



# Family functioning and mental health before and during the COVID-19 pandemic: a two-cohort comparison of emerging adults

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## Abstract

The aim of the present study was to analyze how family relationships changed during the COVID-19 pandemic and to determine whether the health crisis modified the association between family dimensions and emerging adult children's mental health. A large sample of 1732 emerging adults was recruited at two different moments. In 2015, 755 emerging adults were recruited, 201 from campus A (sample 1) and 554 from campus B (sample 2). In 2020, a new sample was recruited and 977 emerging adults completed the questionnaire, 198 from campus A (sample 1 / "Pre-pandemic sample", recruited before the lockdown) and 779 from campus B (sample 2 / "COVID-19 sample" / recruited after the lockdown). The results reveal that the COVID-19 sample of emerging adults perceived poorer parent-child relationships (lower parental involvement and warmth) and reported poorer mental health (lower flourishing and higher psychological distress) than their counterparts in Cohort 1. For their part, the Pre-pandemic sample reported higher levels of psychological distress than their counterparts in Cohort 1. In all samples (Cohort 1 and Cohort 2, both Pre-pandemic and COVID-19), parenting functions were positively associated with children's flourishing and negatively associated with their psychological distress. However, these associations were stronger in Cohort 2 than in Cohort 1, both when assessed before and when assessed during the pandemic. The results of the study support the increasingly important role played by the family as a protective factor for mental health, even in stressful situations when family relationships tend to deteriorate. Study limitations include the use of a sample composed mainly of young emerging adult university students. Future studies should strive to include more emerging adults from the entire age range encompassed by emerging adulthood, as well as members of the non-university-going emerging adult population. Investing in public programs focused on family functions during emerging adulthood is an essential strategy for protecting and improving young adults' mental health and promoting positive family relationships in stressful situations.

**Keywords** COVID-19 pandemic · Family functions · Emerging adulthood · Mental health · Cohort study

## Introduction

During the health crisis provoked by the COVID-19 pandemic, a range of restrictive and innovative measures were adopted by governments worldwide to try and control the spread of the disease. These measures had an acute impact on society (Dzúrová & Květoň, 2021; Thu et al., 2020), affecting both individuals and family functioning. Social distancing, transitions to distance learning and mandatory quarantine had important implications for emerging adults' mental health and disrupted their daily life as individuals (Shanahan et al., 2022). At the same time, the family environment had to accommodate tasks and activities usually carried out in institutions such as schools or the workplace,

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and all family members spent more time at home (Okuyan & Begen, 2022).

Research has uncovered an increasing number of mental health challenges faced by individuals of all ages as a result of the pandemic (e.g., Fountoulakis et al., 2022). However, the restrictions imposed during the COVID-19 crisis had a particularly strong effect on emerging adults (Bueno-Notivol et al., 2020; Charpentier Mora et al., 2022; Shanahan et al., 2022; Sun et al., 2021). Emerging adulthood is a unique developmental stage that encompasses individuals aged from 18 to 29 years (between adolescence and adulthood) in industrialized societies. It is characterized by identity exploration, instability and an open range of possibilities (Arnett, 2000, 2023) and has singular implications for mental health (LeBlanc et al., 2020), with high rates of health-related symptoms and mental disorders (e.g., major depression, generalized anxiety disorder, panic disorder, alcohol use disorder and substance use disorder), which have been found to become more prevalent during these years (Auerbach et al., 2018). In the case of this population group, the pandemic severely limited what was supposed to be a period characterized by exploration, open possibilities and the search for autonomy, drastically reducing emerging adults' opportunities to achieve financial self-sufficiency, leave home or gain the personal and professional stability they need to prepare them for adulthood. This may have affected their mental health. Indeed, recent research has found that the pandemic and its related restrictions are associated with poorer mental health during emerging adulthood (Husky et al., 2020; Preetz et al., 2021). Specifically, studies focusing on this developmental stage before and during the COVID-19 health crisis observed that emerging adults reported higher levels of depression, anxiety (Huckins et al., 2020; Meda et al., 2021), stress (Emery et al., 2021) and overall psychological distress (Elmer et al., 2020; Pierce et al., 2020; Wang et al., 2020) during the pandemic. Moreover, some authors have observed a significant decline in emerging adults' mental well-being (e.g., flourishing, life satisfaction) in comparison with pre-pandemic levels (Grauensperger et al., 2022; Kavčič et al., 2021; Oswald et al., 2021).

