COVID-19 Pandemic: Home Confinement Problems and Mental Health

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Research Article

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Abstract

Home confinement during the COVID-19 crisis causes problems in everyday life that can affect people's mental health. In this context, the purpose of this study was (1) to identify the most frequent problems experienced during the home confinement, (2) to analyse whether these problems vary according to socio-demographics; and (3) to study the influence of home confinement on mental health. One thousand five hundred sixty-nine participants living in Spain during the COVID-19 lockdown answered an online survey including questions about socio-demographics, problems of home confinement and mental health. We used factor analysis to group the home confinement problems into identifiable categories. Descriptive and inferential statistical methods for comparison between socio-demographics were used, and the influence of subsets of home confinement problems on mental health was analysed by multiple linear regression.The 16 evaluated problems were grouped into three factors: “Anger and Frustration”, “Deprivation of Social Contact”, and “Living Together Issues”. The most frequent problem was “missing somebody”, while “being afraid of going mad” was the least frequent one. Women, young people, people with less space at home, and teleworkers and non-working people during the lockdown period reported more home confinement problems. The Anger and Frustration factor was the one most related to mental health. These results highlighted the problems that people had to face during home confinement and their influence on mental health. Finally, the paper suggests designing specific strategies to cope with these problems according to participants’ socio-demographics.

Background

Numerous countries have imposed lockdown as a measure to prevent the spread of the coronavirus disease 2019 (COVID-19) outbreak. Leaving the house for any non- essential activity has been prohibited, schools, shops (except for essential groceries stores and pharmacies) have been closed, and working from home has been a widespread practice to avoid contact with other people.

Although these restrictive measures have been necessary to slow down the spread of the virus, prolonged home confinement may have negative consequences on the population (Hawryluck et al., 2004). Previous research on people under stay-at- home orders during the COVID-19 crisis showed that such experience could contribute to adverse psychological outcomes, including increased loneliness (Courtet, Olié, Debien, & Vaiva, 2020), depression (Reger, Stanley, & Joiner, 2020), and anxiety (Tull et al., 2020). However, most of these studies have evaluated psychiatric morbidity, but not the areas of psychological stress experienced during home confinement. Consequently, there is little evidence on how people face this extraordinary and unusual situation. We consider that to prevent or reduce the onset of mental disorders it is necessary to identify the problems experienced by people during confinement and to develop specific strategies to cope with them in a better way.

The COVID-19 pandemic is the first time in history in which the general population has been confined to their homes, and, as far as we know, no previous empirical research has studied the specific stressors of this situation. However, previous research showed that there is some similarity between the experience of

home confinement and the feelings of social isolation and loss of freedom of movement experienced in incarceration and house arrest (Gurney, 2020; Mengin, 2020).

In the literature of imprisonment and house arrest, problems related to deprivation of liberty and autonomy, lack of contact with other people, and feelings of tension and anxiety generated by the confinement have been studied (Payne & Gainey, 1998; Richards, 1978; Sykes, 1958). A recent study (Hulley, Crewe, & Wright, 2016) about long-term imprisonment effects showed that the deprivation of social contact is the most frequently experienced problem by inmates. Similarly, Gainey and Payne (2000) showed that people under house arrest indicated that social restrictions were also the most frequent pains and suggested that they are a form of control that eliminates social life. In this same study, a participant stated: “it’s like being locked up, but you are at home” (p. 90). In this sense, home confinement and the subsequent reduction of social contact could promote similar thoughts and feelings, causing a state of isolation and helplessness (Pancani, Marinucci, Aureli, & Riva, 2020).

Home confinement has given rise to a feeling of being “trapped” and to a perception of loss of control (Chatterjee & Chauhan, 2020). In a similar way to imprisoned people, adaptation to home confinement can lead to significant difficulties, leading to dysfunctional thinking and behaviours. Hulley et al. (2016) have shown that feelings of lack of control, anger, and frustration are more frequent during the first months of incarceration. Besides, the feeling of being trapped can produce a diminished sense of self-worth and personal value (Haney, 2003). Regarding the work carried out in the field of house arrest, the qualitative study by Chamiel and Walsh (2018) identified boredom and loss of routine as the most deeply felt consequences.

