**ORIGINAL ARTICLE** 



# The impact of COVID-19 lockdown on children's and adolescents' mental health in Greece

Konstantina Magklara <sup>1</sup> 💿 🛛	Helen Lazaratou <sup>1</sup>	Ι	Anastasia Barbouni <sup>2</sup>	Ι
Konstantinos Poulas <sup>3</sup>   Ko	onstantinos Farsalinos	s <sup>4</sup>		

<sup>1</sup>First Department of Psychiatry, Medical School, University of Athens, Athens, Greece

<sup>2</sup>School of Public Health, Department of Public and Community Health, University of West Attica, Athens, Greece

<sup>3</sup>Department of Pharmacy, University of Patras, Rio, Greece

<sup>4</sup>School of Public Health, Department of Public and Community Health, University of West Attica, Athens, Greece; Department of Pharmacy, University of Patras, Rio, Greece

#### Correspondence

Konstantina Magklara, Dilou 14, Kesariani, Athens, Greece. Email: nadia.magklara@gmail.com

## Abstract

The aim of the study was to investigate the impact of the COVID-19 lockdown on children's and adolescents' mental health in Greece during the lockdown of spring 2020. A cross-sectional survey of 1232 Greek parents was conducted in spring 2020. 35.1% of parents reported that their children's psychological health was significantly affected. Parental unemployment, limited opportunity for tele-work and deteriorating psychological health, increased family conflicts and children's pre-existing physical health conditions were all significantly associated with mental health impact. Children and adolescents may experience adverse mental health effects due to the COVID-19 pandemic.

## **KEYWORDS**

adolescence, children, COVID-19, lockdown, mental health, pandemic

# INTRODUCTION

Children and adolescents around the world are experiencing an unprecedented disruption of their everyday lives and daily routines due to the COVID-19 pandemic and the subsequent lockdown measures, imposed to mitigate the risk of virus transmission. Concerns about multiple effects of the pandemic on the mental health and well-being of the paediatric population have been raised (Araújo et al., 2020; Asmundson & Taylor, 2020; Brooks et al., 2020; Liu, Zhang, Wong, Hyun, & Hahm, 2020; Luo

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1

et al., 2020; Mactavish et al., 2020; Mazza et al., 2020; Rogers, Chesney, et al., 2020; Wang et al., 2020). Meta-analytic data suggest that there was an overall increase in mental health symptoms in the general population, which was most pronounced during the early stages of the pandemic (March-April 2020) (Robinson et al., 2022). In the population of children and adolescents rising depression, anxiety and loneliness were reported in China, Canada, Turkey and the United States (Duan et al., 2020; Jiao et al., 2020; Kılınçel et al., 2020; Rogers, Chesney, et al., 2020; Xie et al., 2020; Zhou et al., 2020). Quarantined children and adolescents in India presented significantly higher levels of psychological distress when compared with their non-quarantined peers (Saurabh & Ranjan, 2020). Similar results were reported by studies in Europe. In Italy and Spain, which were two countries that experienced very high numbers of cases and deaths during the first wave of the pandemic, conduct problems, irritability and loneliness in youth increased during the spring lockdown (Orgilés et al., 2020). A representative nationwide study in Germany showed that two-thirds of children and adolescents were significantly affected by the pandemic (Ravens-Sieberer et al., 2022). Studies of parents reporting on their children's psychological health presented similar findings. In a nationwide study in the United States, 14% of the parents reported worsening behavioural health of their children (Ellis et al., 2020). The CoRonavIruS health and Impact Survey (CRISIS) conducted in population samples of parents in the United States and the United Kingdom showed that pre-existing mood states, perceived COVID risk and lifestyle changes were strongly associated with negative mood states of the offspring during the pandemic (Nikolaidis et al., 2021). The COSPACE study, which was designed during the early lockdown in the United Kingdom as an online survey of parental reports on their children's mental health and reported significant deteriorations in several mental health symptoms among preadolescent children (Waite et al., 2021).

