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## Article

# Families Facing Pandemic Modifications of Everyday Life: A Mixed Study on Mothers' and Children's Emotional Reactions and Regulation Strategies

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**Abstract:** The COVID-19 pandemic caused many enduring changes in everyday life of families with negative effects on parents' and children well-being. However, literature lacks of studies exploring emotional reactions and coping strategies of both mothers and children of different ages. Furthermore, most studies used only self-reports. This study aimed to identify the emotions and coping strategies of children, adolescents and their mothers and to verify the association between maternal and children well-being. A mixed-method design using interviews and questionnaires was applied to collect information on well-being (emotional reactions, behavioral/emotional problems) and coping strategies of both mothers (n=65), and their children (n=35, 8-10 year; n=30, 11-13 year) during the second wave of the pandemic (December 2020). No differences between the groups emerged concerning the emotional reactions reported. In contrast, mothers and children of different ages reported different self-regulation and other-regulation strategies. Moreover, maternal strategies had different effects on children well-being. The integration of qualitative and quantitative results was informative to understand how families adapted to the radical changes of everyday life caused by the pandemic. Implications for developing interventions in such similar stressful situations to promote family well-being are discussed.

**Keywords:** COVID-19; mixed method; family well-being; emotions; coping strategies; mother; children; adolescents

## 1. Introduction

Between the end of 2019 and the beginning of 2020, the COVID-19 pandemic began, affecting the life of people all around the world with effects that are still present. On March 9th, the Italian population was forced to stay indoors to avoid the spread of this new virus. Families were forced to spend time in the same physical space for three months. Smart working and distance learning were introduced, school closures were compulsory and meetings in public spaces were forbidden. Some of these limitations and the several modifications of everyday social life aimed to contain infections such as the use of masks, social distancing, distance learning etc, lasted for months after the first lockdown.

This situation negatively affected families' routines and behaviours [24, 28] with negative effects on parents, children, and adolescents' general mental health [23, 27, 28, 31, 35].

Previous studies conducted after potentially traumatic disasters, evidenced that the potential short and long negative effect of stressful circumstances on children mental health is mediated by

how the family handled the stress. For example, the quality of caregiver-children supportive verbal communications (i.e., caregiver's willingness to discuss problems in general, providing encouragement, emotional expression) was associated with children positive coping strategies after the 2010 Chilean earthquake [13], with less negative psychological outcomes 11 years after the Chernobyl nuclear disaster [5], and with adolescents less anxiety and distress [5, 14]. On the other hand, when the distressed caregivers were unable to support their children's ability to express and process painful emotions related to environmental trauma, the effect on the child was detrimental [13].

During and right after the beginning of COVID-19 many scholars aimed to explore the effects of everyday life modifications on children and parents' wellbeing [i.e., 6, 29, 36]. However, most of the studies investigated children wellbeing using parent reports, rarely explored both parents' and children's perspectives, and focused on the first months of the COVID-19 leaving the long-term effects unexplored. Moreover, most of them included wide age ranges failing to capture the differences in emotional reactions between children and adolescents [6, 40].

To contribute to this field of studies, the present research, using both quantitative and qualitative data, explored emotional reactions and coping strategies of children, adolescents and their mothers nine months after the beginning of the COVID-19, on December 2020. This moment in time was very critic, even though the first lockdown was ended, the frequency of infections was still high. Children were requested to go to school following many restrictions (i.e., wearing masks, keeping social distance, reducing interactions, and doing distance learning after contact with an infective person) and social life was strongly modified. An in-depth exploration of children and parents' emotional reactions might help understanding the impact of such strong modifications of family life on parents and children of different ages. Findings will inform the design of clinical and psychosocial interventions directed to families during this and similar situations.

### *1.1. The Impact of COVID-19 Pandemic on Families' Emotional Wellbeing*

#### *Children's and Adolescents' Emotional Reactions*

The majority of studies exploring children's emotional reactions to COVID-19 related modifications of their everyday life were conducted during the first lockdown (March-April 2020), and only few of them directly collected children's opinions, the majority used parent reports.

When interviewed about their wellbeing children reported mixed emotions linked to the different impacts of the situation on their life. Missing their grandparents, playing with their friends, being able to go outside, and having missed milestone events, like birthday celebrations or graduations, made children feeling bored, lonely, and sad [3, 6, 16, 23]. On the other hand, the forced cohabitation made them feel happy, relaxed to be in their own home, helped the development of close family bonds and, at the same time, made them feel angry and worried about their family condition and nervous and agitated about the situation [3, 6, 16, 40]. Moreover, children had low motivation and dissatisfaction about learning online, but they enjoyed some aspects of not going to school [6]. Not having appointments or class's activities reduced the children's stress levels and increased their free time for pleasure activities or for mastering new skills (e.g., yoga, video games, painting) [6, 40].

It is well known that the pandemic has impacted worldwide lives for many months, with implications that are still present even if the emergency is almost over. However, only few studies explored the long-lasting effects of COVID-19 modifications on everyday life after the first lockdown. Moreover, most of the studies considered a wide range of ages, failing to explore the specificities of children and adolescents' reactions. The results of a qualitative study conducted few months after the lockdown showed how children's (from kindergarten age to 18 years old) emotional reactions varied according to age and were quite different from what reported in studies conducted during the lockdown [40]. Specifically, younger children showed COVID-19 preoccupations incorporating them into their games or recommending their parents to respect containment measures. Older children, instead, suffered from the lack of privacy and the reduction of social activities outside the family household (i.e., school, peer groups, recreational activities, visits to grandparents) [40]. Regardless of

their age, children's emotions changed from fear and anxiety, expressed during the first lockdown, to frustration and aggression shown few months later [40].

