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Research paper

The association of detachment with affective disorder symptoms during the COVID-19 lockdown: The role of living situation and social support

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ABSTRACT

Introduction: There is growing concern about the effect of lockdown and social distancing on mental health. Subjective feelings related to social relationships such as detachment have shown a strong effect on mental health, whereas objective factors might have a moderating role in that association.

Objective: To investigate whether social support and living situation have a moderating effect on the association between detachment and affective disorder symptoms during the COVID-19 lockdown.

Methods: 3,305 Spanish adults were interviewed by phone at the end of the COVID-19 lockdown (May–June 2020). Detachment during confinement was assessed with a single-item frequency question. Anxiety symptoms were measured through GAD-7, depressive symptoms through PHQ-9, and social support through the Oslo Social Support Scale (OSSS). Associations with anxiety and depressive symptoms were tested through Tobit regression models. Interactions of detachment with living situation and social support were tested as independent variables.

Results: People living alone showed significantly lower levels of anxiety whereas people living with another (but not as a couple) showed higher levels of depression. Detachment was strongly associated with both affective disorders. Social support had a statistically significant moderating effect on that association. Those with a low level of social support and a high level of detachment reported means of depression and anxiety above major depression (10.5 CI 95% 9.6, 11.4 at OSSS=10) and generalized anxiety disorders (10.1 CI 95% 9.2, 11.0 at OSSS=9) cut offs

Conclusion: Interventions centered on improving social support could alleviate feelings of detachment and prevent affective disorders during lockdowns.

1. Introduction

The new coronavirus disease (COVID-19) began to spread throughout China in December 2019 and exponentially increased confirmed cases and deaths (Chen et al., 2020) as well as mental health problems such as anxiety and depression (Liu et al., 2020) were reported. The disease also spread worldwide during the first half of 2020, including the EU countries and particularly southern European countries

such as Spain (Kinross et al., 2020). On March 15, the Spanish government ordered a nationwide lockdown that lasted until June 21 with differing restriction levels over time, which included interruption of non-essential production for two weeks and social distance measures. The effect of lockdown and social distancing on social connectedness and mental health in the context of COVID-19 pandemic has become a research priority (Galea et al., 2020; Tyrrell and Williams, 2020; Williams et al., 2020).

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Depression and anxiety are the most prevalent mental disorders and contribute substantially to the global burden of disease. The prevalence of the global population with depression and anxiety in 2015 was 4.4% and 3.6%, respectively (World Health Organization, 2017). Although the estimates for the European region were similar to the global average -and slightly higher in Spain (5.2% and 4.1%, respectively) (World Health Organization, 2017)- the prevalence of these disorders may have increased during the COVID-19 pandemic (Salari et al., 2020). Both disorders are more common among females and depression is also more prevalent among older adults whereas the prevalence of anxiety does not vary substantially among age groups (World Health Organization, 2017).

The effect of social connectedness on affective disorders and mental health as well as the importance of quality and perceptions of social network characteristics have been widely documented in the scientific literature. Previous studies have found that individuals who had smaller networks, fewer interpersonal relationships, or low social support, and who lived in areas with poorer social cohesion, reported lower levels of mental health (Kawachi and Berkman, 2001; 2014). Apart from objective factors of social relationships, subjective factors could also have an impact on mental health (Ma et al., 2020; Santini et al., 2015). Feelings of loneliness have been shown to have implications for morbidity and mortality, cognitive decline, and the acceleration of psychological aging (Hawkey and Cacioppo, 2010). In line with these findings, individuals who feel loneliness and lower levels of social support are more likely to develop depression and anxiety (Domènech-Abella et al., 2018).

Feelings of detachment and loneliness overlap but are not coincident. Whereas loneliness refers to a disagreeable feeling related to the perception of a contrast between desires and real social relationships (Perlman and Peplau, 1981), and includes distinct components such as social and emotional loneliness (De Jong Gierveld and Van Tilburg, 2010), detachment is related to a disengagement from social life. As described by Durkheim, it is a feeling in individuals who can no longer find a meaning for their lives in collective life and so search inside themselves for it, allowing “egoistical suicide” (Durkheim, 1951, p. 209).