In Greece, as in many other countries, regulatory lockdown measures have been introduced in the spring of 2020. All schools and universities closed for 8–10 weeks. All sport and leisure activities were suspended, while about 80% of private sector services providing psychological treatments for children and adolescents with mental health problems (reimbursed by the National Organization for the Provision of Health Services) closed (Giannopoulou & Tsobanoglou, 2020). During the first wave of the pandemic Greece managed to contain the pandemic and had a relatively low number of confirmed COVID-19 cases and deaths compared to other countries (Johns Hopkins Center for Systems Science and Engineering, 2020). Data reporting on the mental health effects of the COVID-19 pandemic on children and adolescents in Greece are limited. An online survey of 442 Greek senior high school students conducted in April 2020 revealed a rise in depression and anxiety levels in the time of home confinement (Giannopoulou et al., 2021). A qualitative study investigating the impact of the pandemic through individual interviews with nine psychiatric inpatient adolescents in a paediatric hospital in Athens reported anxiety about harm to self and beloved ones (Giannakopoulos et al., 2020).

The pandemic has placed enormous pressure on health systems around the globe. The strain was particularly alarming for the Greek health system, which has only recently started recovering from a recent deep fiscal crisis with profound socioeconomic implications. During the last decade, there were significant cuts in hospital budgets, understaffing, occasional shortages of medical supplies and limited access to care and preventive services (Kentikelenis et al., 2011). Child and adolescent mental health services and supportive policies underwent major budget changes. Public funding cuts led to some services not being fully operational, many non-profit child and adolescent mental health community centres, psychosocial rehabilitation units and highly specialized establishments were suspended, while the number of abused or neglected children admitted for child protection to paediatric hospitals increased dramatically (Kolaitis & Giannakopoulos, 2015).

Socioeconomic inequalities have been shown to significantly affect youth mental health outcomes. Children and adolescents with lower socioeconomic status are at higher risk of developing mental

3

health problems, with the inequalities being stronger for family income than type of parental occupation (Reiss, 2013). Parental job loss and unemployment may stress families and many studies report deteriorating children's mental health during periods of declining family income (Milligan & Stabile, 2011) or parents' sudden job loss (Johnson et al., 2010). While unemployed parents tend to spend more time with their offspring, this may have a negative impact on children, since unemployment correlates with parental stress and mental health problems, which are, in turn, associated with child stress (Lupien et al., 2000). The association between parental and youth mental health has been established by numerous studies showing that parents' mental health problems negatively affect the psychological health of their children (Ramchandani & Stein, 2003; Vostanis et al., 2006).

The aim of the present study was to investigate the impact of the COVID-19 pandemic and the measure of lockdown in the spring 2020 on the mental health of children and adolescents in Greece. More specifically, the study investigated the type of symptomatology presented by a sample of children and adolescents in Greece during the first wave of the pandemic in spring 2020, as reported by their parents, as well as its association with socioeconomic factors. During the early phase of the pandemic many families experienced unexpected job loss and income insecurity, since many facilities and services closed suddenly in early March 2020. Thus, a further aim of our study was to explore possible socioeconomic associations of children's mental health as reported by their parents.

# METHODS

The study was a cross-sectional online survey of a convenience sample of Greek parents of children aged <18 years. Despite the serious limitations associated with this type of sampling, we chose to use it in order to obtain quickly data from a larger number of parents during the first, acute phase of the pandemic. A questionnaire was designed and uploaded in an online survey tool (www.surveymonkey. com). Initially, participants were presented with an informed consent, consisting of a brief presentation of the research group and the purpose of the study. They were asked to read and provide their consent before proceeding to the questionnaire. If they agreed, they were forwarded to the questions of the survey. Our survey took place between 21 April and 30 May 2020. The study and the survey instrument were advertised in social media, while a press release was distributed to journalists who presented the study inviting participants in internet news-media. The study was approved by the ethics committee of the University of West Attica in Athens, Greece. Survey participation was anonymous and participants were informed through the consent form that they could exit the questionnaire at any time. The IP addresses were recorded by the online system in order to prevent double entries.