To sum up, the lockdown had mixed impact on children's well-being. Scholars also reported the presence of positive reactions related to some aspects of modifications of life. An exploration of both positive and negative emotional reactions is necessary to fully understand the complexity of the experience. Moreover, emotional reactions could differ among ages with children and adolescents showing different emotional reactions and different strategies used to cope with those emotions. A crucial limit of the literature is the only focus on the lockdown experience; this was very useful to understand the immediate effects of the pandemic, however understanding long-lasting effects of the modifications to everyday life that are still present even months after the beginning of the emergency and that could be replicated if similar situations happen again is now necessary.

### 1.1.1. Parents' Emotional Responses

The changes in everyday life caused by COVID-19 had a negative impact also on parents' well-being. The major COVID-19 pandemic's restrictions and the rules imposed by the government to prevent contagions made parents feeling angry, frustrated and stressed for daily inconveniences, especially related to school, work and family members [6]. In particular, stress was perceived by trying to balance work, parenting and schooling children from home [6]. Having to choose between prioritizing work at home or parenting made them feel guilty and unable to fully attend either role. Parenting's difficulties were specifically related to managing sibling relationships and to give their children limited opportunities for socialization with peers [9].

As for the work, unemployment, job insecurity and layoffs made parents feeling high levels of stress [9].

With the extension of the first lockdown, parents expressed concerns about long-term impacts of the COVID-19 pandemic on their children's lives, specifically their mental health, education and opportunities [6]. In addition, with the increase of deaths and infections, concerns were emerging regarding the impact of COVID-19 on the health of elderly parents, family members or friends and parents were feared of getting sick or dying [6, 17]. The closure of infant centres and schools made parents experiencing fear of not feeling able to take care of their children in the event of infection of both parents [6, 9]. In general, they reported the fear of being unable to control what was happening to their family life [9, 25, 30].

Because the family condition impacted that much on parents' emotional reactions, we might expect to find differences between parents of children's and adolescents' reactions. However, to the best of our knowledge only one study explored the difference between negative emotions of parents of children of different ages [40]. Parents of kindergarten-aged children were concerned that their children had few social learning opportunities with their peers and were not receiving adequate preparation for school entry, and, as the duration of the first lockdown increased, they feared that children might forget previously learned kindergarten routines and their friends [40]. In contrast, parents of elementary school-age children showed concerns about their children's educational disadvantages related to home learning due to limited ability to support them [40].

As for children, the COVID-19 pandemic had some positive effects on parents' wellbeing. Among the reported positive aspects of forced cohabitation, one was the creation of stronger bonds with family members and the ability to spend more quality time with their children and the partner. In addition, improvements in sibling relationships were observed that had not occurred when schools were open [6, 9, 16].

In conclusion, the COVID-19 pandemic had both positive and negative effects on parents' emotional sphere. Their emotional reactions varied according to the children's age, however only few studies explored these differences. In addition, most studies were conducted during the first lockdown, leaving a gap on the knowledge of long-term effects of the COVID-19 pandemic on parental well-being.

### 1.2. Coping Strategies to Regulate COVID-19 Emotional Distress

### *Children and Adolescents' Coping Strategies*

Coping strategies are referred to regulatory processes people used to manage their emotions and behaviours under stress [12]. They are multidimensional and have different functions that enable a person to adapt to the environment.

Studies reported that children of different ages used several coping strategies to regulate the emotional distress caused by the COVID-19 pandemic [10, 11]. Pre-schoolers predominantly used behavioural strategies such as "scream or get angry" to deal with their negative emotions [11]. On the other hand, school-age children used more engaged-oriented strategies such as problem solving to take specific actions to solve the crisis, seeking instrumental social support to try to understand how the COVID-19 happened [11]. The coping strategies of preadolescents turned out to be more varied and complex, both cognitively and behaviourally. Children between 10 and 12 years used cognitive strategies as wishful thinking in which they hope the COVID-19 crisis had never happened or they reminded themselves that the lockdown situation was not that bad. Concerning emotional strategies, they tried to calm themselves down, they shared with their parents how they felt about the COVID-19 situation and used humour to joke or tried to laugh about the situation [11].

Some authors found that specific pre- COVID-19 frequently used coping strategies were associated with children's emotional wellbeing during lockdown [10, 29, 34, 38]. For children between 8-13 years the frequent use of savouring before COVID-19, a process of attending, intensifying, and prolonging positive memories, was associated with greater stable positive affect during the lockdown, while the frequent use of dampening, a strategy used to down-regulate positive emotions, predicted low positive affect. In contrast, more frequent pre- COVID-19 rumination predicted the increase of negative affect probably because this dysfunctional strategy consists of thinking often about the negative aspects of a situation [10].

While younger children's emotions were still externally regulated by their parents, adolescents gradually learned to self-regulate their emotions showing different resources than children to cope with the COVID-19 inconveniences and to make new meaning of experiences related to lockdown [26]. Appraisal, the process that determines if a situation is perceived as stressful, positive thinking, acceptance and emotional awareness were considered as protective factors for adolescent's wellbeing. The use of these coping strategies before COVID-19, was associated with low stress during lockdown [29, 38]. On the contrary, procrastination was considered as a risk factor because it is a short-term emotion regulation strategy, based on avoidance, that does not allow processing and accepting negative emotions [29]. Additionally, through direct access to electronic devices (e.g., smartphones and computers) adolescents were able to maintain social contacts to cope with negative emotion that were caused by the inability to meet with relatives and friends [32, 34, 37].

#### *1.2.1. Parents' Coping Strategies*

Parents' strategies to deal with the pandemic's impact on their personal and family life consisted in the tentative to regulate their own emotions and to regulate their children's emotions.