In addition to the problems related to the deprivation of social contact and the inherent issues in confinement, the restrictions that force people to stay at home represent an additional risk factor for mental health (Wang et al., 2020; World Health Organization, 2020). The mass home-confinement directives have assumed that activities that previously belonged to the outside world (e.g., work, school, gym) now have to be done at home (Houghton, 2020). The separation between the public and the private has disappeared, and it has put people near their family members all or most of the time, which may cause or exacerbate tensions (Douglas, Katikireddi, Taulbut, Mckee, & McCartney, 2020).

In the same way that the psychological effects of incarceration vary from one individual to another (Bukstel & Kilmann, 1980; Gendreau & Thériault, 2011), the difficulties experienced during home confinement are likely to be moderated by different factors. For example, a study carried out during the COVID-19 lockdown has shown that women presented higher psychiatric morbidity than men (Liu et al., 2020; Wang et al., 2020). Moreover, young people and students are also becoming more sensitive to the psychological consequences of lockdown (Cao et al., 2020; Parrado- González & León-Jariego, 2020). Besides, the lack of personal space at home (Wang et al., 2020) and the implementation of telework (Mann & Holdsworth, 2003) could also affect the experience of home confinement.

As a result of the above, the aim of this paper was (1) to identify the most frequently experienced problems by people during home confinement due to the imposed lockdown in Spain, (2) to study

whether these problems vary according to sex, age, home space, and work status, and (3) to analyse the influence of confinement problems on the participants' mental health.

Methods

Participants and procedure

A cross-sectional online survey was adopted using convenience snowball sampling to recruit participants during the home confinement in Spain caused by the COVID-19 pandemic. A total of 1596 people (66.6% female), residents from 311 different towns, and aged between 18 and 89 years (*Mage* = 38.62, SD = 14.93) participated in this study.

Before accessing the questionnaire, all respondents had to confirm that they were at least 18 years old and to consent to participate in the online study. All procedures were conducted in accordance with the Declaration of Helsinki. The study (internal code 0857-N-20) is under evaluation by the PEIBA Ethics Committee (Ethics Portal for Biomedical Research in Andalusia).

Instruments

Socio-demographic characteristics. Information about participants' age, gender, work status, and square meters of housing per person was collected.

Problems of home confinement. An adaptation of the long-term imprisonment scale (Richards, 1978) was used to measure the problems of home confinement. The original scale consists of 20 problems that show most of the areas of psychological stress experienced by prisoners. In this study, four of the twenty problems were removed because they did not fit the home confinement situation, and the wording of two further problems was changed (see Table 1). Finally, each item consisted of a home confinement problem, and participants were asked to answer how frequently they experienced these problems on a five-point scale ranging from *never* (1) to *very often* (5). Exploratory and confirmatory factor analyses were performed to investigate whether different subsets of problems could be identified (these analyses are included in the "Results" section below).

Psychological distress. We used the General Health Questionnaire (GHQ-12; Goldberg & Williams, 1988) to assess the general psychological distress during home confinement. The 12 items of the GHQ-12 were measured with the GHQ score (0-0-1- 1); this format is more suitable when using the GHQ-12 as a one-dimensional instrument (Rocha, Pérez, Rodríguez-Sanz, Borrel, & Obiols, 2011). In this study, the scale showed good internal consistency (α = 0.86).