The questionnaire consisted of three sections. The first section included general sociodemographic variables for parents and their offspring (parental sex, age, nationality, geographical area of current address, type of residential area, highest educational level attained and employment status; child's sex and age), as well as information regarding family and/or household characteristics (family annual income, number of bedrooms, number of household members). Information relevant to the pandemic, such as parental tele-working and employment as a healthcare worker during the lockdown, was also sought. The second section included questions about conditions of the everyday life of the family during the lockdown period. We obtained information about conflicts within the family, the level of contact with friends and relatives and self-perceived psychological health of parents. The third section included information about the psychological impact of the pandemic on children. We developed the questionnaire for the needs of the current study based on 'The CoRonavIruS Health Impact Survey' (CRISIS) (Nikolaidis et al., 2021), which used a questionnaire covering key domains relevant

to mental distress and resilience during the pandemic. Specifically, we asked the following question: 'Do you think that your child's psychological health was affected by the lockdown measures'? The possible answers were 'no', 'yes', 'I don't know/ I am not sure'. We further asked parents to rate their child's psychological health now and before the lockdown on a 5-item Likert scale ranging from 'bad' to 'excellent'. We also included Likert-type questions about current psychological symptoms (sleep, stress, fear of being infected with the coronavirus, negative thoughts, depressive mood). Additionally, we asked about changes in physical activity and nutrition of the child during the lockdown. The specific questions asked were: 'Do you think that your child's physical activity level/ nutrition changed during the pandemic?' Possible answers ranged on a 4-item Likert scale from 'no' to 'a lot'. Finally, we asked about the parent's rating about the most significant difficulties experienced by the child during the lockdown. Possible answers were as follows: 'stress', 'social isolation', 'increase in screen time', 'absence from educational activities', 'decrease in physical activity', 'change in sleep time', 'increased calorie intake'.

The questionnaire is not a validated measure, but a self-constructed instrument developed for the needs of the present study. To improve the design of the data collection instrument and to avoid potential comprehension issues experienced by the study participants, eight parents, who did not participate in the study, were recruited to pretest the questionnaire using the method of cognitive interviewing (Collins, 2003).

## **Statistical analysis**

The outcome of interest in our study was the impact of the pandemic on the psychological health of children and adolescents as reported by their parents. The impact was defined as present if answering 'yes' to the question: 'Do you think that your child's psychological health was affected by the lockdown measures'? Only 12 parents (0.97%) in our sample reported that the current psychological health of their children was 'good'/'very good' or 'excellent' and the psychological health before the lockdown 'poor'/'fair'. Thus, it could be assumed that the direction of the overall impact of the lockdown was negative.

Results were reported for the whole sample, with categorical variables presented as number (%) and continuous variables as mean (SD). Chi-square tests were used for categorical variables in order to compare characteristics between those with and without an impact of the pandemic on children's psychological health. Logistic regression analysis was performed to examine factors associated with an impact of the pandemic on children's psychological health. All analyses were performed using SPSS v.22.

# RESULTS

The sample of our study consisted of 1232 parents who completed the online questionnaire. Table 1 shows the basic sociodemographic and socioeconomic characteristics of participants. Most of them were of Greek nationality (98.2%), middle-aged women (79.6%), highly educated (90.0%) and residing in big cities (81.3%). Approximately half of the unemployed parents (7.0% out of a total unemployment rate of 15.0%) reported that they were employed before the pandemic, but lost their jobs during the lockdown. The majority of participants reported a family annual income of  $\geq 10\ 000\ \text{euros}$ , while more than half of the households (55.9%) had more than two bedrooms in their home. Most of the participants were parents of children younger than 13 years (70.4%), with almost 1 out of 5 (19.5%)

	Total ( $N = 123$ )	Total ( $N = 1232$ )	
	N or mean	% or SD	
Parents' age	43.8	7.5	
Parents' sex			
Male	243	19.8	
Female	979	79.6	
Do not want to declare	8	0.7	
Parents' educational level			
Primary school/ Secondary school/ Vocational school/ Senior high school	118	9.6	
Technical college/ University/ Postgraduate degree	1109	90	
Residential area			
Urban	1001	81.3	
Non-urban	220	17.9	
Greek citizenship			
Yes	1210	98.2	
No	12	1	
Parents' employment status			
Public sector employee	382	31	
Private sector employee	339	27.5	
Self-employed	300	24.4	
Student/Pensioner	24	1.9	
Unemployed	98	8	
Employed prior to the pandemic, but currently unemployed	86	7	
Family annual income			
0–9999 euro	93	7.5	
≥10 000 euro	1115	90.5	
Parent's job with no possibility for tele-work	552	42.4	
Number of people in the household			
<u>≤</u> 4	1053	85.5	
>4	178	14.4	
Number of bed-rooms in the household			
≤2	553	.43.6	
>2	689	55.9	
Parent's self-reported psychological health			
Excellent/ Very good/ Good	991	80.4	
Fair/ Bad	240	19.5	
Increase of family conflicts			
Yes	290	23.5	
No	831	67.5	
Do not know/ Not sure	111	9	
		-	