Spending time outdoors in their own backyard and accepted that the lockdown was not up to them helped to enjoy moments and to maintain their well-being [8, 9]. Other parents used avoidance strategies toward elements that were a source of stress for them. For example, they limited contact with friends or relatives with whom they did not have a good relationship with, they avoided arguments with family members, and they limited access to news about COVID-19. One of the most used other-regulation strategies was maintaining contact with friends and family online [9]. Having supportive and understanding colleagues helped them decrease the stress generated by managing work and home life [9].

Parents' strategies to regulate children emotions impacted on children well-being. Negative parental coping strategies, such as rumination and communication difficulties, were associated with high perceived stress in both parents and children [2]. Moreover, during the first lockdown, parental involvement, measured as the focus of the parent on children emotional experience, was positively associated with children and adolescents' emotion regulation skills and low negative reactions [7, 8,

20, 36, 38]. On the other hand, parents with high levels of stress interacted less with their children, negatively affecting the child's emotional regulation skills [36].

One of the major strategies that parents used to protect children from the negative impact of the pandemic was structuring family life during the lockdown to maintain as much as possible the habits and schedules of everyday life. This was done with attention to promote the independence of their children by involving them in the care of the house or by giving them responsibilities. For example, younger children set the table or helped prepare food, while older children did grocery or helped parents to take care of younger siblings or helped them with schoolwork. This strategy was employed in families with children of all ages, but the routine of young children was structured primarily by the parents, while adolescents were actively included in its creation and supported in respecting it independently [40]. An additional strategy was to provide children with a feeling of reassurance and family cohesion through parental closeness, communication, and scheduling of shared activities [21, 29, 39, 40]. Cohesion was established with frequent physical and emotional closeness with the child, such as devoting more time for cuddling [40] and through the sharing of activities that allowed for positive memories and strengthening of family bonds (i.e., walking, board games, movie nights and cooking) [40].

To regulate negative emotions caused by children's exposure to COVID-19 news, parents of children preferred to communicate information with their own words or to use a restrictive mediation style to avoid to expose them directly to false or negative COVID-19 news [26, 40]. In contrast, co-viewing was the style mainly used by parents of pre-teens. Both restrictive mediation and social co-viewing styles were negatively correlated with children's emotional functioning probably because these mediation strategies did not allow for organized processing of negative COVID-19 news. Regardless of children's age, an active communication style used by parents to talk about negative and positive emotions related to COVID-19 news was associated both with a greater children's ability to regulate the emotions as it allowed them to process information of COVID-19 at an emotional and cognitive level [26], but also with more emotional problems in children, probably because talking a lot about the effects of the COVID-19 pandemic could cause them continued worry and rumination [32].

Older children were also encouraged to use social media and electronic devices for home education and to maintain social contacts independently [40].

In summary, during the lockdown, parents used several coping strategies to manage their own distress and to manage their children's emotions and behaviours. While the latter were more explored by previous studies, little is still known on the strategies used by parents to cope with their own distress.

### 1.3. The Present Study

We conducted a mixed-method study using questionnaires and interviews directed to mothers and children of different ages nine months after the beginning of the first lockdown (December 2020). The use of this method filled a gap in literature because current studies examined these issues using only questionnaires, mostly filled online. The choice to use a mixed method was made to obtain more information to help better understanding which emotional reactions were associated with COVID-19 difficulties and which emotion regulation strategies were applied by mothers, children, and adolescents. In addition, the use of this method fills a gap in reading, as current studies address these issues using only quantitative methods, predominantly with online parent report questionnaires. Moreover, our study is original because it addresses these issues by dividing subjects into age groups and considering both mother's and child's perspectives. An additional limitation of the literature that we aimed to fill is that most studies were conducted during the first lockdown, allowing only emotional reactions to be captured in the early period of the pandemic.

The main aim of the study was to identify emotional reactions and emotional coping strategies used by children, adolescents, and their mothers with the following specific aims:

- 1) to investigate emotional reactions in children, adolescents and their mothers,

2) to investigate the emotional coping strategies used to cope with COVID-19 pandemic by children, adolescents and their mothers.

3) to investigate the association between maternal well-being and emotional and behavioural problems in children and adolescents

Based on these objectives we hypothesize that (1) emotional reactions and (2) coping strategies would differ by ages in the two groups (mother-child; mother-adolescent), and that (3) the psychological well-being of mothers is associated with that of their children/adolescents.

## 2. Materials and Methods

### 2.1. Participants and Procedure

Sixty-five mothers with their children participated in the study. Subjects belonged to a previous project. The sample consisted of 35 children (8-10 years old), 30 adolescents (11-13 years old) and their mothers. All participants were Italian, all mothers were married and/or co-habiting with the father of the child.

Mothers were contacted by phone on December 2020 and those who agreed to participate received the links to the online survey for the mother and the link to the online survey for the child. Appointments for the interviews (one with the mother and one with the child) were scheduled.

Children and their mothers signed the written consent form and completed the online survey composed by a set of questionnaires. Telephone interviews with mothers and children were conducted independently few days after the first contact.

### 2.2. Measures

#### 2.2.1. Family Data

Mothers answered to a set of specific questions related to their family condition. The first three questions addressed to what extent (on a Likert scale from 1 = very little to 7 = very much) when the pandemic was over, she thought she would need financial support and psychological support for herself and her child (i.e., *To what extent do you think you will need economic support after the pandemic is over?*; *To what extent do you think you will need psychological support for you?*; *To what extent do you think you will need psychological support for your children?*). Mothers were also asked how often their child asked questions, read or talked about COVID-19 (on a Likert scale from 1 = never to 5 = most of the time).

