



INSTITUTO
UNIVERSITÁRIO
DE LISBOA

The impact of COVID-19-related stressors on the social and emotional functioning of young Portuguese children.

Beatriz Gonçalves da Silva

Masters in Social and Organizational Psychology

Supervisor:

Professor Doctor Joana Isabel Soares Baptista, Assistant Professor,
Iscte – Instituto Universitário de Lisboa

October, 2022



CIÊNCIAS SOCIAIS
E HUMANAS

Department of Social and Organizational Psychology

The impact of COVID-19-related stressors on the social and emotional functioning of young Portuguese children.

Beatriz Gonçalves da Silva

Masters in Social and Organizational Psychology

Supervisor:

Professor Doctor Joana Isabel Soares Baptista, Assistant Professor,
Iscte – Instituto Universitário de Lisboa

October, 2022

Acknowledgements

First, I would like to express my deepest and sincere thank you to everyone who made this dissertation possible by supporting me throughout the last year.

To Professor Joana Baptista, my dissertation supervisor, I want to show my most sincere appreciation and gratitude for the dedication shown to me throughout the whole process. The availability and commitment demonstrated were crucial for the concretization of this project, without which it would never be possible. The support and help given by her were fundamental and I could not be more thankful.

I also want to thank every participant in this study, who found time and patience to answer the questionnaires. Their testimony regarding their COVID-19 experiences and their children's was fundamental to this project.

And finally, but not least, to my family, more specifically my parents who have been my greatest supporters during my academic journey, without them this would never be possible. With this project I hope they are proud of the path I have made and of what I have achieved so far.

To my friends and work colleagues who have been by my side throughout the year and helped me through the difficult moments but who also shared with me the joy and happiness throughout the way.

Resumo

A pandemia COVID-19 trouxe desafios para a população, especialmente famílias com crianças pequenas, visto que estão mais vulneráveis às consequências a longo-prazo da pandemia. O presente estudo teve como objetivo compreender se os stressores relacionados com a COVID-19 estavam relacionados com o funcionamento social e emocional de crianças pequenas, durante o período de um ano. O estudo contou com a participação de 120 crianças (55%, rapazes) e os seus cuidadores primários. Os cuidadores completaram um conjunto de questionários durante o segundo confinamento (T1; idade média = 24.74 meses) e novamente um ano depois (T2) para avaliar os stressores relacionados com a COVID-19 (distress parental, isolamento social da criança e dificuldades económicas). Os cuidadores também reportaram as perceções acerca do funcionamento social e emocional da criança, utilizando a escala Checklist de Sintomas Pediátricos (Perrin, et al., 2016) em T2. Também foram obtidas informações sociodemográficas, como a idade e sexo da criança e as habilitações literárias do cuidador. Foram encontradas associações significativas entre os stressores da COVID-19 em T1 e T2. Adicionalmente, o disstress parental em T1 e T2 e as dificuldades socioeconómicas em T1 foram preditores significativos de mais problemas socioemocionais nas crianças em T2. Os resultados sugerem que os stressores relacionados com a COVID-19 podem ter um impacto negativo no funcionamento das famílias, o que pode ter afetado o bem-estar das crianças. Também demonstram a importância de garantir o apoio necessário às famílias para ajudar a diminuir os níveis de stress parental e consequentemente proteger o bem-estar das crianças.

Abstract

The COVID-19 pandemic imposed challenges to the world population, especially for families with young children as they can be more vulnerable to the long-term consequences of the pandemic. The current study aimed to examine if COVID-19 related stressors predicted the social and emotional functioning of young children over the course of one year. It included 120 children (55%, boys) and their primary caregivers. Caregivers completed a set of questionnaires during the second lockdown (T1; children's mean age = 24.74 months) and again one year later (T2), to assess COVID-19-related stressors, namely caregiving distress, child social isolation, and family economic hardship. Caregivers also reported on child social and emotional functioning, using Pediatric Symptoms Checklist scale (PSC; Perrin, et al., 2016), at T2. Family sociodemographic factors, including child age and sex, and caregiver education were also assessed. Significant associations were found between the COVID-19-related stressors at T1 and T2. Furthermore, caregiving distress at T1 and T2 and economic hardship at T1 were found to be significant predictors of more socioemotional problems at T2. The results of the current study suggested that COVID-19 stressors could have had a negative impact on family functioning, which, in turn, affected children's wellbeing. Those findings highlight the importance of providing the adequate support for families to help reduce parental distress, and, consequently, protect the wellbeing of children.

Contents

Introduction	1
1. Conceptual Framework	3
1.1. The impact of the COVID-19 pandemic on child development	3
1.1.1. Parental distress during COVID-19 and child socioemotional functioning	5
1.1.2. Social isolation during COVID-19 and child socioemotional functioning	8
1.1.3. Socioeconomic hardship due to COVID-19 and child socioemotional functioning	10
1.2. The present study	11
2. Method	13
2.1. Participants and procedure	13
2.2. Measures	14
2.3. Analytic plan	15
3. Results	17
3.1. Preliminary analysis: descriptive statistics	17
3.2. Preliminary analysis: associations between study variables	18
3.2.1. Associations between predictors	18
3.2.2. Associations between predictors and child emotional/behavioural problems	19
3.3. Main Analysis: Predicting child socioemotional problems	21
3.3.1. COVID-19 stressors at T1 and child emotional/behavioural problems at T2	21
3.3.2. COVID-19 stressors at T2 and child socioemotional problems at T2	22
4. Discussion	24
Conclusion	29
References	30

Introduction

The Coronavirus disease 2019 (COVID-19) is a virus found in Wuhan China at the end of 2019, which spread rapidly around the world. It threatened the health of the population of nearly all countries across the globe and governments had to impose social distancing measures and lockdown restrictions to contain the spread of the virus (Chung et al., 2020; Urbina-Garcia, 2020).

In Portugal, the COVID-19 pandemic caused two mandatory lockdowns, one in 2020 during the first wave and another in 2021, which was the worst wave and peak of deaths and hospitalizations. As vaccination began, the restrictions started to ease as families slowly resumed their pre-pandemic lives, with schools opening, and resuming social contact with others outside of the family. As of today, Portugal has one of the highest vaccination rates in the world, which allows its population to be more protected against the virus, lower deaths, and hospitalizations, and consequently experience going back to normal.

Although research has shown that children are at a lower risk if infected with COVID-19 regarding mortality and severity of the disease, they are at higher risk when it comes to the emotional and behavioural negative consequences of the pandemic (Imran et al., 2020; O'Sullivan et al., 2021). Research has shown that COVID-19-related stressors, from an early age, can have consequences on children's socioemotional wellbeing (Fagan & Willfeuer, 2022). Recent studies have shown that restrictions imposed by the pandemic (e.g., school closure) and changes in families' daily lives and functioning (e.g., parental stress) had a negative impact on children's mental health, which resulted in higher levels of depression, low mood, aggravated stress, irritability, and attention deficit (Delvecchio et al., 2022; Petretto et al., 2020). Such findings are consistent with previous research, showing that children who experience crisis, such as a pandemic, traumatic events, or natural catastrophes are more likely to develop posttraumatic stress, as well as emotional and behavioural problems (Slone & Mann, 2016).

Despite those results, little is known about the long-term impact of the pandemic on children's wellbeing, and particularly young children (O'Sullivan et al., 2021). There are reasons to believe, nevertheless, that young children may be one of the most vulnerable populations regarding the COVID-19 pandemic as they have limited coping resources and do not fully understand what is taking place around them (Delvecchio et al., 2022; Imran et al., 2020). Additionally, young children are more dependent on their caregivers, who have also

demonstrated higher levels of stress throughout the pandemic, especially during the lockdowns (Office for National Statistics, 2020; Waite et al., 2021).

The present study aimed to explore the predictive role of COVID-19-related stressors (i.e., caregiving distress, social isolation, and economic hardship), assessed during the second lockdown in Portugal and again one year later, on young children's socioemotional functioning.

The present work is organized in four sections namely: the conceptual framework, method, results, and discussion. The conceptual framework aims to introduce the theoretical background linked to the impact of relevant COVID-19 stressors on the social and emotional development of young children. In this section, the hypothesis which guided the research and study objectives are also presented. On the second section, the method is described including the participants, the assessment measures used, the data collection procedure, as well as the analytical strategy adopted in this study. On the third section, the results are presented. Finally, the fourth and last section of the study is the discussion, where a deeper analysis is conducted as a reflection on the results obtained for the study, explained by the theoretical background. On the discussion, the limitations as well as suggestions for future studies and implications are presented as well. A final conclusion is then presented.

1. Conceptual Framework

The Coronavirus disease 2019 (COVID-19) emerged at the beginning of 2020 and quickly became a public health emergency declared by the World Health Organization which caused most countries in the world to adopt very strict lockdowns and social distancing measures (WHO, 2020a; Buheji et al., 2020; Chung et al., 2020). It threatened the health of the population of nearly all countries due to its high mortality rate and caused unprecedented disruption in various aspects of life, namely on a socioeconomic and emotional level (Singh et al., 2020; Buheji et al., 2020).

Families were faced with numerous stressors such as routine disruption, and loss of job or income, which constituted a threat to their emotional wellbeing as well as an increase in health concerns (Achterberg et al., 2021; Calvano et al., 2022; Lengua et al., 2022). Social distancing measures, lockdowns, and other measures imposed to contain the virus are known to have had a negative impact on families, especially on children (Fegert et al., 2020; Tso et al., 2020). Family stress levels increased, which were associated not only with the restrictive measures, but also due to other factors, such as working from home, loss of social support, and social isolation (Fegert et al., 2020).