Within the family system, the quality of parent-child relationships remains an important factor during emerging adulthood and continues to play a significant role in emerging adults' mental health (Cheung et al., 2019; Inguglia et al., 2016). Prior to the pandemic, relationships between parents and their emerging adult offspring were characterized, in general, by high levels of parental emotional and social support (Fingerman & Yahirun, 2016; Lee & Goldstein, 2016), involvement (Duchesne et al., 2007) and warmth (Romm et al., 2019). Moreover, it should be noted that positive relationships between parents and their emerging adult

offspring are associated with better mental health (García-Mendoza et al., 2017; Inguglia et al., 2015). Specifically, high levels of parental involvement and warmth are associated with emerging adults' well-being and flourishing (De la Fuente et al., 2022; García-Mendoza et al., 2019; Holliman et al., 2021), whereas family contexts characterized by low levels of parental support and closeness are associated with greater psychological distress (e.g., anxiety and depression) during this developmental period (Lanz & Tagliabue, 2007; Kolak et al., 2018; Weisskirch, 2018). It should also be noted that the role played by the family is particularly important in southern European contexts, in which the family system is based on "family welfare regimes" (Vogel, 2002) and is characterized by close family ties (Alesina & Giuliano, 2014), with parents being the main source of financial, social and emotional support for their offspring during emerging adulthood (Sorgente & Lanz, 2017; Albertini, 2010). Moreover, many emerging adult offspring continue to live under the same roof as their parents, leaving the family home much later in life. Indeed, the mean age at which children leave the family home in Spain is particularly high: 30.3 years (Statistical Office of the European Union [Eurostat], 2023).

The lockdown imposed as a result of the COVID-19 pandemic triggered important changes in parent-child processes and relationships (Hall & Zygmunt, 2021). During emerging adulthood, offspring typically exhibit increased autonomy and a greater desire for privacy, and spend more time with friends or a romantic partner outside the family environment (Aquilino, 2006). Consequently, the stay-at-home restrictions and forced reduction in face-to-face contact (limitations on group activities, social gatherings and outdoor activities) meant that emerging adults spent much more time than usual with their families and resulted in an unparalleled level of sudden change in their daily lives and family relationships. Studies analyzing family systems during the COVID-19 health crisis have reported mixed results regarding the impact of the pandemic on family functioning. Some authors found that, during the pandemic, emerging adults perceived more negative interactions with their parents, tenser family relationships, a weaker sense of family connection and a lack of support or understanding from their parents (Hall & Zygmunt, 2021). However, research focused on other parenting variables found that parent-child relationships remained positive during the pandemic. More specifically, emerging adults reported a high level of attachment to their parents (Song et al., 2022) and claimed that they remained one of their main sources of support during the health crisis (van den Berg et al., 2021). High-quality family relationships (e.g., high parental support or attachment) were associated with better mental health (e.g., reports of feeling less stressed, less depressed, less anxious,

and more hopeful) during the pandemic (Hall & Zygmunt, 2021; Liu et al., 2020; van den Berg et al., 2021).

## The present study

The main aim of the present study was to analyze the impact of the COVID-19 pandemic on emerging adults' family functioning and mental health. The specific aims were: first, to explore changes in parenting dimensions (parental involvement and parental warmth) and mental health (flourishing and psychological distress) during the COVID-19 outbreak; and second, to determine how the pandemic affected the relationship between these same parenting dimensions (parental involvement and parental warmth) and emerging adults' mental health (flourishing and psychological distress). To this end, a cohort study was conducted with two measurement moments: 2015 (Cohort 1 [C1]) and 2020 (Cohort 2 [C2]). One of the 2020 sub-samples (C2 Sample 1) was recruited prior to the outbreak of the COVID-19 pandemic, whereas the other 2020 sub-sample (C2 Sample 2) was recruited after the two-month stay-at-home lockdown but before the development of the COVID-19 vaccine, while several severe restrictions were still in place, including municipal lockdowns, social distancing rules, continuous ventilation and obligatory facemask use. This cohort design enabled us to compare family relationships and emerging adults' mental health across two samples recruited and measured five years apart, neither of which had suffered the restrictions linked to the COVID-19 pandemic (C1 Sample 1 and C2 Sample 1), as well as across another two samples recruited during the same years, but with the difference that one of them was recruited and measured after the end of the stay-at-home lockdown (C1 Sample 2 and C2 Sample 2).