TABLE 1	Basic sociodemographic and socioeconomic	c characteristics in a sample of	1232 parents in Greece
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(Continues)

#### TABLE 1 (Continued)

	Total ( <i>N</i> = 1232)	
	N or mean	% or SD
Gender of the child		
Male	676	50
Female	593	48.1
Age of the child		
<13 years	867	70.4
$\geq$ 13 years	365	29.6
Positive history of mental or developmental disorders of the child	63	5.1
Positive history of physical disorders of the child	68	5.5

reporting their current psychological health as fair or bad. A positive history of mental or developmental disorder was reported for 5.1% of the children, while a history of physical health condition was reported by 5.5%.

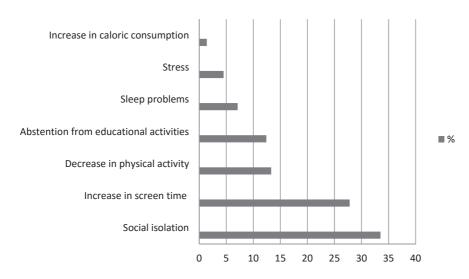
Figure 1 shows children's difficulties associated with the lockdown as reported by the parent. The parents in our sample reported that social isolation and the increase in screen time were the most significant difficulties experienced by the child or adolescent during the lockdown, followed by the decrease in physical activity and absence from educational activities.

Approximately one-third of participants reported that the psychological health of their child was affected by the lockdown. Table 2 presents the characteristics of these cases compared to those with no impact of the lockdown on child's psychological health. Statistically significant differences between the two groups were observed in the employment status of the parent, the opportunity for the parent to work from home, the increase in family conflicts, parent's psychological condition and the positive history of mental or developmental and physical health condition of the child.

Table 3 presents the results of logistic regression analysis. Unemployment of the parent, both previously existing and having occurred during the lockdown, parent having no opportunity to work from home, increase in family conflicts, impaired psychological condition of the parent during the lockdown and child's previous history of physical health condition were all significantly associated with a higher risk of a negative impact of the lockdown on the child's psychological health.

# DISCUSSION

Approximately one-third of the participants in a sample of 1232 parents in Greece reported that the psychological health of their offspring was considerably affected during the lockdown in the spring of 2020. The most significant difficulty experienced by the children and adolescents during the lockdown was social isolation. The unemployment of the parent and their deprivation from opportunities for tele-work, increased family conflicts and a deteriorating psychological health of the parent was significantly associated with the impact of the lockdown on the mental health of their offspring. Previous history of physical health condition of the child was statistically significantly associated with a higher risk of the measures having an impact on the psychological health of the child. There was a trend for a similar association with previous history of a mental or developmental disorder of the child, which however did not reach the level of statistical significance.



**FIGURE 1** Difficulties experienced by children and adolescents during the lockdown as reported by the parent in a sample of 1232 parents in Greece.

One of the major concerns of the parents in our sample during the lockdown was the social isolation of their children. In many countries around the world, children and adolescents have experienced an unexpected and prolonged period of physical isolation from their friends, peers, teachers, extended family and various community networks. Literature shows that isolation associated with quarantine measures has negative psychological effects in adults, including confusion, anger and post-traumatic distress (Brooks et al., 2020). Loneliness might be a major issue associated with social isolation. Loneliness is conceptualized as the negative emotion of a discrepancy between the social contact actually experienced by a person and the desire for it (Perlman & Peplau, 1981). Social isolation is not necessarily followed by loneliness. However, early evidence shows that more than one-third of adolescents report high levels of loneliness (VandePol, 2020), while a rapid systematic review of previous literature reports that social isolation and loneliness increases the risk of depression and possibly anxiety (Loades et al., 2020).

