differs significantly from neutral ($p < 0.05$); e—Differs significantly from slightly satisfied ($p < 0.05$); f—Differs significantly from satisfied ($p < 0.05$); g—Differs significantly from extremely satisfied ($p < 0.05$).

Table 9. Asian-origin participants' Kruskal-Wallis test results for anxiety.

Variables	Normal		Borderline Abnormal		Abnormal		Group Comparisons		
	N = 322		N = 108		N = 68				
	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.93	0.26	0.91	0.29	0.96	0.21	1.42	0.491	-
Quarantined	0.15 c	0.35	0.19	0.39	0.35 a	0.48	16.08	0.000	ac 2.683
Diagnosed COVID-19	0.04	0.19	0.05	0.21	0.09	0.29	3.30	0.192	-
Number of people in contact	6.45	16.13	9.48	24.15	5.88	12.54	2.66	0.264	-
COVID-19 mental discomfort	0.32	0.47	0.31	0.47	0.40	0.49	1.56	0.459	-
Reading COVID-19 SM content	0.95	0.22	0.94	0.25	0.87	0.34	5.74	0.057	-
Facebook	0.08 bc	0.27	0.16 a	0.37	0.16 a	0.37	7.93	0.019	ab 0.644 ac 0.826
Instagram	0.04	0.19	0.07	0.26	0.09	0.29	4.27	0.118	-
YouTube	0.08	0.28	0.09	0.29	0.07	0.26	0.20	0.905	-
Twitter	0.04 b	0.20	0.12 a	0.33	0.07	0.26	9.02	0.011	ab 1.245
TikTok	0.36 b	0.48	0.19 a	0.40	0.19	0.40	15.57	0.000	ab 2.628
Whatsapp	0.01	0.08	0.02	0.14	0.00	0.00	2.17	0.338	-
Websites	0.33	0.47	0.27	0.45	0.22	0.42	3.59	0.166	-
Traditional media	0.62 c	0.49	0.52	0.50	0.46 a	0.50	8.53	0.014	ac 2.183
Wechat	0.66 c	0.48	0.54	0.50	0.47 a	0.50	10.61	0.005	ac 2.395
QQ	0.23	0.42	0.19	0.40	0.22	0.42	0.59	0.746	-
COVID-19 SM content causing fear	0.37	0.48	0.39	0.49	0.43	0.50	0.70	0.704	-
COVID-19 SM content causing mood improvement	0.38	0.49	0.31	0.47	0.41	0.50	1.95	0.377	-
Publishing COVID-19 content	0.21	0.41	0.21	0.41	0.24	0.43	0.25	0.884	-
Age	34.40	11.15	33.13	12.41	31.97	11.21	3.98	0.137	-
Self-development	0.53	0.50	0.54	0.50	0.53	0.50	0.03	0.987	-
Yoga	0.31	0.46	0.28	0.45	0.32	0.47	0.49	0.783	-
Meditation	0.51	0.50	0.49	0.50	0.50	0.50	0.16	0.922	-

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

Table 10. Asian-origin participants' Kruskal-Wallis test results for depression.