Children had to limit contacts with family, colleagues, friends, and other adults, which could cause a disruption to their social support networks (Lengua et al., 2022). Regarding the consequences of the pandemic restrictions on children and adolescents, it resulted in an increase in mental health problems among this population (Calvano et al., 2022; Lengua et al., 2022).

1.1. The impact of the COVID-19 pandemic on child development

Children have been spending more time with their families, more specifically with their caregivers, due to the COVID-19 restrictions and lockdowns. Authors have suggested that the increase of interactions with parents, in this context, can be a risk for mental health problems, considering how children can become more susceptible to parental risk factors as social support decreases (Lengua et al., 2022). In fact, research has shown how home environment throughout early childhood is a predictor of child's later socioemotional functioning. A study conducted by Fagan and Wildfeuer (2022) investigated the long-term associations between parental risks and child outcomes, including socioemotional development. Authors concluded that the presence of more risks in the family environment were associated with lower levels of

children's socioemotional functioning in later childhood. Risks in the home environment, mentioned in this study, included difficulties in the parent-child relationship and elevated levels of stress and socioeconomic difficulties.

Young children, up until the age of 4 years old, are particularly vulnerable to the consequences of the pandemic, especially those with pre-existing vulnerabilities, such as economic hardship or those who have developmental delays (Yoshikawa et al., 2020). Although some studies on the socioemotional domain evidence how large-scale events, such as a pandemic, are known to negatively impact the long-term wellbeing of children (Gargano et al., 2017), other studies assessing the long-term consequences of major events show that the consequences on the emotional wellbeing were mild and temporary (Benner & Mistry, 2020; Eisenberg & Silver, 2011). One study set in Spain during the 2020 lockdown, showed that there was not any increase in behaviour problems or change in children's (ages 3-12) emotional states; however, when looking specifically at younger children (ages 3-6), it was found an increase in behavioural problems. Furthermore, parents' higher levels of anxiety predicted more behaviour problems in children (Romero et al., 2020). On the contrary, a study by Mantovani et al., (2021), which aimed to understand how families in Italy coped with the pandemic restrictions, found that most families showed high levels of resilience, both older children and younger children as well as parents, as they accepted the limitations and challenges of the pandemic to overcome it. So, somehow contradictory results on the impact of COVID-19 on children have been produced, calling for an urgent need of more data.

Children, especially young children, were forced to social isolate at a time when they are beginning to develop their social skills, broaden their social contacts beyond their parents, and are going through a critical social and emotional development period (Dubey et al., 2020; Marques de Miranda et al., 2020). The first years of life are crucial for a child's optimal socioemotional development. Socioemotional development during the first years of a child's life is defined as the ability of children to learn and to build positive relationships and safe attachment styles with others, such as parents and peers, initiate and maintain relationships with adults and peers, management of aggression and conflict and pro-social behaviour (Fagan & Wildfeuer, 2022; Squires, 2002). It is an important skill for children to master, as this is how they will learn how to form meaningful relationships with others (Keller, 2018). Socioemotional skills also include the ability to learn how to regulate and express emotion according to the environment they are in (Lopes, 2021).

Research shows that the first 5 years of a child's life are the most important, as it is in this phase that the brain develops at a faster pace (Tso et al., 2020). During this period, they learn and acquire skills through interaction with other people; however, during the pandemic, these interactions were limited (Wass et al., 2020). In Australia, it was found that nearly half of the student population, especially those who were starting school, were at a higher risk of having learning difficulties, related to education facilities being closed. Moreover, it was shown that children born during the pandemic might already be displaying lower cognitive performance (Goldfeld et al., 2022). A study that aimed to compare the feelings of pre-schoolers and older schoolers during the early weeks of the pandemic, found that younger children were more dependent on their parents and had more fear of infection when compared to older children (Delvecchio et al., 2022; Jiao et al., 2020).

Given previous research suggesting that the COVID-19 pandemic may have led to negative consequences on young children's development – a topic barely studied compared to older children and adolescents – studies aiming to identify predictors of the socioemotional functioning of those children appear to be particularly important. Therefore, this study aims to understand what those predictors are and assess their impact on children's functioning.

1.1.1. Parental distress during COVID-19 and child socioemotional functioning

Young children are particularly reliant on social and family factors, such as parental stress or economic hardship (O'Sullivan et al., 2021). The pandemic has challenged many families, who had to balance their work life with taking care of their children, while some of them were going through economic hardship, such as loss of income or job. Not surprisingly, research has reported high levels of parental stress, linked to stressors related to the pandemic (Pfefferbaum & North, 2020; Prime et al., 2020; Tso et al., 2020).

Parental stress can be defined as a psychological reaction, in which negative thoughts and feelings emerge, in relation to the self or in relation to the child, regarding parenting demands (Deater-Deckard, 1998; Santos, 2008). Parenting can be a complex experience, as it is filled of moments of happiness and affection, although, at the same time, it can be demanding and result in stress (Lucassen et al., 2021). High levels of stress can result in other parenting difficulties. Parents, experience stress daily, even when there is not a pandemic. This stress can be a result of the everyday routine, their perception on their own parenting capacities and concerns about

children, such as their health, education and development, for example. However, this daily stress usually does not have a significant impact on children's wellbeing (Griffith, 2022).

However, one study conducted during the pandemic has shown how 85% of parents reported changes to their children's behaviour and emotional state (Orgilés et al., 2020). Due to the social distancing measures imposed, the support from other people such as family members and educational facilities has been significantly reduced, meaning that parents had to manage their work life, for those who were working from home, and family life (Griffith, 2022; Opperman et al., 2021). Parents with school-aged children had also to manage online school throughout the lockdown periods, sometimes acting as parents, teachers, and employees for several months (Lucassen et al., 2021).

A study by Calvano and colleagues (2022), conducted in Germany, found an increase in parental stress during the pandemic. Also, factors such as social isolation, school closures, and closure of childcare services were among the reasons why parents reported feeling anxious. Parental stress varies in intensity and is dependent on other factors such as the resources the parent has, namely the perception they have about their parenting capacities (Santos 2008). Moreover, higher levels of parental stress may also have been a result of the increase in housework, due to the successive lockdowns, such as cooking several meals for the whole family, and doing the house cleaning, without any social support from other family members or schools (Li et al., 2021).

According to the family stress model (Conger & Conger, 2002), when the demands of being a parent overcome the joy associated with the role, parents can have difficulties in being emotionally available for the child and the family. Hence, when parents display higher levels of parenting stress, this can lead to an increase in dysfunctional parenting practices and co-parenting difficulties (Lucassen et al., 2021), which, in turn, can have negative impact on children's mental health (Abidin, 1992; Lucassen et al., 2021; Wong et al., 2022). Additionally, children's socioemotional difficulties, can be a consequence of parent's inability to properly react to children's emotions (e.g., being unsupportive). Gianotti and colleagues (2022) aimed to understand the differences on parent's perception of their parental stress and children's behavioural problems. They found an increase of psychological distress in parents and children, with mothers reporting a higher level of parental stress.

The family stress model states that stress related from the necessity to manage limited resources will cause psychological distress which in the long-term will impact the child's social

and cognitive outcomes (Ramanathan et al., 2021). In line with the model, several studies have demonstrated how financial difficulties predicted higher levels of financial stress, higher levels of parental stress and poorer parenting practices (e.g., Gershoff et al., 2007; Opperman et al., 2021; Low & Mounts, 2021). These findings help to support the hypothesis of the family stress model, which states that economic difficulties are intrinsically related to an increase in parental stress.

Despite those results, there is increasing evidence that other factors, such as work-related problems or stressful events, such as a pandemic, could also pose as stressors for this model (Masarik & Conger, 2017; Opperman et al., 2021; Ravens-Sieberer et al., 2021). The family stress model demonstrated how these stressors have a negative impact on parenting (Opperman et al., 2021). COVID-19 restrictions, namely the lockdowns, might have increased parental stress in two ways: it could be because it accentuated previous stressors such as inadequate housing conditions, or because it led to additional stressors, such as working from home while caring for young children, loss of income, loss of job, which in turn increased economic difficulties. Opperman and colleagues (2021) found an association between work and family-related stresses and an increase in parents' perceived stress during the COVID-19 lockdown, in Germany.

Parents' perceived stress reflects how parents cope with stressors, as they evaluate their internal resources to assess if they have the necessary coping resources to manage (Opperman et al., 2021). Previous studies found that higher levels of depressive symptoms in mothers, when their children were in preschool, were associated with overreactive parenting practices and less warmth towards the children when they were six years old (Errázuriz et al., 2012). Li and colleagues (2021) found that there was an increase in parental stress throughout the two lockdowns in Germany. However, they discovered that this stress was experienced differently between mothers and fathers, with mothers experiencing higher levels of stress related to an unequal division of housework between men and women, as the latter takes up most responsibilities. Additionally, it was found that having younger children or multiple children was a better predictor of parental stress.

In early childhood, parent and child relationship is a very important predictor of a child's socioemotional wellbeing, as a positive relationship can contribute for a child's optimal cognitive functioning and social competence (Imboden et al., 2021). However, this positive relationship could have been threatened during the COVID-19 pandemic, due to an increase in

parental stress. According to the Bronfenbrenner's (2006) ecological system, it describes family as the most important factor for a child's development. If a parent demonstrates high levels of stress, such as resulting from economic hardship, it can translate in an alteration on parenting abilities, for example, parents can become less responsive or affectionate towards the child (Guajardo et al., 2009).

