

Article

## Using Social Networking Sites During Lockdown: Risks and Benefits

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### ABSTRACT

**Background:** Previous research about use of Social Networking Sites (SNS) use during the COVID-19 lockdown has examined benefits and risks of SNS use (i.e., support through SNS, problematic SNS use and interaction about COVID-19) without comparing them. This study has two objectives: (i) to evaluate which SNS uses (problematic SNS use and interaction about COVID-19 on SNS) predict increased emotional distress, and (ii) to analyse if social support and interaction about COVID-19 mediated the relationship between time spent on SNS and increased emotional distress. **Method:** A total of 1,003 participants (75.5% women) over 18 years old took part ( $M = 42.33$ ;  $SD = 14.32$  years). Three hierarchical linear regressions were performed for the first objective and a path analysis was performed for the second. **Results:** Results showed that negative social comparison on SNS had the highest positive regression weight, followed by interaction about COVID-19 and addictive consequences. Also, an indirect effect of time spent on SNS on anxiety, depression, and life satisfaction through interaction about COVID-19 and support through SNS was found. **Conclusions:** The results indicate that comparative SNS use is the best predictor of emotional distress. The mediation model proposed was confirmed, highlighting the importance of assessing specific SNS uses.

## Uso de Redes Sociales Durante el Confinamiento: Riesgos y Beneficios

### RESUMEN

**Introducción:** Estudios previos durante el confinamiento por COVID-19 sobre el uso de Redes Sociales (RRSS) han examinado los beneficios y riesgos de diferentes usos (uso problemático, interacción sobre el COVID-19 y apoyo mediante RRSS), sin compararlos. Este estudio tiene dos objetivos: a) evaluar qué uso de RRSS predice mejor el incremento de distrés emocional, y b) analizar si el apoyo y la interacción sobre COVID-19 en RRSS media la relación entre el tiempo de uso y el distrés emocional. **Método:** La muestra constó de 1,003 participantes (75.5% mujeres) mayores de 18 años ( $M = 42.33$ ;  $DT = 14.32$ ). Se llevaron a cabo tres regresiones lineales jerárquicas para el primer objetivo y un path análisis para el segundo. **Resultados:** La comparación social negativa en RRSS tiene el mayor peso de regresión, seguido de interacción sobre el COVID-19 y consecuencias adictivas. Se ha obtenido un efecto indirecto del tiempo de uso sobre el distrés emocional a través de la interacción sobre COVID-19 y el apoyo mediante RRSS. **Conclusiones:** Los resultados indican que el uso comparativo de RRSS es el mejor predictor de distrés emocional. Se ha confirmado el modelo de mediación, enfatizando la importancia de la evaluación de usos específicos de RRSS.

#### Palabras clave:

Redes Sociales  
Ansiedad  
Depresión  
COVID-19  
Apoyo social

During the COVID-19 lockdown, Social Networking Sites (SNS) became one of the few means of communication available to individuals. Several studies have reported increasing SNS use during the pandemic in different countries (Caugherge et al., 2021; Lisitsa et al., 2020) and specifically in Spain (Vall-Roqué et al., 2021). This increased use has been contrasted with objective data collected from SNS (Valdez et al., 2020). In this extremely stressful situation, the prevalence of emotional distress among the Spanish population was very high (González-Pando et al., 2021; Justo-Alonso et al., 2020; Méndez-Giménez et al., 2021; Orgilés et al., 2021; Pérez-Rojo et al., 2021). Accordingly, it is important to understand both the positive and the potential adverse effects on mental health depending on how SNS are used. Three types of SNS uses have been studied during the COVID-19 lockdown: (i) SNS use related to emotional distress that existed in the pre-pandemic context, i.e., problematic SNS use (González-Nuevo, Cuesta & Muñiz, 2021; González-Nuevo, Cuesta, Postigo et al., 2021; Haddad et al., 2021; Keles et al., 2020; Saputri & Yumarni, 2021; Seabrook et al., 2016), (ii) pandemic context-specific SNS use related to emotional distress, such as using SNS as a source of information on COVID-19 (Gao et al., 2021; Zhang et al., 2021; Zhao & Zhou, 2020) and (iii) SNS use related to positive mental health effects, such as social support (Caugherge et al., 2021; Hadlington et al., 2022). Social support via SNS was common before the COVID-19 lockdown, but it became essential in isolation.

