

Parents' perceived stress and children's adjustment during the COVID-19 lockdown in Italy: The mediating role of family resilience

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Abstract

Objective: This study aimed to explore the role of family resilience in the relationship between parents' psychological stress and their perceptions of children's emotional and behavioral symptoms during the COVID-19 lockdown in Italy.

Background: The COVID-19 lockdown threatened the well-being of parents, with a potentially cascading effect on children's adjustment. However, the negative impact of parents' stress on children's well-being may be attenuated in resilient families.

Method: During the Italian lockdown, an online survey was administered to 649 parents of at least one child aged between 5 and 17 years. Respondents completed the survey themselves and their child(ren). The Perceived Stress Scale, the Walsh Family Resilience Questionnaire, and the Strengths and Difficulties Questionnaire were administered to parents.

Results: Results show that family resilience is a key mechanism in the association of parents' perceived stress with their perceptions of children's emotional symptoms, prosocial behavior, and hyperactivity and that only parents' marital status moderates this relationship.

Conclusion: The intervening role of family resilience emphasizes the need to empower parents and families during the pandemic crisis.

Implications: By strengthening family resilience, family resources maybe strengthened to meet new challenges more effectively.

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KEYWORDS

behavioral problems, children, COVID-19 pandemic, emotional problems, family resilience, parents, perceived stress

The 2019 novel coronavirus SARS-CoV-2 (COVID-19) first appeared in Wuhan, China, and quickly spread across Europe and the rest of the world (Zhou et al., 2020). Italy was the first country in Europe to confront the COVID-19 outbreak. To contain the spread of the virus, the Italian government announced a national lockdown on March 10, 2020, which imposed social distancing measures, including home confinement, school closure, temporary closure of nonessential businesses and shops, and smart working from home.

The impact of the lockdown measures on psychological well-being among Chinese (Wang et al., 2020) and Italian (Rossi et al., 2020) populations has been widely reported; emerging stressors linked to the pandemic and lockdown include the initial lack of treatment or vaccines, lack of preparedness and response, and the pervasive uncertainty, all of which caused high levels of psychosocial stress. Although most of the studies carried out during the COVID-19 lockdown assessed psychological outcomes in the general population, emerging studies explore the specific effects on parents and children (Spinelli et al., 2020). In this context, the present study was planned to investigate parents' psychological stress and children's emotional and behavioral symptoms in a sample of Italian families dealing with the COVID-19 pandemic.

PARENTAL STRESS DURING LOCKDOWN AND CHILD-RELATED OUTCOMES

During the lockdown, life conditions changed suddenly and significantly, especially in families. In this regard, several studies detected common acute stressors facing caregivers as they were called to take on the role of their child's teacher while also attending to their everyday job and home commitments. While parents of school-age children were challenged with homeschooling, those with preschoolers were charged with nurturing and promoting positive development (Wang et al., 2020), often while working full time, given that educational and daycare services were closed, babysitters and grandparents were not available, and contact with peers was not allowed. Many parents suddenly found themselves working at home and often struggled to find time and space to work within the family environment. This situation significantly increased the risk of parents experiencing stress and negative emotions, with a potentially cascading effect on children's well-being (Sprang & Silman, 2013).

Guided by family systems theory (Fiese et al., 2019), several studies highlight that a pile-up of internal and external stressors can overwhelm the family and heighten the risk for negative outcomes (Östberg & Hagekull, 2013). In the wake of COVID-19, contextual risks such as social disruption, financial insecurity, caregiving burden, and confinement-related stress are likely to permeate the structures and processes of family systems. Accordingly, stressors that impede the functioning of one family member may lead to changes in the functioning of all family members. Therefore, to understand the impact of COVID-19 on the well-being of families, it is central to consider the potential effects of the pandemic on the entire family and understand the ways in which the functioning of one family member can impact the functioning of other family members (Prime et al., 2020).

Several studies have reported the central role played by parents in shaping disaster outcomes for their children (Dallaire et al., 2006). Higher levels of negative disaster outcomes have been detected among children of highly distressed caregivers (Kerns et al., 2014); other studies reported parental stress as the main risk factor related to the mental health of

children dealing with adversity (Pine & Cohen, 2002). Recent studies on the COVID-19 pandemic have revealed that parental stress and strains may compromise parenting behavior sufficiently to impact children's outcomes (Russell et al., 2020). Therefore, convincing evidence indicates that disasters may "get inside the family" and have negative consequences on children's adjustment through the strain it puts on family processes (Browne et al., 2015).

FAMILY RESILIENCE IN RESPONSE TO THE COVID-19 PANDEMIC

A fundamental factor to explore in assessing the impact of COVID-19 on the well-being of family members is how families handle the situation in terms of a proactive approach, short-term response, and "survival" strategies employed (Walsh, 2020). In this regard, family resilience refers to a family's ability to withstand and recover from adversity. It requires more than dealing with stressful conditions, carrying a burden, or rising to challenges. Resilience recognizes the potential for individual and relational transformation and development that can arise from adversity (Walsh, 2020). The Walsh family resilience framework identifies key leading processes that can promote family well-being: (a) communication, including sharing emotions, cooperative problem-solving, and family coping; (b) organization, including flexibility, connections, and availability of social and economic resources; and (c) belief systems, including meaning-making, spirituality, and hope. Recent research has applied the family resilience framework to examine family functioning in response to the pandemic-related adversity (Prime et al., 2020; Ruiz et al., 2020; Walsh, 2020).