#### 2.2.2. Mothers' COVID-Contact Risk Index

An ad-hoc index was computed to evaluate the amount of contact the parent had with people directly affected by the virus, following the assumption that the greater the number of contacts, and the closer to the parent were the people, the greater the impact on psychological wellbeing would be. One point was given for each of the following if present: the parents tested positive for the virus, a familiar or close friend tested positive, a familiar/close friend was hospitalized, a familiar/close friend died. A half point each was given if the parent knew a person (not familiar or close friend) who tested positive, was hospitalized, or died.

#### 2.2.3. Mothers' Worries Regarding COVID-19

An ad-hoc index was computed to evaluate mothers' concerns about possible COVID-19 infection and the consequences on their own and others' physical and mental health (i.e., *During the past month how concerned were you: about being infected; about the possibility that your friends and family members might be infected; about the possibility that your physical health might be affected by COVID-19; about the possibility that your mental health might be affected by COVID-19?*). The questionnaire included four items (on a Likert scale from 1 = very little to 5 = very much).

#### 2.2.4. Mother's and Child's COVID-19 Difficulties

Difficulties experienced by parents and children during the pandemic were investigated with a newly developed pool of 13 items. Parents and children were asked to indicate (on a Likert scale from 1 = very little to 7 = very much) how difficult they were perceiving, during the last week, dealing with several aspects related to the COVID-19 period (i.e., *thinking about yourself, How difficult did you find it to balance family and work?; thinking about yourself, how difficult did you find it to read a book?*).

#### 2.2.5. Mothers' Psychological Well-Being

Individual perception of maternal well-being was investigated using the 21 items from the Depression Anxiety Stress Scale–Short form (DASS) [22]. The questionnaire provides three sub-scales each composed of 7 items (on a Likert scale from 0 = did not apply to me at all to 4 = applied to me very much or most of the time) to measure the individual symptoms indicating stress (i.e., *I found myself getting agitated*), depression (i.e., *I was unable to become enthusiastic about anything*), and anxiety (i.e., *I was aware of the action of my heart in the absence of physical exertion*). To obtain the score of each scale, items are summed.

#### 2.2.6. Mothers' Dyadic Parenting Stress

Perception of parenting stress in the parent-child interaction was investigated using the 12 items of the Parent/Child Dysfunctional interaction domain of the Parenting-Stress Index Short Form (PSI) [1]. The scale investigated the extent of parents' agreement or disagreement with statements describing the parent-child relationship as difficult to manage (on a Likert scale from 1 = very much to 5 = very little) (i.e., *my son rarely does things for me that gratify me; when my son plays, he does not laugh or show that he enjoys himself often; my son does not smile as much as most children do.*).

#### 2.2.7. Child's Emotional and Behavioural Problems (Child Report and Maternal Report)

Behavioural and psychological problems in children were investigated using both mothers and children report of the Strengths and Difficulties Questionnaire (SDQ) [15]. The current study focused specifically on the following subscales: emotional symptoms (i.e., *I am often unhappy, sad or in tears*), hyperactivity-inattention (i.e., *constantly on the move or uncomfortable*), and conduct problems (i.e., *Often quarrels with other children or purposely annoys them*). Each subscale is measured by 5 items (on a Likert scale from 1 = not true to 3 = very true). To obtain the total scores, items are summed (i.e., *respectful of others' feelings; complains frequently of headache, stomachache or nausea; constantly moving or uncomfortable*).

#### 2.2.8. Children's Activities

Children answered to a set of specific questions related to assess possible changes on technology use during the pandemic. Children were asked how much time (on a Likert scale from 1 = never to 5 = 4 and more hours) they played video games throughout the day (i.e., *How many hours a day did you spend playing video games in the past month*). They were asked how many times a day they heard their friends on video call (i.e., *How many times a day do you hear your friends and girlfriends on video call?*) (from 1 = never to 3 = two or more time). In addition, it was investigated how many hours they watched TV (i.e., *How many hours a day did you spend watching TV in the past month?*) (on a Likert scale from 1 = I never watched TV to 4 = more than 3 hours). Finally, they were asked how often they searched for information about COVID-19 (i.e., *During the past month, how often did you happen to read or talk about COVID-19?*) (from 1 = never to 5 = almost always).

#### 2.2.9. Children' Worries Regarding COVID-19

As for mothers, an ad-hoc index was computed to evaluate children and adolescents' concerns about possible COVID-19 infection and the consequences on their own and others' physical and mental health. The questionnaire included four items (on a Likert scale from 1 = never to 5 = very

much): *During the past month how concerned were you: about being infected; about the possibility that your friends and family members might be infected; about the possibility that your physical health might be affected by COVID-19; about the possibility that your mental health might be affected by COVID-19?*).

#### 2.2.10. Children COVID-19 Difficulties

Difficulties experienced by children and adolescents during the pandemic period were investigated with a newly developed pool of 8 items. Children and adolescents were asked to indicate (on a Likert scale from 1 = not difficult at all to 5 = very difficult) how difficult they were perceiving, during the last month, dealing with several aspects related to the COVID-19 period such as falling asleep; waking up in the morning; getting along with my parents; staying away from my friends, etc.

#### 2.2.11. Mothers' and Children's Emotional Reactions and Coping Strategies Associated with COVID-19 Pandemic

To explore the emotional reactions and strategies used to cope with COVID-19 -related difficulties, telephone interviews were conducted with mothers and their children. For the children, the questions concerned the difficulties they experienced during the COVID-19 period at school, at home and with friends. They were also asked what emotions they felt about these difficulties and what strategies they used to cope with them (see Appendix A). For mothers, on the other hand, the questions focused on emotional reactions and coping strategies by referring to both their own difficulties associated with COVID-19 and those experienced by their children. In addition, mothers were asked to report what parenting strategies they used to cope with their children's emotional reactions (see Appendix B).