While there is mounting evidence of the effect of loneliness on health, the effect of detachment has been relatively understudied. However, detachment but not loneliness is a symptom of posttraumatic stress disorder (PTSD) (American Psychological Association, 2013). It is the only PTSD symptom that directly refers to interpersonal connection. Although it could be a normative coping strategy to deal with trauma in the short term, it has also been related to suicidal ideation after adjusting for remaining PTSD symptoms (Davis et al., 2014), proposed as an acquired process in secondary psychopathy (Porter, 1996) and found to be a factor related to anxiety and depression in the context of COVID-19 lockdown (Mazza et al., 2020a).

Cognitive therapy is often used as the main treatment for PTSD symptoms, including detachment, as well as for loneliness (Masi et al., 2011; Watkins et al., 2018). Some researchers have highlighted the necessity of also carrying out strategies based on increasing social support, which have been found to be related to PTSD symptom maintenance (Schnurr et al., 2004), withdrawal from PTSD treatment (Gros et al., 2013), or moderation of its effects (Evans et al., 2010). Regarding loneliness, previous studies have shown that the consequences of loneliness in mental health are moderated by social network size (Domènech-Abella et al., 2017), while the negative effects of social isolation on mortality (Holwerda et al., 2012) and dementia onset (Holwerda et al., 2014) among older adults are moderated by the existence of loneliness. These results suggest the need for considering objective and subjective factors of social relationships to better understand their consequences in health.

This study focuses on the association between detachment and depressive and anxiety symptoms in a population-based sample of 3500 Spanish adult individuals who participated in a telephone interview in the context of the COVID-19 lockdown (May-June 2020). We

hypothesized that (1) detachment was significantly related to depressive and anxiety symptoms, and (2) this association was moderated by objective factors of social relationships, such as living situation and social support.

2. Methods

2.1. Study design

The data came from a cross-sectional survey conducted in a random sample of the non-institutionalized population in Spain as part of the MIND/COVID project. The target population of the survey included people who: (1) were aged 18 years or older, (2) had no language barriers to Spanish, and (3) had access to either a mobile phone or a landline telephone.

Professional interviewers from the experienced survey company IPSOS carried out computer-assisted telephone interviews (CATI) during May-June 2020. The interviewers who are working on this study have an extensive experience ranging from 4 to 23 years. When they joined the IPSOS telephone interviewers team, they were trained on several topics such as research objectives, ethical requirements, data protection, quality control, interview techniques and use of technology. Moreover, IPSOS formers give a specific briefing for each project and IPSOS technician together with the interviewers, review and test the questionnaire question by question. Interviews included questions on demographic characteristics, social networks and living situation, socioeconomic factors, mental health, and general health and wellbeing.

The sample was drawn through a dual-frame random digit dialing (DFRDD) telephone survey, including both landlines and mobile telephones. First, a sample of Spanish mobile telephone numbers was generated through an automated system. Subsequently, landline numbers were selected from an internal database developed and maintained by the survey company to ensure that all geographical areas were represented in the required proportion. Up to 7 calls at different times of day were attempted to each number. The distribution of the interviews was planned according to quotas proportional to the Spanish population in terms of age groups, sex, and region of residence (INE, 2019).

As Fig. 1 shows, a total of 138,656 numbers were sampled, with a final split of 71% mobile and 29% landline telephones; 45,002 numbers were non-eligible (i.e. 43,120 non-existing numbers, 984 numbers of

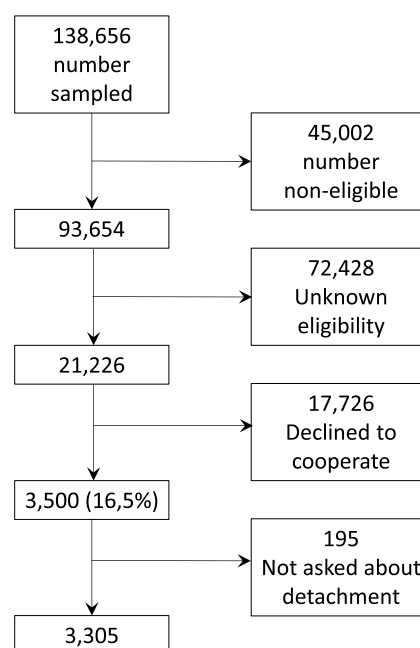


Fig. 1. Flow-chart of the study sample.