As shown above, high levels of parental stress can have a negative impact on parenting and child's development, however some findings are contradictory. For example, a study from Guajardo and colleagues (2009), aimed to study the relationship between parental stress and parental behaviours, such as responsiveness, and children's behavioural outcomes, demonstrated that neither inconsistent nor overreactive parenting predicted a child's emotion understanding. This contradicts most research which states low parental engagement and inconsistency as well-known predictors of children's socialization issues and behavioural difficulties (Guajardo et al., 2009; Loeber, 1990). More research is clearly needed.

Furthermore, one study conducted by Johnson and colleagues (2021), aimed to understand the long-term impacts of lockdown on parental distress, showed how levels of perceived stress decreased over time, as restrictions started to be lifted. However, there is still limited information on the long-term impact the pandemic caused on families and children, although studies indicate that their wellbeing was affected during the pandemic period. It is fundamental to get a deeper understanding of the long-term consequences of child exposure to family distress during the pandemic, considering how important the first few years of life are and how the pandemic related stressors might have impacted children's development. This is especially relevant as children are highly adaptable and there could be a variability on the impact caused by the restrictions and the pandemic itself (Prime et al., 2020).

1.1.2. Social isolation during COVID-19 and child socioemotional functioning

Social isolation, as a social distancing measure to combat the pandemic, conducted to many negative outcomes, such as an increase in anxiety and stress in people of all ages (Araújo et al., 2021). Social isolation is defined as the "*disengagement from social ties, institutional connections or community participation*", which is what children went through during the COVID-19 derived lockdowns, as it reduced the opportunities of children to have face to face interactions with others, besides the caregivers (Cameron & Tenenbaum, 2021; Pantell et al., 2013, pp 2056).

Social isolation changed the way families functioned, as the social contacts were reduced to those living within the same house. The pandemic reduced families' opportunities to manage and consequently reduce stress, by limiting leisure activities that involve socialization or through exercise (Imboden et al., 2021). Studies conducted during previous health emergency events, such as Ebola or the severe acute respiratory syndrome (SARS) showed how social distancing measures and lockdowns are known to have negative psychological outcomes in families (Giannotti et al., 2022).

It is through engaging and communicating with others, that children develop their emotional, cognitive, and social skills (Cameron & Tenenbaum, 2020; Rogoff et al., 2018). Socioemotional capacities are required for the development of children's relations with others. They consist in the abilities of the children to express their ideas, communicate with others, and create meaningful connections, as well as recognise and name their own and other people's emotions (Urbina-Garcia, 2020). They gain these abilities through contact with others, such as parents, siblings, and relatives (Feldman, 2015; Urbina-Garcia, 2020). The term of socioemotional wellbeing implies interactions between the child and not only their parents, but also extended family as well as school acquaintances, neighbours, all of which are crucial for the achievement of socioemotional wellbeing (Urbina-Garcia, 2020). It is important to note that, in the context of social isolation, this wellbeing cannot be achieved. Thus, social distancing measures, such as social isolation, might pose a threat to children's social and emotional functioning (Urbina-Garcia, 2020).

Research conducted during lockdown periods, evidenced how social isolation evoked in children's feelings of sadness and anger, as they showed higher frustration levels, as well as disruptive behaviours and sleep disturbances (Urbina-Garcia, 2020). These changes in the functioning of the families and the disruptions of the social contacts have a negative impact on the adjustment of children, especially in families where pre-existing vulnerable facts exist (Prime et al., 2020). It is important to note, however, that for some families, social isolation was a protective factor, especially for families which income was not affected, who eventually got to enjoy more time together as a family, when otherwise it would not be possible (Fegert et al., 2020).

1.1.3. Socioeconomic hardship due to COVID-19 and child socioemotional functioning

Social distancing measures are a disruption to normal life and have negative outcomes on people's lives (Ares et al., 2021). To contain the spread of the virus, and in line with social distancing measures imposed by the governments, many families were forced to work from home or alteration of job situation. However, for many families, whose jobs were negatively affected, it also meant the closure of businesses or respective workplace, or the impossibility to work from home, and consequently, loss of income or even loss of job. The COVID-19 has resulted in a financial crisis across the globe. Previous research has shown how poverty is an obstacle to an optimal child socioemotional development, consequently, the pandemic might have had a much bigger impact on socially disadvantaged families when compared to economically stable families (Fagan & Wildfeuer, 2022; Li et al., 2021).

If for people with a higher social economic status (SES), social distancing measure might have been an opportunity to spend more time with their family, people with a lower SES reported to have more difficulties in coping with social distancing measures (Ares et al., 2021). Studies have shown how socioeconomic related stressors in disadvantaged populations are related to an increase in psychological distress, especially in individuals who are parents (Ettman et al., 2021; Li et al., 2021). Furthermore, economic hardship was found to better predict feelings of distress, depression, and anxiety (Ares et al., 2021; Costa, 2020; Kimhi et al., 2020).

A study set in the UK with individuals aged 4-16 years old, demonstrated a deterioration in mental health among children from low-income households (Waite et al., 2021). Additionally, another study set in China found that in lower SES families, children displayed an increase of mental health issues (Li et al., 2021). This shows how the COVID-19 pandemic exacerbated the social inequalities already experienced by low socioeconomic families.

Financial stress derives from the difficulty of fulfilling basic needs or acquiring basic goods, such as buying food or paying bills (Low & Mounts, 2021). This is particularly relevant when individuals from low-income families are more likely to have jobs in positions which were badly affected by the pandemic, causing loss of income or even unemployment, increasing levels of financial stress (Low & Mounts, 2021).

There are two models which help explain the relationship between child development and family economic hardship. The first one is the family investment model which states that

families with more economic resources will, as a consequence, be able to invest more in their child. On the other hand, families with less economic resources have less resources, hence will be able to invest less on the child (Ramanathan et al., 2017; Ramanathan, 2021). A study by Easterbrook and colleagues (2022) found that families with lower SES were less engaging and spent less time investing in their child's learning, as parents were struggling with financial difficulties. Furthermore, this study found that the home environment of these families was not ideal for learning, as it was reported having troubles connecting to the internet and lack of space, which negatively influenced the child's learning.

The second model, the family stress model, already mentioned, states that stress related to the necessity to manage limited resources will cause psychological distress, which in the long-term will impact the child's social and cognitive outcomes (Ramanathan et al., 2021). Economic difficulties are related to parenting issues such as the inability of a parent to show affection caused by the stress related to financial problems (Costa, 2020). Adegboye and colleagues (2021) conducted a study with children aged 4-8 years old, which aimed to compare mental health problems before and during the pandemic, and they found that families who had a low income before the pandemic reported an increase in financial stress during lockdowns. Additionally, financial stress worsened parent's mental health, which indirectly predicted child's increase in mental health problems. Furthermore, other studies demonstrated how financial difficulties predicted higher levels of financial stress, higher levels of parental stress, and poorer parenting practices (Gershoff et al., 2007; Low & Mounts, 2021; Opperman et al., 2021). These findings help to support the hypothesis of the family stress model, which states that economic difficulties are intrinsically related to an increase in parental stress.

1.2. The present study

To the best of our knowledge, very few studies attempted to explore the long-term impact of the COVID-19 pandemic on the socioemotional functioning of young children in Portugal. As described above, the first few years of life are fundamental for an optimal development, hence it is important to understand the consequences that the pandemic might have had on young children. A study conducted in China, aimed to examine the long-term impact of the SARS pandemic during early childhood, found that children who lived through that period experienced physical and cognitive development delays (Fan et al., 2020).

The present study is a follow-up of a previous study about the assessment of early emotional/behavioural functioning (Lopes, 2021), that also explored the impact of COVID-19-related stressors on Portuguese toddlers' well-being, during the worst peak of infections to date in Portugal (Toscano et al., 2022). It aims to describe the socioemotional functioning of young children in Portugal during the peak of the pandemic in 2021 (T1) and a year after (T2). Furthermore, it aims to explore the effects of parental distress, social isolation, and socioeconomic hardship, assessed at T1 and T2, on child socioemotional functioning. The current research intends to broaden the knowledge of the long-term effects of the COVID-19 pandemic on young children in Portugal. Based on previous literature, regarding our hypothesis, we expect that higher levels of parental distress, more pronounced social isolation, and more socioeconomic difficulties, at both T1 and T2, will predict more socioemotional difficulties.

2. Method

2.1. Participants and procedure

As stated previously, the present study is part of a wider study; hence, data was collected during two different time points. The first data collection occurred during the third and worst peak to date of the coronavirus pandemic in Portugal, from December 2020 to June 2021 (T1). The second and final data collection occurred one year later, from December 2021 and June 2022 (T2).

Table 1.