## Method

### Sample

Two sets of data were collected from the Transition to Adulthood in Spain Project (<https://grupos.us.es/transaduldez/>) at two different time points, resulting in two cohorts: Cohort 1 (C1), recruited in the spring of 2015 (both C1 Sample 1 and C1 Sample 2) and Cohort 2 (C2), recruited in the spring (C2 Sample 1) and autumn (C2 Sample 2) of 2020. All data

were collected by the Universidad de Sevilla (University of Sevilla) on two different campuses (Campus A and Campus B, corresponding to Samples 1 and 2, respectively).

In 2015, data were collected from 755 emerging adults: 201 from Campus A, called Cohort 1 Sample 1 (C1-S1), and 554 from Campus B, called Cohort 1 Sample 2 (C1-S2). The second cohort was recruited in 2020. This cohort comprised 977 emerging adults, 198 from Campus A, called Cohort 2 Sample 1 (C2-S1) and the remaining 779 from Campus B, called Cohort 2 Sample 2 (C2-S2). Data from C2-S1 were collected before the state of emergency was declared and the stay-at-home lockdown imposed, whereas data from C2-S2 were collected in the autumn of 2020, after the end of the lockdown but before the end of the health crisis (see Table 1). We therefore had two different Sample 1s, both recruited from the same campus and with similar sociodemographic characteristics. The first one was collected in 2015 and the second in 2020. The participants in Sample 1 (Campus A) who were recruited in 2020 had not yet experienced the situation triggered by the pandemic, because data were collected before the lockdown. Consequently, comparisons between the two Sample 1s (or samples from Campus A) reflect changes between the 2015 cohort and the 2020 cohort without the influence of the COVID-19 pandemic. The two different Sample 2s were both recruited from campus B, one in 2015 and the other in 2020, but after the lockdown, meaning that comparisons between the two Sample 2s reflect the effect of the COVID-19 pandemic on the variables studied (see Table 1). From here on, in order to facilitate understanding, we will refer to the Cohort 2 Sample 1 group (recruited in the spring of 2020) as the Pre-pandemic sample, and to the Cohort 2 Sample 2 group (recruited in the autumn of that same year) as the COVID-19 sample. Table 2 shows the background characteristics of all four samples.

When recruiting university students for the two cohorts, an effort was made to ensure a representative distribution of the different knowledge areas (arts and humanities, social sciences and legal studies, engineering and architecture, health sciences, and science) (Ministry of Universities, Spanish Government, 2022).

**Table 1** Sample design

	Samples 1	Samples 2	N
2015 (Cohort 1)	Campus A ( $n= 201$ )	Campus B ( $n= 554$ )	755
2020 (Cohort 2)	Campus A ( $n= 198$ ) Recruited before the state of emergency (Pre-pandemic)	Campus B ( $n= 779$ ) Recruited in the autumn 2020 (Covid-19)	977
			1732

**Table 2** Background characteristics of the samples

Characteristics	C1		C2	
	Sample 1	Sample 2	Sample 1 (Pre-pandemic sample)	Sample 2 (COVID-19 Sample)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Gender				
Female	134 (66.7)	282 (50.9)	138 (69.7)	455 (58.4)
Male	67 (33.3)	272 (49.1)	59 (29.8)	317 (40.7)
Other	-	-	1 (0.5)	7 (0.9)
Employment				
Full-time	4 (2.0)	6 (1.1)	3 (1.5)	37 (4.7)
Part-time	23 (11.4)	50 (9.0)	45 (22.7)	81 (10.4)
None	174 (86.5)	498 (89.90)	150 (75.7)	660 (84.8)
Household income				
Low	34 (16.9)	118 (21.3)	22 (11.1)	166 (21.3)
Intermediate	139 (69.2)	367 (66.2)	134 (67.7)	503 (64.6)
Intermediate-high	27 (13.4)	68 (12.3)	42 (21.2)	102 (13.1)
Current living status				
Living in the parental home	114 (57.7)	352 (63.6)	111 (56.1)	491 (63.5)
Shared accommodation or halls of residence during the week and with parents at weekends	57 (28.4)	94 (17.0)	62 (31.3)	124 (15.9)
Living independently	29 (14.4)	107 (19.8)	24 (12.1)	158 (20.3)
Mean Age (SD, range)	22.04 (1.94, 19–29)	20.20 (20.20, 18–29)	21.57 (2.41, 18–29)	21.15 (2.67, 18–29)

Note. C1 Cohort 1 (2015), C2 Cohort 2 (2020); Sample 1 was recruited from Campus A and Sample 2 from Campus B; Pre-pandemic Sample= Sample 1 from Cohort 2, recruited from Campus A; COVID-19 Sample= Sample 2 from Cohort 2, recruited from Campus B

## Instrument

### Demographic variables

Participants indicated their age, gender, perceived household income, current living status and employment status.