Firstly, problematic SNS use has been associated with negative impacts on mental health before and during the pandemic. Problematic SNS use is generally defined as SNS use that generates negative consequences in a person's life (Marino et al., 2018). Two lines of research on problematic SNS use can be identified: one group of authors understands problematic SNS use as an addiction problem (Andreassen et al., 2012; Blanca & Bendayan, 2018; Van Den Eijnden et al., 2016) including addiction symptoms, such as salience and tolerance, proposed by Griffiths (2005), and another group of authors understands problematic use more fully as a problem of excessive use present alongside with other pathological features, such as a preference for online communication (Marino et al., 2016). SNS addiction has not been included as official diagnosis in the most recent fifth edition of the American Psychiatric Association's Diagnostic Manual for Mental Disorders (DSM-5; APA, 2013), which has opened a debate about if it is indeed an addiction. In the present study, the measurement proposed by González-Nuevo, Cuesta, Postigo et al. (2021) has been used. This questionnaire includes not only an assessment of the addictive consequences of excessive use, but also negative social comparisons on SNS, which can make the user feel inferior to others (Verduyn et al., 2020). These types of problematic SNS use (i.e., addictive and comparative) have been linked to negative mental health consequences in the pre-pandemic context (Arias-de la Torre et al., 2020; Choi & Kim, 2020; Keles et al., 2020; Seabrook et al., 2016; Schmuck et al., 2019), and during the COVID-19 lockdown (Haddad et al., 2021; Majeed et al., 2020; Masciantonio et al., 2021; Panno et al., 2020; Saputri & Yumarni, 2021).

A second negative use of SNS in the pandemic context was SNS use as a source of COVID-19 information. During the COVID-19 lockdown period, SNS were crowded with news and conspiracy theories (Choli & Kuss, 2021). The use of SNS as a source for

COVID-19 information has been assessed mainly through time spent searching for news that has been related to negative mental health outcomes (Brailovskaia et al., 2021; First et al., 2021; Gao et al., 2021; Wheaton et al., 2021; Zhao & Zhou, 2020; Zhang et al., 2021; Zhong et al., 2020). On the one hand, it has been found that searching for news about COVID-19 for two hours per day (Hou et al., 2020) and even for more than one hour was associated with increased emotional distress (Ni et al., 2020). On the other hand, the effects of publishing news instead of just searching for it have also been evaluated. An example of this is the study carried out by Yang et al. (2020), in which they found that posting positive news about COVID-19 decreased emotional distress, while people prone to discuss COVID-19 issues on SNS have been found to have higher levels of emotional distress. Nevertheless, it should be noted that during the COVID-19 lockdown period, even if people did not explicitly search for news about COVID-19 on SNS (i.e., browsing specific COVID-19-news, searching for COVID topics with hashtags), COVID-19-related information was available due to the sheer amount of COVID-19 posts on SNS. For example, Facebook feeds during this period contained multiple posts about COVID-19. Engaging with these posts has been called "doomscrolling", which is defined as the tendency to scroll through SNS despite the appearance of negative or depressing news (in this case, about COVID-19) (Ytre-Arne & Moe, 2021). Using SNS as a source of information on COVID-19 has attracted more research interest compared to the positive aspects of SNS use.

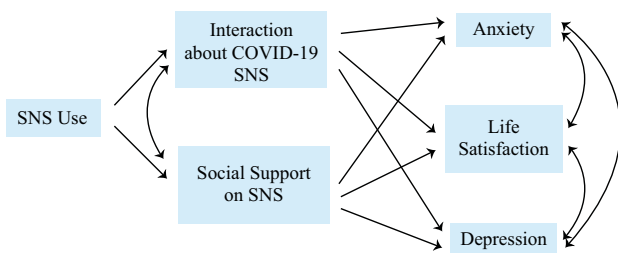
The third SNS use that has been studied is related to positive mental health outcomes has received limited research. One study of positive SNS use is exemplified in the work undertaken by Caugherge et al. (2021), in which they found a positive effect of using SNS to actively manage a situation (i.e., using SNS to accept what is currently happening or to compensate for missing friends). This type of use relieved feelings of distress and anxiety to some degree, increasing feelings of happiness. Additionally, humorous SNS use to cope with the situation (i.e., using social media to watch funny movies about the situation) was positively related to feelings of happiness, but not related to loneliness or anxiety. Another example is the study of Zhong et al. (2021), who found that SNS use as a source of information, emotional support, and peer support is related to health behaviour change (i.e., sticking to health measures, such as using a face mask or disinfectant). However, there is contradictory research. For example, Drouin et al. (2020) found a strong positive relationship between SNS use, both for support and information-seeking on COVID-19, with anxiety.