enterprises, 444 numbers of persons with Spanish language barriers, 268 fax numbers and 186 numbers belonging to quota that were already completed) and 72,428 had unknown eligibility (i.e. no contact was made after the seven attempted calls), resulting in a cooperation rate of 16.5%. Finally, 3500 people were interviewed during the COVID-19 lockdown in Spain. For the present study, results obtained from 195 people who had been quarantined and were not asked about detachment were not analyzed. Therefore, the analysis for the present study includes results obtained from 3305 participants.

3. Ethics statement

Ethical approval was provided by Parc Sanitari Sant Joan de Déu, Barcelona, Spain (PIC 86–20) and by the Parc de Salut Mar Clinical Research Ethics Committee (protocol 2020/9203/I). Once the prospective participant was fully informed about the objectives and procedures of the study, oral consent was obtained to proceed with the interview.

4. Measurements

4.1. Social network-related variables

Participants provided social network-related information such as social support and detachment. Detachment was assessed with a single-item question about the frequency of the participant's feeling detachment: "How often did you feel detached during lockdown: 'never', 'almost never', 'sometimes', 'almost always', or 'always', We categorized these as never, sometimes (including almost never), and (almost) always, in order to increase the statistical robustness of the results.

The Oslo Social Support Scale (OSSS-3) was used to assess social support (Kocalevent et al., 2018). It has three items: "How many people are you so close to that you can count on them if you have great personal problems?" (4 "more than 5", 3 "from 3 to 5", 2 "from 1 to 2", 1 "none"); "How much interest and concern do people show in what you do?" (5 "a lot", 4 "some", 3 "uncertain", 2 "little", 1 "none"), and "How easy is it to get practical help from neighbors if you should need it?" (5 "very easy", 4 "easy", 3 "possible", 2 "difficult", 1 "very difficult"). The total score ranged from 3 to 14, with higher values representing strong levels and lower values poor levels of social support (Kocalevent et al., 2018).

4.2. Affective symptoms and health-related variables

Depressive and anxiety symptoms were measured. Symptoms of depression were measured using the 8-item Patient Health Questionnaire Depression Scale (PHQ-8) (Kroenke et al., 2009). The PHQ-8 contains 8 items, with a total score ranging from 0 to 24, where each item is scored 0 to 3 (0: Not at all; 1: Several days; 2: More than half of the days; 3: Nearly every day). A PHQ-8 score of ≥ 10 is an established cut-off for detecting major depression (Kroenke et al., 2009). The 7-item Generalized Anxiety Disorder Scale (GAD-7) (Spitzer et al., 2006) was included to measure anxiety symptoms. This is a 7-item measure, with items scored 0–3, and a total score of 21. A cut-off of 10 is optimal for detecting generalized anxiety disorder (GAD) (Spitzer et al., 2006).

The existence of pre-pandemic lifetime mental disorders were assessed using a checklist based on the Composite International Diagnostic Interview (CIDI; Kessler and Üstün, 2004) that screens for depression, bipolar disorder, anxiety, panic attacks, alcohol and drug use problems and 'other' mental disorders.

Participants were also asked about their physical health perception (no discomfort, light discomfort, strong/moderate discomfort, and extreme discomfort).

4.3. Socio-demographic variables

Participants were also asked for socio-demographic information: age (in years) which was categorized into five age groups (18–34 years,

35–49 years, 50–64 years, 65–79 years, and 80 years or over), gender, living situation (living as a couple, living with another, living alone, living as a couple with dependent people, and living alone with dependent people), and education level (primary, secondary, professional training, and tertiary).