However, in some families the COVID-19 pandemic may have disrupted or altered family resilience processes. Families were exposed to sudden unexpected threats to their rules, routines, rituals, and relationships, which may have great implications for their coping responses during that time. For example, emerging studies have shown that families reporting higher levels of stress due to their current circumstances, might be affected more than other families (Prime et al., 2020). Likewise, previous studies conducted with families dealing with numerous stressors showed that parental stress can act as a change mechanism in resilient family functioning. Results show that as parental stress levels increase, family resilience decreases (Johnson et al., 2011).

Despite several challenges, the pandemic also presents an opportunity to promote family resilience (Ruiz et al., 2020). A growing body of research in the context of COVID-19 reveals the key role of family resilience processes in buffering against risk, along with enhancing well-being, in the family members (Stark et al., 2020). Emerging studies remark on the fundamental role of family resilience—including providing children with an adequate, consistent response to their cues; optimism; feelings of safety; family-member closeness; and discussions about the current situation—in shaping children's positive emotional and behavioral outcomes (Browne et al., 2015). Those results are in line with previous studies reporting correlations between higher level family resilience and children's positive adjustment and lower children's behavioral impairments (Izumi & Riviera, 2018).

However, although most studies conducted in the context of adversity have examined the interaction between parental stress and children's outcomes (Dallaire et al., 2006), family resilience and children's outcomes (Orte et al., 2015; Walsh, 2016), and parental stress and family resilience (Johnson et al., 2011); to our knowledge, no research has investigated the potential linkages between these variables (parental stress, child functioning, and family resilience) during COVID-19 pandemic. A model examining their relationships merits investigation because it can contribute to a better understanding of how to support families in face of this adversity.

AIM AND HYPOTHESES OF THE STUDY

This study aims to explore the intervening role of family resilience in the relationship between parental stress and children's emotional and behavioral symptoms, as perceived by their parents, in a sample of Italian parents dealing with the COVID-19 pandemic. To this end, based on the literature, we tested a model describing how parental stress predicted family resilience as well as children's emotional and behavioral difficulties and/or strengths (e.g., hyperactivity, prosocial behavior, emotional problems) as perceived by parents. Specifically, we hypothesized that perceived parental stress would negatively predict family resilience (Hypothesis 1A); also, parents' perceived stress would negatively predict parent-reported child prosocial behavior and positively predict child hyperactivity and emotional problems (Hypothesis 1B). Family resilience was expected to predict positive adjustment in terms of prosocial behavior and buffer children's hyperactivity and emotional problems (Hypothesis 2). In addition, we hypothesized that family resilience would serve as a pathway in the relationship between parents' perceived stress and the strengths and difficulties of their children (Hypothesis 3). Finally, we controlled for the effect of the demographic variables (parents' age, marital status, number and age of children, level of education, and occupational status during the pandemic) to determine whether they moderate the effect of family resilience on the path between parents' perceived stress and their perceptions of their children's strengths and difficulties.

METHOD

Participants

A total of 636 parents from 16 regions of Italy participated in the study. The sample consisted of 83 men (12.8%) and 566 women (87.2%) with an age range from 25 to 69 years with a mean of 44.55 years ($SD = 8.42$). The majority of parents were married ($n = 480$, 74%), 87 were living with a cohabitant (13.4%), 51 were divorced (7.9%), and 31 were single, widowed, or had a partner they did not live with (4.8%). Regarding parenthood, 410 parents (63.2%) had one child, 209 (32.2%) had two children, and 17 (2.6%) had three children; 128 parented (20.1%) preschool children, 478 (75.2%) parented primary school children, and 242 (38.1%) parented high school children/adolescents.

Regarding education level, 25 parents (3.9%) attended secondary school, 210 (33%) high school, 263 (41.4%) held a university degree, and 138 (21.7%) held a graduate degree. Regarding employment, 61 parents (9.5%) were unemployed, six parents (0.9%) were students, 28 parents (4.4%) had occasional work, 153 parents (24.1%) had a part-time job, and 388 parents (61%) had a full-time job. During lockdown, 329 (51.7%) parents were working from home, 59 (9.3%) were working on their workplace, 56 (8.8%) were working from both home and their workplace, 157 (24.7) had their jobs suspended, four (0.6%) lost their jobs, and 31 (4.9%) were unemployed.

