Motives for Using Social Networks and Social Network Addiction in a Time of Pandemic

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Abstract

The lockdown situation caused by COVID-19 has increased the use of social networks, which could, in turn, increase social networks addiction. This research consists of two integrated studies aimed at (1) developing and validating the Social Networks Motives Scale (SN-MotiveS) and (2) examining the relationships between the frequency of use of social networks and the motives for why individuals use social networks with social networks addiction, as well as the evolution of these variables over time before (through a retrospective assessment), during, and after lockdown. During lockdown, an online questionnaire was distributed to a sample of 482 participants (Study 1). After lockdown, 114 participants from Study 1 completed a second online questionnaire, forming a longitudinal study (Study 2). Study 1 showed a robust fit for the multifactorial structure of the SN-MotiveS with four factors (socialization, escapism, prosocial behavior, and self-presentation), supporting the external validity of the scale, and the expected correlation patterns were found with social networks frequency of use, abuse, and addiction. Study 2 showed that all the motives increased during lockdown except for self-presentation, whereas after lockdown only prosocial behavior and employment (added in Study 2) decreased significantly. Moreover, the self-presentation and escapism motives acted as mediators in the relationship between social networks frequency of use and social networks addiction. This research provides a reliable instrument to measure the motives for using social networks both during a pandemic and in normal times. In addition, it highlights the importance of paying special attention to escapism motives for predicting social networks addiction in periods of lockdown.

Keywords: social network motives; social network addiction; lockdown; scale validation; mediation

Editorial Record

Introduction

SARS-CoV-2 has brought about a substantial change in our lives. To mitigate the effects of COVID-19, people have been confined for a period (Cohen & Kupferschmidt, 2020). The effects of such confinement on mental health have been extensively studied in record time (Courtet et al., 2020; Hagger et al., 2020; Jacobson et al., 2020; Reger et al., 2020; Tull et al., 2020). In the period of confinement, with a significant reduction in relationships, and an

increase in free time and greater loneliness (Killgore et al., 2020), individuals have increased their frequency of social network use (Cellini et al., 2020; Feldmann et al., 2020; Kumar & Dwivedi, 2020). They may have also changed their motives for using social networks. According to the uses and gratifications theory (Katz et al., 1973), people choose to use media to gratify psychological needs and motivations. Using social networks, people can fulfill different human basic needs, such as the need to belong, social support, and expression (Riva et al., 2016). Those needs have been threatened by the pandemic and confinement situations, in which people have used social networks to cope with uncertainty and isolation (Cauberghe et al., 2021). This has caused a change in people's behavior in relation to social networks (e.g., Boursier et al., 2020) and thus an approach from psychology is needed to understand this change. Therefore, in this time of uncertainty caused by confinement, it seems relevant to develop a scale to measure the motives for using social networks (the Social Networks Motives Scale, abbreviated as SN-MotiveS) to explore how confinement has affected both the motives for using social networks and social network addiction (SNA) and, in turn, to analyze the relationship established between the motives for using social networks and SNA.

On the other hand, the relevance of examining the motives for using social networks also relies on the fact that social networks is the dominant form of communication between people in the current digital era (Gómez-Galán et al., 2020). Social networks are present in diverse spheres of individuals' lives (e.g., social relations, politics, work). They are constantly growing, as is their use. In fact, using social networks is considered a phenomenon of citizenship (Bessarab et al., 2021). Hence, an examination of the motives for using social networks, the possible variations in frequency of use, as well as SNA, from a social psychological perspective, seems to be of interest in general, and in particular in one of the most relevant periods of our history as a society—the COVID-19 pandemic.

For this purpose, this investigation comprises two studies. Study 1 consists of the development and validation of the SN-MotiveS, focusing on the motives for using social networks that may be especially relevant in the uncertainty and loneliness caused by confinement. Moreover, of the diverse motives for using social networks highlighted by the previous literature, some of them, although they can appear in all circumstances, are particularly relevant in situations of uncertainty marked by loneliness, such as the pandemic and confinement. These should be included in the SN-MotiveS, which can be applied not only in normal circumstances, but also in specific situations of uncertainty. In this sense, and although other scales exist, the potential of the present scale relies on its brevity and ability to evaluate together many relevant social motives for using social networks that have been highlighted in previous research, but that have not been assessed together in any previous scale.

Study 2 analyzes the evolution of the study variables and the predictive role of social networks frequency of use and motives for using social networks in SNA. Considering the increasingly high use and abuse of social networks by people in our societies, and specifically in situations of uncertainty, assessing which motives for using social networks are particularly predictive of SNA seems to be of interest for interventions oriented to the reduction of social networks use and abuse. Meanwhile, although the relationship of several motives for using social networks has been studied in the literature, the inclusion of all the motives for using social networks analyzed in the present study has not been done previously together in the same model. This is surely one of the strengths and the particular contribution of the present study. The inclusion of all these motives for using social networks together will allow us to obtain a global vision of how motives for using social networks differentially influence SNA. Moreover, as two time points were included, one during confinement and another after confinement, Study 2 allows us to observe the trends of the different motives for using social networks and SNA at different points of the pandemic, as well as the relationships between those variables over time. Definitively, this approach forms a strength of the present study that allows: (a) better understanding of the evolution of SNA and the motives for why people use social networks over time and in a pandemic period; and (b) the pattern of the relationship between frequency of use, motives for using social networks, and SNA, to be explored by identifying the specific role of the motives for using social networks and their interactions with frequency of use on SNA. This supposes a relevant contribution not only from a theoretical point of view but also in practical terms, by allowing various implications for interventions to be deduced.

Study 1

Introduction

Social Network Motives and the Lockdown Situation

Main Social Network Motives. Based on the theory of uses and gratifications, Raacke & Bonds-Raacke (2008) establish that the primary motivation for which individuals use social networks is socialization, which has been ratified by subsequent studies (Aladwani, 2014; Joinson, 2008; Spiliotopoulos & Oakley, 2013). However, other relevant motives for using social networks have also been highlighted (Ryan et al., 2014). In a meta-analysis that explored the use of social networks, Heravi et al. (2018) identified four main motives: relationship maintenance, relationship building (these could be grouped into the socialization motive), entertainment, and information seeking. Considering that confinement has meant a loss for individuals of the possibility of relating to their loved ones, as well as higher levels of loneliness (Killgore et al., 2020), and given that belongingness is one of the most important needs for humans (Baumeister & Leary, 1995), it is likely that one of the main motives for why individuals used social networks in the confinement situation is socialization. In this sense, Cauberghe et al. (2021) state that adolescents used social networks to socialize, to avoid the loneliness that confinement entailed, and as a constructive strategy to cope with anxiety during the COVID-19 lockdown.

The entertainment motive probably also had relevance during confinement, which meant a break with the usual hobbies, routines, and the different activities that until now have occupied our free time and leisure (Bond et al., 2021). People probably started to use social networks more than usual, as a means of entertainment to occupy all this leisure time that was left unfilled (Bond et al., 2021). Thus, in a pandemic situation, the entertainment motive for using social network could be a strategy to cope with anxiety and boredom derived from confinement.

Another motive for using social networks that appears repeatedly in different studies is the management of negative emotions (Alhabash et al., 2014; Ancu, 2012; Leung, 2013), also called escapism, used as a coping strategy. Because confinement has a strong psychological impact on individuals by negatively affecting their emotional state, it is suggested that one of the motives why people may have used social networks is to regulate anxiety, as a constructive coping strategy (Cauberghe et al., 2021). Therefore, entertainment and mood management, as a way to manage anxiety and negative emotions, may have been two fundamental motives for using social networks in this vulnerable period of confinement, as a strategy to cope with anxiety produced by the uncertainty of the situation.

Also as a strategy to cope with uncertainty, the information-seeking motive for using social networks probably acquired more relevance during confinement, in which uncertainty could lead individuals to the need to seek and share more information with others through networks (Islam et al., 2020), even more so if we consider that it was difficult for individuals to share information face-to-face with their usual social support networks due to isolation.

Another motive for using social networks that has been identified by different authors and that may have acquired relevance during confinement is personal expression or self-presentation (Alhabash et al., 2014; Balakrishnan & Shamim, 2013). In times of uncertainty characterized by confinement, individuals may have seen social networks as a way to channel all their emotions and uncertainty and to express themselves and their discomfort, so the motive for self-presentation, which responds to an inherent human need for expression, could have been especially relevant at this vital time. In addition, Seidman (2013) showed that people who use social networks carry out self-presentation to satisfy the need to belong to a group. In this sense, the breakdown of social relationships because of confinement may have been a greater incentive to fulfill this need for personal expression in order to maintain adherence to a group.

Finally, some studies have identified helping others as a motive for using social networks (Chung, 2014). It should be noted that the situation of confinement also meant the creation of support networks; during the situation of uncertainty and defenselessness that confinement entailed, individuals also used social networks to help others. People began to carry out actions for the benefit of the community during confinement, such as going out to do the shopping for their neighbors (Ramkissoon, 2020). This activism or mutual support has also been transferred to social networks, and general and specific support networks dedicated to the most vulnerable groups have

emerged. Again, this specific use of social networks during confinement could respond to the basic human need for affiliation (Baumeister & Leary, 1995), which was severely threatened during confinement.

Considering the literature reviewed, the motives for using social networks that seem relevant to include in the SN-MotiveS are related to (a) the specific belongingness and affiliation need that was threatened in those situations, such as socialization, self-presentation, and helping motives, and (b) strategies that can be used to cope with uncertainty, such as entertainment, mood management, and information sharing motives. Therefore, it is hypothesized that:

H1: The SN-MotiveS will have a multidimensional structure characterized by containing the different factors or motives for using social networks mentioned.

Even if these motives for using social networks are especially relevant in pandemic and uncertainty contexts, they are also expressed in the usual context. Thus, a scale such as the SN-MotiveS may be useful in any study focused on the motives for using social networks in the population and their relation with, for example, SNA. As the use of social networks grows in our societies, and as more and more problems appear related to social networks, a short scale that encompasses as many motives for using social networks as possible seems to be relevant in all contexts.

Existing Social Network Motives Scales. Although there are similar scales to the SN-MotiveS, none specifically combines the motives that have been highlighted in the present scale. One of the first instruments to measure the motives for using social networks was the Computer-Mediated Communication Motive Scale, developed by Papacharissi and Rubin (2000) to measure the motives for using the Internet. The scale resulted in 27 items and five main motives: interpersonal utility, passing time, information seeking, convenience, and entertainment. The Social Network Sites Motives Scale (Pornsakulvanich & Dumrongsiri, 2013), with 25 items, focused on six main motives: passing time, friendship, trendy, relationship maintenance, entertainment, and relaxation. Some scales are oriented specifically to Facebook, such as the Facebook Motives Scale (Hollenbaugh & Ferris, 2014), which measures five motives with 24 items: virtual community, companionship, exhibitionism, relationship maintenance, and passing time.