Table 1. Original problems of long-term imprisonment (Richards, 1978) and revised problems of home confinement included in the current study

Richard's (1978) problem statements	Problem statements included in the current study (*with revised wording and removed items shown in italics*)
Wishing that time would go faster	Wishing that time would go faster
Being worried about becoming a vegetable	Being worried about becoming a vegetable
Being afraid of dying before you get out	*Removed item*
Wishing you had more privacy	Wishing you had more privacy
Feeling that your life is being wasted	Feeling that your life is being wasted
Feeling suicidal	*Removed item*
Losing your self-confidence	Losing your self-confidence
Feeling sorry for yourself	Feeling sorry for yourself
Missing little "luxuries", e.g. your favourite food, your own clothes	Missing little "luxuries", e.g. *going to your favourite restaurant, seeing your friends*
Keeping out of a trouble	*Removed item*
Feeling angry with yourself	Feeling angry with yourself
Missing social life	Missing social life
Feeling angry with the world	Feeling angry with the world
Missing somebody	Missing somebody
Getting annoyed or irritated with other inmates	Getting annoyed or irritated with *people you live with*
Being afraid of going mad	Being afraid of going mad
Longing for a time in the past	Longing for a time in the past
Feeling sexually frustrated	Feeling sexually frustrated
Worrying about how you will cope when you get out	*Removed item*
Being bored	Being bored

Analysis Plan

The data were analysed in three steps. First, the clustering of home confinement problems was examined by exploratory factor analysis (EFA) in the statistical package IBM SPSS 24, followed by confirmatory factor analysis (CFA) in IBM AMOS 24.

Secondly, we used descriptive techniques such as mean and standard deviation for data analysis. Subsequently, inferential statistical methods such as t-test, analysis of variance (ANOVA) and Tukey's post hoc test were employed for multiple comparisons between socio-demographic characteristics. All statistical tests were considered significant at $p < 0.05$.

Finally, a multiple linear regression model was developed to examine the influence of the subsets of problems of home confinement on general psychological distress.

Results

Subsets of Problems of Home Confinement

We attempted to make a precise distinction between the problems in a situation of home confinement by grouping variables thematically and statistically into meaningful subsets of "problems" or "dimensions". For this classification, an exploratory factor analysis (EFA) with varimax rotation was conducted. From

the first analysis, two factors emerged with an eigenvalue higher than 1 that accounted for 52.57% of the variance. However, a third factor with an eigenvalue less than 1 (EV=.96) was retained. This was done because the scree plot test suggested extracting a third factor, which would increase the variance accounted for to 60.56%, more than the suggested 60% threshold (Hair, Anderson, Babin, & Black, 2010). Furthermore, this third factor had at least three items with loadings greater than 0.4 (see Netemeyer, Bearden, & Sharma, 2003). Finally, by examining the non-statistical information, it was clear that this factor represented the problems posed by living together and excluding it would have resulted in the loss of essential data. Putting the results from the three criteria together, we decided to retain three factors for interpretation. Table 2 shows the factor loading after rotation for the three-factor solution.

Table 2. Exploratory factor analysis of the Problems of Home Confinement (varimax rotation). -

Problems of Home Confinement Scale	Factors		
	Anger and frustration	Deprivation of social contact	Living together issues
1. Losing your self-confidence	.839		
2. Feeling sorry for yourself	.835		
3. Being worried about becoming a vegetable	.732		
4. Feeling angry with yourself	.691		
5. Being afraid of going mad	.657		
6. Feeling that your life is being wasted	.653		
7. Feeling angry with the world	.546		
8. Missing social life		.885	
9. Missing little “luxuries”, e.g going to your favourite restaurant, seeing your friends.		.842	
10. Missing somebody		.756	
11. Longing for a time in the past		.653	
12. Wishing that the time would go faster		.558	
13. Being bored		.438	
14. Getting annoyed or irritated with people you live with			.795
15. Wishing you had more privacy			.792
16. Feeling sexually frustrated			.462

Note: only factors loading greater than 0.4 were reported.