Characterization of the Participants

	<i>M(SD)</i>	<i>n(%)</i>
Child		
Sex	Female	55(45.8%)
	Male	65(54.2%)
Age (T1)	24.74 (7.43)	
Age (T2)	36.42 (7.60)	
In daycare (T2)	Yes	117 (97.5%)
	No	3 (2.5%)
Primary Caregiver		
Sex	Female	106 (88.3%)
	Male	14 (11.7%)
Age	35.16 (5.27)	
Education		
Up to Secondary Education		16 (13.3%)
Higher education		104 (86.7%)
Employment		
Employed		114 (95%)
Unemployed		6 (5%)

The sample included 120 children, aged 22 to 51 months (55 females and 65 males) at T2 (see Table 1), as well as their primary caregivers. Most of the children ($n=117$; 97.5% at T2) attended day-care. Caregivers who took part in this study had a mean of ages of 35.15 years

($SD = 5.30$), with ages ranging from 24 to 57 years old. Regarding the relationship of the caregiver to the child, 88.3 % were the mother and 11.7% the father of the child. Most of the caregivers were of Portuguese Nationality ($n=116$; 96%), currently had a job ($n=114$; 95%) and had completed at least one level of higher education ($n=104$; 86.7%). Most families had one child ($n=78$; 65%) and regarding the employment status of the other caregiver, 112 (93.3%) were employed (at T2).

At T1, the study was disseminated in online parent groups and childcare centers, inviting the primary caregivers of children within the target age range for participation. An online link was provided to caregivers to complete a set of questionnaires. At T2, parents were contacted via email and were given the link to another set of questionnaires. The study was approved by the institutional review board of Iscte-IUL, and informed consents were obtained from all participants included in the study, at T1 and T2.

2.2. Measures

Child socioemotional functioning (T2). To assess children's socioemotional development, the Pediatric Symptoms Checklist scale was used (PSC; Perrin et al., 2016). It has two versions, one for children aged 18 months or less, another for children aged 19 months or more. For this study, only the later was utilized as children in this study were all aged above 18 months. Caregivers filled this questionnaire with their perceptions about their children's behaviour. It consists of a scale with 18 items, rated on a three-point scale (0=No; 1=A little; 2=A lot), including items such as "*Has trouble concentrating*", "*Feels sad/unhappy*" and "*Refuses to share*". It is a short questionnaire, useful to assess socioemotional problems in infancy as it includes several questions of observable behaviours in children. Higher scores on this scale indicate higher socioemotional difficulties. According to the PPSC, children who score above 9 are in higher risk of early socioemotional problems. In the current study, 26 children had scores above 9. For this study, this scale presented an internal consistency of $\alpha = .87$.

Parental distress (T1 and T2). To assess parental distress, participants completed a subscale of the Daily Hassles Questionnaire (Kanner et al., 1981). It is a subscale with 9 items, which aims to assess stressors related to parenting activities. Internal consistency of the scale at T1 was $\alpha = .86$ and at T2 was $\alpha = .87$. Parents reported their perceptions on the daily parenting stress they experienced. It is evaluated on a 5-point scale (ranging from 0 = no hassle, to 4 = big hassle). Items were added to create a final sum and greater scores indicated higher levels of

parenting stress. Furthermore, parents also answered two questions regarding their availability towards their child by answering two questions, using a 3-point scale (0 = Don't agree at all to 2 = Completely agree/a lot) ("Due to the COVID-19 pandemic, I have less time to be with my child"; "Due to the COVID-19 pandemic, I have been less emotionally available to interact with my child"). Finally, to assess the impact of COVID-19 on their psychological wellbeing, parents answered one question ("I have become depressed because of the Coronavirus). Parenting stress, as well parenting availability, and COVID-19 psychological impact on caregivers, were all significantly correlated. Scores were standardized and combined to create a single parental distress variable for T1 and T2. Higher scores in this variable indicated higher levels of caregiving distress.

Child COVID-19 related social isolation (T1 and T2). To assess child social isolation related to the COVID-19 pandemic, a scale was developed to evaluate stressors related to social isolation. Parents were asked the following questions about their child's experience during the pandemic on a 3-point scale (1=Do not agree at all/not at all to 3=Agree completely/a lot): (1) The child had limited opportunities to interact with other children; (2) The child had limited opportunities to interact with family members; and (3) The child had limited opportunities to participate in activities outside the house. Scores were summed to create the child COVID-19 related social isolation variable. The internal consistency for this scale was $\alpha = .86$.

Socioeconomic difficulties related to COVID-19 (T1 and T2). Parents answered a socioeconomic questionnaire regarding the socioeconomic impact of COVID-19 on the family. Caregivers were asked whether the family had experienced the following economic difficulties: (1) negative impact on the household finances; (2) reduction of the household income due to job loss; and (3) difficulties acquiring essential goods, such as food or toilet paper. These questions were measured on a 4-point scale (ranging from not true to totally true). Scores were summed to create an economic hardship variable. Higher scores on the economic hardship scale indicated more difficulties experienced by the family. The internal consistency for this scale was $\alpha = .66$.

2.3. Analytic plan

Data was analysed using IBM SPSS Statistic version 27. Descriptive statistics and bivariate correlations between the study variables were first conducted. Then, hierarchical multiple regressions were performed to test the impact of family socioeconomic hardship (block 1), child

social isolation (block 2), and caregiving distress (block 3), first at T1 and then at T2, on the socioemotional functioning of Portuguese children (at T2), after controlling for possible covariates (child age, sex).

3. Results

3.1. Preliminary analysis: descriptive statistics

Descriptive statistics can be found in Table 2.

Regarding parental distress at T1, 55.9% ($n = 67$) of caregivers reported feeling depressed due to the COVID-19 pandemic (score of 2 or higher). Moreover, 25% ($n = 30$) and 45% ($n = 54$) of caregivers somewhat or completely agreed that they had less time or were less emotionally available (score of 2 or higher) to interact with their child due to the pandemic, respectively. Analysing the results of the Daily Hassles questionnaire measuring parental stress, parents on average achieved a score of 16.19 ($SD= 5.69$). Scores ranged from 9 to 36. Regarding parental distress one year later, at T2, 44.1% of caregivers ($n = 53$) reported feeling depressed due to the pandemic (score of 2 or higher). Also, 21.6% ($n = 24$) and 33.6% ($n = 39$) of caregivers somewhat or completely agreed that they had less time or were less emotionally available (score of 2 or higher) to interact with their child due to the pandemic, respectively. On what concerns parental stress, on average, parents achieved a score of 16.99 ($SD= 5.97$) in the Daily Hassles questionnaire, ranging from a minimum score of 9 to a maximum score of 38.

On what concerns child social isolation, at T1, most caregivers reported that their children had somewhat to very limited opportunities (score of 2 or higher) to interact with other closed adults ($n = 109$, 90.8%), to interact with other children ($n = 107$, 89.2%), and to participate in activities outside the house ($n = 110$, 91.7%). One year later, at T2, most children had somewhat to very limited opportunities to interact with other closed adults ($n = 85$, 70.8%), to interact with other children ($n = 95$, 79.2%), and to participate in activities outside of the house ($n = 86$, 71.7%).

Regarding economic difficulties, at T1, 44.2% ($n = 53$) of caregivers reported that the pandemic had some to a great (score of 2 or higher) negative impact on their finances, 25.8% ($n = 31$) reported that the pandemic had reduced their income and 7.5% ($n = 9$) reported somewhat to very true that they had difficulties in acquiring essential goods. At T2, 40.8% ($n = 49$), 17.5% ($n = 21$) and 7.5% ($n = 9$) of caregivers reported that the pandemic still had a negative impact on their finances, on their income and on acquiring essential goods, respectively.

At T2, children on the PPSC questionnaire, scored on average 5.32 ($SD=4.75$). Scores ranged from a minimum of 0 to a maximum of 22.

Table 2.*Descriptive Statistics*

	<i>M</i>	<i>SD</i>	Min.	Max.
Child age in months (T2)	36.42	7.60	22	51
Caregiver education	1.87	.34	1	2
Parental Time/Emotional Availability (T1)	2.87	1.10	2	6
Parental Psychological	1.81	.92	1	4
Wellbeing (T1)				
Parental Stress (T1)	16.20	5.69	9	36
Child Social Isolation (T1)	6.96	1.47	3	9
Economic Hardship (T1)	4.38	2.04	3	11
Parental Time/Emotional Availability (T2)	2.94	1.50	2	8
Parental Psychological	1.60	.81	1	4
Wellbeing (T2)				
Parental Stress (T2)	16.99	5.97	9	38
Child Social Isolation (T2)	5.63	1.49	3	9
Economic Hardship (T2)	4.03	1.69	3	10
Child socioemotional problems (T2)	5.32	4.75	0	22

3.2. Preliminary analysis: associations between study variables**3.2.1. Associations between predictors.**

Association between the study variables can be found on table 3.

At T1, caregiving distress was found to be positive and significantly associated with child social isolation ($r = .37, p < .001$) and family socioeconomic hardship ($r = .35, p < .001$), also assessed at T1. Child social isolation and family socioeconomic hardship at T1 were also significantly associated ($r = .19, p = .041$).

At T2, the same pattern of results was observed: i.e., caregiving distress was positive and significantly associated with child social isolation ($r = .36, p < .001$) and family socioeconomic

hardship ($r = .67, p < .001$). Child social isolation and family socioeconomic hardship at T2 were also significantly associated ($r = .28, p = .002$).

Results also revealed that caregiving distress at T1 was significantly associated with caregiving distress at T2 ($r = .54, p < .001$). Child social isolation at T1 was significantly associated with child social isolation at T2 ($r = .47, p < .001$). Finally, families who reported more socioeconomic difficulties at T1 also reported more of such difficulties at T2 ($r = .69, p < .001$).