Understanding the effects of specific SNS uses can have on mental health will provide an understanding of how to use SNS beneficially. The present study aims to assess for the first time two specific SNS uses, namely interaction about COVID-19 on SNS and social support via SNS. To fill a gap in knowledge, we will study these two uses simultaneously as social support on SNS has received limited research. Interaction about COVID-19 on SNS assessed in this study is more comprehensive than that proposed by other studies as other studies have only addressed the effects of news searching/posting on levels of psychological wellbeing (Brailovskaia et al., 2021; First et al., 2021; Gao et al., 2021; Wheaton et al., 2021; Yang et al., 2020; Zhang et al., 2021; Zhao & Zhou, 2020; Zhong et al., 2020). The scale interaction about COVID-19

is a measure that has been developed for this study and not only includes seeking information about COVID-19 similar to previous research, but participating in discussions about COVID-19, seeking opinions about COVID-19 and monitoring other people's behaviours during lockdown. These behaviours have not been assessed before. Furthermore, this is the first study to examine the relative importance of problematic SNS use and interaction about COVID-19 on SNS in predicting emotional distress. This knowledge can provide information about preventative efforts regarding SNS use related to emotional distress. As a result, it will be possible to understand more about how different types of SNS use relate to each other and which effects they may have on mental health in both a non-pandemic and a pandemic context.

Within this context, the general purpose of this study was to examine the relationship between different types of Social Networks Use and emotional distress during the lockdown in Spain. This general objective is broken down into two specific objectives. The first specific aim was to analyze which problematic SNS behaviours (i.e., problematic SNS use or interaction about COVID-19 on SNS) predicts increased emotional distress, and the second specific aim was to analyze two functions performed by SNS during the COVID-19 lockdown (i.e., social support and interaction about COVID-19) and their associations with emotional distress.

Our hypotheses for this second objective were that (1) higher SNS use will predict higher interaction about COVID on SNS and higher social support on SNS; (2) higher interaction about COVID-19 on SNS will predict higher anxiety, higher depression and lower life satisfaction; (3) higher social support on SNS will predict lower anxiety, lower depression and higher life satisfaction; (4) social support on SNS will mediate the relationship between SNS use and depression, anxiety and life satisfaction; (5) interaction about COVID-19 on SNS will mediate the relationship between SNS use and depression, anxiety and life satisfaction (Figure 1).



**Figure 1.**  
Proposed Theoretical Model.

## Method

### Participants

The sample was initially composed of 1059 participants from the general Spanish population with the inclusion criteria of being over 18 years old and a regular SNS user. The final sample was reduced to 1003 persons after eliminating 5.29% of the sample for having more than two mistakes on the control scale (described in the Instruments section). Sociodemographic characteristics are shown in Table 1. From this sample, another paper has been published to validate the Problematic SNS use questionnaire (PUS) (González-Nuevo, Cuesta, Postigo et al., 2021).

**Table 1.**  
Sociodemographic characteristics.

Variable	n	%
<b>Sex (women)</b>	757	75.5
<b>Region</b>		
Asturias	787	78.5
Cantabria	68	6.8
Madrid	36	3.6
Castilla y León	24	2.4
Aragón	17	1.7
Andalucía	14	1.4
Cataluña	13	1.3
País Vasco	13	1.3
Other	31	3.1
<b>Educational training</b>		
Primary	26	2.6
Secondary	39	3.9
Bachelor	135	13.5
Vocational training	153	15.3
University training	650	64.8
<b>Working Status</b>		
Unemployed before lockdown	210	20.9
Unemployed since lockdown	174	17.3
On-site work	203	20.2
Teleworking	318	31.7
Retired	98	9.8

### Instruments

**Social Networks Use.** Time spent using the popular SNS YouTube, Facebook, Instagram and Twitter during lockdown was assessed through four Likert-type items worded as follows: "Since lockdown, how much time did you spend using Facebook on any given day?" and with six response options, "5 minutes or less", "30 minutes", "1 hour", "3 hours", "6 hours" and "8 hours or more". A higher score means more time spent on SNS.

**Interaction about COVID on SNS Scale.** Interaction about COVID on SNS is defined as the use of SNS focused on the search for, and discussion of, COVID-related issues (for example, "I have followed all the opinions about COVID-19I could on social networks"). It was assessed through four Likert-type items using a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). A higher score means higher use of SNS focused on the search for, and discussion of, COVID-related issues. This questionnaire was created for this study, so we carried out an Exploratory Factor Analysis (EFA) to make sure that the questionnaire has adequate psychometric properties. The suitability of the data for factor analysis of the interaction about COVID-19 on SNS scale was tested with the KMO test (KMO = .77) and the Bartlett test ( $p < .001$ ). The PA (Calderón et al., 2019; Timmerman & Lorenzo-Seva, 2011) suggested the presence of a single factor. This result was supported by the GFI indicators (.99), which were greater than .95, indicating a good fit; the explained variance (66.01%); and the RMSR (.041), indicated an acceptable

fit (Ferrando & Anguiano-Carrasco, 2010). The  $\alpha$ -coefficient found in the present study was .83.