A confirmatory factor analysis (CFA) was performed following the EFA results. The first tested model showed a poor fit to the data. However, following a Scheffe-like procedure for model modification in SEM (Hancock, 2000), the modification indices indicated strong evidence of a correlated error residual between items 8 and 9 (maximum modification index = 186.094; expected parameter change = .188). Analysis of these items revealed that they were strongly overlapping (i.e “missing social life” and “missing little ‘luxuries’, e.g. going to your favourite restaurant, seeing your friends”), and their error residuals were allowed to correlate. The re-specified model showed a good fit to the data and confirmed the three-factor structure: CFI = .916; NFI = .909; TLI = .900; RMSEA = .076; SRMR = .061. The regression weights of the latent factors on the observed variables ranged from .55 to .84.

The first factor represented negative feelings and thoughts related to the experience of home confinement, and it was consequently labelled “Anger and Frustration”. The second factor represented problems referred to the deprivation of relationships and social contact due to the home confinement. Therefore, this factor was labelled “Deprivation of Social Contact”. The third factor, labelled “Living Together Issues”, was related to the problems between household members (Table 2). The internal consistency of the indicators for each of the three factors was adequate regarding the criteria published in the literature of Cronbach’s Alpha (Cronbach, 1951) (Table 3).

Socio-demographic characteristics and problems of home confinement during the COVID-19 crisis

Table 3 represents the means and typical deviations of the three factors and the 16 problems experienced during the home confinement. The mean ratings of the items indicated that the problems most frequently experienced by the respondents belonged to the Deprivation of Social Contact factor. Specifically, the five most severe problems were “missing somebody” (M = 4.03), “missing little luxuries” (M = 3.73), “missing social life” (M = 3.72), “wishing that time would go faster” (M = 3.22) and “longing for a time in the past” (M = 3.13). In contrast, the five least frequently experienced problems were “being afraid of going mad” (M = 1.58), “being worried about becoming a vegetable” (M = 1.69), “feeling sorry for yourself” (M =1.70), “losing your self- confidence” (M =1.83) and “feeling angry with yourself” (M =1.97), that belonged to the Anger and Frustration factor.

Regarding gender, Table 3 shows significant differences between the frequency of problems between men and women. In this case, women reported statistically higher scores in all of the three factors and problems statements ($p < .01$), except for “feeling sexually frustrated” which was similar for both groups ($p = .598$).

A one-way ANOVA revealed significant differences between “young people (18-30 years), “middle age people” (31-50 years), and “older people” (>50 years). Post hoc multiple comparisons with Tukey’s HSD test revealed that young people experienced significantly greater frequency of the 16 problems of home confinement than middle age ($p < .01$) and older people ($p < .01$). Also, middle age people showed statistically higher frequency of problems than older people (see table 3), except for “being worried about becoming a vegetable” ($p = .165$) and “wishing that time would go faster” ($p = .643$).

The differences of these problems depending on the square metres per household member were tested using tertiles. The results showed that people in the first tertile reported having more home confinement problems than those in the second or third tertile in 13 of the 16 problem statements ($p < .01$ or $p < .05$; see Table 3). The other three problems did not differ between the three groups. The problem of “missing somebody” was statistically higher in the first tertile than the second tertile but not statistically higher than the third one. Finally, people in the second tertile showed significantly higher scores in only four of the 16 problems of home confinement than people in the third tertile (see Table 3).

In addition, we compared the frequency of home confinement problems between key workers and the rest of the respondents. This second group consisted of people working from home and non-working people

(students, unemployed, and retired) that were not allowed to meet others outside their household. In this case, significant statistical differences between the two groups were observed (Table 3), and key-workers reported a lower frequency of problems related to the people they lived with ($p < .01$). Specifically, this group showed less frequency of getting annoyed or irritated with people they live with ($p < .01$) and less frequency of wishing they had more privacy ($p < .01$). Also, key-workers group scored lower on feeling that their life is being wasted ($p < .01$).

Table 3. Differences in the frequency of the problems of home confinement according to sex, age, home space and work status.