5. Statistical analysis

Data were adjusted with post-stratification weights to restore distribution of the adult general population of Spain according to age group, sex, and geographic area, in order to compensate for survey non-response and ensure the representativeness of the sample. Missing item-level data were imputed using multivariate imputation with fully conditional specification methods (van Buuren, 2018). Considering that the median value of individuals with missing values across the analyzed variables was less than 1%, with all variables with less than 5% missing, a single imputation was carried out.

Descriptive analyses included weighted proportions and unweighted frequencies for categorical variables and means and standard deviation for scales. Means of depression and anxiety scales were calculated according to all variable categories and the effect size was calculated with Cohen's *d*. Bivariate Tobit regression models were fitted to evaluate whether sex, age group, living situation, education level, physical health, social support, pre-pandemic lifetime mental disorders and detachment were factors with a statistically significant association with depressive and anxiety symptoms (dependent variables).

Tobit models are suitable for dependent variables not normally distributed and with a large cluster of responses at the lowest value. In this case, this approach assumes that several responses are censored at the lowest value because the measured categories are not detailed enough to detect latent values in depression and anxiety scales. About 25% of the sample accumulates at the lowest value (0) of the dependent variables (anxiety and depression) and about 50% among the three lowest values (0, 1, and 2). The rest of the sample is distributed over remaining values and the percentages gradually decrease as they distance from the lower values. Tobit models yield theoretically continuous values normally distributed through maximum likelihood estimates for censored values while using a standard linear model for remaining values (Long, 1997).

Those factors which were significantly associated with dependent variables in the bivariate models were added to the multivariate models. To verify whether social support and living situation had an impact on the relationship of detachment with depressive and anxiety symptoms, interactions of detachment with social support and with living situation were tested in separate models and with both dependent variables.

In both models, only the interaction between social support and detachment was statistically significant, and thus it was included in the final adjusted models. Results from Tobit regression models were presented as unstandardized coefficients and 95% confidence intervals (95%CI).

Tobit regression coefficients show the effect on the uncensored latent dependent variables. To assess the interaction effect for expected censored value, estimated means of depression and anxiety were calculated through margins (Cong, 2000) based on the adjusted Tobit regression model. To estimate these means, covariables were centered, taking the real proportion in the sample into account. The predicted means of depression and anxiety associated with the interaction of social support and detachment are shown in Figs. 1 and 2, respectively. We included the cut-off line for major depression and generalized anxiety disorder, respectively, in order to show the interaction values with a mean predicted above that cut-off.

All reported *p*-values were based on a two-sided test, where the level of statistical significance was set at $p < 0.05$. Stata version SE 13 (StataCorp, 2013) was used to analyze the survey data.

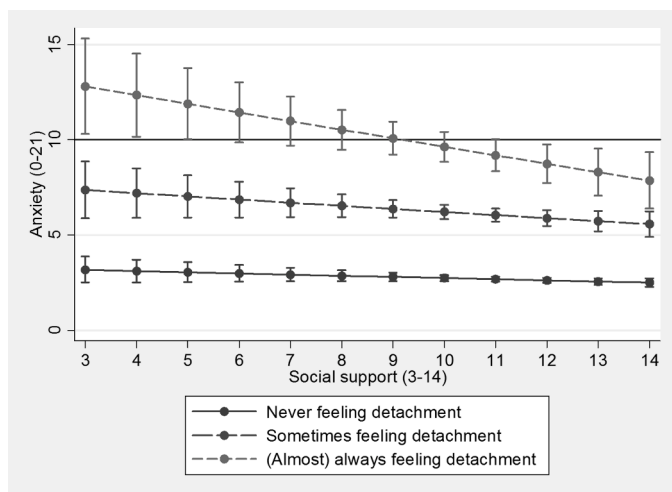


Fig. 2. Predicted mean for anxiety according to detachment and social support levels. Note: A cut-off point of 10 was used as screening for generalized anxiety disorder (GAD).

6. Results

The socio-demographic characteristics of the study sample are presented in Table 1. About 60% of participants were between 35 and 64 years of age whereas 2.5% were 80 or over. Some 51.3% of the sample was male. The means of anxiety and depression scales were 3.64 and 3.96, respectively. Being female, younger, living with another (not as a couple), with lower levels of education, with poor physical health status, with pre-pandemic lifetime mental disorders and presenting detachment and lower levels of social support, were significantly related to anxiety symptoms, whereas factors related to depressive symptoms also included living alone. According to Cohen’s d (Cohen, 1988), in all cases the effect size of the association was small except for some categories of age groups (medium) and physical health and detachment (large).