Measures

Perceived Stress Scale

To measure parents' stress, the Perceived Stress Scale (PSS), developed by Cohen et al. (1983) and adapted into Italian by Mondo et al. (2019), was used. The PSS assesses the extent to which respondents find their lives unpredictable, uncontrollable, and challenging. It includes 10 items, six with negative valence (e.g., "In the last month, how often have you felt nervous and

'stressed'?) and four with positive valence (e.g., "In the last month, how often have you been able to control irritations in your life?"). Participants assess how often they experience the feelings described in each item using a 5-point Likert scale ranging from 0 (*never*) to 4 (*very often*). After reversing the values in the positive valence items, a total score was extracted to indicate individuals' perceived stress.

Walsh Family Resilience Questionnaire

To measure family resilience, we used the Walsh Family Resilience Questionnaire (WFRQ) developed by Walsh (2015) and translated into Italian by Rocchi et al. (2017). It consists of 32 items and approaches resilience from a socioecological point of view. Participants are asked how their families deal "with crises and ongoing challenges." Of the 32 items, 13 refer to the belief systems (e.g., "We can count on the fact that family members will help one another in difficulty"), nine assess the organizational patterns (e.g., "We are flexible in facing unforeseen events and adapting to new challenges"), and 10 refer to communication/problem-solving (e.g., "Whenever there are problems, we draw on spiritual resources such as faith, prayer, meditation, rites, and/or the religious community"). Based on the specific purpose of this study and taking parsimony into consideration, a selection of the original 32 items was made, and only 16 items were used. Participants were asked to evaluate their agreement with each item using a 5-point Likert scale ranging from 1 (*absolutely disagree*) to 5 (*absolutely agree*). An overall family resilience score was calculated using the mean from each participant's responses to the 16 items.

The Strengths and Difficulties Questionnaire

The Strengths and Difficulties Questionnaire (SDQ) was developed by Goodman (1999) to evaluate emotional and behavioral problems in typically developing young people as assessed by their parents. The Italian version (translated by De Giacomo et al., 2004) of the questionnaire for parents of 4- to 17-year-old children was used. It consists of 25 items that assess five dimensions of emotional and behavioral problems: (a) conduct problems (e.g., often fights with other children or bullies them), (b) hyperactivity/inattention (e.g., restless, overactive, can't sit still for long), (c) peer relationships problems (e.g., picked on or bullied by other children), (d) prosocial behavior (e.g., helpful if someone is hurt, upset, or feeling ill), and (e) emotional symptoms (e.g., often unhappy, downhearted, or tearful). In the present study, only three out of the five subscales were included (hyperactivity, prosocial behavior, and emotional symptoms) because the other two (conduct problems and peer relationships problems) refer to the relations of children with their peers, which was not relevant during lockdown. Participants were asked to evaluate their agreement with each statement using a 3-point Likert scale ranging from 0 (*not true*) to 2 (*certainly true*).

Procedure

An online survey, which included parents in Italy, was administered between April and May 2020, after 45 days of lockdown. The snowballing technique was chosen, and an online structured questionnaire was prepared using the Qualtrics Survey Platform. The survey link was distributed via invitations sent by e-mail and disseminated through institutional and private social media, including Facebook, Instagram, and WhatsApp. The study sample was encouraged to send the survey to at least three other caregivers they know. Eligibility criteria were being a

parent 18 years of age or older, being able to provide informed consent, and residence in Italy, and having at least one child aged 5 to 17 years. In case of multiple children in this age range, the caregiver was asked to report on the child whose initial of the first name comes first in alphabetical order. Minors were not involved in the study as all the questionnaires, both parent- and child-related, were completed by the parent. After reading the written consent form and explicitly agreeing to take part in the study and to publication of the results, participants were asked to complete the survey reflecting on both their behaviors, emotions, and thoughts and those of their children in the current lockdown. Once they had completed the survey, parents could subscribe to receive via email a set of cards created by the first author's research institute showing 10 tips for building family resilience in response to disasters. The survey took about 30 minutes to complete. During data collection, the anonymity of the participants was ensured. Data information was anonymized, and the submission did not include images that could identify the respondents.

A total of 653 questionnaires were obtained within 50 days of data collection, with 17 for excluded because they were not fully completed. This study is part of a wider longitudinal research project, "Strategies for Building Resilience in Families Dealing With the COVID-19 Pandemic," designed by the Resilience Research Unit at the Department of Psychology of the Università Cattolica del Sacro Cuore, in partnership with the Department of Teaching and Learning and Educational Organization at Universidad de Barcelona and supervised by the Resilience Research Center at Dalhousie University. Ethical approval was provided by the Universidad de Barcelona.