Variables	Normal		Borderline Abnormal		Abnormal		Group Comparisons		
	N = 293		N = 129		N = 76				
	M	SD	M	SD	M	SD	H	p	z
Staying at home	0.93	0.26	0.94	0.24	0.89	0.31	1.37	0.504	-
Quarantined	0.15 c	0.35	0.19	0.40	0.30 a	0.46	9.94	0.007	ac 2.095
Diagnosed COVID-19	0.02 c	0.14	0.04	0.19	0.16 a	0.37	26.03	0.000	ac 1.847
Number of people in contact	7.18	17.68	7.30 c	19.64	6.00 b	14.86	7.92	0.019	bc 2.714
COVID-19 mental discomfort	0.29 c	0.45	0.38	0.49	0.42 a	0.50	6.75	0.034	ac 1.806
Reading COVID-19 SM content	0.96 c	0.20	0.92	0.27	0.86 a	0.35	10.84	0.004	ac 1.395
Facebook	0.10	0.29	0.13	0.34	0.11	0.31	1.23	0.540	-
Instagram	0.05	0.23	0.05	0.21	0.05	0.22	0.12	0.942	-
YouTube	0.08	0.27	0.10	0.30	0.07	0.25	0.81	0.667	-
Twitter	0.06	0.23	0.05	0.21	0.11	0.31	3.04	0.219	-
TikTok	0.34 c	0.48	0.30	0.46	0.14 a	0.35	11.40	0.003	ac 2.688
Whatsapp	0.00	0.06	0.02	0.12	0.01	0.11	1.94	0.380	-
Websites	0.32	0.47	0.29	0.45	0.22	0.42	3.03	0.220	-
Traditional media	0.64 c	0.48	0.55	0.50	0.38 a	0.49	17.26	0.000	ac 3.496
Wechat	0.67 b	0.47	0.52 a	0.50	0.50	0.50	12.44	0.002	ab 2.449
QQ	0.24	0.43	0.25	0.43	0.12	0.33	5.54	0.063	-
COVID-19 SM content causing fear	0.36	0.48	0.46	0.50	0.34	0.48	4.10	0.129	-
COVID-19 SM content causing mood improvement	0.37	0.48	0.40	0.49	0.33	0.47	0.92	0.631	-
Publishing COVID-19 content	0.20	0.40	0.18 c	0.38	0.33 b	0.47	7.41	0.025	bc 1.803
Age	33.41	11.31	34.11	11.99	34.74	11.14	1.07	0.585	-
Self-development	0.53	0.50	0.57	0.50	0.46	0.50	2.14	0.343	-
Yoga	0.32	0.47	0.30	0.46	0.24	0.43	2.01	0.366	-
Meditation	0.50	0.50	0.51	0.50	0.51	0.50	0.05	0.974	-

Due to violations of normality, non-parametric Kruskal-Wallis tests (H statistic) were performed with effect analysis carried out by multiple rank mean comparisons (z). Values $p < 0.05$ are marked bold. a—Differs significantly from normal ($p < 0.05$); b—Differs significantly from borderline abnormal ($p < 0.05$); c—Differs significantly from abnormal ($p < 0.05$).

Life satisfaction. Regardless of the group, all respondents displaying higher mental discomfort concerning coronavirus had lower life satisfaction, and those practicing yoga a higher level. The remaining relations were shaped separately for the inhabitants of Europe and Asia. The former showed higher life satisfaction associated with: mood improvement after reading COVID-19 content in social media, practicing self-development, and meditation. Moreover, the older respondents were more often satisfied with their own lives than the younger ones. In the case of respondents from Asia, the above dependencies did not occur at all. Asian respondents showed a tendency towards an extremely low life satisfaction while being on the formal quarantine. Being dissatisfied with life was related with the two situations: COVID-19 diagnosis and feeling fear after reading about coronavirus in social media. The analysis also showed the relationship between searching for this content using traditional websites: participants with a neutral level of life satisfaction most often used them, and those with an extremely satisfied level used them the least frequently.

Anxiety. The impact of COVID-19-related content in social media on anxiety differed strongly between two groups. Only one relation was mutual: the more frequent Facebook usage, the greater anxiety level; the rest remained distinct. Among the European respondents, anxiety grew with the increase of COVID-19 mental discomfort level, reading coronavirus content on social media (especially Instagram), and feeling fear after such reading. Younger participants felt more anxious than older ones. Anxiety lowered with the increase of the number of virtual contacts and engaging in self-development. Asian participants evinced higher anxiety levels related to being quarantined. TikTok, WeChat, and traditional media were associated with lower anxiety, and only Twitter activities caused the opposite effect.