It should be noted that, in addition to proposing a scale specifically focused on the motives cited, the authors wanted it to be relatively short, with only three items for each of the six motives studied. Thus, although there are already validated scales to measure the motives for why individuals use social networks, these scales are relatively long and measure only a few motives for using social networks. Furthermore, the confinement situation is permeated with a high degree of uncertainty and there is no scale that specifically measures all the dimensions that are relevant in these special circumstances.

Social Network Motives and Their Relationship with Addiction to Social Networks and Other Related Variables. SNA, social networks overuse, and frequency of use are variables that, theoretically, should be related to motives for using social networks, and then could be used for external validation of the SN-MotiveS. But are frequency of use, abuse, and SNA different concepts? Frequency of use refers to the time spent using social networks, while social networks abuse and SNA are related to frequency of use in the sense that one of their characteristics will be high frequency of social networks use.

Although the Diagnostic and Statistical Manual of Mental Disorder (American Psychiatric Association, 2013) does not recognize SNA, different authors have recognized that the excessive use of social networks may be considered a behavioral addiction (Sun & Zhang, 2021). However, whether the excessive use of social networks is or is not an addiction remains controversial (Ihssen & Wadsley, 2021). The term "problematic use" of social networks (or more broadly, the "problematic use" of the Internet) can be used to differentiate it from the formal clinical conditions of other addictions (e.g., Lee, 2021) and to avoid a premature pathologizing of this maladaptive behavior (Carbonell & Panova, 2017). In spite of this, other studies have reported that people experience detrimental addiction-like symptoms from social networks use, such as lower well-being and self-esteem (Hawi & Samaha, 2017; Satici, 2019). Apart from the empirical evidence, theoretical models also support the excessive use of social networks as an addiction (see Andreassen, 2015, for a review). According to Griffiths (2005), SNA shares with other chemical (and non-chemical, such as the Internet use) addictions the six typical components of any addiction: salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse. In this sense, social networks abuse, as simply an overuse or misuse of social networks, could be differentiated from SNA not based on the frequency of use of social networks, but on whether the use of social networks is expressed by the six components of any

addiction (Griffiths, 2005). Social networks abuse will not necessarily suppose the appearance of any of these symptoms, while SNA will be expressed only if these symptoms are present (Griffiths, 2005).

Throughout the literature, a close relationship has been recognized between motives for using social networks and SNA (Kuss & Griffiths, 2011; Schivinski et al., 2020; Wang et al., 2016). Nevertheless, few studies have explored this relationship, with some inconsistencies between them, making further research necessary to explore the relationship between motives for using social networks and SNA (Ryan et al., 2014). The motives for using social networks that have been most often related to social networks frequency of use, abuse, or addiction are socialization, entertainment, and self-presentation (Alzougool, 2018; Chen & Kim, 2013; Ryan et al., 2014). Certainly, Süral et al. (2019) found that entertainment and self-presentation motives mediate the association between emotional intelligence and higher social networks problematic use. Moreover, Floros and Siomos (2013) found that the more individuals use social networks to socialize and to escape from their daily life, the greater their frequency of participation in social networks. In the same way, a strong association has been demonstrated between the entertainment motive and social networks frequency of use (Joinson, 2008), but other motives have also been related to social networks misuse. In this sense, Song et al. (2004) have related information, entertainment, and socialization to Internet addiction, while Masur et al. (2014) have shown that self-presentation, escapism (coping with negative emotion), information-seeking, and socialization are related to SNA. On the other hand, relevant to our research in the COVID-19 context, social networks use (and more broadly Internet use) may have served as a way to escape from negative emotions, for example feeling anxiety (Boursier et al., 2020; Gecaite-Stonciene et al., 2021). Therefore, in the specific period of the pandemic, the management of negative emotion motive could be especially relevant.

On the other hand, certain factors give gratification when using social networks (Soh et al., 2014). In this sense, entertainment and the management of negative emotion are relevant motives for using social networks (Arab & Díaz, 2015), and could be especially related to SNA. Moreover, the excessive use of social networks may arise as a dysfunctional coping strategy to manage negative emotions (Brailovskaia et al., 2019; Green et al., 2016; Kardefelt-Winther, 2014); management of negative emotion is related to the coping strategy motive and is particularly relevant in relation to SNA. Moreover, the use of social networks for entertainment and to manage negative emotions, oriented to the search for gratification, can lead to a loss of control of the time spent using social networks, affecting the time management (prominence and tolerance) of individuals, one of the symptoms of SNA (Cuadrado et al., 2020). Another symptom of SNA is mood modification (Griffiths, 2005), closely related to the entertainment and management of negative emotion motives. Thus, it was expected that the entertainment and the management of negative emotions motives, in comparison with the other motives, would be especially related to SNA, specifically with the symptoms of time management and mood modification.

In short, it was hypothesized that:

H2: All the motives for using social networks of the SN-MotiveS would be related to higher (a) social networks frequency of use, (b) social networks abuse, and (c) SNA; moreover, the entertainment and management of negative emotion motives would be particularly related to SNA and to the time management and mood modification SNA symptoms.

Method

Participants

A total of 482 people (73.2% women) residing in Spain and with a mean age of 39.89 years old (*SD* = 13.09, age range = 18–85), participated in the study. Regarding the usual place of residence, 68.5% resided in Andalusia, 18.7% in Castilla y León, 2.7% in the Community of Madrid, and 10.1% in other communities. A total of 48.8% of the participants reported not having children. The average number of people residing at home during confinement was 3.22. The majority (96.7%) reported not having disabled people in their care. Finally, 57.6% reported having a job, 18.8% were unemployed, 17.8% were students, and 5.8% were retired or had retired early.

Regarding social networks frequency of use, during confinement, only 15.8% reported using social networks less than 30 minutes per day, contrasting with 35.8% who used social networks less than 30 minutes daily before confinement. Moreover, only 14.4% used social networks between 30 and 59 minutes per day during confinement,

contrasting with 20.6% who spent the same time per day before confinement. This means that 56.5% (before confinement) versus 30.2% (during confinement) used social networks less than one hour per day. Approximately the same percentage of people used social networks between one and two hours per day before (25.6%) and during (25.2%) confinement. Only 13.3% used social networks between three and four hours per day before confinement, contrasting with the 22.9% of people using them with the same frequency of use per day during confinement. In the same way, only 3.8% used social networks between 5 and 6 hours before confinement, while a higher value of 12.5% showed the same frequency of social networks use during confinement. Finally, only 0.8% used social networks more than seven hours per day before confinement, with 8.1% reporting the same use during confinement.

Regarding social networks abuse, people abused social networks significantly less ($t = -13.77$, $p < .001$) before ($M = 2.28$, $SD = 0.89$) compared to during ($M = 2.73$, $SD = 1.04$) confinement. The same is applicable to SNA ($M_{before} = 1.87$, $SD_{before} = 0.68$; $M_{during} = 2.49$, $SD_{during} = 0.91$; $t = -19.82$, $p < .001$).

Procedure

During confinement, in late April 2020, an online questionnaire was disseminated by the research team and some PhD students through different social networks (Twitter and WhatsApp, primarily). Due to the specific circumstances related to confinement that complicated data collection, both participation and dissemination of the questionnaire were requested using a snowball sampling procedure. The study, conducted in Spain, was done in accordance with the ethical principles for medical research involving human subjects of the World Medical Association Declaration of Helsinki (World Health Organization, 2001). Participants gave their informed consent on the first screen to be able to access the questionnaire. Their participation was voluntary, their anonymity was guaranteed, and they could withdraw from the study at any time. The Spanish population was confined as of March 14, and the confinement did not end before mid-June. Thus, the participants responded to the questionnaire about 4–6 weeks after the starting point of the confinement situation and in a confinement period in which the COVID-19 cases and deaths were declining. The confinement situation implied stay-at-home orders. People could leave their homes only to buy essential products or to go to work if they were essential workers (firefighters, police officers, supermarket workers, etc.).

Measures

Motives for Using Social Networks. This Social Networks Motives Scale (SN-MotiveS) was developed to determine the specific motives for why people dedicate their time to social networks during particularly uncertain circumstances, such as confinement. It was based on a review by Heravi et al. (2018) on the reasons why people use social networks, in which socialization (maintenance and establishment of social relationships), entertainment, and information were identified as the dominant motives, and on several other studies that identified other specific motives for using social networks, such as self-presentation (Balakrishnan & Shamim, 2013; Bumgarner, 2007; Choi et al., 2013), seeking information (Park et al., 2009), mood management or venting negative feelings (Ancu, 2012; Leung, 2013), and helping others (Chung, 2014). All these motives are of interest in situations characterized by uncertainty, helplessness, and a reduction in social contact, such as the pandemic. Thus, the SN-MotiveS was developed with six factors, some of them particularly related to the threatened needs during confinement of belongingness, affiliation, and control (socialization, sharing information, self-presentation, and helping motives), and others to the strategies people use to manage stressful and uncertain situations (entertainment and mood management motives), each one with three items. Thus, the global scale is made up of 18 items that the participants answer on a Likert-type scale from 1 (*Very rarely*) to 5 (*Very often*).

Social Network Frequency of Use. To measure the time that the participants dedicate daily to the use of social networks in the different periods evaluated (they were asked to respond thinking about both the time before confinement and at the present time during confinement), a single item (*In general, estimate how much time a day you spend looking at social networks)* was used. The participants answered on a frequency scale from 1 (*Less than 10 minutes*) to 10 (*More than 12 hours*).

Social Network Abuse. The Social Networks Overuse Scale (Cuadrado et al., 2020) was used to assess the extent to which the participants present abusive behaviors in the use of social networks, such as looking at social

networks as the first thing they do when they get up and the last thing they do when they go to bed, eating with their mobile nearby to check social networks, or carrying their mobile phones and checking social networks while they are with their friends. This scale does not represent SNA because it does not reflect any of the dimensions of an addiction, but it represents the overuse or abuse of social networks. Participants responded to the four items on a five-point Likert scale (1 means *Very rarely* and 5 *Very often*). The reliability was high both before and during confinement (α_{before} = .81, α_{during} = .82).

Social Network Addiction. To assess the extent to which the participants present symptoms of SNA, the Short SNAddS-6S (Cuadrado et al., 2020) was used. This short instrument represents the six core symptoms of SNA: salience, tolerance, mood modification, relapse, withdrawal, and conflict (Griffiths, 2005). Participants answer the six items on a five-point Likert scale (1 means *Very rarely* and 5 *Very often*). Good reliability was obtained (α_{before} = .76, α_{during} = .78). In addition to the short scale, two factors (each one with three items) were used from the long version of the same scale (SNAddS; Cuadrado et al., 2020). These were the time management factor (the need to use social networks more and more, becoming the greatest motivation for the individual, which includes both the salience and tolerance symptoms together) and mood modification (the fact that social networks use changes the individual's mood, being either exciting or relaxing).