		Sex			Age		
	N = 1596 M (SD)	Men (N=533)	Women (N=1063)	*p*	Young people (N=634)[a]	Middle age people (N=548)[b]	Older people (N=414)
Anger and frustration (α = .878)	1.88 (0.86)	1.66 (0.70)	1.99 (0.91)	**	2.17 (0.97)**	1.80 (0.79)**	1.54 (0.58)
Losing your self-confidence	1.83 (1.11)	1.64 (0.98)	1.93 (1.16)	**	2.14 (1.28)**	1.76 (1.03)**	1.47 (0.74)
Feeling sorry for yourself	1.70 (1.07)	1.49 (0.90)	1.80 (1.13)	**	1.98 (1.25)**	1.65 (0.99)**	1.35 (0.67)
Being worried about becoming a vegetable	1.69 (1.08)	1.53 (0.95)	1.77 (1.13)	**	1.85 (1.18)**	1.64 (1.06)	1.52 (0.90)
Feeling angry with yourself	1.97 (1.14)	1.69 (0.98)	2.11 (1.19)	**	2.25 (1.28)**	1.90 (1.06)**	1.62 (0.87)
Being afraid of going mad	1.58 (0.99)	1.30 (0.72)	1.72 (1.08)	**	1.88 (1.19)**	1.48 (0.87)**	1.25 (0.62)
Feeling that your life is being wasted	2.24 (1.28)	2.04 (1.14)	2.34 (1.34)	**	2.69 (1.37)**	2.05 (1.19)**	1.80 (1.04)
Feeling angry with the world	2.19 (1.26)	1.98 (1.16)	2.30 (1.29)	**	2.46 (1.38)**	2.17 (1.22)**	1.82 (0.99)
Deprivation of social contact (α = .831)	3.41 (0.88)	3.18 (0.85)	3.52 (0.86)	**	3.83 (0.78)**	3.25 (0.85)**	2.97 (0.75)
Missing social life	3.72 (1.06)	3.58 (1.08)	3.79 (1.05)	**	4.11 (0.95)**	3.57 (1.10)**	3.32 (0.97)
Missing little “luxuries”, e.g going to your favourite restaurant, seeing your friends.	3.73 (1.10)	3.62 (1.08)	3.79 (1.11)	**	4.18 (0.95)**	3.53 (1.12)**	3.30 (1.04)
Missing somebody	4.03 (1.00)	3.78 (1.07)	4.16 (0.95)	**	4.35 (0.85)**	3.94 (1.03)**	3.65 (1.03)
Longing for a time in the past	3.13 (1.34)	2.78 (1.33)	3.31 (1.31)	**	3.68 (1.22)**	2.98 (1.30)**	2.50 (1.23)
Wishing that the time would go faster	3.22 (1.36)	2.89 (1.33)	3.38 (1.34)	**	3.50 (1.35)**	3.06 (1.34)	2.99 (1.31)
Being bored	2.64 (1.23)	2.47 (1.16)	2.72 (1.25)	**	3.20 (1.22)**	2.43 (1.11)**	2.07 (1.03)
Living together issues (α = .625)	2.12 (0.91)	2.02 (0.86)	2.17 (0.93)	**	2.47 (0.95)**	2.00 (0.85)**	1.73 (0.71)
Getting annoyed or irritated with people you live with	2.02 (1.02)	1.83 (0.95)	2.11 (1.04)	**	2.34 (1.07)**	1.96 (0.98)**	1.60 (0.82)
Wishing you had more privacy	2.13 (1.24)	2.04 (1.16)	2.17 (1.28)	*	2.46 (1.37)**	2.01 (1.17)**	1.77 (0.99)
Feeling sexually frustrated	2.22 (1.33)	2.19 (1.28)	2.23 (1.34)	-	2.62 (1.44)**	2.04 (1.24)*	1.83 (1.08)
Global score of the problems of home confinement (α = .897)	2.50 (0.73)	2.30 (0.64)	2.60 (0.75)	**	2.86 (0.73)**	2.39 (0.68)**	2.12 (0.53)

Table 3 cont.