Depression. These results were the most numerous and various. In both groups, higher mental discomfort caused by COVID-19 content was related to stronger depression. However, this was where the similarities ended. Relationships between the same two variables were found in both groups, but they were of a different nature. First, European-origin respondents contacted the largest number of people when they were not depressed at all, while Asian respondents had to have borderline abnormal depression to behave this way. Second, low levels of depression in the European origin group were associated with the least possible usage of social media in the search for COVID-19 content, while the level of depression in the Asian group decreased with the increase in the frequency of using these media. European-origin participants showed more links between COVID-19 content in social media and depression. Depression became more severe with Twitter being used as a source of information about the virus, and the subsequent fear of it. As with anxiety, the young participants most often had problems with depression. All the analyzed activities improving subjective well-being were: yoga, meditation, and self-development, which were associated with the lack of depression. Asian-origin respondents had higher levels of depression after being diagnosed with the virus and during quarantine. The frequency of using TikTok and WeChat was associated with depression in such a way that higher activity on these portals was linked to a decrease in this trait. It also distinguishes that the participants in this group with the strongest depressive symptoms most willingly published on social media about COVID-19. Table 11 summarizes the comparison between Asian and European participants.

Table 11. Kruskal-Wallis test results for Asian and European-origin participants comparison.

Dependent Variable	<i>p</i> -Values					
	Life Satisfaction		Anxiety		Depression	
	Europe	Asia	Europe	Asia	Europe	Asia
Staying at home	0.278	0.257	0.177	0.491	0.050	0.504
Quarantined	0.868	0.000	0.318	0.000	0.907	0.007
Diagnosed COVID-19	0.853	0.000	0.237	0.192	0.102	0.000
Number of people in contact	0.683	0.152	0.045	0.264	0.000	0.019
COVID-19 mental discomfort	0.013	0.025	0.000	0.459	0.000	0.034
Reading COVID-19 SM content	0.178	0.471	0.000	0.057	0.001	0.004
Facebook	0.513	0.264	0.024	0.019	0.169	0.540
Instagram	0.304	0.121	0.000	0.118	0.130	0.942
YouTube	0.817	0.412	0.814	0.905	0.373	0.667
Twitter	0.527	0.121	0.212	0.011	0.045	0.219
TikTok	0.191	0.056	0.312	0.000	0.768	0.003
Whatsapp	1.000	0.646	1.000	0.338	1.000	0.380
Websites	0.279	0.003	0.353	0.166	0.646	0.220
Traditional media	0.798	0.108	0.729	0.014	0.811	0.000
Wechat	1.000	0.730	1.000	0.005	1.000	0.002
QQ	1.000	0.079	1.000	0.746	1.000	0.063
COVID-19 SM content causing fear	0.636	0.023	0.000	0.704	0.000	0.129
COVID-19 SM content causing mood improvement	0.023	0.701	0.084	0.377	0.087	0.631
Publishing COVID-19 content	0.282	0.416	0.534	0.884	0.194	0.025
Age	0.001	0.093	0.041	0.137	0.011	0.585
Self-development	0.000	0.947	0.000	0.987	0.000	0.343
Yoga	0.000	0.022	0.164	0.783	0.000	0.366
Meditation	0.000	0.377	0.083	0.922	0.002	0.974

ote. *p*-values < 0.05 are marked bold. Values in italics are confluent between groups, underlined values present occurrence of relations between the same variable but with a different direction.

4. Discussion

Coronavirus itself and the forced lockdown it caused has boosted fear, panic, depression, anxiety, obsessive behaviors, stockpiling, paranoia, and may even lead to post-traumatic stress disorder in the long term [2]. Compulsory social distancing has heightened social media usage, which aggravated the abovementioned mental states.

The first stage of our study showed the relation between COVID-19 content in social media on mental health. Our results showing the negative effects of lockdown, quarantine, mental discomfort caused by the pandemic, and the diagnosis of the virus confirmed the conclusions of other researchers [2,6,7,22,24,28]. This study indicated that these effects are associated with lower life satisfaction, higher anxiety, and depression. However, we also proved that reading social media COVID-19 content may raise feeling of fear that also influences life satisfaction and is linked to higher depression levels.