### 2.3. Analytic Plan

#### 2.3.1. Quantitative Analyses

Mothers' and children's scores at each questionnaire were computed. Descriptive analyses were performed to examine the distribution of answers to questions. Differences between groups were examined with One-way ANOVA. Associations among variables were examined with Pearson's correlations in the two groups.

#### 2.3.2. Qualitative Analyses

A Theoretical Thematic Analysis was used to identify dominant themes across the entire data set. The data analysis was conducted according to Braun and Clarke's Thematic Analysis framework [4]. We adopted a theoretical, deductive or "top down" way of performing the analysis. This means that the themes identified are strongly related to the specific research questions and the coding process is driven by the particular interest of the study. In this sense, this form of thematic analysis is analyst-driven and provides a detailed analysis of specific aspects of the data, which were fit into a predefined coding frame based on the specific research questions and hypothesis. In the case of this article, we were explicitly interested in the impact of COVID-19 pandemic and the related coping strategies adopted by mothers and their children, thus we specifically focused on these features and aspects in coding the data.

The type of analysis adopted can be also described as semantic, as data were organized and summarized to underline patterns in the explicit content of participants' responses. We focused on the meanings clearly included in the interviewees' words, providing an accurate description of data, rather than an interpretation that goes beyond what participants said.

First, the interviews were fully transcribed by a research assistant. Then we proceeded with the familiarization with the data, reading several times the participants' answers. Three members of the research team identified codes by selecting and tagging parts of the text considered pertinent to understand the reactions and the coping strategies adopted by mothers and children to front the pandemic. They produced a list of extracted codes that was then discussed within the entire research

group to define macro-areas relevant to the research questions. This progressive organization in themes was carried out by combining, splitting or redefining codes in order to reach consensual clusters of concepts featuring the research areas of investigation. All the data were analysed in their original language, Italian.

In reporting the results, we decided to present the final list of themes and codes without selecting specific quotes from the interviews, because our aim is to show the main recurrent areas of impact of the Covid event and the main responses to it for the whole sample, rather than doing an in dept analysis of single experiences.

### 3. Results

#### 3.1. Descriptives

The exploration of frequencies of answers to the living characteristics questions gave interesting information about the two groups. The 44% of children declared to spend 2 hours or more per day playing videogames versus the 23% of adolescents. Concerning video calling friends, 47% of children and 47% of adolescents declared to do it at least 2 or more times a day. More than 50% of children and 30% of adolescents what TV for more than 2-3 hours a day. Concerning reading and talking about COVID-19, 64% of children and 66% of adolescents do it often and always during the last month. Mothers of children and adolescents declare on average to need low economic (Mean children = 2.61, SD = 1.78; M adolescents = 2.59, SD = 1.93) and psychological (Mean children = 2.61, SD = 1.79; M adolescents = 2.38, SD = 1.42) support for themselves and psychological support (Mean children = 2.55, SD = 1.65; M adolescents = 2.48, SD = 1.57) for their kids.

#### 3.2. Differences Between the Groups

One-way ANOVA results showed that mothers of adolescents reported higher parenting stress and less worries about the COVID-19 than mothers of children (see Table 1). No significant differences emerged between children and adolescents reported emotional and behavioural problems.

**Table 1.** Differences Between the Groups.

	Children		Adolescents		<i>F</i> (1, 59)	<i>P</i>
	M	SD	M	SD		
Parenting Stress	21.63	7.34	25.59	8.25	3.94	.05
DASS Depression	13.03	5.01	13.69	4.38	0.30	.59
DASS Anxiety	11.53	3.98	11.66	4.47	0.01	.91
DASS Stress	14.63	4.53	15.24	4.37	0.29	.59
Economic Support	2.61	1.78	2.59	1.94	0.00	.96
Psychological Support Mother	2.61	1.78	2.38	1.42	0.31	.58
Psychological Support Child	2.55	1.65	2.48	1.57	0.02	.88
COVID-19 Difficulties Mother	44.41	15.08	39.14	14.76	1.89	.17
Worries Mother	11.88	3.56	9.62	3.27	6.59	.01
SDQ Hyperactivity/Attention	9.12	1.85	8.77	1.43	0.70	.40

SDQ Emotional Symptoms	8.24	2.24	8.63	2.46	0.46	.50
SDQ Behavioural Problems	8.09	2.23	8.17	1.76	0.02	.88
COVID-19 Difficulties Child	22.97	5.66	21.40	4.92	1.38	.24
Worries Child	10.79	3.97	10.10	3.68	0.52	.47

Abbreviations: DASS (Depression Anxiety Stress Scales); \*SDQ (Strengths and Difficulties Questionnaire).

### 3.2.1. Associations among Maternal and Children Reported Behavioural and Emotional Problems

Persons correlations among maternal reported and children reported behavioural and emotional problems, as assessed with the SDQ were very high in all scales (mean  $r = .48$ ). For this reason, we decided to keep only SDQ data as directly reported by children and adolescents for further analyses.

### 3.2.2. Associations among Maternal Well-Being and Children Behavioural and Emotional Problems

Pearson correlations among maternal well-being (PSI - Parenting stress during the interaction, DASS - depression, anxiety, and stress symptoms) and children emotional and behavioural problems (SDQ) evidenced significant associations in the two groups (see Table 2). Mothers of children with high parenting stress had children with more behavioural problems, while mothers of adolescent with higher parenting stress have children with higher hyperactivity and attention problems. Hyperactivity and attentional problems as well as emotional problems in adolescents were associated with also high depressive, anxiety and stress symptoms in mothers; association not present in the children group. High behavioural problems were associated with maternal high depression and stress in the group of children and with high anxiety and stress in the group of adolescents.