Statistical Analyses

For the scale validation, exploratory factor analysis (EFA) was performed, followed by confirmatory factor analysis (CFA; Cabrera-Nguyen, 2010; Costello & Osborne, 2005) with SPSS and AMOS, respectively. To do this, the sample was randomly divided in half, so that the EFA was performed with 50% of the data (N_{split1} = 241) and the CFA with the other 50% (N_{split2} = 241). EFA with Oblimin direct rotation was performed to identify the subscales within the items pool and to be able to extract the items that were not adequately grouped in the subscales. The Bartlett's sphericity test (BST) and the Kaiser-Meyer-Olkin statistic (KMO) were performed to assess the suitability of the EFA (Bartlett, 1954; Williams et al., 2010). Moreover, parallel analysis (PA) was used to determine the number of factors to retain in the EFA (Ledesma & Valero-Mora, 2007). After that, various CFA models were compared, one unifactorial and two multifactorial, using AMOS 20. The goodness of fit of the model was verified with the chi-squared statistic (χ^2), the goodness of fit index (GFI), the adjusted goodness of fit index (AGFI), the comparative fit index (CFI), the error means square approximation (RMSEA), and the Tucker-Lewis Index (TLI), and using the general recommended rules (Schermelleh-Engel et al., 2003). To check the external validity of the scale, different Pearson correlation analyses were carried out to check whether the scale, as well as its different factors, are related to other constructs with which they should theoretically be related. Finally, to analyze the reasons why the participants mainly used social networks during confinement, a pairwise comparison analysis of means was performed.

Results

Exploratory Factor Analysis

For the 18 items, the KMO index (.88) and the BST (χ^2 = 3,574.65, *df* = 153; *p* <.001) supported the use of EFA, which showed a multifactorial structure that explained 74.87% of the variance, composed of four factors (the factor loading of each item in each factor can be seen in Table 1, as well as the reliability and percentage of variance explained for each factor). Factor 1 is related to escapism (composed of the items expected to represent entertainment and mood management), factor 2 to prosocial behavior (composed of the items expected to represent information sharing and helping), factor 3 to socialization, and factor 4 to self-presentation. The global reliability of the scale was high (α = .93).

Given that it was expected to find six hypothesized factors, a second EFA was carried out setting six factors for extraction (the factor loading of each item in each factor can be seen in Table 1, as well as the reliability and percentage of variance explained for each factor). The results showed the expected multifactorial structure, which explained 84.73% of the total variance, and with the items located in the expected factors. Factor 1 represents the information-sharing motive, factor 2 the prosocial behavior motive, factor 3 the socialization motive, factor 4 the self-presentation motive, factor 5 the mood management motive, and factor 6 the entertainment motive.

Table 1. *Results of the Exploratory Factor Analyses.*

Motives for using social networks Have you used social networks to...	EFA				EFA fixing 6 factors for extraction					
	F1	F2	F3	F4	F1	F2	F3	F4	F5	F6
1. ...communicate with your family and friends			−.909				−.935			
2. ...keep in touch with your acquaintances and close friends			−.921				−.951			
3. ...get news of how your loved ones are doing			−.906				−.945			
4. ...hang out	.751									.883
5. ...have fun	.713									.933
6. ...hang out and fight boredom	.771									.939
7. ...post information about yourself on the networks (videos, photos, statuses, etc.)				.916				.923		
8. ...update your profile on the networks				.888				.889		
9. ...expose how you feel or what you are doing on social media				.813				.831		
10. ...forget about your worries	.874								.932	
11. ...not think about your problems	.869								.943	
12. ...cope with your anxiety	.761								.906	
13. ...inform others of certain news		.831			.896					
14. ...send current information to others		.860			.945					
15. ...disseminate information about events to others		.798			.892					
16. ...organize or answer initiatives to help others		.839				.843				
17. ...reply to messages to help other people		.826				.836				
18. ...sign petitions that have been sent to you to help others		.593				.873				
Percentage of explained variance	44.22	12.83	9.99	7.83	44.22	12.83	9.99	12.83	5.27	4.60
Cronbach's alpha values	.90	.89	.94	.86	.91	.92	.91	.91	.88	.83
H coefficient	.92	.92	.94	.92	.94	.89	.96	.92	.95	.95

When performing PA to determine the number of factors to retain in the EFA, the first, second, third, and fourth eigenvalues extracted from the actual data were larger than the corresponding 95th percentile random data eigenvalues. This suggested that the model with four factors is the one to be retained.

Confirmatory Factor Analysis

To verify the unidimensionality or multidimensionality of the scale, three models were compared (see Figure 1) through a simple CFA (Model 1) and two multifactorial CFA (Models 2 and 3). By following the principle of parsimony, Model 1 evaluated the one-dimensional model, that is, the simplest, which would affirm that the variance of our scale contains only one factor. Model 2 responds to the hypothesis that the variance of our scale is divided into four different factors corresponding to the results found in the EFA. Finally, a second-order multidimensional model (Model 3) was tested, in which again the scale would be divided into four factors, but this time the first (escapism) and the second (prosocial behavior) factors would be divided into two subfactors, according to the six hypothesized factors and the confirmed EFA results when setting the factors to be extracted at six.

As can be seen in Figure 1, although the unidimensional model revealed the worst fit, it had acceptable indices. Models 2 and 3 showed similarly good fit indices. The model with the best fit was Model 2, which corresponds to the four factors found in the EFA, so it is the model that was finally retained, congruently with the PA. In Figure 1, the values are shown using the motives for using social networks during confinement. The models had similar adjustments when using the items referring to motives for using social networks before confinement (Supplementary File 1).