**Social Support on SNS Scale.** Social support on SNS in the lockdown context is defined as the use of SNS as a form of contact with friends and family during isolation (for example, “I have had video calls through social networks with people I appreciate”). SNS use focused on COVID-19 was assessed through five items on a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). A higher score means higher use of SNS as a form of contact with friends and family during isolation. This questionnaire was created for this study, so we carried out an EFA to make sure that the questionnaire has adequate psychometric properties. The suitability of the data for factor analysis of the social support on SNS scale was tested with the KMO test (KMO = .77) and the Bartlett test ( $p < .001$ ). The PA (Calderón et al., 2019; Timmerman & Lorenzo-Seva, 2011) suggested the presence of a single factor. This result was supported by the GFI indicators (.97), which were greater than .95, indicating a good fit; the explained 62.21% of the variance; and the RMSR (.124) indicated an acceptable fit (Ferrando & Anguiano-Carrasco, 2010). The  $\alpha$ -coefficient found in the present study was .85.

**Satisfaction with Life Scale (SWLS; Diener et al., 1985).** This instrument is a life satisfaction scale consisting of five items. Participants are asked to indicate their level of agreement with each statement using a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). A higher score means more life satisfaction. The estimated reliability using the  $\alpha$ -coefficient in its Spanish adaptation is .88 (Vázquez et al., 2013). The  $\alpha$ -coefficient found in the present study was .82.

**Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983).** The Spanish adaptation of Terol et al.’s HADS (2007) was used. It is a 14-item questionnaire with two subscales of seven items each on a Likert scale ranging from 0 to 3. The subscale HADS-A assesses the level of anxiety. The other subscale HADS-D assesses the level of depression. A higher score means more severe anxiety and depression, respectively. The internal consistency for both scales in the Spanish version was .86 (Quintana et al., 2003). The  $\alpha$ -coefficient found in the present study was .84 for the HADS-A subscale and .77 for the HADS-D subscale.

**Problematic Use of SNS Questionnaire (PUS; González-Nuevo, Cuesta, Postigo et al., 2021).** This is a self-report questionnaire consisting of 18 Likert-type items divided into two subscales on problematic SNS use. The first scale, Addictive Consequences of SNS use, consists of ten items and assesses addictive SNS use. High scores in addictive consequences of SNS use entail a high interference of using social networks in the daily life of the person. The second scale, Negative Social Comparison on SNS, is composed of eight items and measures the degree to which the person, through the use of SNS, compares him/herself with others, believing him/herself to be inferior to them. High scores on negative social comparison on SNS are associated with a high level of comparison in social networks in which the person feels inferior to other people. All items have five response options, where 1 indicates “strongly disagree” and 5 “strongly agree”. In the present study, the internal consistency of the negative social comparison on SNS and addictive consequences of SNS use scales was excellent ( $\alpha = .94$  and  $\alpha = .91$ , respectively).

**Attentional control scale.** A 10-question attentional control scale was included in which participants were asked to select a certain response option (e.g., “In this question, you should select strongly agree.”). The scale items were randomly included in between the other scales’ items. All items are Likert-type and have five response options. For seven of those items, the response options range between 1 = “strongly disagree” and 5 = “strongly agree”. The response options for the other four items range from 1 = “Never” to 5 = “Always”. The choice of response options depended on the position of the attentional item in the questionnaire. For example, if an attentional question was included after a PUS question (for which the response options ranged from “strongly disagree” to “strongly agree”), the attentional question had the same options. This scale was applied to detect those participants who responded randomly to the different questionnaires.

## Procedure

The data were collected during the lockdown in Spain from 28 April to 7 May 2020. The inclusion criteria for participation in the study was that participants had to be 18 years old or older and regular social media users. A snowball sampling procedure was used to obtain the sample using different SNS (e.g., Facebook, Instagram, WhatsApp). Participants were asked to share the questionnaire with their own social networks. Data were collected anonymously and voluntarily, with informed consent from the participants before starting and a brief explanation of the aim of the study as well as the researcher’s contact details in case further information was required. Both, the items of the questionnaires and the attentional control scale, were presented via Google forms in randomized order and completing all questions was mandatory. Participants did not receive any reward for participating in the study.