Data analysis

First, the factorial validity of all the questionnaires was tested via exploratory factor analysis (EFA) and/or confirmatory factor analysis (CFA), using SPSS (version 26) and AMOS (version 19) statistical software, respectively. To test Hypotheses 1A and 1B (i.e., parents' stress would predict family resilience and children's emotional and behavioral problems) as well as Hypothesis 2 (i.e., family resilience would predict children's emotional and behavioral problems), a series of hierarchical regression analyses using the Enter method was performed in SPSS (version 26). In the first block (model) of the analyses, we controlled for the parents' gender, age, marital status, number of children, level of education, and occupational status to estimate their effect on the outcome. In the second block (model), the predictors to be tested were entered. To test Hypothesis 3 (i.e., family resilience would mediate the relationship between parental stress and children's strengths and difficulties), we tested a model examining the direct and indirect relationships between the preceding variables. The indirect effects were tested using the Bootstrap estimation procedure (Preacher & Hayes, 2004) in AMOS (version 19) statistical software (a bootstrap sample of 10,000 was specified). An accelerated 95% confidence interval (CI) was determined (when the 95% CI did not include zero, the indirect association was significant). Finally, we checked the moderating effect of the demographic variables (parents' gender, age, marital status, number and age of children, level of education, and occupational status) in the aforementioned model in SPSS PROCESS (version 3.5, model 15).

RESULTS

On the PSS, EFA revealed a single factor solution which explained the 56.21% of the total variance. CFA validated this model structure: $\chi^2(30) = 3.181, p < .005, CFI = .940, GFI = .953, SRMR = .051, 90\% CI [.069, .094], RMSEA = .081$. The reliability of the scale was found satisfactory ($\alpha = 0.85$). See Table S1 in the supplementary materials.

Similarly, EFA of the WFRQ revealed a single factor solution that explained the 48.32% of the total variance. Item 16 was removed because of its low loading, and the analysis was repeated with the 15 remaining items. The new model explained the 50.97% of the total variance and was confirmed by CFA: $\chi^2(85) = 4.307, p < .005, CFI = .933, GFI = .904, SRMR = .047, 90\% CI [.075, .090], RMSEA = .082$. The reliability of the items selected was satisfactory ($\alpha = 0.93$). See Table S2 in the supplementary materials.

Regarding the SDQ, CFA confirmed a three-factor model (Table 1): $\chi^2(84) = 2.650, p < .005, CFI = .929, GFI = .937, SRMR = .068, 90\% CI [.052, .072], RMSEA = .058$. Reliability of the three subscales was satisfactory ($\alpha = 0.76$ for hyperactivity, $\alpha = 0.74$ for prosocial behavior, and $\alpha = 0.71$ for emotional symptoms).

In the next step, we estimated the mean scores of all the scales and subscales revealed via CFA. Table 2 presents the means and standard deviations for each scale or subscale used in the study. Results showed that parents experienced medium levels of stress during the lockdown period ($M = 2.16, SD = 0.36$). The resilience levels of the families were moderate to high ($M = 3.58, SD = 0.63$). Regarding the emotional and behavioral problems of children, parents reported medium to low levels of negative emotional symptoms ($M = 0.57, SD = 0.43$) and hyperactivity ($M = 0.84, SD = 0.30$) and medium to high levels of prosocial behavior ($M = 1.40, SD = 0.43$).

Correlations between the preceding variables (presented in Table 2 and 3) indicated that perceived parental stress negatively correlates with family resilience; emotional symptoms and hyperactivity of the children, as perceived by their parents, presented positive correlations with parents' perceived stress and negative correlations with family resilience.

To test Hypotheses 1 and 2, hierarchical regression analysis was used in which the demographic variables (parents' gender, age, marital status, occupational status, level of education, and number and age of children) were controlled for. The results confirmed Hypothesis 1 by showing that parents' perceived stress predicted family resilience and children's strengths and

TABLE 1 Confirmatory factor analysis of the Strengths and Difficulties Questionnaire

	Factors			R	R ²
	Hyperactivity (F1)	Prosocial behavior (F2)	Emotional symptoms (F3)		
SDQ9	0.82			0.17	0.66
SDQ15	0.72			0.23	0.52
SDQ2	0.52			0.42	0.27
SDQ7	0.60			0.29	0.36
SDQ13	0.60			0.24	0.36
SDQ6		0.67		0.21	0.45
SDQ11		0.59		0.20	0.34
SDQ12		0.55		0.34	0.30
SDQ1		0.67		0.17	0.45
SDQ4		0.54		0.29	0.29
SDQ5			0.61	0.29	0.37
SDQ8			0.63	0.18	0.40
SDQ14			0.57	0.31	0.33
SDQ10			0.62	0.28	0.39
SDQ3			0.44	0.27	0.19

Note: The residuals between items 2–7, 7–15, and 9–13 were allowed to correlate (Anderson & Gerbing, 1988). SDQ = Strengths and Difficulties Questionnaire.

TABLE 2 Mean scores, standard deviations, and correlations among perceived stress, family resilience, and strengths and difficulties of the children

Factors	<i>M</i>	<i>SD</i>	Parents' perceived stress	Family resilience	SDQ—emotional symptoms	SDQ—prosocial behavior
Parents' perceived stress ^a	2.16	0.36	1			
Family Resilience ^b	3.58	0.63	−0.092*			
SDQ Emotional Symptoms ^c	0.57	0.43	0.232**	−0.212**		
SDQ Prosocial Behavior ^c	1.40	0.43	−0.124**	0.330**	−0.178**	
SDQ Hyperactivity ^c	0.57	0.43	0.208**	−0.036	0.299**	0.006

Note: SDQ = Strengths and Difficulties Questionnaire.