More frequent use of Facebook, Instagram, and Twitter caused higher anxiety among the studied group. These results are similar to those presented by Ahmad and Murad [24]. Respondents with severe depressive symptoms were not looking for any type of support on social media. In the studied sample, the use of Facebook and Instagram was higher in people who were not satisfied with their own life, but with the further intensification of this dissatisfaction, the activity on these portals decreased significantly. These different reactions may be caused by varying stress coping strategies, including seeking virus-related information, but also avoidance and denial of the pandemic phenomenon [52]. However, our findings also presented the support that social media may offer in these difficult, pandemic

times. Dissatisfaction with life caused respondents to search for online social support. It was particularly visible, as this group contacted virtually the highest number of people during lockdown and were the most likely to use WeChat than other participants. This result is partially in accordance with Drouin's research team's findings [7] showing that WeChat is used during stressful life events to improve life satisfaction and to process trauma. We cannot confirm that this application improved life satisfaction in our sample, but we may affirm that it was used for searching for support during the lockdown. Anxiety level was also seen to decrease with TikTok, WeChat, and QQ-related activities. These results may be explained by a theory described by Zhong, Huang, and Liu [22] that informational support achieved through social media diminishes perceived threats and improves coping methods. The relationship between depression and the use of COVID-19 content search in social media was not linear. Borderline abnormal respondents were active in searching for such content and used TikTok as well as QQ. Nevertheless, as the symptoms of depression worsened, they stopped the above activities. Described relationships of COVID-19-related social media activity with depression should also be referred to the results indicating an increase in depression over the lockdown [53], as special attention and care should be given to persons at greater risk of suffering from psychological distress that can impair functioning and lead to other psychopathological consequences.

In the second phase of the study, we identified several similarities, but, most importantly, also numerous differences between respondents of Asian and European origin and the relation between mental health and social media COVID-19 content. The psychological discomfort caused by the pandemic affected the European part of the sample, reducing life satisfaction, and increasing the level of anxiety and depression. The search for COVID-19 content on social media and a small number of online contacts during lockdown coexisted with high levels of anxiety and depression. Reading virus-related social media content was more common among participants who were satisfied with life, but it increased anxiety and deteriorated mood in those with high levels of depression. A high level of anxiety was displayed by the respondents who often used Facebook and Instagram; for depression, this was the case for Twitter users. For Asian respondents, forced quarantine lowered life satisfaction, increasing levels of depression and anxiety. Positively diagnosed COVID-19 had similar effects, but did not raise the level of anxiety. The psychological discomfort caused by the pandemic decreased the satisfaction with life. The use of social media to search for content about the virus was associated with high levels of anxiety but low levels of depression. However, the results that differentiated this group mostly from the first one were the positive effects caused by social media activity. Among the Asian-origin respondents, only Facebook boosted anxiety, while Twitter, TikTok and WeChat reduced anxiety and the level of depression. Borderline depression respondents actively searched for online contacts during lockdown, and those with the most severe forms of this disease were most actively publishing about the virus.

Despite several concurrent results, lack of life satisfaction and higher likelihood of depression was related to increased perception of mental discomfort caused by the coronavirus and a high level of anxiety among Facebook users, and the results between the two groups showed significant differences. European respondents were more prone to feeling anxious and depressed due to passive (reading) and active (commenting, staying in touch) social media activities related to the Coronavirus. Moreover, Asian participants showed the ability to use these media in a way that reduces the negative effects on mental health. The positive impact of TikTok, QQ, and WeChat could be more emphasized by the greater popularity of these applications in Asian countries, compared with European ones (only in relation to the study participants). Nevertheless, Asian origin participants were more likely to provide and seek social support through online media during the lockdown. The observed positive effects seem to confirm the other researchers claim that social media may be a source of information, a welcome relief from the COVID-19 pandemic, and social support (caring, trust, and empathy) during crisis, and that more active use reduces levels of depression as well as improves subjective well-being [7,22,28]. We found this stage of our

study especially relevant. As previous research showed that Asians are more likely to suffer from discrimination during the pandemic, and social media may become a particularly important tool of coping with these negative results [6,28], we have found that, indeed, this group of participants developed differently than European social media use patterns.