Figure 1. *Comparison of the Three Proposed Models With the Motives for Using Social Networks Reported During Confinement.*
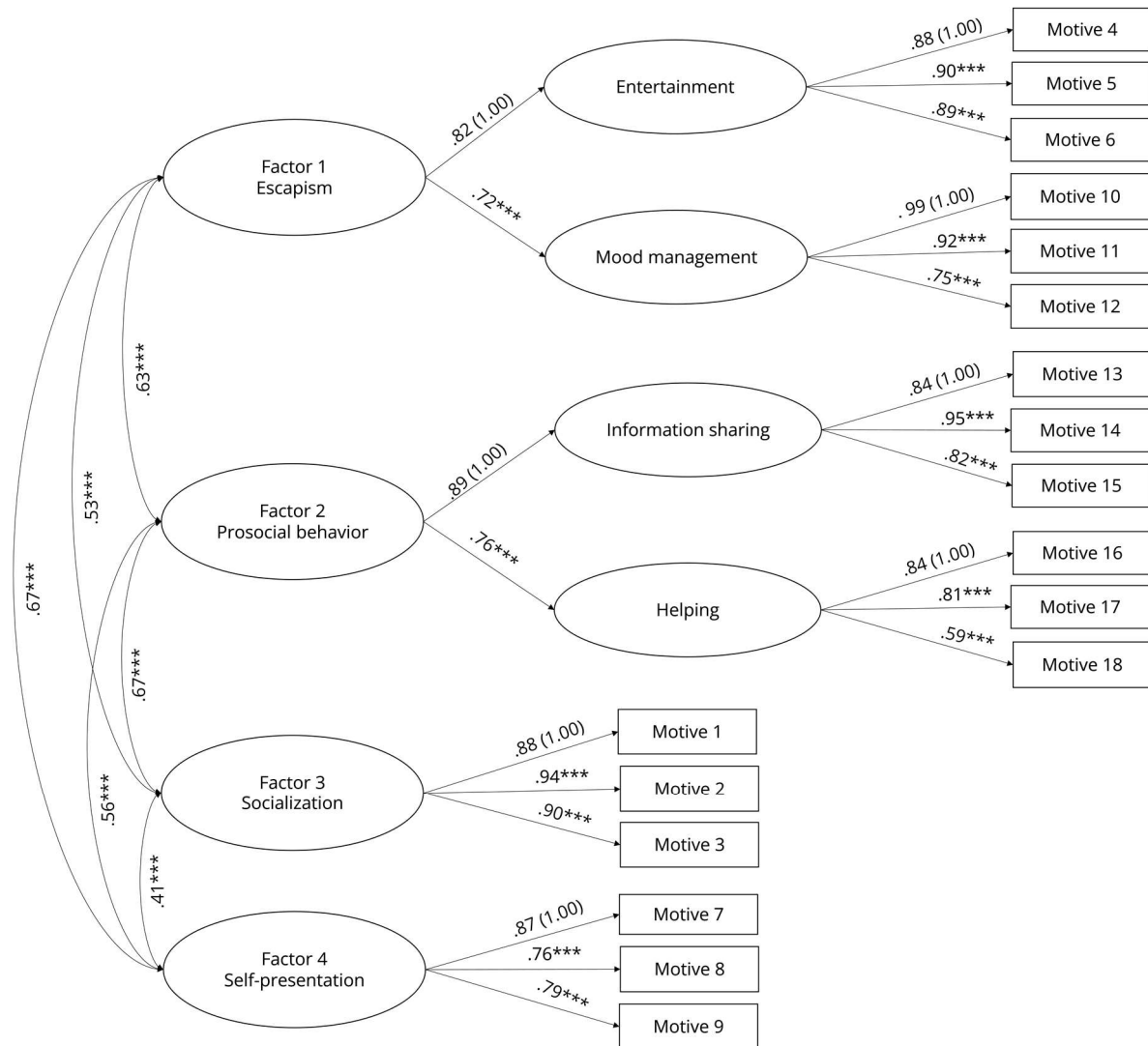
(a)
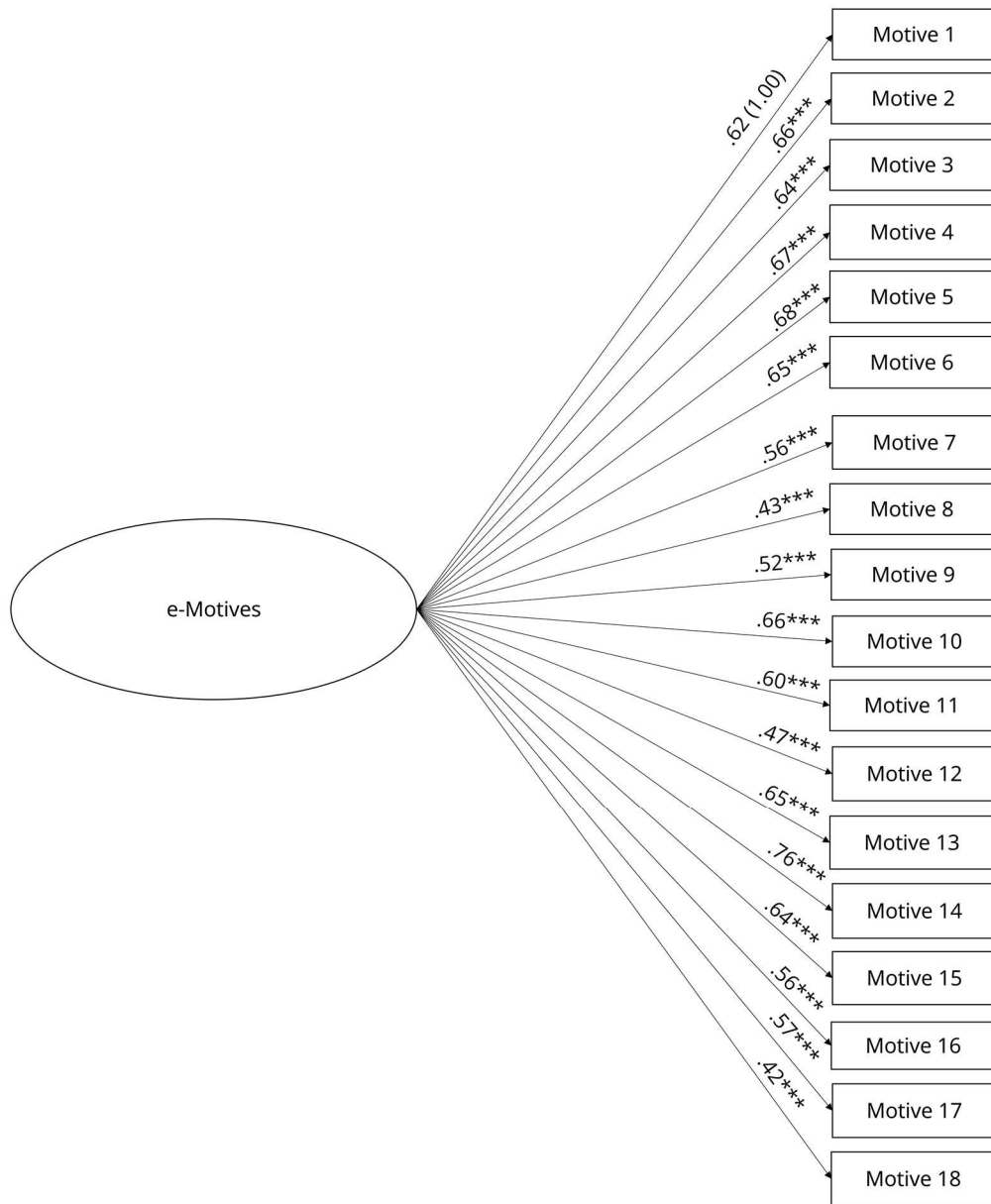
(b)
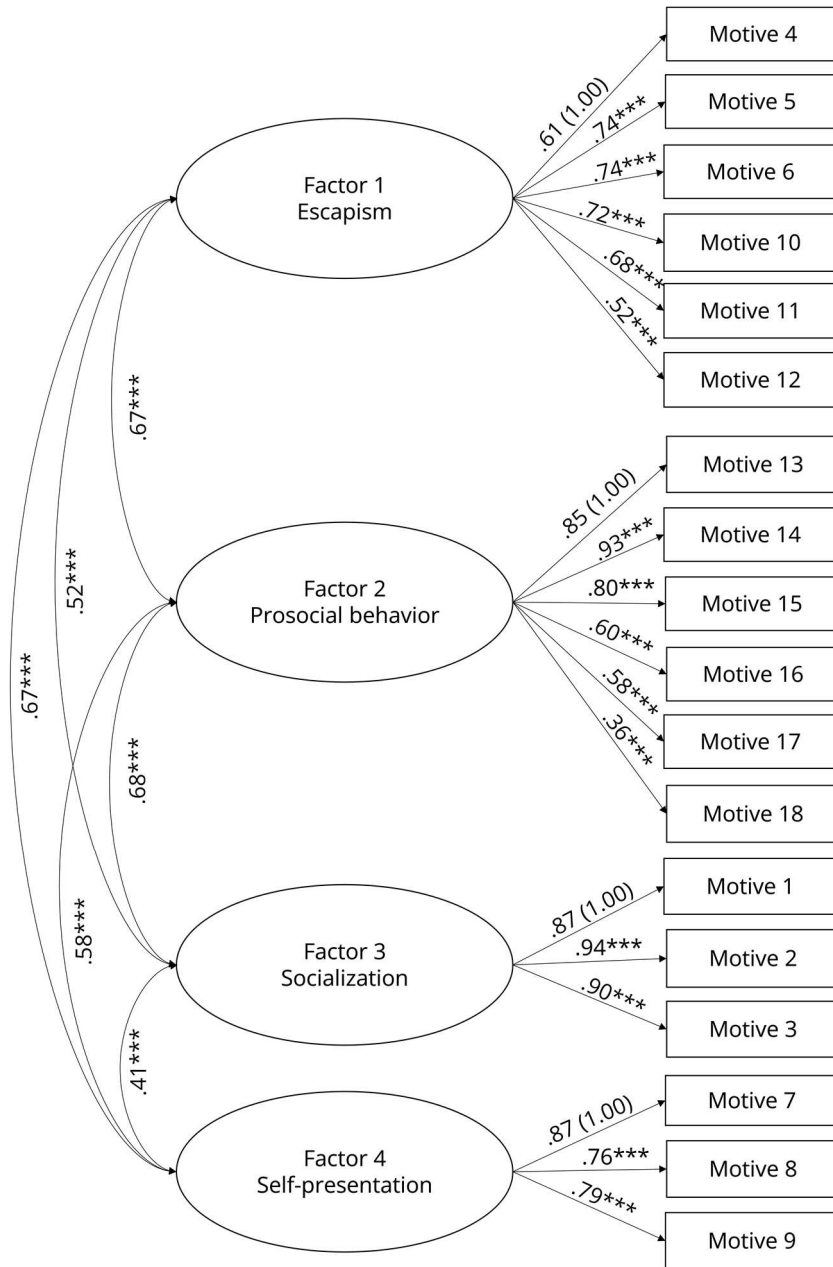
(c)

Note. (a) Model 1: unidimensional structure; fit indices: χ^2(gl = 117) = 231.394; p < .001; RMSEA (95% CI) = .064 [.052; .076]; CFI = .968; GFI = .906; AGFI = .863; TLI = .958; AIC = 339.394.
(b) Model 2 : four factor structure; fit indices: χ^2(gl = 114) = 171.293; p < .001; RMSEA (95% CI) = .046 [.031; .059]; CFI = .984; GFI = .931; AGFI = .896; TLI = .978; AIC = 285.293.
(c) Model 3: higher order structure; fit indices: χ^2(gl = 119) = 189.924; p < .001; RMSEA (95% CI) = .050 [.036; .063]; CFI = .980; GFI = .923; AGFI = .890; TLI = .974; AIC = 293.924.

External Validity of the Scale

To explore the external validity of the scale, a correlation analysis was performed. The results were aligned with the expected relationships (Table 2), with all the motives for using social networks significantly related with social networks frequency of use, social networks abuse, and SNA.

Motives Most Used During Confinement

The means comparison by pairs showed that socialization was the most common motive for using social networks during confinement (M = 3.94, SD = 1.08), with a level of use significantly higher than (a) the prosocial behavior motive (M = 2.80, SD = 1.09; t = 24.67, p < .001)—the second most used—and (b) the escapism motive (M = 2.76, SD = 1.10; t = 23.29, p < .001)—the third most used. No significant differences were observed between the prosocial behavior and escapism motives (t = −0.66, p = .507). Both prosocial behavior (t = 18.09, p < .001) and escapism (t = 18.55, p < .001) motives were used more than the self-presentation motive.

Table 2. *Correlations, Means and Standard Deviations of All the Study Variables.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. F1 SN-MotiveS BC	-																	
2. F2 SN-MotiveS BC	.527***	-																
3. F3 SN-MotiveS BC	.506***	.555***	-															
4. F4 SN-MotiveS BC	.568***	.454***	.307***	-														
5. F1 SN-MotiveS DC	.763***	.383***	.301***	.470***	-													
6. F2 SN-MotiveS DC	.379***	.790***	.393***	.372***	.481***	-												
7. F3 SN-MotiveS DC	.397***	.483***	.652***	.297***	.472***	.552***	-											
8. F4 SN-MotiveS DC	.472***	.354***	.175***	.807***	.522***	.452***	.327***	-										
9. Frec. use BC	.459***	.295***	.249***	.356***	.413***	.228***	.230***	.268***	-									
10. Frec. use DC	.418***	.258***	.183***	.304***	.514***	.318***	.261***	.339***	.764***	-								
11. SN-Abuse BC.	.539***	.356***	.292***	.482***	.431***	.274***	.267***	.430***	.576***	.482***	-							
12. SN-Abuse DC	.479***	.298***	.174***	.424***	.547***	.360***	.273***	.464***	.484***	.617***	.740***	-						
13. ManagSN BC	.565***	.485***	.415***	.458***	.427***	.387***	.370***	.361***	.364***	.248***	.427***	.323***	-					
14. ManagSN DC	.445***	.383***	.260***	.365***	.594***	.507***	.432***	.425***	.234***	.419***	.296***	.471***	.577***	-				
15. Mood Mod. BC	.651***	.381***	.293***	.430***	.616***	.365***	.325***	.397***	.334***	.342***	.377***	.398***	.535***	.451***	-			
16. Mood Mod. DC	.475***	.247***	.100**	.326***	.735***	.422***	.296***	.421***	.239***	.411***	.282***	.490***	.271***	.600***	.696***	-		
17. SNA BC	.637***	.491***	.380***	.524***	.553***	.415***	.400***	.430***	.430***	.338***	.474***	.401***	.866***	.565***	.737***	.464***	-	
18. SNA DC	.492***	.369***	.207***	.412***	.708***	.520***	.401***	.494***	.295***	.464***	.339***	.528***	.499***	.856***	.596***	.799***	.655***	-
Mean	2.22	2.26	3.12	1.66	2.76	2.80	3.94	1.87	2.98	4.87	2.28	2.73	2.18	3.18	1.70	2.28	1.86	2.49
Standard deviation	0.92	0.95	1.09	0.89	1.10	1.09	1.07	1.06	2.41	3.16	0.89	1.04	0.85	1.11	0.86	1.28	.67	.90

Note. ***p < .001; **p < .01; *p < .05; F = factor; SN-MotiveS = Social Networks Motives Scale; BC = before confinement; DC = during confinement; Frec. = frequency; SN-Abuse = social network abuse; ManagSN = time management symptom of social network addiction; Mood Mod. = mood modification symptom of social network addiction: SNA = social network addiction.