### Parenting dimensions

Parenting dimensions were measured using two subscales of the Perceptions of Parents Scales (POPS), College Student Version (Grolnick et al., 1991; Robbins, 1994). The *parental involvement* ( $\alpha=0.83$  in C1,  $\alpha=0.83$  in C2) (e.g., My parent finds time to talk with me) and *parental warmth* ( $\alpha=0.82$  in C1,  $\alpha=.86$  in C2) (e.g., My parent accepts me and likes me as I am) subscales comprise 12 items rated on a 7-point Likert-type scale ranging from 1 (*not at all true*) to 7 (*very true*). Response scores were averaged to create a single score for each scale, with high scores indicating high parental involvement and warmth.

### Mental health

Flourishing was assessed using the validated Spanish version (De la Fuente et al., 2017) of the Flourishing Scale

(Diener et al., 2010). This scale comprises 8 items (e.g., “I lead a purposeful and meaningful life”) rated on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Scores were summed, with higher scores indicating higher levels of flourishing. An  $\alpha$  value of 0.81 was obtained in both C1 and in C2.

Psychological distress was assessed using the Spanish adaptation (Bados et al., 2005) of the Depression Anxiety Stress Scales (DASS-21) (Lovibond & Lovibond, 1995), reduced version. This instrument comprises 21 items that assess the negative emotional states of depression, anxiety and stress over the last 7 days in the general population. Participants answered on a Likert-type scale ranging from 0 (*did not apply to me at all*) to 3 (*applied to me very much, or most of the time*). A higher-order factor: “General affective distress” (Daza et al., 2002) was obtained by summing all the item scores together, with higher scores indicating higher distress ( $\alpha=0.89$  in C1;  $\alpha=0.93$  in C2).

### Procedure

To recruit the emerging adults in C1 (2015) and C2 (2020), we contacted university faculty and asked them for permission to access the students on their courses. All participants were informed of the purpose of the study, participation

was completely voluntary and anonymity was guaranteed. The study was approved by the Coordinating Committee for the Ethics of Biomedical Research in Andalusia (Spain, 12/03/2015).

## Hypotheses and statistical analysis

The following hypotheses were established: (H1) We expected the sample that had experienced the COVID-19 lockdown to have poorer family relations and poorer mental health than their counterparts from 2015. In contrast, we expected the sample from 2020 that had not yet suffered the consequences of the COVID-19 lockdown to score similarly to their counterparts from 2015 in terms of family relations and mental health. (H2) We expected better family relations to be associated with better mental health in both 2015 and 2020, although we had no clear expectations regarding whether or not said association would be stronger in one sample than in the other. Due to its novel design, as well as shedding light on how family relations are changing and what effect this has on young people's well-being, the present study also provides insight into how family affects emerging adults during moments of profound and unexpected social crisis, of which the COVID-19 pandemic is a paradigmatic example.

The IBM SPSS Statistics 26 program was used for the data analysis. First, we calculated the descriptive statistics of the study variables. In order to explore the differences between the samples from Campus A (C1-S1 and C2-S1 Pre-pandemic sample) and the differences between the samples from Campus B (C1-S2 and C2-S2 COVID-19 sample), mean differences were calculated using the *t* test for independent samples. Cohen's *d* (Cohen, 1988) was calculated in all cases.

Next, hierarchical multiple regression (HMR) analyses were conducted to calculate moderation effects, in order to assess whether the association between parenting

dimensions (parental involvement and parental warmth) and emerging adults' flourishing and psychological distress changed during the COVID-19 pandemic. Two different HMR analyses are reported (Model 1 and Model 2) for each parenting variable. A further step was incorporated into the HMR analyses by calculating the interaction between cohort and both parenting dimensions.

## Results

Table 3 shows the changes observed in family relationships between C1 and C2, distinguishing between the samples from Campus A (C1-S1 and C2-S1, measured prior to the restrictions imposed as a result of the pandemic) and the samples from Campus B (C1-S2 and C2-S2, which, in the latter case, was measured after the imposition of said restrictions). As shown in the Table, the data collected from C1-S1 and C2-S1 (Pre-pandemic sample) did not reflect any changes in family relationships. The emerging adults measured in 2015 perceived similar levels of parental involvement and parental warmth as those measured in 2020. However, when C1-S2 and C2-S2 (COVID-19 sample) were compared, the emerging adults in the C2-S2 COVID-19 sample were found to perceive lower levels of parental involvement and parental warmth. The results for flourishing followed a similar pattern, with no differences being observed between the two cohorts when the data from 2020 were collected prior to the pandemic (C2-S1 Pre-pandemic sample), although lower levels of flourishing were reported by emerging adults from 2020 who were going through the pandemic when the data were collected (C2-S2 COVID-19 sample) than their counterparts in 2015 (C1-S2). However, it is interesting to note that psychological distress was higher in both samples from the 2020 cohort, regardless of whether data were collected before or after the outbreak of the pandemic. In light of this finding, we decided to compare the psychological