	House Space			Work Status		
	< 27.50 m^2/person (N= 561)	27.50 – 37.50 (N=551)	> 37.50 (N=484)	Key-workers (N=204)	Teleworkers and non-workers (N=1392)	*p*
Anger and frustration	2.01 (0.92)^{**cd}	1.86 (0.86)	1.76 (0.77)	1.80 (0.79)	1.89 (0.87)	
Losing your self-confidence	1.98 (1.20)^{*c**d}	1.79 (1.08)	1.71 (1.01)	1.76 (0.96)	1.84 (1.13)	
Feeling sorry for yourself	1.81 (1.16) ^{**d}	1.67 (1.03)	1.60 (0.98)	1.65 (0.95)	1.71 (1.08)	
Being worried about becoming a vegetable	1.72 (1.11)	1.70 (1.14)	1.65 (0.98)	1.64 (1.01)	1.70 (1.09)	
Feeling angry with yourself	2.09 (1.20)^{**d}	2.01 (1.16)^{**d}	1.78 (1.02)	1.92 (1.11)	1.97 (1.14)	
Being afraid of going mad	1.72 (1.09)^{*c**d}	1.55 (0.98)	1.45 (0.86)	1.54 (0.88)	1.58 (1.01)	
Feeling that your life is being wasted	2.44 (1.35)^{**cd}	2.15 (1.26)	2.11 (1.21)	2.00 (1.15)	2.27 (1.30)	**
Feeling angry with the world	2.32 (1.30) ^{**d}	2.18 (1.27)	2.07 (1.18)	2.14 (1.20)	2.20 (1.27)	
Deprivation of social contact	3.54 (0.88)^{**cd}	3.35 (0.92)	3.32 (0.80)	3.35 (0.83)	3.41 (0.88)	
Missing social life	3.81 (1.08)	3.67 (1.09)	3.67 (1.00)	3.65 (1.02)	3.73 (1.07)	
Missing little “luxuries”, e.g going to your favourite restaurant, seeing your friends.	3.80 (1.10)	3.67 (1.15)	3.73 (1.10)	3.59 (1.09)	3.75 (1.10)	
Missing somebody	4.12 (0.94)^{**c}	3.94 (1.08)	4.03 (0.97)	3.99 (1.00)	4.04 (1.00)	
Longing for a time in the past	3.31 (1.31)^{**d}	3.13 (1.34)	2.94 (1.34)	3.07 (1.33)	3.14 (1.34)	
Wishing that the time would go faster	3.36 (1.38)^{*cd}	3.13 (1.37)	3.15 (1.31)	3.29 (1.36)	3.21 (1.36)	
Being bored	2.88 (1.23)^{**cd}	2.58 (1.27)	2.44 (1.14)	2.56 (1.10)	2.65 (1.25)	
Living together issues	2.37 (0.97)^{**cd}	2.12 (0.87)^{**d}	1.81 (0.78)	1.95 (0.81)	2.14 (0.92)	**
Getting annoyed or irritated with people you live with	2.23 (1.07)^{**d}	2.11 (0.97)^{**d}	1.66 (0.93)	1.83 (0.95)	2.04 (1.03)	**
Wishing you had more privacy	2.54 (1.34)^{**cd}	2.06 (1.19)^{**d}	1.73 (1.04)	1.91 (1.03)	2.16 (1.27)	**
Feeling sexually frustrated	2.37 (1.38)^{**d}	2.21 (1.28)	2.04 (1.30)	2.13 (1.30)	2.23 (1.34)	
Global score of the problems of home confinement	2.66 (0.77)^{**cd}	2.47 (0.74)^{*d}	2.36 (0.64)	2.42 (0.67)	2.51 (0.74)	