* $p < .05$. ** $p < .01$.

^a0–4 Likert scale.

^b1–5 Likert scale.

^c0–2 Likert scale.

TABLE 3 Regression analyses of parents' perceived stress and family resilience predicting parents' perceptions of their children's strengths and difficulties

Variables	<i>R</i>	<i>R</i> ²	ΔR^2	<i>R</i> ² change	β	<i>F</i>	<i>t</i>	<i>p</i>
Parents' perceived stress								
Perceived Stress → Family Resilience	0.111	0.012	0.004	0.007	−0.089	2.035	−2.084	.038
Perceived Stress → Hyperactivity	0.243	0.059	0.044	0.036	0.196	4.841	5.307	.000
Perceived Stress → Prosocial Behavior	0.128	0.016	0.007	0.014	−0.121	1.749	−3.009	.003
Perceived Stress → Emotional Symptoms	0.271	0.073	0.065	0.058	0.244	8.308	6.276	.000
Family resilience								
Family Resilience → Hyperactivity	0.167	0.028	0.017	0.002	−0.046	2.561	−1.152	.013
Family Resilience → Prosocial Behavior	0.332	0.111	0.102	0.108	0.331	13.025	8.750	.000
Family Resilience → Emotional Symptoms	0.241	0.058	0.049	0.043	−0.208	6.491	−5.353	.000

difficulties. Specifically, perceived stress negatively predicted family resilience ($\beta = -0.111$, $t = -2.084$, $p < .05$); furthermore, perceived stress positively predicted hyperactivity ($\beta = 0.243$, $t = 5.307$, $p < .001$) and emotional symptoms ($\beta = 0.271$, $t = 6.276$, $p < .05$) but negatively predicted prosocial behavior ($\beta = -0.128$, $t = -3.009$, $p < .001$). None of the demographic variables tested had a significant effect on the predicted variables.

Hypothesis 2 was also confirmed, as it was found that family resilience positively predicted parents' perceptions of children's prosocial behavior ($\beta = 0.332$, $t = 13.025$, $p < .001$) and negatively predicted emotional symptoms ($\beta = -0.241$, $t = -5.353$, $p < .001$) and hyperactivity ($\beta = -0.167$, $t = -1.152$, $p < .05$). Regarding demographic variables, only children's age (specifically, in the subgroup of 5- to 12-year-olds) had a significant effect on family resilience predicting children's prosocial behavior ($\beta = 0.131$, $t = 2.122$, $p < .05$).

To test Hypothesis 3, a path model was built (see Figure 1) including five latent variables: parents' perceived stress, family resilience, and parent-reported children's strengths and difficulties subscales (hyperactivity, emotional symptoms, and prosocial behavior); in this model, the residuals among the dimensions of the SDQ and were allowed to correlate (Kline, 2015).

First, we checked Model 1 (direct effects only) in which parents' perceived stress affects their perceptions of children's strengths and difficulties through resilience. In this model, no direct paths from perceived stress to parents' perceptions of children's strengths and difficulties were included. All fit indexes indicated a good fit: $\chi^2 = 1462.29$, $\chi^2(710) = 2.060$, $p < .001$,

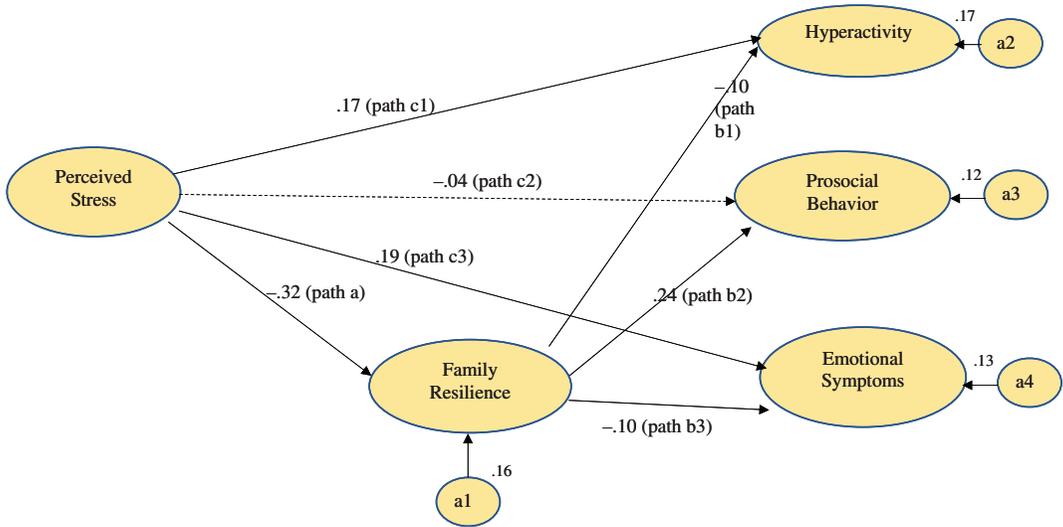


FIGURE 1 The path model of parents’ perceived stress, family resilience, and parents’ perceptions of children’s strengths and difficulties (Model 2)