**Table 3** Means, standard deviations, and T-tests for independent samples, for parenting variables and mental health variables

Measure	C1 Sample 1		C2 S1 Pre-pandemic sample		t(df)	<i>p</i>	Cohen's <i>d</i>	95% CI
	M	SD	M	SD				
Parental involvement	5.78	1.14	5.77	1.15	0.133(395)	0.895	0.01	[-0.21, -0.24]
Parental warmth	6.22	0.97	6.22	1.05	-0.054(395)	0.957	0.00	[-0.20, 0.19]
Flourishing	48.74	4.82	47.90	5.55	1.615(387.604)	0.107	0.16	[-0.18, 1.86]
Psychological distress	29.19	21.08	37.81	28.75	-3.412(361.098)	0.001	-0.34	[-13.59, -3.65]
	C1 Sample 2		C2 S2 COVID-19 Sample					
Parental involvement	5.52	1.17	5.30	1.29	3.113(1252.140)	0.002	0.40	[0.78, 0.34]
Parental warmth	6.03	1.03	5.77	1.19	4.280(1279.002)	>0.001	0.23	[0.14, 0.38]
Flourishing	46.16	6.01	44.55	6.92	4.510(1277.942)	>0.001	0.40	[0.91, 2.30]
Psychological distress	33.25	22.53	44.69	28.23	-8.191(1305.470)	>0.001	-0.44	[-14.18, -8.70]

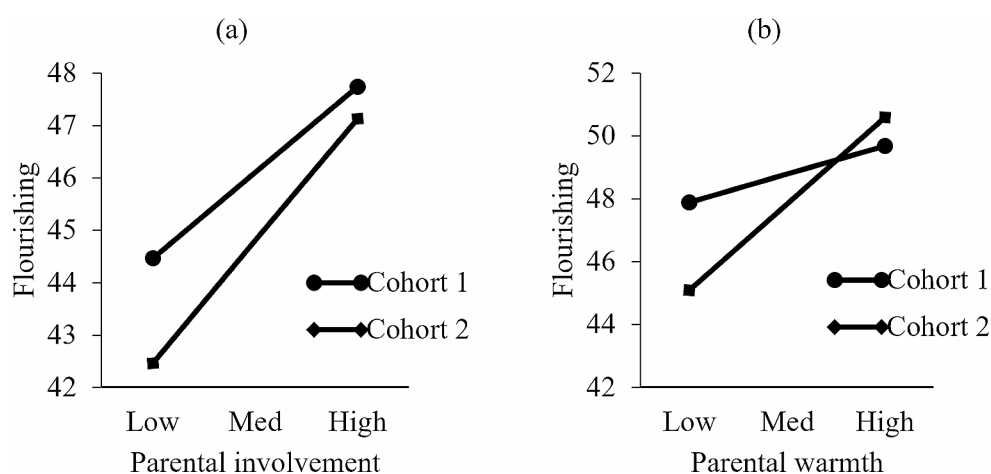
Note. C1 = Cohort 1 (2015); C2 = Cohort 2 (2020)



**Table 4** Moderation effects on emerging adults' mental health by cohort

	Flourishing		Psychological Distress	
	C1-S1/C2-S1 Pre-pandemic sample	C1-S2/C2-S2 COVID-19 sample	C1-S1/C2-S1 Pre-pandemic sample	C1-S2/C2-S2 COVID-19 sample
	$\beta$ ( $p$ )	$\beta$ ( $p$ )	$\beta$ ( $p$ )	$\beta$ ( $p$ )
<b>MODEL 1</b>				
Parental involvement	0.21 (0.002)	0.25 (<0.001)	-0.28 (<0.001)	-0.21 (<0.001)
Cohort	-0.55 (0.026)	-0.32 (0.007)	0.34 (0.155)	0.41 (0.001)
P. involvement x Cohort	0.48 (0.056)	0.24 (0.047)	-0.18 (0.453)	-0.23 (0.056)
R <sup>2</sup>	0.10	0.11	0.12	0.12
<b>MODEL 2</b>				
Parental warmth	0.18 (0.009)	0.35 (<0.001)	-0.31 (<0.001)	-0.25 (<0.001)
Cohort	-1.20 (<0.001)	-0.28 (0.040)	0.93 (0.001)	0.42 (0.003)
P. warmth x Cohort	1.14 ( $p$ <.001)	0.21 (0.123)	-0.79 (0.005)	-0.25 (0.077)
R <sup>2</sup>	0.17	0.17	0.23	0.14