Further concerns of the parents in our sample were the limited physical activity and the increased screen time of children and adolescents during the lockdown. A study conducted in 2426 children and adolescents in Shanghai, China confirmed a substantial decrease in physical activity and a significant increase in screen time during the COVID-19 pandemic (Xiang et al., 2020). The vicious circle between reduced physical activity and increased sedentary behaviour was one of the major concerns early in the crisis that lead in an urgent call for systematic efforts to mitigate the effects of home confinement of children (Guan et al., 2020; Wang et al., 2020).

Our study presents some interesting findings suggesting socioeconomic inequality in the distribution of the negative effects of the COVID-19 crisis in the population of children and adolescents. The unemployment of the parent that was either present prior or occurred during the course of the pandemic was significantly associated with a negative impact on children's psychological health. Our findings are in line with previous studies about significant determinants of youth psychological health. Socioeconomic inequalities are among the most common findings in literature investigating the mental health of children and adolescents (Elgar et al., 2015; Magklara et al., 2010). There is evidence that higher income inequality relates not only to more psychological and physical symptoms, but also to fewer days of physical activity and higher Body Mass Index, which is in accordance with the higher concern of reduced physical activity reported in our study (Elgar et al., 2015). Parental

	Negative impact on child's psychological health				
	Yes		No/Not sure		
	n	%	n	%	p value
Total	432	35.1	800	64.9	
Parent's educational level					
Senior high school or less	36	8.3	82	10.3	.269
Technical college or University or Postgraduate degree	395	91.4	714	89.3	
Residential area					
Urban	344	79.6	657	82.1	.184
Non-urban	86	19.9	134	16.8	
Greek citizenship					
Yes	425	98.4	785	98.1	.182
No	2	0.5	10	1.3	
Parent's employment status					
Public sector employee	120	27.8	262	32.8	.002
Private sector employee	117	27.1	222	27.8	
Self-employed	100	23.1	200	25	
Student/ Pensioner	5	1.2	19	2.4	
Unemployed	44	10.2	54	6.8	
Employed prior to the pandemic, but currently unemployed	44	10.2	42	5.3	
Family annual income					
0–9999 euro	40	9.3	53	6.6	.093
≥10 000 euro	383	88.7	732	91.5	
Parent's job with no possibility for tele-work	206	47.7	316	39.5	.005
Number of people in the household					
≤4	372	86.1	681	85.1	.675
>4	60	13.9	118	14.8	
Number of bed-rooms in the household					
≤2	196	45.4	337	42.1	.308
>2	234	54.2	455	56.9	
Parent's self-reported psychological health					
Excellent/ Very good/ Good	295	68.3	696	87	<.001
Fair/ Bad	136	31.5	104	13	
Increase of family conflicts					
Yes	171	39.6	119	14.9	<.001
No	225	52.1	606	75.8	
Do not know/ Not sure	36	8.3	75	9.4	

**TABLE 2** Characteristics of children without and with a negative impact of the pandemic on their psychological health as reported by the parent in a sample of 1232 parents in Greece

#### TABLE 2 (Continued)

	Negative impact on child's psychological health				h
	Yes		No/Not sure		_
	n	%	n	%	p value
Gender of the child					
Male	213	49.3	403	50.4	.856
Female	208	48.1	385	48.1	
Age of the child					
<13 years	318	73.6	549	68.6	.067
$\geq$ 13 years	114	26.4	251	31.4	
Positive history of mental or developmental disorders of the child	30	6.9	33	4.1	.032
Positive history of physical disorders of the child	40	9.3	28	3.5	<.001

Bold indicates statistical significant value (p < .05).

unemployment is one of the most significant socioeconomic indicators associated with the psychological health of children and adolescents. In addition to that, family income has been shown to be a stronger socioeconomic indicator than the type of parental occupation (Reiss, 2013). Financial stress is considered to be the most important consequence of unemployment, with regard to the health of the unemployed individual and the family members (Magklara et al., 2010; Whelan, 1992). The significance of the above-mentioned associations is of particular interest for Greece, since it is a country that was severely affected by a major fiscal crisis during the last decade (Kentikelenis et al., 2011). According to a report conducted on behalf of UNICEF 3 years ago, almost one in two children in Greece (45%) lived in material deprivation and 22% in severe material deprivation (Papatheodorou & Papathanasiou, 2017).