**Table 2.** Pearson's correlations among Maternal Well-Being and Children Behavioural and Emotional Problems.

		PSI	DASS depression	DASS anxiety	DASS stress
Children	SDQ Hyperactivity/Attention	.34	.29	.27	.19
	SDQ Emotional Symptoms	.35	.20	.17	.17
	SDQ Behavioural Problems	.58**	.43*	.26	.38*
Adolescents	SDQ Hyperactivity/Attention	.37*	.68**	.65**	.63**
	SDQ Emotional Symptoms	.09	.35	.51**	.45*
	SDQ Behavioural Problems	.18	.30	.51**	.45*

Note: \*\*  $p > .01$ , \*  $p > .05$ ; Abbreviations: PSI (Parent Stress Index); DASS (Depression Anxiety Stress Scales); SDQ (Strengths and Difficulties Questionnaire).

### 3.2.3. Associations among COVID-19 Related Variables and Mothers and Children Well-Being

Associations among COVID-19 related variables and well-being are presented on Table 3. High frequency of searching information about COVID-19 and high level of worries about the pandemic were associated with higher emotional problems only in adolescents. High fatigue to adjust to COVID-19 modifications of everyday life was associated with high emotional and behavioural problems in the two groups and with hyperactivity/attention problems only in the children group.

**Table 3.** Pearson's correlations among COVID-19 Related Variables and Mothers and Children Well-Being.

		PSI	DASS depression	DASS anxiety	DASS stress	SDQ Hyperactivity/ Attention	SDQ Emotional symptoms	SDQ Behavioural problems
Children	Search for information	.07	-.17	.05	-.12	.21	.29	.18
	Worries Child	-.14	.19	.16	.25	-.10	.20	.24
	COVID-19 Difficulties Child	.11	.09	.22	.16	.42*	.42*	.52**
	COVID-19 Difficulties Mother	.26	.26	.42*	.45**	-.11	.18	.15
	Worries Mother	.10	.54**	.60**	.53**	.02	.08	.03
Adolescents	Search for information	.11	.09	.29	.48*	.00	.43*	.06
	Worries Child	-.08	.25	.34	.26	.15	.47**	.11
	COVID-19 Difficulties Child	.33	.07	.11	.26	.23	.38*	.37*
	COVID-19 Difficulties Mother	.28	-.29	-.05	.17	-.21	.25	-.03
	Worries Mother	.10	.33	.56**	.48**	.32	.47**	.30

Note. \*\*  $p > .01$ , \*  $p > .05$ ; Abbreviations: PSI (Parent Stress Index); DASS (Depression Anxiety Stress Scales); SDQ (Strengths and Difficulties Questionnaire).

More difficulties in adjusting to COVID-19 modifications of everyday life was associated with mothers' high anxiety and stress only in the group of children. In both groups more preoccupations about COVID-19 were associated with high maternal anxiety and stress, and with high depression only in the children group.

### 3.3. Qualitative Findings

#### 3.3.1. Mothers

The emergency situation associated to the world pandemic have significantly impacted on the emotional, physical and cognitive levels of functioning of the participant mothers.

The qualitative analysis confirms quantitative results in showing that there are no significant differences between mothers of children and mothers of adolescents. Indeed, both groups experience similar emotional, physical, and cognitive reactions and there are no differences regarding the general levels of anxiety or stress.

The main emotional reactions to the COVID event among the mothers can be classified in the following categories: fear of being infected by and infecting other people; sense of vulnerability and powerlessness; feeling of irritability/agitation/frustration/anger; apathy and sadness; anxiety, worry and uncertainty; feeling of loneliness and inadequacy/insecurity.

Concerning the physical discomfort, COVID has had an impact mainly in terms of: sleep problems, such as insomnia, difficulties in sleep regularity and frequency of nightmares; increase in body weight; feeling of tiredness, weakness and muscle rigidity.

Regarding the cognitive impact of the situation, mothers mainly report: difficulties in concentration and lack of attention; feeling of confusion; a limited number of mothers also reported lower memory capacity and an overthinking tendency.

The coping strategy can be classified in two different types: self-regulation strategies and other-regulation strategies.

Self-regulation strategies refer to internalization and rationalizing of emotions and thoughts in order to develop acceptance and pro-activity to front what is experienced as inevitable. Seeking information and reading up on the continuously evolving situation to better understand it are included in this type of strategies. Besides that, participants find comfort in practicing hobbies and sports, as a way to keep their creativity alive, take care of their body-mind system, and distract themselves from the problematic situation. In this respect, mothers of adolescents are more generic in reporting the ways they found to keep themselves busy, referring to these activities mainly as a way to avoid thinking at the situation. Mothers of children, instead, detail the activities more in depth, referring to specific hobbies, sports and personal interests they dedicated time to.

Moreover, mothers of teenagers were able to adopt a self-isolation strategy – that is, being able to take some time alone to lessen the emotional overload - which instead is not mentioned by mothers of children, probably because they could not do so, given the age of their offspring. This difference seems to align to quantitative results that show that mothers of children had more worries related to COVID and its impact than mothers of adolescents, who were probably less worried also due to the possibility to adopt temporary self-isolation as an adaptative regulation strategy.