**Fig. 1** Moderation effect of cohort (a) on the association between parental involvement and flourishing in the COVID-19 sample, in comparison with their counterpart sample from 2015, (b) on the association between parental warmth and flourishing in the Pre-pandemic sample, in comparison with their counterpart sample from 2015



distress levels of the two samples from Cohort 2 (2020). The results revealed significantly higher values among the COVID-19 sample ( $M=44.69$ ) ( $F=9.31$ ,  $p=.002$ ,  $d=0.24$ ) than among the Pre-pandemic sample ( $M=37.81$ ), although the effect size was small.

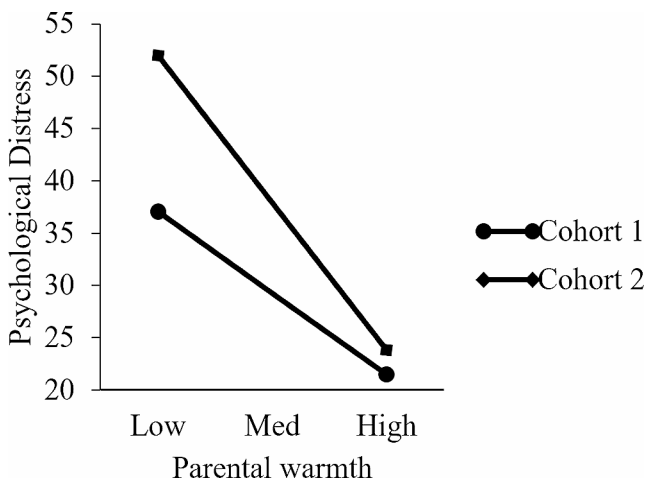
In order to determine the role played by the COVID-19 pandemic in the association between parenting dimensions and flourishing and psychological distress, we compared the sample who had suffered its effects in 2020 (C2-S2 COVID-19 sample) with their counterpart sample in 2015 (C1-S2), and then compared the sample who had not suffered the effects of the pandemic in 2020 (C2-S1 Pre-pandemic sample) with their counterpart sample in 2015 (C1-S1). As shown in Table 4, a significant interaction effect was observed between cohort and parental warmth on both flourishing and psychological distress in the Pre-pandemic sample. The results also revealed a significant interaction effect between cohort and parental involvement on flourishing in the COVID-19 sample.

When these significant associations were explored in more detail, the graphs revealed that the associations

between parenting variables and flourishing/psychological distress were stronger in C2 (2020) than in C1 (2015). This pattern was found for both C2-S1 (Pre-pandemic sample) in relation to its counterpart sample in 2015 (C1-S1), and for C2-S2 (COVID-19 sample) in relation to its counterpart from that same year (C1-S2), although some associations were observed to be stronger only in the C2 Pre-pandemic sample than in its 2015 counterpart (C1-S1) (e.g., parental warmth and flourishing/psychological distress), whereas others were observed to be stronger only in the C2 COVID-19 sample in relation to its counterpart sample group (C1-S2) (e.g., parental involvement and flourishing) (see Figs. 1 and 2).

## Discussion

The COVID-19 pandemic and government-imposed lockdown restrictions disrupted the lives of many emerging adults, who were forced to spend more time at home with their families during a developmental period in which they



**Fig. 2** Moderation effect of cohort on the association between parental warmth and psychological distress in the Pre-pandemic sample, in comparison with their counterpart sample from 2015

would typically be spending more time in other developmental contexts (e.g., with friends and romantic partners). This may have had repercussions on young people's family relationships and mental health. The aim of the present work was to determine whether or not this was indeed the case, at least in Spain.

Our results indicate that family relationships were as positive among emerging adults from 2020 before lockdown (C2-S1 Pre-pandemic sample) as they were for emerging adults from 2015 (C1-S1 sample), and were characterized by high levels of parental involvement and parental warmth. However, as hypothesized, they also reveal that the COVID-19 pandemic had a detrimental effect on family relationships: when emerging adults from 2015 (C1-S2) were compared with emerging adults from 2020 (C2-S2 COVID-19 sample), the latter reported less parental involvement and warmth. These findings are consistent with that reported previously in the literature, which suggests that the pandemic or pandemic-related events constituted a stressful situation for emerging adults that had psychosocial consequences (Kujawa et al., 2020), affecting the family context and resulting in poorer relationships between parents and their emerging adult offspring (Hall & Zygmunt, 2021).