Finally, we wanted to refer to the results describing the impact of activities related to improving subjective well-being. In the entire sample, yoga practice coexisted with higher satisfaction with life and lower intensity of depression symptoms. Meditation had a similar effect on life satisfaction, while being associated with lower levels of anxiety. Self-development practices were linked to a lack of depression and anxiety. For European-origin respondents, all three activities were associated with life satisfaction; moreover, self-development was linked to lower anxiety, and meditation with lower levels of depression. For Asian-origin participants, only yoga had a positive effect on life satisfaction. Moreover, our results illustrating the impact of COVID-19 content in social media placed mainly young people and women in the risk group. These two groups were found to be most often related to serious anxiety and depression, and dissatisfaction with life. As the study conducted by Roma and others [53] found out that higher levels of depression at the beginning of the lockdown along with fewer coping strategies were linked to increased depression at follow-up, the supporting roles of yoga, meditation, and self-development become extremely important.

Our findings seem to confirm a prevalence of social media COVID-19 content on life satisfaction, depression, and anxiety during the pandemic by confirming some of the results from previous studies on a new level (Asia/Europe comparison), as well as finding some new associations especially visible in regional differences between participants.

Although we believe we garnered important insights, our study was not without limitations. All data were self-reported by participants, so we cannot guarantee the accuracy of the answers. In addition, the applied measurement scales for life satisfaction, anxiety, and depression were also based on the declarations of the respondents and, although these are tools widely recognized and used in scientific and research circles, they remain an indication of the possibility of certain mental states, and not their formal diagnosis. Although we gathered more than 1,600 records, we rue that the lockdown period was a hindrance to gather more representative data and an online form of the survey might have influenced the composition of the sample. Additionally, it was a cross-sectional study, not a longitudinal one. In our research, we assumed that declaring a country of origin is tantamount to identifying with the cultural patterns of a region. This simplification is also a limitation of the study. One of the limitations is the unequally numerous sample sizes between European and Asian origin respondents resulting from the snowball sampling of data collection. Finally, the last limitation is the unrepresentative nature of the study and the inability to generalize its results to the entire population.

Thus, in order to provide a fuller picture of how COVID-19 social media content in social media may affect psychological wellbeing, it will be necessary for future research to include data from a wider set of countries and cultures, different pandemic phases, and even in a post-pandemic setting to examine differences in studied behaviors. Additionally, the study employed a cross-sectional assessment. It would be valuable to carry out similar research, including longitudinal studies during other lockdowns, to provide solid and more causal evidence for the nature of associations found. These limitations justify further studies on the topic. Another interesting, emerging path to conduct a similar study is in terms of gender, as women are at a greater risk for psychological problems than men [54], including anxiety [55,56] and depression [57,58].

5. Conclusions

In conclusion, our findings showed that there is an important influence of social media COVID-19-related content on mental health problems, including poor life satisfaction and heightened anxiety and depression levels. This paper was aimed at exploring the impact of COVID-19 content published in social media on these three psychological traits.

Concerning the findings, we proved that although the COVID-19 content was used to spread fear-boosting anxiety and depression symptoms, social media were also used as a tool for social support helping during social distancing. The comparison between inhabitants of Europe and Asia participating in our study evinced significant differences in patterns of using social media for the pandemic information search and publishing. We believe that the information on the pandemic spread in social media may serve for good, but also be fuel for exaggerating fear and panic. This is why we should remember that rapidly expanding misinformation, panic, and fear regarding COVID-19 may cause severe psychological problems that may last even longer than the virus itself.

Supplementary Materials: The following are available online at <https://www.mdpi.com/article/10.3390/su13169198/s1>, S1: The study questionnaire, S2: List of dependent variables used in The Kruskal-Wallis test, S3: Complete calculation results, Dataset S4: raw data.

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