TABLE 4 The bootstrap 95% CIs (lower and upper bounds) for the direct and indirect effects

Relationship	Estimated effect	95% CI	
		Lower bounds	Upper bounds
Direct effects			
Perceived Stress → Family Resilience	-0.32**	-0.42	-0.23
Perceived Stress → Hyperactivity	0.17**	0.09	0.25
Perceived Stress → Prosocial Behavior	-0.04	-0.10	0.02
Perceived Stress → Emotional Symptoms	0.19**	0.12	0.26
Family Resilience → Hyperactivity	-0.10*	-0.18	-0.01
Family Resilience → Prosocial Behavior	0.24**	0.16	0.32
Family Resilience → Emotional Symptoms	-0.10*	-0.18	-0.02
Indirect effects			
Perceived Stress → Family Resilience → Hyperactivity	0.10**	0.05	0.10
Perceived Stress → Family Resilience → Prosocial Behavior	-0.15**	-0.21	-0.01
Perceived Stress → Family Resilience → Emotional Symptoms	0.12**	0.03	0.11

Note: CI = confidence interval.

* $p < .05$. ** $p < .01$.

CFI = 0.927, GFI = 0.896, SRMR = 0.058, 90% CI [0.038, 0.044], RMSEA = 0.041. We then checked Model 2 (mediating model) in which we added direct paths from parents’ perceived stress to their perceptions of children’s strengths and difficulties. The fit indexes indicated a good fit as well: $\chi^2 = 1409.76$, $\chi^2(707) = 1.994$, $p < .001$, CFI = 0.935, GFI = 0.901, SRMR = 0.047, 90% CI [0.037, 0.043], RMSEA = 0.040). When the chi-squares of the two models were compared, their difference was found to be significant ($\Delta\chi^2 = 52.50$, $\Delta df = 3$, $p < .001$), in favor of Model 2. This indicates that family resilience intervenes in the relationship

between parents' perceived stress and parents' perceptions of their children's strengths and difficulties. As Figure 1 shows, all paths were statistically significant, except for the path from perceived stress to prosocial behavior.

In the next step, we used a bootstrap estimation procedure to check the significance of the intervening role of resilience. Table 4 displays the bootstrap results of the direct and indirect effects. Parents' perceived stress has a significant indirect effect on their perceptions of children's hyperactivity, prosocial behavior, and emotional symptoms via family resilience, and the 95% CIs [0.02, 0.21] exclude zero. The combined results indicate that family resilience could serve as a pathway in the linkage between parents' perceived stress and their perceptions of their children's strengths and difficulties, thus confirming Hypothesis 3.

Finally, we tested the moderating role of the demographic variables in the intervention of family resilience in the relationship between parents' perceived stress and their perceptions of children's strengths and difficulties. Specifically, we tested whether the indirect effect of parents' perceived stress on their reports of children's strengths and difficulties (see Figure 1, paths c1, c2, c3) varies due to the effect of the demographic variables on the path from family resilience to children's strengths and difficulties (see Figure 1, paths b1, b2, b3). The results showed that only marital status moderated this relationship to emotional symptoms (path b3). Analysis of the moderation effect indicated that the relationship was significant for the married participants ($\beta = -0.235$, $SE = 0.054$, $t = -4.327$, $p = .000$) and the participants with a cohabitant ($\beta = -0.175$, $SE = 0.123$, $t = -3.291$, $p = .001$) but not for the divorced parents ($\beta = -0.033$, $SE = 0.149$, $t = -0.201$, $p = .201$). Marital status also moderated the effect of parents' perceived stress to their reports of children's emotional symptoms through family resilience (path c3; $\beta = -0.052$, $SE = 0.018$, $p = .004$). Analysis of the moderation effect indicated that the relationship was significant only for the divorced parents ($\beta = 0.033$, $SE = 0.013$, 95% CI [0.003, 0.034]).

DISCUSSION

This study sought to introduce a family resilience lens toward understanding the impact of the parental stress during the COVID-19 lockdown on child well-being. The COVID-19 pandemic led parents to face, suddenly and unexpectedly, multiple stressors (e.g., economic difficulties, homeschooling requirements, additional parenting charges, childcare) that could have cascading effects on their own well-being, in addition to their children's mental health (Prime et al., 2020; Ruiz et al., 2020). However, our results show a moderate level of parental stress in response to the COVID-19 lockdown, as well as medium to low levels of parent-reported child emotional and behavioral impairments.

Nevertheless, families reporting high levels of parental stress appear to be affected more than others; indeed, results show that high parental stress predicts low levels of family resilience, as well as poor child outcomes in terms of emotional problems, hyperactivity, and low prosocial behaviors as perceived by parents. These results are aligned with the spillover hypothesis, which suggests that within a family system, negative emotions can be transferred directly from one relationship to another (McCoy et al., 2013), and with the family systems theory, which considers families as subsystems that interact with and influence the larger family unit as a whole (Cox & Paley, 1997).