Discussion

The main aim of the first study of this research consisted of the validation of a scale especially conceived for the measurement of motives for the use of social networks in situations of uncertainty, such as confinement due to COVID-19, i.e., the SN-MotiveS. The results confirm the validity, reliability, and multidimensionality of the SN-MotiveS, for four different factors. Two of these factors corresponded to two of the expected motives for social networks use (socialization and self-presentation), while the other two, escapism and prosocial behavior, each comprised two of the motives for using social networks that were theoretically raised. Thus, the escapism factor encompasses the entertainment and the mood management motives, while the prosocial behavior factor encompasses the information-sharing and helping motives. These groupings seem logical. Regarding prosocial behavior, both the provision of information and helping are intentional behaviors aimed at benefiting others, and as such, according to the definition of Weinstein and Ryan (2010), they are prosocial behaviors, which explains why they may have been grouped in a single factor. Regarding the escapism factor, both the entertainment dimension and the mood management dimension are motives that allude to the need to increase or maintain positive emotions and to cope with uncertainty and confinement-related boredom and negative emotions, and so the inclusion of both in a unique factor is conceptually justified.

The four-factor structure is consistent with the main motives highlighted by different authors. The motive for socialization has been highlighted as the main motive for using social networks by several authors (Aladwani, 2014; Joinson, 2008; Raacke & Bonds-Raacke, 2008; Spiliotopoulos & Oakley, 2013) and also seems to be relevant in periods of confinement, in which the possibility of socializing has been seriously curtailed (Killgore et al., 2020). On the other hand, the escapism factor that includes both entertainment and mood management is consistent with the motives for fun and coping with negative emotions and anxiety highlighted by different authors (Alhabash et al., 2014; Ancu, 2012; Heravi et al., 2018; Leung, 2013), and it also seems especially relevant in the situation of uncertainty that confinement has entailed, which has brought with it an increase in psychological and mental discomfort, with a significant increase in negative emotions (Killgore et al., 2020). Likewise, the prosocial behavior factor had also been highlighted previously (Ramkissoon, 2020), in addition to being essential during confinement, in which many people, faced with the situation of helplessness of the general population, became involved in a support network that arose naturally to help each other (Ramkissoon, 2020). Finally, the motive for self-presentation is also consistent with the previous literature (Alhabash et al., 2014; Balakrishnan & Shamim, 2013).

The global scale and each of its factors presented high reliability levels. In addition, the external validity of the scale was also demonstrated, since each of the dimensions was related, as expected, with the different variables that have been considered in the study. Thus, and in accordance with the previous scientific literature, it was found that the more the individuals used social networks during confinement to socialize, the greater the amount of time they dedicated to social networks (Floros & Siomos, 2013), the more they presented abusive behaviors with social networks (Chen & Kim, 2013), and the more symptoms of SNA they presented (Ryan et al., 2014). In addition, the escapism factor had the highest correlation with SNA symptoms related to time management and mood modification, which is also consistent with the previous literature (Arab & Díaz, 2015) and provides validity to the construct. The SN-MotiveS may therefore be considered suitable for both researchers and professional practitioners who want to explore the motives for why people use social networks, especially in situations of uncertainty such as a confinement situation.

The results show that the most common motive for using social networks, with a high frequency, was to socialize, which seems logical considering the measures of social distancing and isolation resulting from confinement, which led individuals to feel a great need for relationships (Killgore et al., 2020). Although to a lesser extent, participants also widely reported the escapism and prosocial behavior motives; this is also a reflection of people's experiences in this unusual situation, being an attempt to forget the negative emotions produced by the pandemic (Killgore et al., 2020), engaging in leisure time at home (Bond et al., 2021), and helping others in need (Ramkissoon, 2020). Finally, the self-presentation motive seems not to have been as frequent as the others during confinement. In congruence with the confinement situation, in which loneliness (Killgore et al., 2020), negative emotions (Killgore et al., 2020), and the need to help (Ramkissoon, 2020) seem to have been predominant, updating one's profile on social networks seems to have played a secondary role compared to the other motives for using social networks studied.

Study 2

Introduction

The analysis of motives for using social networks is especially relevant in a confinement situation, in which people have had to adapt to a new reality based mainly on daily activities and social connections through social networks. Previous studies have shown that individuals made greater use of social networks during confinement (Bond et al., 2021). In this sense, considering that social networks frequency of use is closely related to SNA (Kumar & Dwivedi, 2020; Kuss & Griffiths, 2011), the time that the participants devoted to social networks before confinement and the increased time they devoted to social networks during confinement would probably have influenced SNA after confinement. Additionally, some motives for using social networks may be particularly closely related to social networks frequency of use (Boursier et al., 2020). In this sense, given the close relationship between social networks frequency of use and SNA (Kumar & Dwivedi, 2020), social networks frequency of use would probably be more associated with the motives for using social networks that are most related to addiction. In this sense, the analysis of the relationship of frequency of use and motives for using social networks before and during confinement with SNA after confinement seems to be of interest.

On the other hand, after the confinement situation, most people had to adapt again to the "new normal," in which they returned to their prior daily activities that could distract them from using social networks, albeit with some restrictions. Hence, it could be useful to explore the possible variations in the different stages of the confinement situation (i.e., pre-confinement, during confinement, and post-confinement) in the motives for using social networks, social networks frequency of use, and SNA. Thus, in Study 2, two different objectives were proposed. In the first place, the evolution of motives for using social networks, social networks frequency of use, as well as SNA, comparing the levels of these variables before, during, and after confinement, was analyzed. Second, the relations established by social networks frequency of use and the motives for using social networks with SNA were explored.

Trends in Motives for Using Social Networks

Considering that confinement meant a reduction in leisure activities (Bond et al., 2021), increased loneliness, and negative emotions (Brooks et al., 2020), many people found in social networks an ally to fight boredom and remain connected with their loved ones; thus, motives for using social networks would have undergone changes during confinement. Particularly, given that during the confinement period people stopped dedicating themselves to their usual leisure activities and focused a large part of their entertainment on social networks (Bond et al., 2021; Lemenager et al., 2020), and considering that confinement led to an increase in negative emotions (Brooks et al., 2020), it was hypothesized that the escapism motive would increase substantially during confinement. On the other hand, given that the escapism motive is closely related to two symptoms of SNA, namely time management and mood modification (Cuadrado et al., 2020; Griffiths, 2005), it was proposed that, once confinement is over, the decrease in this motive would be less pronounced than that for other motives for using social networks.

The social distancing norm imposed by confinement resulted in the impossibility of relating to many loved ones and in increased feelings of loneliness (Röhr et al., 2020; Tull et al., 2020). Thus, the motive for socialization would have increased substantially during confinement, then decreasing again at the end of confinement as people were able to reconnect. In addition, it is expected that people used social networks for activism and solidarity behaviors during confinement, since people who habitually take part in actions for helping others had to change their ways of acting and use social media to help others in need (Carlsen et al., 2021; Ramkissoon, 2020). On the other hand, the great uncertainty that characterized confinement and the pandemic situation will have meant that individuals needed to seek and share more information (Islam et al., 2020), so it was also expected to find a substantial increase in the prosocial behavior motive during confinement.

Confinement was accompanied by teleworking for a large part of the population (DeFilippis et al., 2020; Kumar & Dwivedi, 2020). Thus, it was expected to find a significant increase in the work motive (added to our SN-MotiveS in this second study) during confinement. On the other hand, once confinement was over and teleworking ended, most returned to their work in person, so it was expected to find a significant decrease in the work motive after confinement. However, no changes are expected for the self-presentation motive, since the online presence and making oneself known on social networks is something that was already normalized and widespread before the pandemic (Herring & Kapidzic, 2015). People usually used social networks to self-present to others because they

"wish to make a socially desirable impression on others, while still remaining true to one's own beliefs and ideals" (Skogen et al., 2021). There is no reason that confinement would have changed this desire of making a desirable impression on others. Therefore, no changes were expected in the self-presentation motive.

Thus, it was hypothesized that:

H1: The different motives for using social networks will increase during confinement, except for the self-presentation motive.

H2: In addition, motives for using social networks would decrease after confinement, except for the self-presentation and escapism motives.

Social Networks Frequency of Use and Social Network Addiction Before, During, and After Confinement

During the confinement and the pandemic, the need for information meant that many people spent a lot of time using social networks (Islam et al., 2020; Lemenager et al., 2020). In addition, social networks turned out to be a tool capable of replacing, at least in part, some of the deficiencies caused by isolation, especially at the social level (Bond et al., 2021). Moreover, by having to suspend their outdoor activities, people became accustomed to using social networks more (Bond et al., 2021; Lemenager et al., 2020). Spending too much time on social networks can lead to addiction (Andreassen, 2015; Cuadrado et al., 2020). Kuss and Griffiths (2017) state with concern that a minority of the population participates very actively in social networks, with a prolonged duration of use. With confinement, this minority could grow into a larger group, leading to more social networks addicts (Gómez-Galán et al., 2020). Then, SNA could have significantly increased during confinement. On the other hand, once confinement was over, as it was a one-off and time-limited event, and when the possibility of organizing time in another way and returning to regular free-time activities returned, it can be expected that the frequency of use of social networks, and to a lesser extent SNA, would fall again after confinement. Thus, it was hypothesized that:

H3: Social networks frequency of use and SNA will increase during confinement and will decrease again after confinement.

Mediating Roles in Social Network Addiction

Social networks frequency of use is associated with both motives for using social networks (Alzougool, 2018; Joinson, 2008; Ryan et al., 2014) and SNA (Cuadrado et al., 2020; Ryan et al., 2014); moreover, motives for using social networks are also related to SNA (Floros & Siomos, 2013; Masur et al., 2014; Ryan et al., 2014; Song et al., 2004).

Thus, as frequency of use is associated with motives for using social networks (Alzougool, 2018; Joinson, 2008; Ryan et al., 2014), it could be expected that the more frequently individuals used social networks before confinement, the more they would be at risk to increase their social networks use during confinement, and thereby to increase their use of social networks for all motives during confinement (especially those related to SNA, such as escapism, for example, and those related to the loss of relationships, present during confinement as the socialization motive). Thus, it was expected that people who spent more time using social networks before confinement would switch to use social networks more (1) for escapism motives, due to the increased time spent at home and without the possibility of doing their usual activities because of the stay-at-home order, as well as for social motives during confinement; (2) for socialization motives and self-presentation motives, due to the increase in social distance, social isolation, and the subsequent need for socialization related to confinement; and (3) for prosocial behavior motives, due to the uncertain situation that may have led to an increase in prosocial behaviors on social networks. Moreover, as both frequency of use (Cuadrado et al., 2020; Ryan et al., 2014) and motives for using social networks (Alzougool, 2018; Floros & Siomos, 2013; Masur et al., 2014; Ryan et al., 2014; Song et al., 2004) are related to SNA, it could be expected that the more frequently individuals used social networks before confinement, the more they would use social networks for the different motives for using social networks during confinement, and the more they would be at risk to present higher levels of SNA after confinement. Therefore, it was proposed that motives for using social networks during confinement mediate the relationship between social networks frequency of use before confinement and SNA after confinement.