Table 2 shows the adjusted models including the significant interactions. All statistically significant associations detected in unadjusted models remained significantly related to both outcomes except for some categories of the living situation variable. Living as a couple was found to be significantly related to anxiety symptoms whereas living with another was found to be related to depressive symptoms.

The estimated means of anxiety by social support level stratified as low, medium, and high frequency of detachment feelings are shown in Fig. 2. The graph shows that the lower social support is, the stronger the effect of detachment on anxiety symptom is. Moreover, those with a level of social support lower than 10 and a high level of detachment had a predicted mean of anxiety above the GAD cut-off.

The estimated means of depression by social support level stratified as low, medium, and high frequency of detachment feelings are shown in Fig. 3. Like Fig. 2, the lower the social support is, the stronger the effect of detachment on depressive symptoms. Those with a low level of social support and a high level of detachment had predicted means of depression and anxiety above the major depression (10.5 CI 95% 9.6, 11.4 at social support=10) and generalized anxiety disorder (10.1 CI 95% 9.2, 11.0 at social support=9) cut-offs.

7. Discussion

To the best of our knowledge, this is the first study to examine the effects of social network and detachment on anxiety and depressive symptoms in the context of pandemic lockdown in a population-based sample. Significant differences in the effect of detachment were found depending on the level of social support but not the living situation. The

Table 1 Characteristics of the sample and factors related to anxiety and depression.

Characteristic	Freq. (%)	Anxiety		Depression	
		Mean (SD)	Cohen’s d	Mean (SD)	Cohen’s d
(N = 3305)		3.64 (4.29)		3.96 (4.58)	
Sex					
• Male	1462 (48.7)	2.94 (3.83)	Ref.	3.28 (4.27)	Ref.
• Female	1843 (51.3)	4.20 (4.56)	0.29***	4.49 (4.75)	0.27***
Age groups					
• 18–34	661 (22.1)	4.76 (4.66)	Ref.	5.39 (4.71)	Ref.
• 35–49	988 (28.1)	3.86 (4.22)	0.20***	4.05 (4.52)	0.29***
• 50–64	1053 (25.5)	3.35 (4.31)	0.32***	3.67 (4.76)	0.36***
• 65–79	517 (20.8)	2.55 (3.57)	0.52***	2.61 (3.68)	0.65***
• 80+	86 (3.5)	2.76 (3.77)	0.44***	3.36 (4.03)	0.44***
Living situation					
• Living as a couple	939 (28.8)	3.45 (4.39)	Ref.	3.53 (4.48)	Ref.
• Living with another	398 (13.4)	4.53 (4.51)	0.25***	5.09 (4.57)	0.35***
• Living alone	406 (13.5)	3.39 (4.34)	0.02	4.13 (4.90)	0.13*
• Living as a couple with dependent people	1198 (34.8)	3.47 (4.06)	0.00	3.63 (4.37)	0.02
• Living alone with dependent people	317 (9.4)	4.08 (4.44)	0.14**	4.84 (4.91)	0.28***
Education level					
• Primary	228 (7.9)	4.34 (5.09)	Ref.	4.51 (5.46)	Ref.
• Secondary	1131 (34.4)	4.05 (4.81)	0.06	4.44 (4.94)	0.01
• Professional training	624 (18.5)	3.33 (3.73)	0.24*	3.71 (4.16)	0.18
• Tertiary	1322 (39.2)	3.32 (3.86)	0.25**	3.56 (4.24)	0.21*
Physical health					
• No discomfort	2163 (65.5)	3.14 (3.90)	Ref.	3.39 (4.14)	Ref.
• Slight discomfort	637 (19.1)	3.91 (4.28)	0.19***	4.31 (4.66)	0.22***
• Strong discomfort	481 (14.6)	5.31 (5.19)	0.52***	5.75 (5.45)	0.54***
• Extreme discomfort	24 (0.8)	9.00 (6.37)	1.49***	9.29 (7.54)	1.41***
Social support scale (3–14)	11.11 (1.89)	–	–	–	–
• Below mean	1063 (32.6)	4.41 (4.76)	Ref.	4.94 (5.29)	Ref.
• Above mean	2242 (67.4)	3.28 (4.01)	0.26***	3.49 (4.13)	0.32***
Detachment					
• Never	2479 (75.3)	2.59 (3.36)	Ref.	2.87 (3.67)	Ref.
• Sometimes	653 (19.5)	6.02 (4.76)	0.93***	6.37 (4.88)	0.89***
• (Almost) always	173 (5.1)	9.72 (5.61)	2.01***	10.42 (6.15)	1.95***
Pre-pandemic mental disorder					
• No	2152 (65.1)	2.71 (3.50)	Ref.	2.89 (3.67)	Ref.
• Yes	1153 (34.9)	5.67 (5.06)	0.72***	6.28 (5.46)	0.78***