A robust body of research has related environmental stressors with overall family functioning (Pedersen & Revenson, 2005) and, particularly, with parents' stress with both family functioning (Johnson et al., 2011) and child adjustment (Browne et al., 2015; Pine & Cohen, 2002; Russell et al., 2020). This may be because parents dealing with high levels of stress may be less caring and sensitive with their children and more likely to use power-assertive techniques (see McLoyd, 1990). In line with this, other studies show that parents' perceived stress is related to

higher scores on parents' perceptions of behavioral and emotional problems scales in both children (Spinelli et al., 2020) and adolescents (Operto et al., 2018) and with lower scores of prosocial behavior (Williams & Berthelsen, 2017).

However, although parental stress appears to affect the quality of a family's resilient function (Johnson et al., 2011), results of the study show that family resilience is a key mechanism within the family that can buffer the effect of parents' perceived stress on child well-being as perceived by parents. In particular, results show a negative correlation between family resilience and child adjustment in terms of emotional problems and behavioral symptoms, as reported by parents, as well as a positive correlation between family resilience and children's prosocial behaviors.

Children's age (specifically in children aged 5–12) affect the impact of family resilience on parents' perceptions of the children's prosocial behavior. One possible explanation for this finding could be that children's pro-sociality, before the adolescent phase, is strongly related to other variables such as specific parenting styles, peer attachment and other relevant social relationships (Malonda et al., 2019). Instead, children's age does not affect the impact of family resilience on children's impairments (i.e., emotional and behavioral symptoms). Overall, these results are consistent with previous studies, reporting the association between higher family resilience and lower emotional (McDermott et al., 2010) and behavioral problems among children (Walsh, 2016) and higher prosocial behavior (Orte et al., 2015), as reported by parents. In particular, emerging studies show that secure belief systems, communication, and strong family organization—characterized by guidance, connectedness, and flexibility—can buffer against COVID-19 risks while enhancing family members' well-being (Ruiz et al., 2020; Stark et al., 2020; Walsh, 2020).

When the family demographic variables were taken into consideration (i.e., parents' gender, age, marital status, education level, number and age of kids, and occupational status), only marital status was found to moderate significantly the effect of parents' perceived stress with their perceptions of their children's emotional symptoms through family resilience. In particular, the effect of family resilience on parent-reported emotional symptoms of their children appeared to be stronger for the married participants compared with cohabiting participants, but they were both significant compared with divorced parents. This result is in line with previous studies stating that living in a marital or cohabitation relationship, compared with other family living arrangements, improves children's well-being (Ribar, 2015). Indeed, the important benefits that marriage can have on parents, such as better psychological health and greater happiness, could contribute to increase the family resilience in terms of family involvement and cohesiveness of family, sharing emotions, cooperative problem-solving, and family coping (Kapp & Brown, 2011). Furthermore, married couple are more likely to have a shared vision of the future, which turned out to be a strong protective factor for families dealing with the COVID-19 pandemic (Walsh, 2020).

Marital status also moderates the indirect effect of parents' perceived stress on their perceptions of children's emotional symptoms through family resilience. For divorced parents, this effect increases. Several studies affirmed that divorced caregivers present less happiness, more symptoms of depression, more social isolation, and more negative life events (e.g., Wood et al., 2007), whereas their children report higher tendencies toward anxiety and greater susceptibility to mental disorders (Wilson & Newins, 2018). In particular, parents who retain primary custody of children (usually mothers) often experience the strain of solo parenting, given that a second parent is no longer present in the household to share daily childrearing tasks, with negative consequences on their own and their children's emotions, behaviors, and health (Amato, 2014). Likewise, being a single parent during the COVID-19 lockdown increased the prevalence of high psychological distress among caregivers, especially mothers (Marchetti et al., 2020), due to the lack of parental support from a partner (Mikolajczak et al., 2018). Correspondingly, during the pandemic, children of divorced families were at higher risk of developing psychological impairments (Terzioğlu & Büber, 2021). Indeed, highly distressed mothers might have been too overwhelmed by the situation to be available and responsive to their children's needs and to find appropriate ways to be supportive for them; this might have increased

the likelihood that their children developed negative outcomes. However, the key role of family resilience in buffering the effect of parents' perceived stress on child well-being appears particularly relevant for these families. This calls for preventive activities and well-being programs to strengthen single caregivers by enhancing the key leading processes that can promote family well-being.

In conclusion, previous studies have stated that resilience factors may function as both compensatory factors (i.e., decreasing negative outcomes; Giordano et al., 2020) and protective factors (i.e., modulating or diminishing the impact of adversity and difficulty; Giordano et al., 2019, 2021; Giordano & Ungar, 2021). Results of our studies show that family resilience supported individuals' well-being during the COVID-19 pandemic, as both a compensatory factor—reducing parents' perceptions of their children's behavioral impairments—and a protective factor—alleviating the relationship between the severity of the caregiver's stress and children adjustment, as perceived by parents.