However, there is no reason to think that people who spent more time using social networks before confinement would switch to use social networks more for work during confinement. The greater use of social networks for work during confinement was totally contingent on the situation and beyond people's desire; it was not something

that they sought, but something that they had to face due to the exceptional situation they were experiencing. Therefore, the frequency of use they previously made of social networks should not be related to the fact that they have used social networks more or less for work purposes during confinement. In the same way, and for the same reasons, the greater use that individuals will have made of social networks for work purposes during confinement should not be related to the SNA that they could suffer after confinement. In addition, none of the symptoms of SNA are related to working with social networks (Cuadrado et al., 2020; Griffiths, 2005), and in any case, SNA can lead to a decrease in work capacity, but not the opposite (Griffiths, 2005; Kuss & Griffiths, 2011). Based on the above, it was hypothesized that:

H4: Motives for using social networks will mediate the relationship between the social networks frequency of use before confinement and SNA after confinement, except for the work motive.

Nevertheless, the relationships between variables can be bi-directional. In this sense, it could also be expected that the more individuals' motives related to the need for socialization or to SNA, the higher their frequency of social networks use during confinement.

In this sense, one of the motives for using social networks that is related to social networks frequency of use is called escapism in this study (Hart, 2010; Joinson, 2008; Ryan et al., 2014). Nevertheless, Joinson et al. (2008) did not find that their surveillance gratification motive, related to socialization, was related to higher frequency of use (defined as time spent using social networks). In this sense, the motives for using social networks could differentially increase the social networks frequency of use. It could be that active engagement in entertainment and non-social motives when using social networks could increase the social networks frequency of use more than social motives. Moreover, it could be expected that the motives especially related to SNA, such as escapism (Cuadrado et al., 2020), could increase the social networks frequency of use more than other motives.

Thus, it was hypothesized that:

H5: The frequency of use during confinement will mediate the relationship between motives for using social networks before confinement and SNA after confinement, especially for the escapism motive, and except for the work motive.

Method

Participants

Participants of this longitudinal study were 114 Spanish residents (72.2% of women) with a mean age of 39.87 years (SD = 12.06, age range = 18–68). Of these participants, 74.6% resided in Andalusia, 14% in Castille y Leon, 2.6% in the Madrid Community, 2.6% in Aragon, and 6.2% in other Spanish communities.

Regarding social networks frequency of use, only 15.7% and 15.8% reported using social networks less than 30 minutes per day during and after confinement, contrasting with the 28.9% who used the social networks at the same frequency before confinement. Moreover, only 9.6% used social networks between 30 and 59 minutes per day during confinement, contrasting with the 22.8% and 23.7% who spent the same time per day before and after confinement, respectively. This means that 51.7% (before confinement) versus 25.3% (during confinement) and 39.5% (after confinement) used social networks for less than one hour. Approximately the same percentage of people used social networks between one and two hours per day before (22.8%), during (27.2%), and after (23.7%) confinement. People who used social networks between three and four hours represented 17.5% before, 16.7% during, and 25.4% after confinement. Only 6.1% and 5.3% used social networks between five and six hours before and after confinement, respectively, contrasting with the higher value of 21.1% with the same social networks frequency of use during confinement. Finally, only 1.8% used social networks more than seven hours per day before confinement, 9.6% during confinement, and 4.4% after confinement.

Regarding SNA, participants reported lower levels before confinement (M = 2.00, SD = 0.76) than during (M = 2.63, SD = 0.95; t = −11.07, p < .001) and after (M = 2.27, SD = 0.88; t = −3.23, p = .002) confinement, and a higher level (t = 4.53, p < .001) during than after confinement.

Power analyses for F-tests as the test family performed with G*Power using the mean effect size reported in social psychology (r = .21; (Richard et al., 2003) revealed that, for the analysis performed and the number of predictors of our model, 117 participants were needed to find an effect at 95% power, 99 at 90%, and 88 at 85%. Thus, our sample size was sufficient to find an effect with a moderate effect size.

Procedure

In late July 2020, once confinement ended, three months after the previous data collection (during confinement), the questionnaire was distributed again by email to all participants of the previous survey who were interested in participating in a follow-up of the first study. This enabled us to carry out a longitudinal study to analyze the evolution of the variables over time, comparing the phases before and after confinement. As in the first phase, participants had to give their consent on the first screen to be able to access the questionnaire. The second data were then collected approximately one month after the end of the lockdown (21 June 2020). In that period, people could leave their houses and go to all places freely. The use of a face mask was mandatory indoors, but not outdoors.

Measures

SNA, social networks frequency of use, and *motives for using social networks* were measured using the same scales as in Study 1. In the SN-MotiveS, to assess the extent to which the participants used social networks for work before, during, and after confinement, a work motive factor of three items was added: *Have you used social networks to communicate with people in the workplace?, Have you used social networks to work?*, and *Have you used social networks to hold meetings, calls, or work videoconferences?*. This motive is not usually identified as a dominant motive, although it has been identified in some studies (Baek et al., 2011). The reliability of the Short SNAddS-6S (Cuadrado et al., 2020) and of all the motives of the SN-MotiveS showed excellent reliability before, during, and after confinement (Cronbach's α between .80 and .93). In addition, EFA performed for the SN-MotiveS produces the five expected factors.
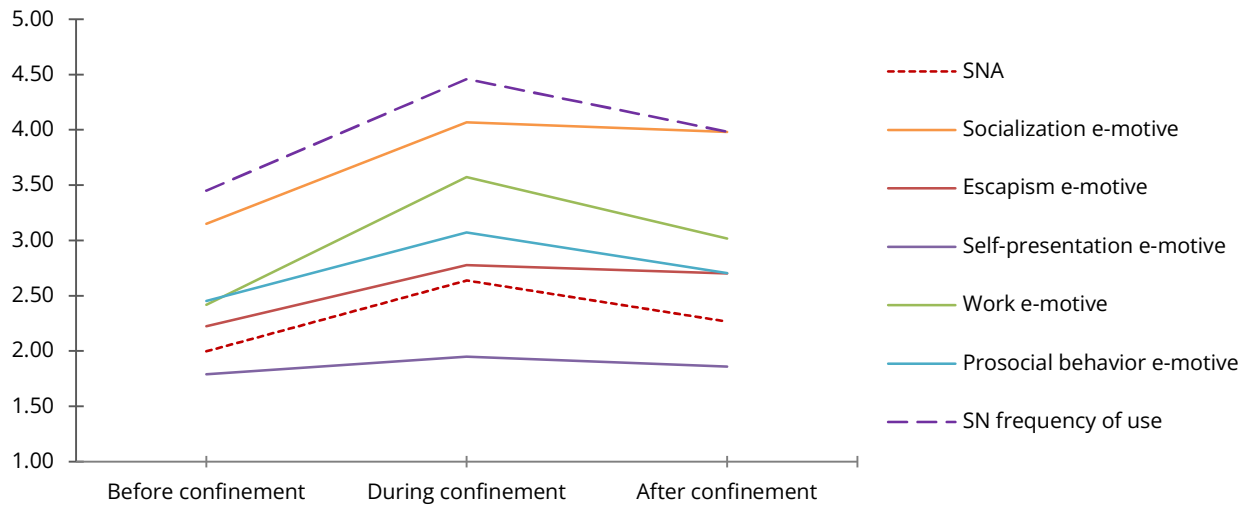
Data Analyses

To explore the evolution of the variables over time, different repeated measures analyses (RMA) with the variables of social networks frequency of use, motives for using social networks, and SNA were carried out. The mediating role of the motives for using social networks in the relation established between social networks frequency of use and SNA was evaluated with the fourth model of the Process for SPSS macro, with 10,000 bootstraps, and by using social networks frequency of use before confinement as an IV, the different motives for using social networks during confinement as mediating variables, and SNA after confinement as the dependent variable (DV). Moreover, age and gender were introduced as covariates to control the model for age and gender. In the same way, the mediating role of social networks frequency of use in the relation established between the motives for using social networks and SNA was evaluated with the fourth model of the Process for SPSS macro, with 10,000 bootstraps, and by using, one by one, the motives for using social networks before confinement as an IV, social networks frequency of use during confinement as mediating variable, and SNA after confinement as the dependent variable (DV). Moreover, in each case, the other motives for using social networks that were not entered as IV were entered as covariates, as well as gender and age.

Results

Trend of the Study Variables: Repeated Measures Analyses

The RMA (Figure 2) showed significant differences in the evolution of social networks frequency of use, $F(gl=2) = 31.23$, $p < .001$, $\eta^2 = .22$, observed power (OP) = 1.00; the escapism motive, $F(gl=2) = 26.79$, $p < .001$, $\eta^2 = .19$, OP = 1.00; the socialization motive, $F(gl=2) = 28.93$, $p < .001$, $\eta^2 = .30$, OP = 1.00; the prosocial behavior motive, $F(gl=2) = 26.50$, $p < .001$, $\eta^2 = .19$, OP = 1.00; the work motive, $F(gl=2) = 47.38$, $p < .001$, $\eta^2 = .29$, OP = 1.00; and SNA, $F(gl=2) = 36.52$, $p < .001$, $\eta^2 = .24$, OP = 1.00; but not for the self-presentation motive, $F(gl=2) = .722$, $p = .100$, $\eta^2 = .02$, OP = .469. Significant differences were found between before and during confinement in all variables, except for the self-presentation motive. Also, significant differences were found between during and after confinement for all variables, except for the socialization, escapism, and self-presentation motives. Finally, significant differences were found between before and after confinement, except for the self-presentation motive.