In relation to mental health, the findings of our study partially confirm Hypothesis 1, since the emerging adults in Cohort 2 had higher levels of psychological distress regardless of whether their data had been collected before or after the lockdown, although these levels rose even more during the COVID-19 health crisis, a finding that is consistent with our original hypothesis. Authors from different countries have been warning of a deterioration in emerging adults' mental health for some years now (e.g., Kroksstad et al., 2022; Wiens, 2020). In Spain, the mental health of young people has also worsened over recent years, and

the COVID-19 pandemic served only to exacerbate this situation (Cayuela et al., 2020; Sanmartín et al., 2022). As several authors have pointed out, emerging adulthood is a critical period with many implications for mental health (Auerbach et al., 2018; LeBlanc et al., 2020), and is characterized by more symptoms of depression and anxiety than observed in other age ranges (Gambin et al., 2021). In addition to the vulnerability inherent to this life stage, which is due (among other things) to the instability so characteristic of this period, it is important to remember that today's emerging adults have grown up in a particularly complex and unfavorable environment, in which their childhood was impacted by a far-reaching economic downturn, high unemployment rates and a lack of future perspectives. According to the Active Population Survey (EPA), 28.36% of young Spaniards aged between 18 and 24 years are unemployed (*Instituto Nacional de Estadística*– National Institute of Statistics [INE], 2024). These figures are even worse in Andalusia, the Spanish region in which the data were collected, where youth unemployment is 38.99% (INE, 2023). These extremely high unemployment figures are further exacerbated by the fact that existing social protection mechanisms (e.g., guaranteed employment or basic universal income) are still inadequate (Santamaría, 2018). Today's emerging adults therefore spent their childhood and adolescence suffering from the effects of the 2008 financial crisis and subsequent recession, and just when the economy appeared to be picking up, the COVID-19 virus emerged. It is therefore likely that the pandemic caused problems that were already present in many young people to come to the surface. Indeed, our data indicate that emerging adults from the 2020 cohort had more symptoms of psychological distress than their counterparts in the 2015 cohort, although they also revealed that the COVID-19 sample scored even higher for psychological distress than the Pre-pandemic sample, which was also recruited in 2020, thereby indicating that the pandemic had a detrimental effect on the mental health of this population group (Bueno-Notivol et al., 2021; Shanahan et al., 2022). Despite this, however, it is important to acknowledge that, in line with other studies (Devaraj & Patel., 2021) the effect size of the differences between the two samples was small, suggesting that the COVID-19 crisis probably only exacerbated and highlighted a problem that has been brewing for the last decade. The finding that the COVID-19 pandemic worsened emerging adults' mental health was supported by the results linked to flourishing, which was only observed to decline from Cohort 1 to Cohort 2 in the COVID-19 sample, not in the Pre-pandemic one. These results are consistent with those reported previously by other authors, who observed an increase in mental health problems and a decline in emerging adults' life satisfaction

during the COVID-19 pandemic, in comparison with pre-pandemic levels (Preetz et al., 2021).

Finally, the most important result, in our opinion, due to it being a novel finding in the literature, is that fact that even under conditions as adverse as those experienced in the context of the COVID-19 pandemic, when family relationships worsened, good family functioning continued to be a protective factor against mental illness among emerging adults. Indeed, the association between family relationships and distress and flourishing was generally stronger in Cohort 2 (2020) than in Cohort 1 (2015). Previous studies have confirmed that, prior to the pandemic, relationships between parents and their emerging adult children were characterized by high levels of warmth and involvement (Duchesne et al., 2007, Lee & Godstein, 2016, Romm et al., 2019), with this in turn being associated with various indicators of mental health (Holliman et al., 2021), physical health and well-being (Lee et al., 2020). Our data go one step further, demonstrating that among both those who had suffered the effects of the pandemic and those who had not, the association between family relationships and adjustment was stronger in 2020 than in 2015, suggesting that family relationships are of increasing importance for the positive adjustment of emerging adults. It is also important to highlight the fact that, even under exceptional circumstances, and despite the worsening of family relationships observed in the COVID-19 sample, the family continues to be a clear reference and one of the fundamental pillars of young people's positive adjustment.