Increased family conflicts and poorer psychological health of the parent have been also associated with higher risk of a negative impact of the crisis on the psychological health of children and adolescents in our study. Family conflict, in the form of either inter-adult or parent–child conflict, has been linked in various studies to children's behavioural, emotional, social, academic and health problems and identified as important predictor of children's maladjustment (Cummings & Schatz, 2012). Regarding the impact of parental psychological health, most existing findings derive from studies conducted in clinical populations, linking parental psychopathology to a wide range of negative outcomes for their offspring (Zahn-Waxler et al., 2002). Population studies have shown similar results reporting positive associations between parental psychological distress and psychosocial maladjustment of their offspring (Roustit et al., 2010; Vostanis et al., 2006). Similarly, a UK online study that utilized parental reports about the pandemic impact on their children's mental health showed that children that experienced higher emotional distress during the pandemic were more likely to have a parent with worse psychological health (Raw et al., 2021).

Finally, our study showed a positive association between a history of physical health condition and a negative impact of the lockdown on the psychological health of the child. Similar findings have been shown by a recent meta-analysis, which reported that change in mental health symptoms tended to be larger among participants with a pre-existing physical health condition compared to the general population (Robinson et al., 2022). Chronic physical illness is thought to be a risk factor for psychological problems. The presence of physical symptoms and the need for disease management

	Negative impact on child's psychological health		
	OR	95% CI	p value
Parent's educational level			
Primary/Secondary/Vocational/Senior high school	1		
Technical college/University/Postgraduate degree	1.58	0.98-2.55	.062
Residential area			
Non-urban	1		
Urban	0.85	0.60-1.19	.342
Greek citizenship			
No	1		
Yes	1.22	0.25-6.00	.811
Parent's employment status			
Public sector employee	1		
Private sector employee	1.32	0.93-1.88	.118
Businessman	1.15	0.81-1.65	.437
Student/Pensioner	0.66	0.22-1.97	.461
Unemployed	1.87	1.09-3.21	.023
Employed before the lockdown but currently unemployed	2.3	1.35-3.93	.002
Family annual income			
≥10 000 euro	1		
0–9999 euro	1.02	0.60-1.76	.935
Parent's job with no opportunity for working from home (tele-w	vork)		
No			
Yes	1.38	1.05-1.80	.019
Number of people in the household			
≤3	1		
>3	1.19	0.89–1.60	.23
Number of bedrooms in the household			
≤2	1		
>2	0.87	0.65-1.15	0.331
Parent's self-assessed psychological health			
Excellent/Very good/Good	1		
Fair/Bad	2.17	1.57-2.99	<.001
Increase in family conflicts during the lock down			
Do not know/Not sure	1		
Yes	3.28	1.98–5.44	<.001
No	0.94	0.58-1.50	.783
Child's gender			
Female	1		
Male	0.93	0.71-1.22	.6

**TABLE 3** Logistic regression analysis of factors associated with an impact of the pandemic on children's psychological health in a sample of 1232 parents in Greece

	Negative impact on child's psychological health		
	OR	95% CI	p value
Child's age			
<13 years	1		
$\geq$ 13 years	1.01	0.75-1.36	.958
Positive history of mental or developmental disorder of the child			
No	1		
Yes	1.26	0.70-2.26	.444
Positive history of physical health condition of the child			
No	1		
Yes	2.12	1.21-3.72	.009

#### TABLE 3 (Continued)

Abbreviations: CI, Confidence interval; OR, Odds ratio.