Weighted proportions and unweighted frequencies are displayed for categorical variables and means with standard deviation (SD) are displayed for scales. Social support scale ranges from 3 to 14. Higher values indicate higher social support. Anxiety scale ranges from 0 to 21 whereas depression scale ranges from 0 to 24. Higher values indicate more anxiety and depressive symptoms, respectively.

Effect size is calculated through Cohen's d. Values between 0.2 and 0.3 are considered a "small" effect size, 0.5 a "medium" effect size, and 0.8 and above a "large" effect size. The statistical significance of the associations was calculated through bivariate Tobit regression models (*p < 0.05, **p < 0.01, ***p < 0.001).

Table 2
Multivariate Tobit regression models of factors related to anxiety and depression.

Characteristic	Anxiety Coef. (95%CI)	Depression Coef. (95%CI)
Intercept	3.12 (1.49, 4.76) ***	3.84 (2.18, 5.50)***
Sex		
• Male	Ref.	Ref.
• Female	0.91(0.57, 1.25)**	0.94 (0.58, 1.30)***
Age groups		
• 18–34	Ref.	Ref.
• 35–49	–0.34 (–0.87, 0.19)	–0.69 (–1.25, –0.14)**
• 50–64	–1.42 (–1.94, –0.90)***	–1.65 (–2.20, –1.10)***
• 65–79	–2.16 (–2.76, –1.56)***	–3.09 (–3.73, –2.44)***
• 80+	–2.84 (–3.98, –1.70)***	–2.45 (–3.58, –1.33)***
Living situation		
• Living as a couple	Ref.	Ref.
• Living with another	0.22 (–0.39, 0.83)	0.63 (0.01, 1.26)*
• Living alone	–0.96 (–1.53, –0.39)**	0.11 (–0.49, 0.70)
• Living as a couple with dependent people	0.01 (–0.43, 0.45)	0.10 (–0.36, 0.56)
• Living alone with dependent people	–0.09 (–0.71, 0.52)	0.37 (–0.30, 1.05)
Education level		
• Primary	Ref.	Ref.
• Secondary	–0.78 (–1.57, 0.01)	–0.53 (–1.33, 0.27)
• Professional training	–1.21 (–2.04, –0.39)**	–1.05 (–1.90, –0.20)*
• Tertiary	–1.30 (–2.09, –0.52)**	–1.17 (–1.97, –0.37)**
Physical health		
• No discomfort	Ref.	Ref.
• Slight discomfort	0.71 (0.38, 1.23) ***	0.89 (0.45, 1.34)***
• Strong discomfort	2.01 (1.48, 2.55) ***	2.13 (1.56, 2.70)***
• Extreme discomfort	3.985 (1.00, 6.70) **	3.98 (0.83, 7.14)*
Social support scale (3–14)	–0.10 (–0.22, 0.02)	–0.15 (–0.28, –0.03)*
Detachment		
• Never	Ref.	Ref.
• Sometimes	4.35 (1.79, 6.92) ***	5.34 (2.71, 7.98)***
• (Almost) always	10.07 (6.33, 13.81) ***	11.87 (8.01, 15.74) ***
Pre-pandemic mental disorder		
• No	Ref.	Ref.
• Yes	2.29 (1.91, 2.67) ***	2.51 (2.12, 2.91)***
Interaction		
Detachment*social support		
• Never	Ref.	Ref.
• Sometimes	–0.08 (–0.32, 0.15)	–0.20 (–0.44, 0.04)
• (Almost) always	–0.36 (–0.72, –0.01)*	–0.52 (–0.89, –0.16)**