* $p < .05$; ** $p < .01$;. a = statistical differences with middle age and older people. b = statistical differences with older people. c = statistical differences with 27.50 to 37.50 m2/person. d = statistical differences with >37.50 m2/person

Multiple regression analysis of home confinement problems on mental health

A multiple regression analysis was conducted to study the relationship between the three subsets of problems and general psychological distress during the home confinement. The predictors of general psychological distress were problems related to the deprivation of social contact (β = .156; $p < .01$) and feelings of anger and frustration (β = .631; $p < .01$). However, living together issues were not significantly associated with psychological distress ($p = .978$). This model accounted for 52.7% of the total variability of the general psychological distress during the home confinement period.

Discussion

A substantial part of the psychological morbidity during the COVID-19 crisis has been attributed to the home confinement situation. This morbidity may be due to stress by home confinement problems that hinder, and in some cases impede, satisfying human needs and wants (e.g., freedom to walk the streets, or see family and friends). Since home confinement is an imposed situation, we consider that we can only act on the stressors that mediate the relationship between this situation and psychological morbidity. Thus, the purpose of the present study was to examine the problems that people had to face during the home confinement period and how these problems vary according to sex, age, home space, and work status.

To our knowledge, there is no previous empirical research about global home confinement in the literature. Therefore, based on the similarity between home confinement and imprisonment situation (Gurney, 2020; Mengin, 2020), we adapted the long-term imprisonment scale (Richards, 1978) to measure the problems experimented by people during home confinement.

In this study, three subsets of problems of home confinement labelled “Deprivation of Social Contact”, “Anger and Frustration” and “Living Together Issues” were found. The results showed remarkable similarities in the most and least frequent problems reported between the sample of this research and previous studies carried out with long-term prisoners. In line with the findings of Hulley et al. (2014), Leigey & Ryder (2014) and Richards (1978), the pains of “missing somebody”, “missing little luxuries” and “missing social life” were perceived as being three of the most frequent problems. In addition, in agreement with Flanagan (1980) and Leygey and Ryder (2014), the problems of “losing your self-confidence”, “being afraid of going mad”, and “feeling sorry for your-self” were rated by the respondents as being the least frequent ones.

Regarding socio-demographic characteristics, the problems were reported differently by the participants. First, women experienced a higher frequency of these problems than men during confinement. This result was compatible with those found in the imprisoned population where women’s severity scores were considerably higher than men´s (Crewe, Hulley, & Wright, 2017). This higher impact of home confinement in women can be explained by the greater emotional burden with which women respond to stressful situations (Tamres, Janicki, & Helgeson, 2002). Moreover, some measures taken to achieve social distance (eg, school closings and working from home) during the COVID-19 crisis may have a great impact on women’s daily life. On the one hand, women generally play the role of primary caregivers at

home which is intensified during home confinement (Douglas et al., 2020). On the other hand, women feel more pressured by time than men when working from home (Belzunegui-Eraso & Erro- Garcés, 2020).

Secondly, some differences were also found depending on the age of the participants. Young people showed higher frequency for all of the 16 problems than the other two groups (middle age and old people). Different circumstances may explain this result. Adolescents rely on their social network to help clarify their emotions, to normalise experiences and thoughts (Laursen & Hartup, 2002; Prinstein & Giletta, 2016) and to cope with negative events (Lepore, 2001). Thus, the loss of social contact among adolescents and members of their social network due to home confinement may increase the frequency of these problems. Furthermore, these results are consistent with previous studies which indicate that young people are more sensitive to some stressors (e.g., frustration and boredom, lack of in-person contact with friends, and lack of space at home) during home confinement (Wang et al., 2020).

Third, the problems of home confinement were more frequent in people who had less space in their household, except for the three related to the feeling of losing social life, missing little luxuries, and feeling inactive (as a vegetable). These results are aligned with those reported by Kanaga and Flynn (1981) about the effect of spatial invasions on stress production. Almagro and Orane-Hutchinson (2020) have recently suggested complementary support measures for those households that are forced to live in a reduced shared space during the lockdown. In our study, home confinement problems were significantly more frequent when the house space per person was <27.50 m2. The effect of home space on problems decreased significantly if 32.50 m2 were available for each person at the household.