3.2.2. Associations between predictors and child emotional/behavioural problems.

Caregiving distress at T1 and T2 (T1, $r = .41, p < .001$; T2, $r = .58, p < .001$), child social isolation at T1 ($r = .26, p = .006$) and family economic hardship at T1 and T2 (T1, $r = .39, p < .001$; T2, $r = .41, p < .001$) were all significantly associated with child emotional/behavioural problems. Social isolation at T2 and demographic variables (i.e., child age and sex, and caregivers' education) had no significant associations with child socioemotional difficulties (all $p > 0.05$).

Table 3.*Bivariate Correlations Between Study Variables*

	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Child age in months (T1)									
2. Child Sex	-.12								
3. Caregiver Education	.05	.03							
4. Economic hardship (T1)	.13	-.02	-.10						
5. Economic hardship (T2)	.14	.01	-.12	.69***					
6. Child Social Isolation (T1)	-.03	-.03	-.01	.19*	.16				
7. Child Social Isolation (T2)	-.01	-.15	.04	.22*	.28**	.47***			
8. Caregiver Distress (T1)	-.05	.06	.09	.35***	.24**	.37***	.33***		
9. Caregiver Distress (T2)	-.01	-.08	-.10	.57***	.67***	.23*	.37***	.54	
10. Child socioemotional problems	.11	.16	-.11	.39***	.41***	.25**	.17	.41***	.58***

* $p < .05$; ** $p < .01$; *** $p < .001$.

3.3. Main Analysis: Predicting child socioemotional problems

Table 4 and 5 present the regression analysis.

Hierarchical multiple regressions were performed to investigate the effects of COVID-19-related stressors on child socioemotional problems at T2. Thus, a first regression was carried out, testing the role of family socioeconomic hardship (block 1), child social isolation (block 2), and caregiving distress (block 3), all assessed at T1. A second regression was then conducted, testing the role of those putative predictors, but now assessed at T2. Given that the demographic variables (e.g., age, sex) were not significantly associated with child socioemotional functioning, as showed by previous preliminary analysis, they were not entered in the regression models.

3.3.1. COVID-19 stressors at T1 and child emotional/behavioural problems at T2

Family socioeconomic hardship at T1 was entered in the first block of the analyses and was found to be a significant predictor of more socioemotional problems ($\beta = .39, p < .001$). This model proved to be statistically significant, $F(1, 118) = 21.04, p < .001, R^2 = .15$. Then, child social isolation at T1 was included in the second block of the analyses. The model was significant, $F(2, 117) = 13.18, p < .001, R^2 = .18$, and showed significant improvements from the first model, $\Delta F(1, 117) = 4.67, p = .033, \Delta R^2 = .033$. Both family socioeconomic hardship ($\beta = .36, p < .001$), and social isolation ($\beta = .18, p = .033$), predicted more child socioemotional problems. Finally, caregiving distress at T1 was entered in the third block of the analyses. The model proved, once again, to be statistically significant, $F(3, 116) = 12.34, p < .001, R^2 = .24$, and showed significant improvements from previous models, $\Delta F(1, 116) = 8.87, p = .004, \Delta R^2 = .058$. Caregiving distress acted as a significant individual predictor of child socioemotional problems ($\beta = .27, p = .004$). Family socioeconomic hardship ($\beta = .28, p = .002$) was retained as a significant predictor, contrary to child social isolation.

Table 4.*Predictors (T1) of child socioemotional problems (T2)*

	<i>B</i>	<i>SE</i>	β	<i>t</i>
Block 1	R²=.15 (ΔR²=.14)		<i>F</i> (1,118) = 21.04***	
Economic hardship	.91	.20	.39	4.59***
Block 2	R²=.18 (ΔR²=.17)		<i>F</i> (2,117) = 13.18***	
Economic hardship	.83	.20	.36	4.17***
Child social isolation	.59	.27	.18	2.16*
Block 3	R²=.24 (ΔR²=.22)		<i>F</i> (3,116) = 12.34***	
Economic hardship	.64	.20	.28	3.18**
Child social isolation	.32	.28	.10	1.12
Caregiving distress	.60	.20	.27	2.98**

p*<.05; *p*<.01; ****p*<.001.**3.3.2. COVID-19 stressors at T2 and child socioemotional problems at T2**

Family socioeconomic hardship at T2 was entered in the first block of the analyses. The model was found to be statistically significant, $F(1, 118) = 24.39$, $p < .001$, $R^2 = .17$. Family socioeconomic hardship at T2 was a significant individual predictor of more socioemotional difficulties ($\beta = .41$, $p < .001$). The second model, $F(2, 117) = 12.41$, $p < .001$, $R^2 = .18$, which included child social isolation at T2, did not show significant improvements from the first model, $\Delta F(1, 117) = .52$, $p = .472$, $\Delta R^2 = .004$. Only family socioeconomic hardship proved to be a significant predictor of child socioemotional difficulties ($\beta = .40$, $p < .001$). Caregiving distress at T2 was entered in the third block, $F(3,116) = 19.69$, $p < .001$, $R^2 = .38$, significantly improving previous models, $\Delta F(1, 116) = 28.42$, $p < .001$, $\Delta R^2 = .16$. Caregiving distress was found to be a significant predictor of more socioemotional difficulties ($\beta = .56$, $p < .001$), but not child social isolation or family socioeconomic difficulties.

Table 5.*Predictors (T2) of child emotional and behavioural problems (T2)*

	<i>B</i>	<i>SE</i>	β	<i>t</i>
Block 1	R²=.17 (ΔR²=.16)		<i>F</i> (1,118) = 24.39***	
Economic hardship	1.16	.24	.41	4.94***
Block 2	R²=.18 (ΔR²=.16)		<i>F</i> (2,117) = 12.41***	
Economic hardship	1.11	.25	.40	4.53***
Child social isolation	.20	.28	.06	.722
Block 3	R²=.34 (ΔR²=.32)		<i>F</i> (3,116) = 19.68***	
Economic hardship	.14	.29	.05	.49
Child social isolation	-.13	.26	-.04	-.49
Caregiving distress	3.44	.65	.56	5.33***

p*<.05; *p*<.01; ****p*<.001.

4. Discussion

The present longitudinal study aimed to extend the limited current research on the long-term consequences of the COVID-19 pandemic on children's wellbeing. Therefore, the present study main objective was to understand the impact of COVID-19 stressors on children's socioemotional problems, over the course of a year, by describing and exploring the effects of parental distress, social isolation, and socioeconomic hardship on child socioemotional functioning on the Portuguese population, and by understanding how these stressors progressed over time.

First, the present study found that 26 children had highly significant socioemotional difficulties, which can be due to a direct influence of the pandemic. This goes in line with previous research, that shows how the pandemic can have a negative influence on children's socioemotional development and adjustment, especially on younger children (Orgilés et al., 2020). Further research is needed to understand if the pandemic was directly related to these results, or if there had been pre-existing factors that might explain why these children were having these difficulties. It is important to note, however, that the mean of the PSC in this study was below the cut-off point of 9; this could indicate that most children were well-adapted, despite the pandemic.

Results confirmed the hypothesis of this study, that higher levels of caregiving distress, social isolation and more economic difficulties would be related to more socioemotional problems on children and are in line with results presented in literature, which state that these stressors can cause mental health and behavioural problems (Calvano et al., 2022; Urbina-García, 2020; Waite et al., 2021). This finding was consistent in both T1 and T2, except for social isolation and economic hardship at T2 which were not significant individual predictors of more socioemotional problems in children. These findings can be explained with the ease of social distancing restrictions during T2, as families were allowed to resume their normal lives, and children had gone back to day care. However, our results demonstrated that, although in comparison to results obtain during T1 which were collected during the worst peak of COVID-19 pandemic and during a lockdown, a year after families still reported considerable levels of distress and limitations to their normal lives. This finding opposes research which stated that as restrictions lifted, namely social distancing measures, it was expected that parental stress levels significantly decreased over time, which appears not the case for the present study (Johnson et

al., 2021). Recall that, for example, 44.1% of caregivers' still reported feeling depressed due to the pandemic.

Social isolation is one of the COVID-19 stressors which had a great impact on family's wellbeing during the pandemic. This meant that families could no longer rely on the help and support of others, such as family or childcare support, as contacts were limited to those living within the same household (Cameron & Tenenbaum, 2020). Regarding children social isolation, the impacts of the pandemic were very present during the 3rd wave of the pandemic, however, one year later families reported less social isolation, which was expected as restrictions began to be lifted. During T1, the consequences of social isolation were related to more socioemotional problems in children. However, this was not the case during T2, as social isolation was not a predictor of more socioemotional problems. Although families reported that the restrictions were still being felt in the home, results suggest that the impact of social isolation, which was felt across the population during the COVID-19 lockdowns, might be temporary and last for as long as the stressor is in place.

Another factor that might explain this result can be due to children's resilience and ability to adapt to the environment they are in as well as their families, as shown in previous studies which aimed to evaluate the impact of the pandemic on family's stress levels (Mantovani et al., 2021; Prime et al., 2020). Resilient parents, when faced with a stressful situation, can protect their children from the negative effect of the situation by engaging in positive and supportive parenting, which in turn leads to a better child socioemotional functioning (Fagan & Wildfeuer, 2022). Furthermore, this finding could be explained by social isolation being a protective factor for families, especially those whose income and jobs were not affected, as it meant families got to spend quality time together (Fegert et al., 2020). This finding agrees with some of the literature, as socialization and participation in leisure activities are known to help reduce stress (Imboden et al., 2021). Furthermore, it helps explain the important that socialization has on reducing emotional and behavioural problems on children, as well as help reduce families stress levels.