Unstandardized coefficients with 95% confidence interval (CI) are displayed (*p < 0.05, **p < 0.01, ***p < 0.001).

effect of detachment on mental health was stronger among participants with a social support below the mean; they reported a level of anxiety and depression above the major depression and generalized anxiety

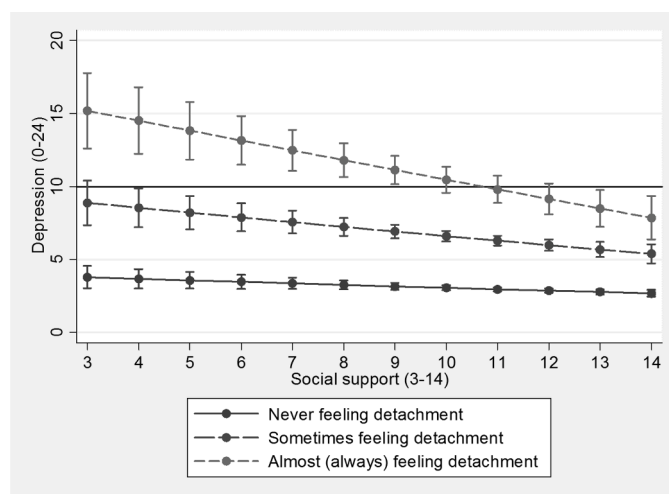


Fig. 3. Predicted mean for depression according to detachment and social support levels.
Note: A cut-off point of 10 was used as screening for major depressive disorder (MDD).

disorder cut-offs.

These results are consistent with previous research showing a relationship between greater detachment and greater mental disorders such as depression and anxiety (Anderson et al., 2018; Hyatt et al., 2020). Detachment is defined as a maladaptive extreme of the five-factor model of personality, which is coherent with the fact that addressing maladaptive social cognition is the most effective treatment to alleviate negative perceptions related to social relationships (Masi et al., 2011; Watkins et al., 2018) and perhaps to avoid its consequences in mental health. However, when analyzing these consequences, we found that they depended on the availability of real social relationships. Therefore, it is necessary to consider whether we should address detachment, social support or both in interventions for preventing the mental health consequences of COVID-19 lockdown.

Apart from maladaptive social cognition, low social support is also induced by contextual factors such as limited opportunities to participate in social activities, particularly among older adults (Toepoel, 2013), and structural factors such as economic and social policies (Nicholson, 2012). In this line, one study highlighted the importance of social connectedness in public health and proposed politic interventions based on a typology of structural, functional, and qualitative dimensions, each of which exhibits multiple-causal elements (Holt-Lunstad et al., 2017). Structural refers to existence and interconnections among differing social ties and roles; functional refers to functions provided or perceived to be available in social relationships; and qualitative focuses on perceptions of positive and negative aspects of social relationships (Holt-Lunstad et al., 2017).

Consistent with this, previous studies analyzed the association between social networks and mental health and suggested the need to take into account objective and subjective factors of social relationships (Ma et al., 2020; Santini et al., 2015). Moreover, in a case-control study, behavioral as well as affective indicators of social relationships were found to be predictive of clinical anxiety or depression 2 years later, especially in patients with comorbid disorders (Saris et al., 2017).