Fourth, our results showed that people who worked from home or did not work during the pandemic presented greater problems of coexistence than key workers who have continued to work in person. Previous research (Charalampous, Grant, Tramontano, & Michailidis, 2019; Gajendran & Harrison, 2007) indicates that conflicts and disturbances between household members will increase as working from home practices are extended, as it blurs the boundaries between workspace and home life. In fact, almost 50% of employees who have been working from home during the COVID- 19 crisis reported additional conflicts with their family members and stated that they bother them more frequently (Baert, Lippens, Moens, Sterkens, & Weytjens, 2020). In addition, and according to Gajendran and Harrison (2007), those workers who work from home for the first time will perceive a greater negative impact of the work-family conflict. Furthermore, non-working people had to face a different challenge; without the distraction and the routine of daily activities, the widely reported psycho-social benefits of home would be compromised, and households might become “a container of anxiety” (Gurney, 2020, p. 21).

Finally, our analyses indicate that home confinement problems could impact mental health negatively. Of all of the three subsets of home confinement problems found in the current study, the Anger and Frustration factor was associated with a greater psychological morbidity. In this sense, it should be highlighted that the problems rated least frequently by respondents were those that indicate more weakening of the individual’s psychological integrity. This may be explained by the fact that, in general, these problems are less noticeable by the subjects, hence the reason why they are less frequently

reported. However, they seem to cause a greater psychological imbalance when associated with the sudden lack of control over daily routines and the loss of freedom of movement experienced during the lockdown. Additionally, the Deprivation of Social Contact factor was related to the general psychological distress but in a less intense way. Lastly, the Living Together Issues factor was not associated with the mental health of the participants of this study.

We believe that these findings provide further information about the impact on people's daily life caused by the measures taken to contain the outspread of COVID-19. However, our research had several limitations**.** A first limitation was the use of the long- term imprisonment scale to measure the problems of home confinement. Although we are aware that they are not the same situation, the authors decided to use a previously validated scale of the problems of imprisonment to identify the problems of home confinement during the COVID-19 lockdown because of their similarities (Gurney, 2020; Mengin, 2020). Moreover, the selected instrument encompasses most of the problems discussed in the literature about home confinement during the COVID-19 outbreak, such as deprivation of social contact, feelings of anger and frustration, and living together issues (Usher, Bhullar, & Jackson, 2020; Xiang et al., 2020). It should also be emphasised that home confinement is similar to house arrest, which is an alternative measure to incarceration in prison.

In addition, our study was based on cross-sectional data, and therefore it remains unclear whether the problems of home confinement lead to general psychological distress. In the same line, we also do not know the extent of the pre-existing psychological distress before the implementation of stay-at-home orders. Consequently, future researches should take place with longitudinal designs. Another limitation of this study was the use of snowball sampling and, consequently, the results found cannot be generalised.

Despite noted limitations, the findings of this work can be useful in three aspects: (1) the subsets of stressors of home confinement found allow designing specific strategies to face the problems derived from the lack of social contact, feelings of anger and frustration, and living together issues. (2) The identification of social groups especially vulnerable to home confinement problems (women, young, people with reduced home space and people working from home and non-workers) helps to plan preventative actions if future lockdown situations are experienced again. In line with our results, we suggest some actions to mitigate the unwanted effects of home confinement: (a) to balance domestic responsibilities between men and women, (b) to define accurately student academic work and assessment, (c) to give access to a temporary shelter to those people that live in a small-sized house, and (d) to regulate working from home schedules. (3) Finally, the differentiated effect on mental health of the three subsets of problems of home confinement suggests prioritising psychotherapeutic care in people who experience this situation with greater anger and frustration.

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