Figure 2. *Evolution of the Study Variables Over Time.*

Legend:
- SNA
- Socialization e-motive
- Escapism e-motive
- Self-presentation e-motive
- Work e-motive
- Prosocial behavior e-motive
- SN frequency of use

X-axis: Before confinement, During confinement, After confinement

Mediating Roles of the Motives for Using Social Networks and Frequency of Use

For the fourth hypothesis (Motives for using social networks during confinement as mediators in the relationship between social networks frequency of use before confinement and SNA after confinement), the mediation analysis confirmed that, when controlling the model by sex and gender, social networks frequency of use before confinement had a direct effect on SNA after confinement, effect = .126, p = .012. Furthermore, the escapism, effect = .060; bootstrap (95%) = [.014, .127], and self-presentation, effect = .063; bootstrap (95%) = [.022, .118], motives for using social networks during confinement acted as mediators in the relationship established between social networks frequency of use before confinement and SNA after confinement. However, the socialization, effect = −.001; bootstrap 95% [−.034, .032], prosocial behavior, effect = −.016; bootstrap (95%) = [−.046, .008], and work, effect = .001; bootstrap (95%) = [−.009, .014], motives for using social networks during confinement did not act as mediators in the relationship established between social networks frequency of use before confinement and SNA after confinement. The model explained 42% of the variance, R^2 = .42, $F(8, 104)$ = 2.08, p < .001. The different mediations can be seen in Figure 3.

For the fifth hypothesis (Social networks frequency of use during confinement as mediator in the relationship established between motives for using social networks before confinement and SNA after confinement), the mediation analyses confirmed that, when introducing the other motives, age and gender as control variables, the escapism, effect = .224, p = .062, and self-presentation, effect = .237, p = .013, motives for using social networks before confinement, but not the socialization, effect = −.071, p = .434, prosocial behavior, effect = −.057, p = .557, or work, effect = .022, p = .771, motives for using social networks had a direct effect on SNA after confinement. Furthermore, the social networks frequency of use during confinement acted as mediator only in the relationship that the escapism motive before confinement established with SNA after confinement, effect = .131; bootstrap (95%) = [.036, .253], but not in the relationship that self-presentation, effect = .042; bootstrap (95%) = [−.012, .129], socialization, effect = .010; bootstrap (95%) = [−.047, .073], prosocial behavior, effect = −.034; bootstrap (95%) = [−.112, .022], or work, effect = −.001; bootstrap (95%) = [−.057, .046], motives for using social networks before confinement established with SNA. The model explained 40% of the variance, R^2 = .40, $F(8, 104)$ = 8.78, p < .001. The different mediations can be seen in Figure 4.

Discussion

Regarding the trend in the variables, frequency of use, SNA, and motives for using social networks increased during confinement, except for the self-presentation motive, which remained stable over time. This significant increase in the variables is congruent with previous studies that explained that social isolation and the inability to continue with normal leisure activities led to an increase in the use and consumption of social networks (Gómez-Galán et al., 2020). This increase in the use of information technologies was also a way in which individuals could preserve their mental health, facing the threatening and difficult situation of isolation (García et al., 2021; García del Castillo-Rodríguez et al., 2020). However, although most of the variables decreased again at the end of confinement, the self-presentation, escapism, and socialization motives for using social networks did not do so,

remaining at levels similar to those reached during confinement. These results are consistent with other studies showing that, once confinement is over, the greater use that individuals have established remains relatively stable (García et al., 2021). On the other hand, given that the escapism motive is directly related to the SNA symptom of managing negative emotions (Cuadrado et al., 2020; Griffiths, 2005), it was to be expected that this motive for using social networks would be less likely to decrease once increased. This may indicate a certain habituation to the greater use of social networks during confinement and to their rewarding power, which, in turn, may be worrisome in relation to possible addictive behaviors derived from such greater use.

Figure 3. *Mediating Role of the Motives for Using Social Networks Between Social Networks Frequency of Use and Social Networks Addiction.*

Note. ***$p < .001$, **$p < .01$, **$p < .05$, #$p < .07$.
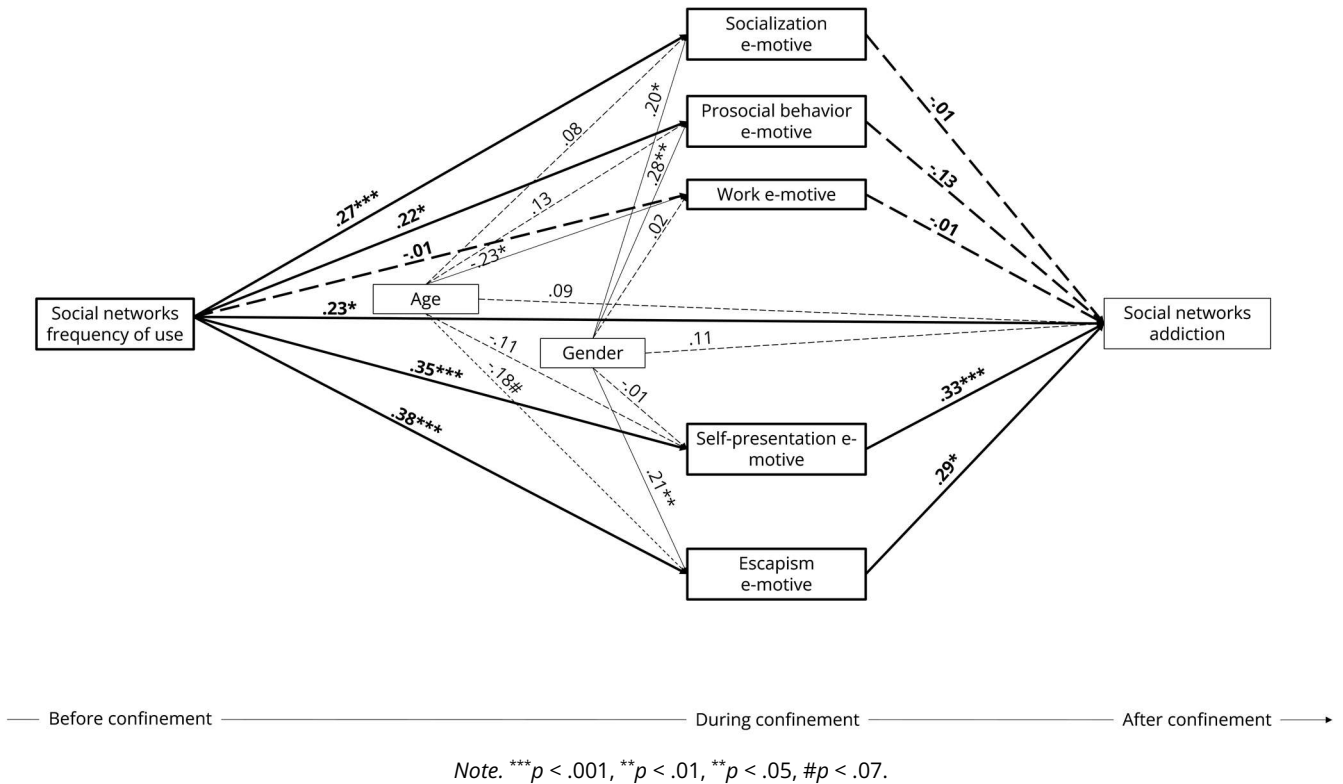
Figure 4. *Mediating Role of the Social Networks Frequency of Use Between Motives for Using Social Networks and Social Networks Addiction.*

Note. ***$p < .001$, **$p < .01$, **$p < .05$, #$p < .07$.
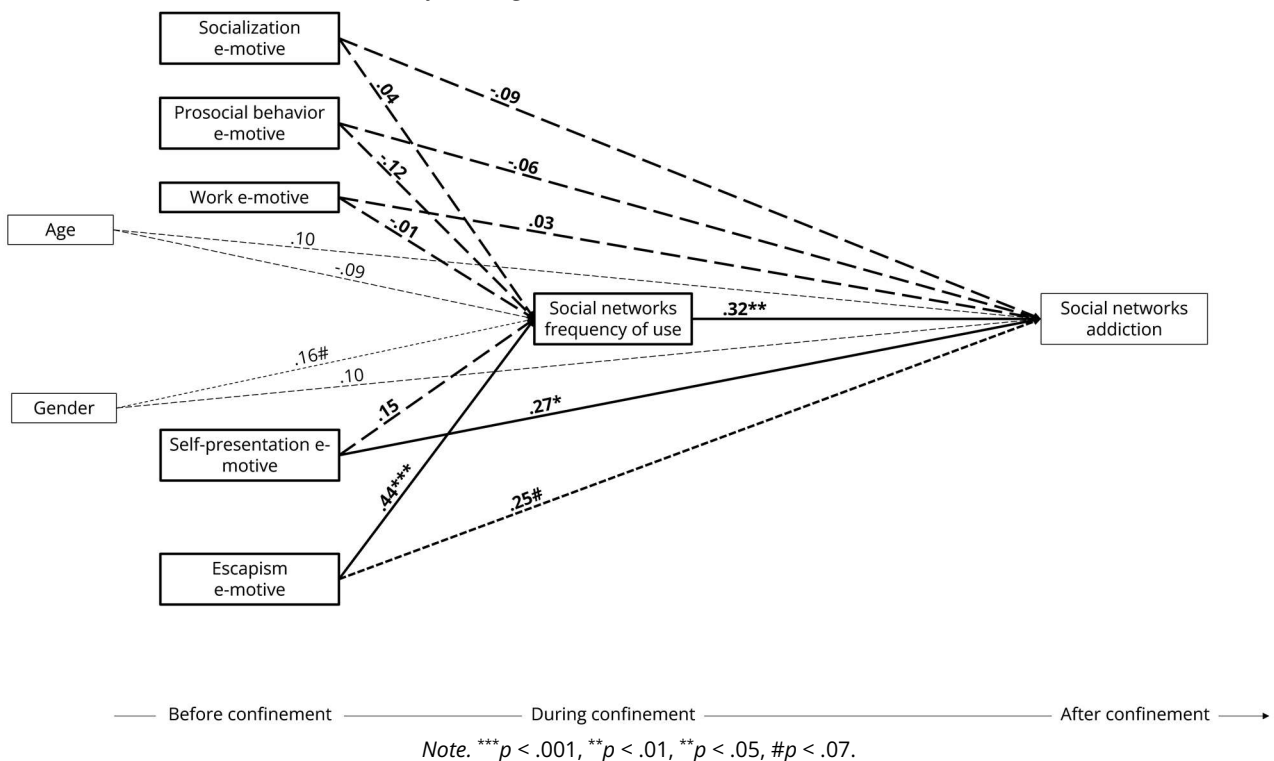
Predictive Model of SNA After Confinement

Regarding the relationships among variables, the results showed that the more frequently individuals used social networks before confinement, the more they used them for socialization, prosocial behavior, escapism, and self-presentation during confinement (Alzougool, 2018; Joinson, 2008; Ryan et al., 2014); in turn, the more they used social networks for escapism and self-presentation during confinement, the higher their SNA levels were after confinement (Floros & Siomos, 2013; Masur et al., 2014; Ryan et al., 2014; Song et al., 2004). However, as expected, the use of social networks as a socializing element, work tool, and way of giving help were not related to SNA. In this sense, the increases in the socializing, work, and giving help motives for using social networks were not related to uncontrollable use and enjoyment of social networks themselves; they were inherent and contingent to the confinement situation, reflecting a natural need to have contact with people, an obligation to work, and a social responsibility to help others. All these motives are much more controllable than escapism and self-presentation needs.