Previous studies have detected a relationship between the living situation and mental health. For example, people who live alone more frequently suffer from common mental disorders (Jacob et al., 2019), whereas perceived neighborhood environment could have a moderation effect on the association between living alone and depression (Stahl et al., 2017). In addition, living with dependent older people (Carriedo et al., 2020) and living with young children (Pierce et al., 2020) have been related to lower levels of mental health in the context of COVID-19

lock-down. In our study, depression and anxiety symptoms have been found to be affected by the living situation in a number of ways. Compared with those living as a couple, those living alone showed lower levels of anxiety while those living with another person showed higher levels of depression. These results are in line with previous studies according in which depression and anxiety could have different components of social networks as related factors. Contact frequency has been found to be associated with anxiety whereas social network size was associated with depression (Vink et al., 2008). Although “being married” has previously been identified as a protective factor for mental health and has been linked to lower odds for anxiety (Haro et al., 2006), in the context of the COVID-19 pandemic, several researchers have found “being married” as a risk factor for anxiety (Islam et al., 2020; Malesza and Kaczmarek, 2021; Msherghi et al., 2021), which could be partially explained by the fact that intimate partner violence has increased during the COVID-19 lockdown (Mazza et al., 2020b).

Apart from the factors related to social relationships, we found that depression and anxiety were associated with being female, younger, and with lower levels of education. Whereas the associations of lower level of education (Freeman et al., 2016; Ruscio et al., 2017) and being female (World Health Organization, 2017) with higher levels of depression and anxiety have been widely reported, the finding according to which younger people are more prone to suffering from these mental disorders is in contrast with previously reported global estimations (World Health Organization, 2017) and could be due to the COVID-19 pandemic affecting mental health in younger adults in particular.

8. Strengths and limitations of the study

The strengths of our study include the use of a large community-representative sample of Spanish adults, from a variety of socioeconomic backgrounds, and the ability to control for confounding factors. However, several limitations of our study deserve consideration. First, the cross-sectional design precludes interpreting the associations described as causal. We cannot be sure that detachment causes symptoms of affective disorders; this association could be bidirectional. However, our results show that this association is moderated by social support after adjusting by potential confounding factors. Second, our data is based on self-reports, which may result in recall or reporting bias. Nevertheless, recall biases are usually relatively minor (Kriegsman et al., 1996), and in our study, recall periods were short and well-defined, to minimize recall bias. Third, the present study lacks an analysis of lifetime/current psychopharmacological treatments. However, to minimize this gap, the statistical models were adjusted for the presence or absence of pre-pandemic mental disorders. Finally, detachment has been relatively understudied and there is a lack of scientific literature for comparing our findings. Future studies with longitudinal data and in different settings and countries are needed to replicate our findings on the associations of detachment, social support, and affective disorders in traumatic contexts.

9. Conclusions

The results of this study highlight the effect of objective social support in the association between detachment and affective disorders in a potentially traumatic context such as the COVID-19 lockdown in Spain. People with a level of social support below the mean and feeling detachment most of the time reported levels of anxiety and depressive symptoms above the cut-off for GAD and MDD after adjusting the association for hypothetical confounding factors such as age, gender, and living situation.

Both objective social support and detachment were found to be independent and robust risk factors for depression and anxiety. This should warn to consider the effect of maladaptive social cognition on mental health as well as the effect of available social relationships in a complementary way. It seems that maintaining social communication

during lockdowns and improving social relationships through known strategies such as improving social skills, enhancing social support, and increasing opportunities for social contact could minimize the effect of the maladaptive extreme of detachment on mental health. Therefore, interventions addressing simultaneously maladaptive social cognition and available social support could be more effective.

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CRediT authorship contribution statement

Joan Domènech-Abella: Formal analysis, Validation, Writing - original draft, Writing - review & editing. **Aina Gabarrell-Pascuet:** Conceptualization, Writing - review & editing. **Lydia Hanaa Faris:** Data curation. **Paula Cristóbal-Narváez:** Data curation. **Mireia Félez-Nobrega:** Data curation. **Philippe Mortier:** Writing - review & editing. **Gemma Vilagut:** Validation, Writing - review & editing. **Beatriz Olaya:** Validation, Writing - review & editing. **Jordi Alonso:** Funding acquisition, Validation, Writing - review & editing. **Josep Maria Haro:** Conceptualization, Funding acquisition, Validation, Writing - review & editing.

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