## Data Analysis

Three hierarchical linear regression analyses were conducted to explore the relevance of the three types of negative SNS use (i.e., addictive consequences of SNS use, negative social comparison on SNS and interaction about COVID-19 on SNS) in predicting levels of depression, anxiety and life satisfaction. In all three analyses, the problematic SNS use variables (i.e., addictive consequences of SNS use and negative social comparison on SNS) were introduced first as they have been related to emotional distress and low life satisfaction in the non-pandemic context, and in the second step were included pandemic-specific variables, such as the interaction on COVID-19 on SNS. The coefficient of determination ( $R^2$ ) was used to analyse the percentage of variance explained.

A path analysis was performed to evaluate the relationships between time spent on social networks and the outcome variables anxiety, depression and life satisfaction mediated by interaction about COVID-19 on SNS and social support on SNS. Standardized regression coefficients were calculated, and  $R^2$  measures for each exogenous variable were estimated. Goodness-of-fit criteria were calculated to assess model fit with the *Comparative Fit Index* (CFI)  $\geq .95$ , and *Standardized Root Mean Square Residual* (SRMSR)  $< .08$ , indicating acceptable model fit (Hu & Bentler, 1999).

The path analysis was performed using the lavaan package (version 0.6-9) in R software (version 4.0) (Rosseel, 2012), and the hierarchical regression analysis was performed using IBM SPSS 26.0.

## Results

Firstly, the descriptive statistics of the variables involved in the analyses in the first and second objectives are presented, as well as the profiles of SNS use in the participants with high levels of anxiety, depression and low life satisfaction (Table 2). As can be seen, the level of time spent using SNS is higher in the group with higher levels of anxiety. Concerning the use of SNS in the pandemic context, the mean interaction about COVID-19 on SNS is higher in the group that meets the three criteria (high anxiety, high depression and low life satisfaction) and in the case of mean social support on SNS use, the group with low life satisfaction has the lowest value. Finally, the level of problematic use of social support on SNS is higher in the group with high anxiety, high depression and low life satisfaction for both addictive consequences of SNS use and negative social comparison on SNS.

Since the first objective of this study was to reveal the potential predictive power of addictive consequences of SNS use, negative social comparison and interaction about COVID-19 on SNS on anxiety, depression, and life satisfaction, three hierarchical

linear regression analyses were performed (Table 3). Model 1 included the PUS variables (addictive consequences of SNS use and negative social comparison on SNS) and Model 2 added interaction about COVID-19 on SNS as predictor in the three regressions. In a first step, the variables specific to problematic SNS use were included to determine whether the predictive power increases when interaction about COVID-19 on SNS is included, to address SNS use in the pandemic context.

Higher problematic SNS use (i.e., addictive consequences of SNS use and negative social comparison on SNS) was significantly associated with higher anxiety and depression. However, only negative social comparison on SNS was significantly associated with lower life satisfaction. A higher interaction on COVID-19 was significantly associated with higher anxiety and depression, but not with life satisfaction. Including the interaction about COVID-19 on SNS variable in the second step significantly increased the explained variance of anxiety and depression, but did not significantly increase the explained variance in life satisfaction. All predictors of SNS use types jointly explained a significant proportion of the variance in life satisfaction ( $R^2 = .14$ ), depression ( $R^2 = .18$ ) and anxiety ( $R^2 = .19$ ). The final standardised regression equation (Model 2) for predicting anxiety, depression and life satisfaction can be found in Table 3 in the column showing the beta for each of the variables.

**Table 2.**  
Profiles of SNS use in Participants with High Anxiety, High Depression and Low Life Satisfaction.

	Total		High Anxiety		High Depression		Low Life Satisfaction		Low Life Satisfaction, High Anxiety and Depression	
	<i>n</i> = 1003		<i>n</i> = 260		<i>n</i> = 316		<i>n</i> = 222		<i>n</i> = 94	
	M	SD	M	SD	M	SD	M	SD	M	SD
SNS Use	8.07	2.96	8.83	3.16	8.26	3.04	8.46	3.32	8.59	3.28
Interaction about COVID-19 on SNS	9.42	3.67	10.33	4.02	10.15	3.71	9.91	3.75	10.78	3.99
Social Support on SNS	20.21	3.88	20.23	4.10	19.66	3.73	19.36	3.99	19.61	3.55
Addictive Consequences	15.34	6.16	17.76	7.09	17.53	6.86	17.03	6.76	18.20	7.57
Negative Social Comparison	17.45	7.01	20.73	7.92	20.86	7.70	21.37	7.94	23.80	7.96
Total ( <i>n</i> = 1003)			6.8	3.56	6.03	3.30	17.86	3.49		