The mothers who adopted other-regulation strategies, specifically refer to a way to regulate their emotions based on interpersonal dialogue and search for other people's support. This covers both deep exchanges with relatives - who are part of, or live close to, the family nucleus - and more sporadic interactions with friends, neighbors and acquaintances. As expected, there are no specific differences between mothers, as both groups mainly rely to other members of the family nucleus, being them the only people with whom it was possible having face to face interactions during the pandemic.

Concerning the ways mothers of both groups manage the challenges of the emergency situation, we found a number of emotional and behavioral strategies. Quantitative data show that in both groups there is a correlation between the level of covid-related worry and the level of emotional trouble, showing a link between the ability of managing the situation and emotional difficulties. However, children's mothers who have difficulties in handling the changes caused by the pandemic experience more level of anxiety and depression than mothers of adolescents who are struggling with same difficulties; this may be due to the fact these mothers have to front a more complex situation, as younger children have a limited number of available external strategies of regulation.

The emotional strategies include:

- engaging in an open and transparent dialogue with their children, which embraces: encouraging self-narration and disclosure about their feelings as well as explanation and clarification of what the situation is like and what they could expect in future;
- mothers of teenagers experience more difficulties in engaging in an open dialogue, so they tend, on the one hand, to adopt a more directive style, giving concrete advices on how managing time, and on the other hand, to be more indulgent and tolerant than usual, applying a less invasive attitude in order to give teens a space free from control; this result supports and enlightens quantitative analysis showing that mothers of adolescents are characterized by higher level of parenting stress, but not higher level of generic stress;
- trying to appease and reassure, adopting a downplaying attitude to underline to the children the transitory character of the situation and to adolescents its shared nature (that is, everybody was experiencing the same situation);
- especially with children, mothers tried to take advantage of the enforced physical presence within the domestic environment and the related constrained proximity, to develop a closer emotional intimacy and connection.

On the behavioral level, strategies embrace: pushing the children to engage themselves in daily activities and keeping their routines; sharing moments with them, mainly through play and practical/intellectual activities; being more tolerant and indulgent toward the use of technological devices such as mobile phones and tablets, abandoning the stricter attitude mothers used to manifest before the physical restrictions imposed by the pandemic; especially for adolescents, mothers tend to push them in seeing friends, when possible, to prevent the risk of social isolation.

### 3.3.2. Children and Adolescents

Children and adolescents reported a number of emotional reactions.

First, the fear of contagion for oneself and significant others, which is more common among adolescents, who think more at the possibility to 'bring COVID at home' and infecting the family elderly.

Second, worries and anxiety, which for children denote a general sense of danger and refer to a number of scenarios: the possibility of losing other people, such as grandparents; school mates not respecting the Covid rules; the preoccupation of unintentionally not respecting all the social limitations imposed by the pandemic (such as the use of masks); the difficulty in seeing the end of the pandemic, and thus the restauration of usual relationships, that end up in the worry of this being a never-ending story. For teenagers, worries and anxiety are specifically linked to the school context and to a general feeling of wasting time; also, for the adolescents the uncertainty about the situation tend to end up in a self-closing mood.

Third, sadness and depressive mood, which are manifested through frequent and "unexplained" crying and are associated to a general feeling of isolation, disconnection and distance from other people. In particular, both groups report sadness due to: the great number of dead people; lack of affective interactions with both peers and elderly; the impossibility to greet mates in cases of transition from a school cycle to another; the nostalgia for a past era of freedom contrasted with a present and a prospective future full of restrictions.

Forth, feeling of boredom and lack of fun moments. Especially the teenagers report that they struggle in finding what to do within the house walls, so they tend to spend a lot of time asking themselves what to do, while doing nothing. Especially for adolescents, boredom is associated to a sense of decrease in creativity and motivation and to feelings of emptiness and loneliness.

Concerning the coping mechanisms adopted by children and adolescents, self-regulation strategies mainly rely on hobbies and diversions, such as playing, reading, listening to music, playing music instruments, drawing, watching movies, tv, video games, and, in a limited number of cases, reorganizing personal spaces. The group of younger children appear to struggle in internalizing negative emotions and thoughts, thus their strategy corresponds in the majority of cases to an active attempt to not think about the situation and adopt an apparently indifferent stance, while other children rely on positive thinking, that is, the recall of beautiful moments of the past spent with significant people and friends. Adolescents, as expectable, experience difficulties in internalizing their emotions too, as they tend to keep emotions and thoughts for themselves, avoiding talking and sharing feelings with others. This leads adolescents to apparently rely on extra-familiar activities more than children. This means that they more frequently report to spend time listening to music, reading, watching movies or using mobile phones. This is apparently in contrast with quantitative results, showing no differences between groups in terms of self-regulation strategy. This can be interpreted considering that adolescents may be more aware of the role of these activities in terms of active strategies to manage the situation.

Regarding the external strategies of regulation, children mainly count on the family context.

Both quantitative and qualitative results show that how the parents manage the pandemic influence the way in which children and adolescents in turn manage it. Children, for example, tend to help parents in daily accomplishments and engage in activities with sibling – to whom they sometimes direct a clear request for help, asking the other members of the family to spend time with them. Adolescents rely more on friends, with whom they interact via video/phone call and chatting, but also mention their parents as a mean of external regulation. Indeed, quantitative analysis shows

that, among the teenagers, those with higher level of emotional difficulties tend to rely on parents especially for information seeking about COVID. Another form of external regulation mentioned by both the samples is represented by engaging in routines associated to taking care of pets.

#### 4. Discussion

The present study aimed to verify, during the period of the second lockdown, the emotional reactions and coping strategies used by children, adolescents, and their mothers, and their associations. The mixed research design of the study, through the administration of self-reports and interviews, allowed to capture the perspectives of mothers and their children. Furthermore, the division of the children's sample by age helped in the identification of different patterns across groups.