Bold indicates statistical significant value (p < .05).

strategies are likely to interfere with many aspects of the child's everyday life, may cause frustration and detrimentally affect the child's self-esteem. Additionally, chronic illness may lead to problematic parental behaviours, ranging from overprotection to rejection, which may further impair the child's psychological health (Bennett, 1994). There was evidence of a trend for a similar association with a history of previous psychiatric or developmental disorder, which has not reached, however the level of statistical significance in our sample. The finding is in accordance with other findings showing that change in mental health symptoms was non-significant in samples with pre-existing mental health conditions (Robinson et al., 2022). On the other hand, multiple studies have pointed out a possibly higher vulnerability of individuals with pre-existing mental illness that experience additional adverse events (Fiorillo & Gorwood, 2020; Nikolaidis et al., 2021).

# Limitations

An important limitation of our study is the fact that we used an online, convenience sample, which is not representative of the population studied. It has been argued that non-representative samples attract volunteers who are already well engaged, interested in the topic, who can access the internet, while those excluded, for instance individuals with severe mental illness, are often those most in need (Pierce et al., 2020). Therefore, our findings cannot be interpreted as an overall prevalence of psychopathology among children in the general population. However, our results indicate that individuals with various types of vulnerabilities are at higher risk for negative outcomes of the current crisis. Given the argument that vulnerable populations may have been excluded from our surveys, it could be expected that the real impact of COVID-19 pandemic could be of greater magnitude for specific population sub-groups.

Another limitation of our study is the fact that we used only parental reports. However, we collected our data during the lockdown and there were only limited opportunities to use more subjective measures of children's characteristics and difficulties. Additionally, the online nature of the design of our study presented significant difficulties for the use of children as informants, especially for younger children that were the majority in our sample. In addition, the design of our study was cross-sectional with no pre-pandemic data, which means that causal inferences are not possible. A further limitation of our study is the lack of validated questionnaires as measures of children's mental health.

# CONCLUSIONS

Our findings indicate that vulnerable individuals are at higher risk for experiencing negative outcomes during the course, and possibly also at the aftermath, of the COVID-19 pandemic. Both family risk factors, such as parental unemployment, psychological distress or family conflict, and individual risk factors, such as pre-existing physical health conditions, contribute substantially to the vulnerability of children and adolescents to the adverse effects of the new coronavirus outbreak and its containment measures. Well-designed public health policies should focus on specific population groups with the aim of ameliorating risks, when possible, and enhancing resilience.

## AUTHOR CONTRIBUTIONS

KM: Methodology, Writing - Original draft, Formal analysis, Resources. HL: Conceptualization, Methodology, Review & Editing, Supervision, Resources. AB: Conceptualization, Methodology, Resources, Review & Editing. KP: Conceptualization, Methodology, Writing - Review & Editing, Resources, Supervision. KF: Conceptualization, Methodology, Writing - Original Draft, Formal analysis, Resources.

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# **CONFLICTS OF INTEREST**

The authors report no conflict of interest relevant to this study.

# DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

# ETHICS STATEMENT

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committee on human experimentation with the Helsinki Declaration of 1975, as revised in 2008. The study protocol was approved by the ethics committee of the University of West Attica, Athens, Greece.

# CONSENT STATEMENT

Participants were presented with an informed consent, consisting of a brief presentation of the research group and the purpose of the study. They were asked to read and provide their consent before proceeding to the questionnaire.

# PERMISSION TO REPRODUCE MATERIAL FROM OTHER SOURCES

The authors declare that they have not reproduced any original material from other sources.

## ORCID

Konstantina Magklara D https://orcid.org/0000-0002-8558-7001

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## AUTHOR BIOGRAPHIES

Konstantina Magklara is a child and adolescent psychiatrist at a university child and adolescent mental health centre in Athens, Greece.

**Helen Lazaratou** is a Full Professor of Child and Adolescent Psychiatry at the National and Kapodistrian University of Athens.

**Anastasia Barbouni** is a paediatrician and Professor of Public Health, Hygiene and Disease Prevention at the Department of Public and Community Health of the University of West Attica.

**Konstantinos Poulas** is an Associate Professor of Biochemistry at the Department of Pharmacy, University of Patras and the Director of BioHealth Hub, Science Park, Patras.

**Konstantinos Farsalinos** is a senior researcher at the University of Patras, the School of Public Health of the University of West Attica, as well as the King Abdulaziz University.

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