*Note:* High anxiety and depression indicates scoring above 9 in anxiety and 8 in depression. Low life satisfaction indicates scoring below 16. Low life satisfaction/high anxiety and depression indicates participants who met three criteria [i.e., high anxiety (score > 9), high depression (score > 8) and low life satisfaction (score < 16)]

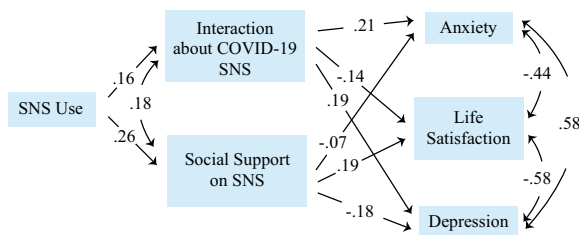
**Table 3.**  
Hierarchical Linear Regression to Predict Anxiety, Depression and Life Satisfaction.

Dependent Variable	Model	Variables included in each step	$\beta$	R2 (p of the increase in R2)
Anxiety	1	Addictive Consequences	.12 ( $p < .001$ )	.17 ( $p < .001$ )
		Negative Social Comparison	.32 ( $p < .001$ )	
Depression	2	Interaction about COVID-19 on SNS	.12 ( $p < .001$ )	.19 ( $p < .001$ )
		1	Addictive Consequences	.08 ( $p = .016$ )
Life Satisfaction	2	Negative Social Comparison	.36 ( $p < .001$ )	.18 ( $p = .021$ )
		1	Interaction about COVID-19 on SNS	.07 ( $p = .021$ )
Life Satisfaction	2	Addictive Consequences	-.03 ( $p = .47$ )	.14 ( $p = .160$ )
		Negative Social Comparison	-.35 ( $p < .001$ )	
		Interaction about COVID-19 on SNS	-.04 ( $p = .16$ )	

\* = The  $\beta$  of each of the variables corresponds to the definitive model (model 3)



The model (Figure 2 based on current evidence related to SNS use during lockdown fit the data adequately based on goodness-of-fit indices (CFI = .98; SRMR = .04). From the results of the path analysis, all direct paths were significant at the 0.05 level (see Table 4). The explained variance in the anxiety measure was 4.4%, 5.4% in depression, and 4.3% in life satisfaction, explained using social support on SNS, interaction about COVID-19 on SNS and SNS use. Also, the explained variance in social support on SNS was 6.6% and in interaction about COVID-19 on SNS was 2.6%. SNS use was positively associated with interaction about COVID-19 on SNS as well as SNS use with social support on SNS. SNS use had a stronger relationship with social support on SNS than with interaction about COVID-19 on SNS. Interaction about COVID-19 on SNS was positively associated with anxiety and depression and was also negatively associated with life satisfaction. social support on SNS was negatively associated with anxiety and depression. On the contrary, social support on SNS was positively associated with life satisfaction.



**Figure 2.** Final Path Analysis Model of Anxiety, Depression and Life Satisfaction. Note. This graph represents standardized regression weights

**Table 4.** Path Model: Direct Effects.

Path	b(SE)	Z-value	p	β
Interaction about COVID-19 on SNS → Anxiety	.21 (.03)	6.73	<.001	.21
Interaction about COVID-19 on SNS → Depression	.17 (.03)	5.88	<.001	.19
Interaction about COVID-19 on SNS → Life Satisfaction	-.14 (.03)	-4.50	<.001	-.14
Social Support on SNS → Anxiety	-.06 (.03)	-2.12	.034	-.07
Social Support on SNS → Depression	-.16 (.03)	-5.85	<.001	-.19
Social Support on SNS → Life Satisfaction	.17 (.03)	5.85	<.001	.19
SNS Use → Social Support on SNS	.34 (.04)	8.40	<.001	.26
SNS Use → Interaction about COVID-19 on SNS	.20 (.04)	5.20	<.001	.16

Note. b = Unstandardized path coefficient; SE = Standard error; β = Standardized path coefficient.