Some limitations should be taken into consideration when interpreting the results presented here, the first being that the sample group was mainly made up of young emerging adults. Future studies should strive to expand the sample to include more emerging adults from the entire age range (18–29 years) and to increase the number of older emerging adults in order to gain a more complete vision of the entire developmental stage. A second key limitation was the fact that all participants in the sample were university students. The majority of research focused on emerging adults uses university samples, perhaps because the university-going emerging adult population is readily accessible in any institutional setting (Arnett, 2000). However, using only university students limits the generalizability of the findings to the general emerging adult population. There is still limited research focusing on the group often referred to as “the forgotten half” (emerging adults who do not attend university; Arnett, 2000, 2016). Future studies should therefore seek to include non-university-going emerging adults also (e.g., NEETs or vocational training students).

Another avenue for future research may be to examine possible differences in parent-child relations in accordance with emerging adult offspring's gender and the possible

impact of these differences on this population's mental health during a worldwide crisis such as the COVID-19 pandemic. Our findings show that family relationships were as positive among emerging adults from 2020 as they were among those from 2015, and they also indicate that family is a protective factor for emerging adults' mental health. Given that previous research has found that differential behavior patterns still exist for sons and daughters during emerging adulthood (e.g., Vacchio, 2021), it may be interesting to analyze whether the protective role played by family for emerging adults may differ in accordance with gender.

Finally, further work is also required in the field of cross-national studies. It is well known that emerging adulthood is a period strongly influenced by sociocultural context (Arnett, 2023). In this sense, Europe is far from uniform and models for transitioning to adulthood may differ (Scabini, 2000), particularly between countries in the north and those in the south. As noted at the beginning of this paper, the role played by family is particularly important in Southern European contexts and future research may benefit from examining between-country differences as a means of shedding light on the specificities of the period analyzed here.

Despite these limitations, however, the present study is, to the best of our knowledge, one of the first to explore how the COVID-19 pandemic affected the Spanish family system, and the implications this had for emerging adults' mental health. Moreover, the study was based on an interesting Cohort design, which enabled us to compare samples of emerging adults from before and after the COVID-19 pandemic. Cohort studies are not common in the general literature, and are even scarcer in southern European countries such as Spain, where there is also a lack of studies focusing on emerging adulthood. The present study therefore addresses an important gap in the literature.

In conclusion, our findings contribute to a growing body of research focusing on the implications of the COVID-19 pandemic. Nevertheless, beyond merely highlighting once again that the pandemic has had important repercussions on young people's mental health, it also enables us to conclude that family relationships, despite being of poorer quality after the health crisis, nevertheless had a major influence on emerging adults' psychological adjustment. In this sense, the study provides evidence of the fact that, even under very difficult circumstances, positive family relationships still act as a protective factor for emerging adults' adjustment.

Ultimately, these findings point to the importance of designing and implementing public programs aimed at providing parents with the tools they need to foster their children's positive development, psychological well-being and mental health. They also indicate that warmth and involvement continue to be central components in the parent-child relationship and key elements in offspring's adjustment



during emerging adulthood, even during moments of profound social crisis. Consequently, it is important for policymakers and practitioners to provide parents of emerging adults with the information they require, encouraging them to ensure high levels of warmth and involvement and promote positive family relationships in order to contribute to the mental health of their sons and daughters during this challenging life stage. This is especially important during emerging adulthood, when parents have no previous behavioral models on which to base their relationship with their children who, despite having come of age, continue to depend on them financially and to live in the family home. Under such circumstances, it is important for parents to learn strategies for promoting positive family relationships, since this is beneficial for their offspring's mental health, particularly in stressful situations such as the COVID-19 pandemic.

**Authors' contributions** Sánchez-Queija and Parra Conceptualization; Sánchez-Queija, Parra, García-Mendoza and de la Fuente Formal analysis; Parra and Sánchez-Queija Funding acquisition; García-Mendoza and de la Fuente Investigation; Sánchez-Queija and Parra, Methodology; Parra and Sánchez-Queija Project administration; Sánchez-Queija and Parra Supervision; Roles/Writing - García-Mendoza and de la Fuente original draft; Parra and Sánchez-Queija Writing - review & editing.

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**Data, Materials and/or Code availability** The datasets analyzed during the current study are available from the corresponding author on reasonable request.

## Declarations

**Ethics approval** The study was approved by the Coordinating Committee for the Ethics of Biomedical Research in Andalusia (Spain; 12/03/2015).

**Competing and/or financial interests** The authors declare they have no competing and/or financial interests.

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