In line with our hypothesis, caregiving distress (at T1 and T2) was found to be a significant predictor of child's socioemotional problems. Out of the three stressors explored in the study, caregiving distress was the stressor that appears to better explain child socioemotional problems at T2. This finding goes in line with previous research, which has shown how parents who are in greater distress due to pandemic related stressors, such as economic difficulties or the pressure on the work-life balance, can have a negative impact on children's emotional and

social development, as they are less available to the children's demands (Calvano et al., 2022; Opperman et al., 2021).

Studies have demonstrated how parents displayed higher levels of stress during COVI-19, which could have resulted in less emotional availability towards their children (Achterberg et al., 2021; Calvano et al., 2022). One factor that can explain these results for Portuguese parents, is how they work long hours and are reliant on family support to take care of their children; without this support during the lockdowns Portuguese parents could have become more vulnerable to the effects of COVID-19 (Toscano et al., 2022). As most families expressed that their children interacted less with other children and as well as other adults, namely family members, it can be implicit that this added a burden to parents, which consequently could have impacted their children's socioemotional wellbeing (Li et al., 2021). Another factor that might help to explain the high stress levels experienced by caregivers is the changes of the routine brought by the pandemic, having to work from home while taking care of their children, as the pandemic might have exacerbated these stressors already present in the parent's life (Opperman et al., 2021).

Furthermore, our results seem to support the parental stress model, which stated that parents who are experiencing more stress, will be less emotionally available for their children, which can have numerous of consequences for their wellbeing (Low & Mounts, 2021; Opperman et al., 2021; Ramanathan et al., 2021). Caregiving distress influences negatively how parents evaluate their capacities to cope, as parents who display higher levels of stress, are more likely to perceive themselves with less resources to manage their children and their overall life, for example (Opperman et al., 2021). Also, parents who display higher levels of stress due to the COVID-19 pandemic could be at higher risk of adopting maladaptive parenting practices, such as using punishing behaviours and emotional abuse (Calvano et al., 2022). One aspect to highlight was the fact that the majority of the caregivers in this study were mothers, who, according to other studies are at higher risk of stress, due to the unequal housework division, which is still a reality in most households, as they are responsible not only for the education of the child, but also the management of the house chores, such as cooking and cleaning (Li et al., 2021). Studies demonstrated how stress in mothers was associated with overreactive parenting practices, less emotional availability (Errázuriz et al., 2012).

Our results showed that economic hardship was related to higher levels of stress, supporting the hypothesis of the family model stress, as parents stress could have resulted from the need to manage limited resources (Ramanathan et al. 2021). This finding is consistent with literature, as having financial difficulties is known to be one of the main sources of stresses for parents

(Gershoff et al., 2007; Opperman et al., 2021). During the COVID-19 pandemic, where families lost their jobs or had their sources of income affected, this finding is not surprising. During the worst peak of the pandemic, both economic hardship and parental stress were predicting more child socioemotional problems. However, this was not the case one year after, although economic hardship was associated to higher levels of caregiving distress and child functioning.

The current findings help to understand how important it is to protect children's wellbeing by promoting parental wellbeing, by implementing strategies to reduce their stress and by providing the appropriate support. This is particularly relevant for mothers, as they experience higher levels of stress and are more affected by the increased burden during the COVID-19 pandemic. Therefore, one strategy to help reduce the burden experienced by mothers is to promote positive coparenting, so that both caregivers are supporting each other, especially in terms of promoting adequate child upbringing (Feinberg et al., 2021; Toscano et al., 2022).

Limitations and Future Directions

The current study, to the best of our knowledge, was the first to examine the long-term impact of the COVID-19 pandemic on young children's socioemotional functioning in Portugal. However, the present study has limitations which should be discussed. One of the main limitations of the current research is its design, as it is a quantitative study based on parent's perception of the variables. Having a deeper understanding of the caregiver's experience would help support the results of the current study, by implementing observational measures for assessing parenting behaviours or by interviewing them to comprehend which were the major difficulties they have experienced during the pandemic and how the pandemic affected the development of their children. Additionally, the assessment of children's socioemotional wellbeing was based on the caregiver's self-report, which can be affected by bias (Bornstein et al., 2015). Considering these limitations, future studies should adopt a multi-method design and directly assess young children's socioemotional development.

Moreover, the present findings cannot be generalized to all children, as families in this study were mostly highly educated, belonging to middle class. Additionally, most of the caregivers in this study were employed and reported little to no socioeconomic difficulties due to the pandemic. Families who lost their jobs and source of income would most likely have a different experience to the families in this study. Furthermore, the present study was conducted through an online questionnaire, and families of lower socioeconomic class might not have access to internet as easily. Therefore, results are not generalized to families of lower socioeconomic status. Furthermore, as most of the children in this study were attending day-

care (97% of children), future studies could examine the long-term impact of the pandemic on the socioemotional development of children who do not attend day care. Attending day care could have been a protective factor against the negative consequences of the pandemic; it could have helped alleviate the impact that caregiving distress had on children, as they get to experience another environment outside the house.

Other recommendations merit discussion. Our results highlight the need to provide appropriate support to families, especially during difficult times, such as a pandemic or during other crisis, as parental stress can directly and negatively influence children's development and wellbeing. Considering how the consequences of caregiving stress on children's development can be prolonged in time, even after the critical period of the pandemic ended, it would be interesting for future research to follow these parents and assess their well-being a year after, as it would help understand if families were still being affected by COVID-19 stressors. Results of the present study demonstrated the importance of providing the adequate support to parents, especially during crisis, such as a pandemic or economic recessions, for example. This increased support might help mitigate the effects of caregiving distress on child's emotional problems. For the future, it would be interesting to have this support through online interventions, namely on the promotion of adequate coping mechanisms, to help parents manage their emotional wellbeing as well as their child's. This is particularly important, as parental stress arises when caregivers evaluate their internal coping resources as insufficient (Opperman et al., 2021). Having interventions which would allow parents to develop their coping resources would directly have a positive influence on their parenting skills and consequently the social and emotional wellbeing of the child, reducing the likelihood of harsh parenting practices (Feinberg et al., 2021; Toscano et al., 2021).

Conclusion

The current study provided an insight of the long-term impact COVID-19 stressors on the functioning of families in Portugal, more specifically on the social and emotional wellbeing of young children, which was something not yet studied. The results of the study helped to understand what stressors had the greatest impact on children's development and on family's wellbeing. By examining the long-term consequences of the pandemic this study helped to understand how important it is to provide adequate support for parents to promote their wellbeing and consequently their child's.

Furthermore, future research should focus on understanding parents' experiences, to help identify which were the main stressors for them during the pandemic, but also understand their perception on how the pandemic affected their child's emotional wellbeing. This deeper understanding will help to prevent negative consequences of future crisis and develop the adequate support to help to promote the wellbeing of Portuguese families.

References

- Abidin, R. R. (1992). The determinants of parenting behavior. *Journal of Clinical Child Psychology*, 21(4), 407–412. https://doi.org/10.1207/s15374424jccp2104_12
- Achterberg, M., Dobbelaar, S., Boer, O. D., & Crone, E. A. (2021). Perceived stress as mediator for longitudinal effects of the COVID-19 lockdown on wellbeing of parents and children. *Scientific reports*, 11(1), 2971. <https://doi.org/10.1038/s41598-021-81720-8>
- Adegboye, D., Williams, F., Collishaw, S., Shelton, K., Langley, K., Hobson, C., Burley, D., & van Goozen, S. (2021). Understanding why the COVID-19 pandemic-related lockdown increases mental health difficulties in vulnerable young children. *JCPP advances*, 1(1), e12005. <https://doi.org/10.1111/jcv2.12005>
- Araújo, L. A., Veloso, C. F., Souza, M. C., Azevedo, J., & Tarro, G. (2021). The potential impact of the COVID-19 pandemic on child growth and development: a systematic review. *Jornal de pediatria*, 97(4), 369–377. <https://doi.org/10.1016/j.jpmed.2020.08.008>
- Ares, G., Bove, I., Vidal, L., Brunet, G., Fuletti, D., Arroyo, Á., & Blanc, M. V. (2021). The experience of social distancing for families with children and adolescents during the coronavirus (COVID-19) pandemic in Uruguay: Difficulties and opportunities. *Children and youth services review*, 121, 105906. <https://doi.org/10.1016/j.childyouth.2020.105906>
- Bai, Y., Liu, X., Zhang, B. et al. Associations of youth mental health, parental psychological distress, and family relationships during the COVID-19 outbreak in China. *BMC Psychiatry* 22, 275 (2022). <https://doi.org/10.1186/s12888-022-03938-8>
- Benner, A. D., & Mistry, R. S. (2020). Child Development During the COVID-19 Pandemic Through a Life Course Theory Lens. *Child development perspectives*, 14(4), 236–243. <https://doi.org/10.1111/cdep.12387>
- Bornstein, M. H., Putnick, D. L., Lansford, J. E., Pastorelli, C., Skinner, A. T., Sorbring, E., Tapanya, S., Tirado, L. M. U., Zelli, A., Alampay, L. P., Al-Hassan, S. M., Bacchini, D., Bombi, A. S., Chang, L., Deater-Deckard, K., Di Giunta, L., Dodge, K. A., Malone, P. S., & Oburu, P. (2015). Mother and father socially desirable responding in nine countries: Two kinds of agreement and relations to parenting self-reports. *International Journal of Psychology*, 50(3), 174–185. <https://doi.org/10.1002/ijop.12084>
- Buheji, M., Hassani, A., Ebrahim, A., da Costa Cunha, K., Jahrami, H., Baloshi, M., & Hubail, S. (2020). Children and coping during COVID-19: A scoping review of bio-psycho-social factors. *International Journal of Applied Psychology*, 10(1), 8-15. 10.5923/j.ijap.20201001.02