Implications

The present study contributes to the growing body of literature on family resilience. As suggested by previous theories (e.g., the spillover hypothesis, McCoy et al., 2013; family systems theory, Cox & Paley, 1997), our study highlights that families are subsystems in which negative emotions can be transferred from one member to another and affect family functioning as a whole. In particular, children's well-being depends on the well-being of their parents and other caregivers, as children are keen observers of parents, and they notice and react to their stress (Bartlett et al., 2020). Therefore, to cope with crisis situations such as the COVID-19 pandemic, caregivers must take care of themselves so they might have the internal resources to offer children consistent, sensitive care that may protect them from the pandemic's harmful effects. To this end, caregivers should engage in self-care by getting enough rest, taking time for restorative activities, and remaining connected to their friends and relations.

Furthermore, specific remote intervention programs for parents might be useful to increase parenting skills and provide a sense of self-efficacy to make them feel capable of effectively managing their emotional state and their relationships with children. This might be particularly crucial for parents living in highly affected countries such as Italy, where the COVID-19 pandemic was considered the greatest long-term, life-changing event since World War II, and the prolonged conditions of forced lockdown generated a major burden on parents (Prime et al., 2020; Spinelli et al., 2020). However, Italian parents' high levels of exposure to the adversities related to the pandemic can also be considered a protective factor for future involvement in prevention programs. Indeed, according to protective motivation theory (Grothmann & Reusswig, 2006), the adoption of a response is dependent on individuals' level of perceived threat, where the perceived risk and the likelihood that the occurrence of a hazard will have harmful consequences cause enough concern to mobilize them to reduce the risk. Therefore, highly exposed caregivers, like Italian parents during the pandemic, might have developed more "protection motivation" and thus be more encouraged to engage actively in prevention programs and interventions that increase their ability to cope effectively with challenging events and help them provide a solid reference point for their children.

Similarly, the findings regarding the intervening role of family resilience emphasizes the need to empower families, especially during the pandemic. Indeed, part of individual efforts to become resilient to the crisis is due to family support. Family dynamics such as family members' positive responses to deal with stressors can have an important impact on the family's ability to cope with crisis situations. Therefore, efforts to intervene should be directed at strengthening relations and consistency to foster social support within the family itself. According to our results, this might be particularly crucial for single-parent families.

The study of family resilience should be the basis for developing strategies on how to strengthen family functions in response to the pandemic. These strategies can empower health care professionals, teachers, and educators to support children and their families as they navigate the COVID-19 pandemic (Kang et al., 2020). Furthermore, various media can help disseminate basic information on what parents and children can do to assist themselves and strengthen their family functioning. For example, messages about the value of getting back into routines, the value of allowing for communication, the key role of parents in helping their child feel safe, and enhancing natural recovery through transferring the message that “we can cope with this,” might be particularly crucial for the enhancement of the protective resilience factors among families. However, although various forms of information dissemination are recommended and used in response to disasters (Ronan & Johnston, 2005), no studies to date have directly evaluated the extent to which such basic forms of support actually assist children and families.

Families have the potential for resilience, and this principle can be maximized by identifying and building key strengths and resources within the family (Walsh, 1998). However, further studies are needed to identify the specific protective factors that might produce healthy families and what effective coping strategies should be applied to cope effectively after a disaster or hazardous event such as the COVID-19 pandemic.

Limitations and future directions

With regard to limitations, this study was based on cross-sectional data. Therefore, it can be used to report associations but not to ascertain causative relationships. Future longitudinal research can overcome the constraints of the cross-sectional mode by testing the causal relationships among the examined variables. To this end, the second data collection, which was conducted on the same sample during the second wave of the COVID-19 pandemic, may shed light on the mediating role of family resilience on children's well-being. Another limitation concerns the sampling method (a convenience sample was recruited via social media), which has a higher risk of sampling bias and limits generalization of the results. Moreover, self-report tools have been used to collect the data; response bias is a commonly discussed issue in behavioral research when self-report tools are used (Brutus et al., 2013). Furthermore, children's psychological symptoms have been collected from parent reports. Although this data collection method is broadly employed, it may be less informative than child reports or direct evaluation by experts of children's well-being. The lack of information regarding children's gender is also a limitation because this variable cannot be controlled for. Also, given that the questionnaires were distributed electronically, there is considerable probability that only highly motivated and/or educated parents participated in the study. However, an electronic survey method was considered the safest and most effective way to collect data from a large number of subjects because the study was carried out during the national lockdown. Finally, as the pandemic continues, further research is needed to shed light on how parental stress caused by specific pandemic-related situations (e.g., repetitive lockdowns) challenges both parents' resilience and children's emotional and behavioral state.

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The data that support the findings of this study are available from the corresponding author (F.G.) upon request. All data and materials as well as software application support the published claims and comply with field standards.

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