Regarding the indirect effects of interaction about COVID-19 on SNS, a significant positive indirect effect was noted for SNS use on anxiety through interaction about COVID-19 on SNS ( $b = .04$ , 95% CI [.02, .06],  $p < .001$ ) and for SNS use on depression through interaction about COVID-19 on SNS ( $b = .03$ , 95% CI [.02, .05],  $p < .001$ ) as well as a significant negative indirect effect was noted for SNS use on life satisfaction through interaction about COVID-19 on SNS ( $b = -.03$ , 95% CI [-.04, -.01],  $p = .003$ ). Hence, SNS use was significantly associated indirectly and positively with anxiety and depression as well as indirectly and negatively with life satisfaction through the interaction on COVID-19 on SNS.

With respect to the indirect effects of the mediator social support on SNS, a negative significant indirect effect was noted for SNS use on depression through social support on SNS ( $b = -.06$ , 95% CI [-.08, -.04],  $p < .001$ ) and for SNS use on anxiety through social support on SNS ( $b = -.03$ , 95% CI [-.06, -.01],  $p = .003$ ) as well as a positive indirect effect for SNS use on SWLS through social support on SNS ( $b = .06$ , 95% CI [.04, .09],  $p < .001$ ). Thereby, SNS use was significantly associated indirectly and negatively with anxiety and depression as well as indirectly and positively with life satisfaction through the social support provided through SNS.

**Discussion**

This research aimed to analyze the relationship between different types of SNS use and emotional distress during the lockdown in Spain. This study’s objective was subdivided into two specific objectives: (i) to examine which problematic SNS behaviours (i.e., problematic SNS use or interaction about COVID-19 on SNS) predicts increased emotional distress, and (ii) to evaluate two functions performed by SNS during the COVID-19 lockdown (i.e., social support and interaction about COVID-19) and their associations with emotional distress.

First, the characteristics of the data were analysed descriptively. In general, the uses of SNS that have been related to increased emotional distress, i.e., problematic and COVID-19-related SNS use, have been higher in the group with the lowest values for mental health (i.e., high anxiety, high depression and low life satisfaction). Results are in line with previous studies that found a relationship between the variables of SNS use and poorer mental health (Arias-de la Torre et al., 2020; Choi & Kim, 2020; Haddad et al., 2021; Majeed et al., 2020).

Regarding the first objective, the predictive power of interaction about COVID-19 on SNS, negative social comparison on SNS and addictive consequences of SNS use on anxiety and depression was studied for the first time using a hierarchical linear regression method. The three predictors of anxiety and depression, problematic SNS use (negative social comparison on SNS and addictive consequences of SNS use subscales) and COVID-19-related SNS use (measured with the interaction about COVID-19 on SNS scale) indicated that scoring higher on these variables predicted higher levels of anxiety and depression. Negative comparative SNS use had a higher weight in the regression equation for both variables, followed by interaction about COVID-19 on SNS and addictive consequences of SNS use, with similar values. Regarding the prediction of life satisfaction, only negative social comparison on SNS had significant negative weights indicating higher comparative use of SNS predicted lower levels of life satisfaction.

The positive relationship between problematic SNS use (both for negative social comparison on SNS and addictive consequences of SNS use) with negative mental health associations has been extensively studied in pre-pandemic contexts (Arias-de la Torre et al., 2020; Choi & Kim, 2020; Keles et al., 2020; Seabrook et al., 2016; Schmuck et al., 2019), and during the COVID-19 lockdown (Haddad et al., 2021; Majeed et al., 2020; Masciantonio et al., 2021; Panno et al., 2020; Saputri & Yumarni, 2021). SNS use as a source of information and discussion about COVID-19, not having been previously assessed, has not specifically been related to any

mental health problems. However, searching for COVID-19 news on SNS has been positively related to increased emotional distress (Brailovskaia et al., 2021; First et al., 2021; Gao et al., 2021; Wheaton et al., 2021; Zhang et al., 2021; Zhao & Zhou, 2020; Zhong et al., 2020), which is consistent with our results.

The novelty of this objective was to compare the predictive power of these SNS uses. It is worth highlighting the importance of comparative SNS use which has been the strongest predictor of anxiety and depression in comparison with the rest of the SNS use variables. In isolation, our findings highlight that day-to-day life at home can generate social comparisons on SNS. This can partially be explained by the SNS users' home situation (i.e., if they live by themselves, with children or with their partner), their routine (i.e., their work and pastime activities) or their attitude (i.e., positive coping mechanisms, including humour and positivity), and others. Future research needs to investigate which features and reasons make SNS a source for comparisons.