- Calvano, C., Engelke, L., Di Bella, J., Kindermann, J., Renneberg, B., & Winter, S. M. (2022). Families in the COVID-19 pandemic: parental stress, parent mental health and the occurrence of adverse childhood experiences-results of a representative survey in Germany. *European child & adolescent psychiatry*, 31(7), 1–13. <https://doi.org/10.1007/s00787-021-01739-0>
- Cameron, L., & Tenenbaum, H. R. (2021). Lessons from developmental science to mitigate the effects of the COVID-19 restrictions on social development. *Group Processes & Intergroup Relations*, 24(2), 231–236. <https://doi.org/10.1177/1368430220984236>
- Chung, G., Lanier, P., & Wong, P. (2022). Mediating Effects of Parental Stress on Harsh Parenting and Parent-Child Relationship during Coronavirus (COVID-19) Pandemic in Singapore. *Journal of family violence*, 37(5), 801–812. <https://doi.org/10.1007/s10896-020-00200-1>
- Conger, R. D., & Conger, K. J. (2002). Resilience in Midwestern families: Selected findings from the first decade of a prospective, longitudinal study. *Journal of Marriage and Family*, 64(2), 361–373. <https://doi.org/10.1111/j.1741-3737.2002.00361.x>
- Costa, R., R., (2020). Parentalidade em contextos de desvantagem socioeconómica: O papel preditivo de variáveis familiares e sociodemográficas na perceção dos técnicos. [Dissertação de mestrado, Universidade de Lisboa].
- Deater-Deckard, K. (1998). Parenting stress and child adjustment: Some old hypotheses and new questions. *Clinical Psychology: Science and Practice*, 5(3), 314–332. <https://doi.org/10.1111/j.1468-2850.1998.tb00152.x>
- Delvecchio, E., Orgilés, M., Morales, A., Espada, J. P., Francisco, R., Pedro, M., & Mazzeschi, C. (2022). COVID-19: Psychological symptoms and coping strategies in preschoolers, schoolchildren, and adolescents. *Journal of applied developmental psychology*, 79, 101390. <https://doi.org/10.1016/j.appdev.2022.101390>
- Doucet, F., Allen, L. (Ed.), & Kelly, B. B. (Ed.) (2015). Transforming the workforce for children Birth through Age 8: A unifying foundation. *The National Academies Press*.
- Dubey, S., Biswas, P., Ghosh, R., Chatterjee, S., Dubey, M. J., Chatterjee, S., Lahiri, D., & Lavie, C. J. (2020). Psychosocial impact of COVID-19. *Diabetes & metabolic syndrome*, 14(5), 779–788. <https://doi.org/10.1016/j.dsx.2020.05.035>
- Easterbrook, M. J., Doyle, L., Grozev, V. H., Kosakowska-Berezecka, N., Harris, P. R., & Phalet, K. (2022). Socioeconomic and gender inequalities in home learning during the COVID-19 pandemic: examining the roles of the home environment, parent supervision, and educational provisions. *Educational and Developmental Psychologist*, 1-13.

- Eisenberg, N., & Silver, R. C. (2011). Growing up in the shadow of terrorism: youth in America after 9/11. *The American psychologist*, 66(6), 468–481. <https://doi.org/10.1037/a0024619>
- Errázuriz, P. A., Harvey, E. A., & Thakar, D. A. (2012). A Longitudinal Study of the Relation Between Depressive Symptomatology and Parenting Practices. *Family relations*, 61(2), 271–282. <https://doi.org/10.1111/j.1741-3729.2011.00694.x>
- Fagan, J., Wildfeuer, R. Low-Income Parental Risk and Engagement in Early Childhood and Child Social-Emotional Functioning in Middle Childhood. *Journal of Child and Family Studies* 31, 70–85 (2022). <https://doi.org/10.1007/s10826-021-02204-x>
- Fan, Y., Wang, H., Wu, Q., Zhou, X., Zhou, Y., Wang, B., Han, Y., Xue, T., & Zhu, T. (2021). SARS pandemic exposure impaired early childhood development in China. *Scientific reports*, 11(1), 8694. <https://doi.org/10.1038/s41598-021-87875-8>
- Fegert, J. M., Vitiello, B., Plener, P. L., & Clemens, V. (2020). Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child and adolescent psychiatry and mental health*, 14, 20. <https://doi.org/10.1186/s13034-020-00329-3>
- Feinberg, M. E., Mogle, J. A., Lee, J. K., Tornello, S. L., Hostetler, M. L., Cifelli, J. A., Bai, S., & Hotez, E. (2021). Impact of the COVID-19 pandemic on parent, child, and family functioning. *Family Process Advance* online publication. <https://doi.org/10.1111/famp.12649>
- Feldman, R. (2015). The adaptive human parental brain: Implications for children's social development. *Trends in Neurosciences*, 38(6), 387–399. <https://doi.org/10.1016/j.tins.2015.04.004>
- Gargano, L. M., Welch, A. E., & Stellman, S. D. (2017). Substance use in adolescents 10 years after the World Trade Center attacks in New York City. *Journal of Child & Adolescent Substance Abuse*, 26(1), 66–74. <https://doi.org/10.1080/1067828X.2016.1210551>
- Gershoff, E. T., Aber, J. L., Raver, C. C., & Lennon, M. C. (2007). Income is not enough: incorporating material hardship into models of income associations with parenting and child development. *Child development*, 78(1), 70–95. <https://doi.org/10.1111/j.1467-8624.2007.00986.x>
- Giannotti, M., Mazzoni, N., Bentenuto, A., Venuti, P., & de Falco, S. (2022). Family adjustment to COVID-19 lockdown in Italy: Parental stress, coparenting, and child externalizing behavior. *Family process*, 61(2), 745–763. <https://doi.org/10.1111/famp.12686>
- Goldfeld, S., O'Connor, E., Sung, V., Roberts, G., Wake, M., West, S., & Hiscock, H. (2022). Potential indirect impacts of the COVID-19 pandemic on children: a narrative review using a

community child health lens. *The Medical journal of Australia*, 216(7), 364–372.

<https://doi.org/10.5694/mja2.51368>

- Griffith A. K. (2022). Parental Burnout and Child Maltreatment During the COVID-19 Pandemic. *Journal of family violence*, 37(5), 725–731. <https://doi.org/10.1007/s10896-020-00172-2>
- Guajardo, N. R., Snyder, G., & Petersen, R. (2009). Relationships among parenting practices, parental stress, child behaviour, and children's social-cognitive development. *Infant and Child Development*, 18(1), 37–60. <https://doi.org/10.1002/icd.578>
- Gupta, S., & Jawanda, M. K. (2020). The impacts of COVID-19 on children. *Acta paediatrica* (Oslo, Norway, 1992), 109(11), 2181–2183. <https://doi.org/10.1111/apa.15484>
- Imboden, A., Sobczak, B. K., & Griffin, V. (2021). The impact of the COVID-19 pandemic on infant and toddler development. *Journal of the American Association of Nurse Practitioners*.
- Imran, N., Zeshan, M., & Pervaiz, Z. (2020). Mental health considerations for children & adolescents in COVID-19 Pandemic. *Pakistan journal of medical sciences*, 36(COVID19-S4), S67–S72. <https://doi.org/10.12669/pjms.36.COVID19-S4.2759>
- Jiao, W. Y., Wang, L. N., Liu, J., Fang, S. F., Jiao, F. Y., Pettoello-Mantovani, M., & Somekh, E. (2020). Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. *The Journal of pediatrics*, 221, 264–266.e1. <https://doi.org/10.1016/j.jpeds.2020.03.013>
- Johnson, M. S., Skjerdingsstad, N., Ebrahimi, O. V., Hoffart, A., & Urnes Johnson, S. (2021). Mechanisms of parental distress during and after the first COVID-19 lockdown phase: A two-wave longitudinal study. *PloS one*, 16(6), e0253087. <https://doi.org/10.1371/journal.pone.0253087>
- Kanner, A., Coyne, J., Schaefer, C., & Lazarus, R. (1981). Comparison of two modes of stress measurement. Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine*, 4(1), 1–39. <https://doi.org/10.1007/BF00844845>
- Keller, H. (2018). Parenting and socioemotional development in infancy and early childhood. *Developmental Review*, 50, 31-41.
- Kimhi, S., Marciano, H., Eshel, Y., & Adini, B. (2020). Resilience and demographic characteristics predicting distress during the COVID-19 crisis. *Social science & medicine* (1982), 265, 113389. <https://doi.org/10.1016/j.socscimed.2020.113389>
- Lengua, L. J., Thompson, S. F., Kim, S. G., Rosen, M. L., Rodman, A., Kasparek, S., Mayes, M., Zalewski, M., Meltzoff, A., & McLaughlin, K. A. (2022). Maternal mental health mediates the effects of pandemic-related stressors on adolescent psychopathology during COVID-19. *Journal of child psychology and psychiatry, and allied disciplines*, 10.1111/jcpp.13610. Advance online publication. <https://doi.org/10.1111/jcpp.13610>