In this same way, the mediation model showed that only the escapism and self-presentation motives for using social networks acted as mediators in the relationship between social networks frequency of use and SNA. Consistent with the previous literature, which showed that social networks frequency of use is directly related to motives for using social networks (Joinson, 2008), it has been found that the greater amount of time that people spent on social networks before confinement, the more they used social networks to socialize, help others, present themselves, and have fun during confinement. However, as expected, the social networks frequency of use was not related to the work motive, since the greater use that individuals made of social networks to work was contingent on the situation of demand caused by the need to telework, not something that they decided to do to occupy their free time or combat boredom and isolation, as happened with the other motives for using social networks.

Furthermore, the only two motives for using social networks that directly predicted SNA after confinement, thus contributing to its maintenance, and that acted as mediators between social networks frequency of use and SNA, were the escapism and self-presentation motives. These two motives for using social networks could be related to a greater rewarding power, which could explain the greater relationship they have with SNA (Kashif et al., 2020). In this sense, the escapism motive is a construct very close to the management of the negative emotions symptom of addiction (Cuadrado et al., 2020; Griffiths, 2005), which could also explain the predictive power of this motive for using social networks in SNA.

When looking at the mediating role of social networks frequency of use during confinement between motives for using social networks before confinement and SNA after confinement, it was confirmed only between the escapism motive and SNA, while the self-presentation motive only acted as direct predictor and no other motives for using social networks before confinement had a significant direct impact on SNA after confinement. Except for self-presentation (the only motive for using social networks that does not undergo changes in the different phases of the pandemic, remaining stable over time), the levels of the other motives for using social networks before confinement were not determinant in the SNA experienced after confinement. This result highlights the relevance of the confinement situation itself in the SNA experienced after confinement, in comparison to the motives for using social networks experienced before confinement.

Considered together, these results highlight the relevance of social networks frequency of use, as well as the self-presentation and escapism motives as risk factors for SNA. Both social networks frequency of use and self-presentation motives act as direct predictors of SNA both before and after confinement. Regarding the escapism motive, although only the escapism motive during confinement acted as direct predictor of SNA, the level of this motive expressed before confinement acted as indirect predictor, through the effect it had on social networks frequency of use. As escapism is a highly related SNA characteristic regarding the use of social networks (Cuadrado et al., 2020; Griffiths, 2005), it is not surprising to find that when people used social networks for escapism before confinement, then their social networks frequency of use increased during confinement, thus leading to higher SNA after confinement.

General Discussion

The severe impact of confinement on the global population, by reducing leisure options and social relationships (Bond et al., 2021; Brooks et al., 2020) and increasing social networks use (Lemenager et al., 2020), makes the analyses of motives for using social networks and SNA related to the pandemic highly relevant.

The first study of this research provides researchers and professionals with a valid, reliable, and multifactorial scale—the SN-MotiveS—to explore to what extent individuals use social networks to escape from reality (the escapism motive, which included two subdimensions: entertainment and mood management), to socialize with others (the socialization motive), to act in a prosocial way with regard to other individuals (the prosocial behavior motive, which included two subdimensions: helping and sharing information), and to express themselves (the self-presentation motive). These motives for using social networks are especially relevant in a time of confinement; nevertheless, the scale and its factors are valid to be used both during confinement circumstances and in normal situations. Moreover, researchers can use all the motives for using social networks of the scale or each one separately, depending on their needs.

As a reflection of the loneliness and isolation suffered during confinement (Bond et al., 2021; Brooks et al., 2020), the motive for using social networks most reported during confinement was socialization, with a high level of use. Escapism and prosocial behaviors were the second most common motive for social networks use, both at the same moderate level, as a response to confinement, pandemic uncertainty, and lost leisure activity. Self-presentation was the reason for which individuals used social networks the least.

In the second study, the results showed that all the motives for using social networks (except for self-presentation) increased during confinement, congruently with previous studies (Brooks et al., 2020; DeFilippis et al., 2020; Herring & Kapidzic, 2015; Lemenager et al., 2020; Ramkissoon, 2020; Tull et al., 2020), and then decreased, but not falling to the levels prior to confinement three months after confinement. Indeed, the socialization, self-presentation, and escapism motives did not decrease once confinement ended, remaining at levels similar to those during confinement. This finding seems particularly relevant, since the motives for using social networks that are most directly related to SNA have been shown to be escapism and self-presentation, which did not experience a decline after confinement. The habits of higher use of social networks that were acquired during confinement, especially the escapism motive, were maintained once the social isolation ended, which could lead to a long-term increase in SNA symptoms in the population. Therefore, motives for using social networks could be useful for both researchers and mental health professionals since the different motives for using social networks would have to be explored to control an individual's SNA.

The results of the present study shed light on the motives for using social networks during uncertain scenarios and their association with SNA. Importantly, most countries are still facing the pandemic and its consequences. For instance, several nations had to implement new confinement periods (e.g., The Netherlands) and other restrictions to curb the effects of COVID-19 on the health of their population. Thus, understanding why people increase the frequency of social networks use may be useful for the creation of programs to prevent or reduce SNA and its pernicious effects in periods of uncertainty and threat, either due to possible new confinements or similar periods of societal threat (e.g., global economic downturns, international conflicts, etc.). Likewise, the present studies extend prior research on social networks use and SNA (Gómez-Galán et al., 2020; Zarco-Alpuente et al., 2021) by also considering motives for using social networks in the period of COVID-19. Furthermore, an important aspect of our research is the analyses of these variables over time, which illustrate in more detail the processes that arise from motives for using social networks and social networks frequency of use to SNA. All in all, these findings contribute to the knowledge on social networks use and SNA.

Limitations and Future Research

While the results are promising, some limitations of the study should be highlighted. One limitation involves the representativeness of the sample, which was mainly made up of women. However, the analysis of comparison of means did not reveal significant differences in the motives for using social networks, the social networks frequency of use, nor the SNA of men and women, except for the socialization motive during confinement, which was more common for women than men. This appears to confer more validity to the scale, because women are generally more socially oriented than men and could use social networks more for maintaining contact (Makashvili et al., 2013). Nevertheless, inconsistencies have been found in this aspect in different studies. Thus, analyses of the

gender differences in the motives for using social networks seem to be relevant for future research. Also, future research could focus on some moderators that can buffer the relationship between the motives for using social networks and SNA. In the same way, because some variables that could play an important role in pandemic situations and confinements, such as loneliness, boredom, and experiencing uncertainty, could also influence social networks use and misuse, future research should focus on those constructs as potential control and predictive variables related to motives for social networks use. Regarding the variables used, it could be remarked that the social networks frequency of use was assessed with an ordinal scale, by classifying usage times in advance. Probably a metric response could have provided more precise and extensive information, as well as a more accurate assessment method.

Another limitation related to the representativeness of the sample is the sample size of Study 2. Although the a priori effect size analysis showed that our sample was sufficient to detect a moderate effect size, it can be argued that the sample is small when considering the extremely large population. Thus, future research should replicate the result in a larger sample.

On the other hand, further studies could also focus on the adolescent population, since they are the group that uses social networks the most. Better acknowledgement of motives for using social networks in adolescents would facilitate the organization of campaigns and workshops for a reduction in social networks frequency of use and SNA by having more information on why they are using social networks.

Other limitations are related to data gathering, the number of evaluations and temporalization of the study. Regarding the sampling method, the stay-at-home order during the period of dissemination of the questionnaire necessitated the use of a snowball approach. In this regard, it could be argued that a sample consisting of similar people may be generated because they find or suggest each other, and that such an approach may homogenize the findings coming from friends and relatives. Nevertheless, both the PhD students and research team members disseminated the questionnaire widely, asking for the questionnaire to be disseminated to different people to ensure a more heterogeneous and representative sample. In this sense, the sociodemographic data showed that the participants were heterogeneous, with participants covering a large age range and different types of activity status (worker, unemployed, student, and retired), and with participants from different parts of Spain, although the research team members and PhD students who disseminated the questionnaire were all from Andalusia. Even so, it would be interesting for further studies to replicate the results using a different sampling procedure.

Moreover, future studies should include more evaluation time points with a longer period between evaluations to better explore the evolution of the variables as well as the interactions between the studied variables over time. In this regard, further research should explore the reasons for why the increase in socialization and escapism motives persists over time.

The authors of the present study also acknowledge that future research must address the study of different variables that could be moderators in the relationship between motives for using social networks, social networks frequency of use, and SNA. For instance, extraversion is associated with social acceptance and interest in social relations (Deng et al., 2021) and interest in being the center of social attention (Hu et al., 2019). Thus, extraversion should be considered when exploring socialization and self-presentation motives in relation to social networks frequency of use and SNA. Furthermore, the present results might have been clearer if facets of personality traits had been considered. Reid et al. (2011) showed that people with gambling addiction were more prone to mood disturbances and vulnerability to distress (related to escapism) and distrust of others; this hampers prosocial behavior (e.g., Kang et al., 2016). Hence, further research must consider facets of personality when examining the relationship between motives for using social networks and social networks frequency of use with SNA.

Moreover, regarding the validity of the scale, and although the results of both the internal and external validity are promising, it should be noted that, when testing convergent validity, other existing motives for using social networks scales were not included, principally to not enlarge the questionnaire, with the associated risk of losing participants due to fatigue. Thus, future research should replicate the results found here by adding other social networks motive scales to ensure the convergent validity of the factors of our scale with those of other social networks motive scales.

Conclusion

Individuals are currently living in the digital era, in which new technologies and digitalization have changed people's lives. People's use of social networks is growing, and social networks are the main source of

entertainment and interaction for many people, especially young people. This combines with the confinement period associated with the COVID-19 pandemic, which caused an increase in the social networks frequency of use. In the present research, a new measure to evaluate the motives for using social networks (SN-MotiveS) was developed and validated. The SN-MotiveS is a valid tool to evaluate why people decide to use social networks in pandemic and non-pandemic contexts. Likewise, the present study shows that people increased their use of social networks for almost all the proposed motives for using social networks; not surprisingly, after confinement, the socialization and escapism motives did not reduce. This issue is worrying because the results also confirm that the escapism motive is directly related to SNA after confinement. Given that SNA has detrimental consequences for individuals' health and social relations, the results emphasize the relevance of considering a tool that enables practitioners to measure as many motives for using social networks as possible, i.e., with the SN-MotiveS, in the study of social networks use and SNA, both within and outside the pandemic context.

Conflict of Interest

Authors' Contributions

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