Moreover, continuing with this first objective of comparing different SNS uses to predict increased emotional distress, interaction about COVID-19 on SNS and addictive consequences of SNS use had similar and lower regression weights than negative social comparison on SNS in predicting anxiety and depression. Previous research has shown a stronger relationship between comparative SNS use with emotional distress than addictive SNS use (González-Nuevo, Cuesta, Postigo et al., 2021). However, interaction about COVID had not been compared with problematic SNS use. One reason why SNS use generated anxiety during lockdown is the large amount of COVID-19 information on SNS. Accordingly, while using SNS, users saw content that made them anxious, yet they did not stop using SNS or "doomscrolling", as studied by Ytre-Arne and Moe (2021).

Finally, the main implication of interaction about COVID-19 on SNS is that not only did we assess searching for news about COVID-19 (which is not distinctive for SNS and can occur on traditional media), but we also assessed participating in discussions about COVID-19, seeking opinions about COVID-19 and monitoring other people's behaviours during the lockdown. On SNS information cannot only be presented (i.e., a characteristic of Web 1.0), but created, discussions can be had, and opinions shared (i.e., a characteristics of Web 2.0) (Fuchs et al., 2010; Kuss & Griffiths, 2017). As a result, on SNS, the information is often contradictory and mixed with opinions, as Jones et al. (2017) demonstrated after analyzing 13,000 public accounts on Twitter. This may be one of the reasons why searching for news about COVID-19 on SNS is related to depression, while viewing such information on traditional media is not (First et al., 2021). Therefore, it appears that SNS are unique in that interacting with information about COVID-19 on SNS can be particularly harmful to mental health.

With regards to the second objective, the proposed theoretical model has been supported. An indirect effect of SNS use on anxiety, depression and life satisfaction through interaction about COVID-19 on SNS has been found. Higher SNS use to interact on COVID-19 was found to be related to higher anxiety, depression, and lower life satisfaction. In contrast, an indirect effect of SNS use on anxiety, depression, and life satisfaction through social support on SNS has been found. In contrast, greater SNS use as a form of support during isolation was found to be related to lower anxiety, depression, and higher life satisfaction.

Previous studies have shown the associations between these two uses of SNS with mental health, indicating SNS use as a form of social support is associated with better mental health (Cauberghe et al., 2021; Zhong et al., 2021), and, conversely, information seeking on COVID-19 indicating worsening mental health (Brailovskaia et al., 2021; First et al., 2021; Gao et al., 2021; Wheaton et al., 2021; Zhang et al., 2021; Zhao & Zhou, 2020; Zhong et al., 2020). Nonetheless, the influence of these two SNS uses (i.e., as a form of social support and for COVID-19 information seeking) on mental health has not been assessed in a unique model in previous studies. Our findings confirm that using SNS as a form of support is beneficial for people in isolation and interacting about COVID-19 on SNS is related to emotional distress. Therefore, SNS misuse prevention should focus on how social networks are used rather than how much time they are used for. Prevention campaigns should focus on the benefits of using SNSs as a form of social support and to connect with other people and on the drawbacks of using them in an addictive way or with highly anxiety-related content such as the news about COVID-19.

The present results must be examined alongside several limitations. The questionnaires have been developed specifically for this study. Given the complexity of the Covid-19 situation, the sample, although large, is a convenience sample made up mostly of university students, which may not be extrapolated to the general population. Additionally, variables that may affect the relationship between SNS use and psychological distress, such as political orientation, were not taken into account. In this context, the relationship of viewing news about COVID-19 with emotional distress is moderated by the political orientation of viewers (Freiling et al., 2021), and the news source. Specifically, on SNS, news about COVID-19 can be created by (i) lay authors (i.e., unverified websites, low-quality newspapers, anonymous users) which are related to emotional distress and (ii) by official authors (e.g., government or sanitary authorities) which are not related to emotional distress (Heffner et al., 2021; Şentürk et al., 2021). Future studies should consider these results and the double effect, positive and negative, that SNS use can have.

To conclude, SNS use increased significantly during the Covid-19 lockdown and was related to emotional distress and life satisfaction, depending on how SNS were used. This study is the first to compare the ability to predict psychological distress from different SNS uses; addictive SNS use, comparative SNS use, and interaction about COVID-19 on SNS. The results indicate that comparative use is the best predictor of emotional distress compared to other uses. Moreover, we confirmed for the first time in a comprehensive model that the two opposing uses analyzed during lockdown, using SNS as support and interaction about COVID-19 on SNS, have opposite relationships with emotional distress. On the one hand, use for support is related to better psychological wellbeing and interaction about COVID-19 on SNS to greater emotional distress, thus confirming the relevance of assessing and preventing emotional distress-related SNS use rather than the amount of time spent on SNS per se.

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