- Li, W., Wang, Z., Wang, G., Ip, P., Sun, X., Jiang, Y., & Jiang, F. (2021). Socioeconomic inequality in child mental health during the COVID-19 pandemic: First evidence from China. *Journal of affective disorders*, 287, 8–14. <https://doi.org/10.1016/j.jad.2021.03.009>
- Loeber, R. (1990). Development and risk factors of juvenile antisocial behavior and delinquency. *Clinical Psychology Review*, 10(1), 1–41. [https://doi.org/10.1016/0272-7358\(90\)90105-J](https://doi.org/10.1016/0272-7358(90)90105-J)
- Lopes, P. B. P. de F. (2021). Brief Infant-Toddler Social and Emotional Assessment (BITSEA): estudo de validação para a população portuguesa [Dissertação de mestrado, Iscte - Instituto Universitário de Lisboa]. Repositório do Iscte. <http://hdl.handle.net/10071/23600>
- Low, N., & Mounts, N. S. (2022). Economic stress, parenting, and adolescents' adjustment during the COVID-19 pandemic. *Family Relations*, 71(1), 90-107.
- Lucassen, N., de Haan, A. D., Helmerhorst, K., & Keizer, R. (2021). Interrelated changes in parental stress, parenting, and coparenting across the onset of the COVID-19 pandemic. *Journal of family psychology. Journal of the Division of Family Psychology of the American Psychological Association (Division 43)*, 35(8), 1065–1076. <https://doi.org/10.1037/fam0000908>
- Mantovani, S., C. Bove, P. Ferri, P. Manzoni, A. Cesa Bianchi & M. Picca (2021) Children 'under lockdown': voices, experiences, and resources during and after the COVID-19 emergency. Insights from a survey with children and families in the Lombardy region of Italy, *European Early Childhood Education Research Journal*, 29:1, 35-50, DOI: 10.1080/1350293X.2021.1872673
- Marques de Miranda, D., da Silva Athanasio, B., Sena Oliveira, A. C., & Simoes-E-Silva, A. C. (2020). How is COVID-19 pandemic impacting mental health of children and adolescents?. *International journal of disaster risk reduction*, 51, 101845. <https://doi.org/10.1016/j.ijdrr.2020.101845>
- Masarik, A. S., & Conger, R. D. (2017). Stress and child development: A review of the Family Stress Model. *Current Opinion in Psychology*, 13, 85–90. <https://doi.org/10.1016/j.copsyc.2016.05.008>
- Oppermann, E., Cohen, F., Wolf, K., Burghardt, L., & Anders, Y. (2021). Changes in Parents' Home Learning Activities With Their Children During the COVID-19 Lockdown - The Role of Parental Stress, Parents' Self-Efficacy and Social Support. *Frontiers in psychology*, 12, 682540. <https://doi.org/10.3389/fpsyg.2021.682540>
- Office for National Statistics (2020). Coronavirus and anxiety, Great Britain. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/coronavirusandanxietygreatbritain/3april2020to10may2020>

- Orgilés, M., Morales, A., Delvecchio, E., Mazzeschi, C., & Espada, J. P. (2020). Immediate Psychological Effects of the COVID-19 Quarantine in Youth From Italy and Spain. *Frontiers in psychology*, 11, 579038. <https://doi.org/10.3389/fpsyg.2020.579038>
- O'Sullivan, K., Clark, S., McGrane, A., Rock, N., Burke, L., Boyle, N., Joksimovic, N., & Marshall, K. (2021). A Qualitative Study of Child and Adolescent Mental Health during the COVID-19 Pandemic in Ireland. *International journal of environmental research and public health*, 18(3), 1062. <https://doi.org/10.3390/ijerph18031062>
- Pantell, M., Rehkopf, D., Jutte, D., Syme, S. L., Balmes, J., & Adler, N. (2013). Social isolation: a predictor of mortality comparable to traditional clinical risk factors. *American journal of public health*, 103(11), 2056-2062.
- Perrin, E. C., Sheldrick, C., Visco, Z., & Mattern, K. (2016). *The survey of well-being of young children (SWYC) user's manual (1.01)*. Center, Tufts Medical. <https://www.tuftschildrenshospital.org/-/media/Brochures/Floating-Hospital/SWYC/SWYC-Manual-v101-Web-Format-33016.ashx?la=en&hash=E0C2802F003ED312E9D5268374C540A112151FB3>
- Petretto, D. R., Masala, I., & Masala, C. (2020). School Closure and Children in the Outbreak of COVID-19. *Clinical practice and epidemiology in mental health*, 16, 189–191. <https://doi.org/10.2174/1745017902016010189>
- Pfefferbaum, B., & North, C. S. (2020). Mental Health and the Covid-19 Pandemic. *The New England journal of medicine*, 383(6), 510–512. <https://doi.org/10.1056/NEJMp2008017>
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631–643. <https://doi.org/10.1037/amp0000660>
- Ramanathan, S., Balasubramanian, N., & Faraone, S. V. (2017). Familial transient financial difficulties during infancy and longterm developmental concerns. *Psychological Medicine*, 47(12), 2197–2204
- Ramanathan, S., Balasubramanian, N., & Faraone, S. V. (2021). Association between transient financial stress during early childhood and pre-school cognitive and socioemotional development. *Infant and Child Development*, e2267. <https://doi.org/10.1002/icd.2267>
- Ravens-Sieberer, U., Kaman, A., Erhart, M., Devine, J., Schlack, R., & Otto, C. (2022). Impact of the COVID-19 pandemic on quality of life and mental health in children and adolescents in Germany. *European child & adolescent psychiatry*, 31(6), 879–889. <https://doi.org/10.1007/s00787-021-01726-5>

- Rogoff, B., Dahl, A., & Callanan, M. (2018). The importance of understanding children's lived experience. *Developmental Review*, 50(Part A), 5–15.
<https://doi.org/10.1016/j.dr.2018.05.006>
- Romero, C. S., Delgado, C., Catalá, J., Ferrer, C., Errando, C., Iftimi, A., Benito, A., de Andrés, J., Otero, M., & PSIMCOV group* (2020). COVID-19 psychological impact in 3109 healthcare workers in Spain: The PSIMCOV group. *Psychological medicine*, 1–7. Advance online publication. <https://doi.org/10.1017/S0033291720001671>
- Santos, V. A. B., (2008). Stress parental e práticas parentais em mães de crianças com perturbação de hiperactividade com défice de atenção [Dissertação de mestrado, Universidade de Lisboa].
- Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, 293, 113429.
<https://doi.org/10.1016/j.psychres.2020.113429>
- Slone, M., & Mann, S. (2016). Effects of War, Terrorism and Armed Conflict on Young Children: A Systematic Review. *Child psychiatry and human development*, 47(6), 950–965.
<https://doi.org/10.1007/s10578-016-0626-7>
- Squires, J., Bricker, D., & Twombly, E. (2002). *The ASQ:SE user's guide for the ages & stages questionnaires: Social-emotional* (Vol. 2). Brookes.
- Tso, W., Wong, R. S., Tung, K., Rao, N., Fu, K. W., Yam, J., Chua, G. T., Chen, E., Lee, T., Chan, S., Wong, W., Xiong, X., Chui, C. S., Li, X., Wong, K., Leung, C., Tsang, S., Chan, G., Tam, P., Chan, K. L., ... Lp, P. (2022). Vulnerability and resilience in children during the COVID-19 pandemic. *European child & adolescent psychiatry*, 31(1), 161–176.
<https://doi.org/10.1007/s00787-020-01680-8>
- Urbina-Garcia, A. (2020). Young Children's Mental Health: Impact of Social Isolation During The COVID-19 Lockdown and Effective Strategies. <https://doi.org/10.31234/osf.io/g549x>
- Waite, P., Pearcey, S., Shum, A., Raw, J. A., Patalay, P., & Creswell, C. (2021). How did the mental health symptoms of children and adolescents change over early lockdown during the COVID-19 pandemic in the UK?
- Wass, S. V., Whitehorn, M., Marriott Haresign, I., Phillips, E., & Leong, V. (2020). Interpersonal Neural Entrainment during Early Social Interaction. *Trends in cognitive sciences*, 24(4), 329–342. <https://doi.org/10.1016/j.tics.2020.01.006>
- Wong, R. S., Tung, K., Li, X., Chui, C. S., Tso, W., Lee, T., Chan, K. L., Wing, Y. K., Fu, K. W., Wong, I., & Lp, P. (2022). Examining family pre-pandemic influences on adolescent psychosocial wellbeing during the COVID-19 pandemic. *Current psychology (New*

Brunswick, N.J.), 1–11. Advance online publication. <https://doi.org/10.1007/s12144-022-02736-5>

World Health Organization (2020, April). WHO Timeline – COVID-19.

<https://www.who.int/news/item/27-04-2020-who-timeline---covid-19>

Yeasmin, S., Banik, R., Hossain, S., Hossain, M. N., Mahumud, R., Salma, N., & Hossain, M. M. (2020). Impact of COVID-19 pandemic on the mental health of children in Bangladesh: A cross-sectional study. *Children and youth services review*, 117, 105277.

<https://doi.org/10.1016/j.childyouth.2020.105277>

Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., Ponguta, L. A., Richter, L. M., & Stein, A. (2020). Effects of the Global Coronavirus Disease-2019 Pandemic on Early Childhood Development: Short- and Long-Term Risks and Mitigating Program and Policy Actions. *The Journal of pediatrics*, 223, 188–193.

<https://doi.org/10.1016/j.jpeds.2020.05.020>