No relevant differences between children and adolescents and between mothers of children and mothers of adolescents emerged in the reported emotional reactions. Regarding the emotional reactions of children and adolescents, the interviews revealed differences in the causes associated with the emotion (e.g., for the children, anxiety was associated with losing loved ones, whereas in adolescents with distance learning). The same emotions have been reported in other studies, but none of these explored differences on the changes implied by COVID-19 that caused the emotional reactions, based on the age of the subjects [6, 18, 26]. In our case, the quantitative analysis allowed further differences to be identified. Adolescents tend to seek an explanation for the changes and limitations caused by COVID-19 as a reaction to the anxiety and worries experienced.

Consistent with the literature, mothers in both groups, during the second lockdown period, reported similar reactions [6, 9, 19]. To the levels of anxiety and depression evidenced by the questionnaires corresponded similar emotional, psychosomatic, and cognitive reactions. The use of quantitative methodology alongside qualitative methodology made it possible to identify differences between the two groups of mothers specifically concerning aspects more related to the parenting experience. To the intensified parenting stress reported by mothers of adolescents corresponded a greater difficulty in finding appropriate ways to cope with the situation such as dialoguing with the kid instead of using a directive and more authoritarian parenting style. We might suppose that during this moment of crisis characterized by social isolation and the necessity to respect many limits to everyday life, parenting an adolescent was a more challenging experience [6].

Results helped to fill the gap in the literature on the differences between self-regulation and external-regulation strategies used to cope with the changes related to the stressful situation. Children used more cognitive avoidance strategies to cope with negative emotion, whereas adolescents engaged more in extra-familiar activities and hobbies as self-regulation strategies. Maybe, adolescents who possess more cognitive strategies to understand the stressful event, were able to choose activities that allow them to self-regulate. For external-regulation strategies, children sought help from family members, whereas adolescents relied on friends, using social media [37, 32]. This is consistent with specificities of the ages, with adolescents giving more importance to the peer group [33]. In addition to previous findings, caring for and spending time with one's pets emerged as an external-regulatory strategy in both children and adolescents.

The interviews revealed that in both groups, mothers used self-regulatory strategies, such as engaging in hobbies and seeking information about COVID-19 [9]. However, teen's moms used self-isolation as a coping strategy. Having older children allowed them to take more time for themselves, which may explain why teen's moms report lower concerns about COVID-19. Among the external-regulation strategies, mothers relied on their partner and family members. For the strategies used by mothers in managing their children, differences between groups emerged from the interviews. For example, consisted with previous studies findings, children's mothers used more physical contact and closeness to establish a greater emotional connection compared to mothers of adolescents [40]. Furthermore, our results underlined how adolescent's mothers found difficulties in establishing an open dialogue with their children about the emotions they felt, thus assuming a directive or permissive attitude to manage the situation during the second wave of the pandemic. On the behavioral level, both groups reported to share moments together with their kids and urged them to

maintain the routine of the pre-pandemic period [40]. Mothers also reported a greater than usual tolerance in allowing their children to use technology and in pushing adolescents to meet their friends, when possible, to avoid social isolation. This represents a new element specific to the second wave of COVID-19 not found in previous studies conducted during the first phase of the emergency [7].

Finally, quantitative results confirm a significant association between maternal and child well-being. This contributed to understand how the way the mother handled a stressful event influenced the child's psychological well-being [32]. In the adolescent group emotional and behavioural problems were positively associated with maternal stress, anxiety, and depression. It is known that adolescence is often characterized by mother-child communication problems [32], and the way in which adolescents' mothers reported to handle the stressful event impacted more on this issue. Interestingly, in the group of children high maternal symptoms of anxiety and stress were associated with children's difficulties in adapting to changes in daily life. Children and mothers with non-functional strategies had more difficulties in coping with the stressful event, and greater emotional and behavioural problems. Moreover, mothers with low psychological well-being may have problems in communicating with their children and in being supportive to their emotion regulation [36, 2].

Despite the important results reported, the present study presents some limitations. First, the small sample limits the generalizability of findings. Second, the cross-sectional design limits the possibility to explore causations. Last, we did not explore the emotional reactions and coping strategies of other family members, such as fathers. Future studies should conduct longitudinal examination of this topic investigating the long-term effects of the pandemic on the psycho-emotional well-being of both children and adolescents, in larger samples and including the full family perspectives.

Despite these limits the present study gives a picture of how mothers and their children coped with the challenges related to the modification of everyday life related to COVID-19. The use of mixed methodology has been useful in capturing important information about how families of children and adolescents may react when faced with stressful events that may involve the entire family system, (such as natural cataclysms, wars, bereavements, etc.). In this way, intervention projects can be developed that consider the specific family needs in relation to the age of the children.

In conclusion, it is recommended to intervene on the parent-child interaction to promote family well-being. In general, interventions should be based on promoting maintenance of daily routines, emotional closeness of parents, and fostering open dialogue to enable children and adolescents to understand and emotionally manage stressful events. In addition, it would be useful to promote parental support projects to help them decrease the stress caused by the everyday family routine modifications to foster a more adaptive parenting, a fundamental variable to prevent children and adolescents emotional and behavioural problems.

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#### Appendix A. Child and Adolescent's Interview Protocol

**Table 4.** Child and adolescent's interview protocol questions.

<b>Covid-19 Difficulty Management</b>
<ul style="list-style-type: none"> <li>• Have there been any difficulties, big or small, in your life since Covid began?</li> <li>• Were there any difficulties in school?</li> <li>• Were there difficulties at home?</li> <li>• Were there difficulties with friends?</li> <li>• What did you do to manage these situations?</li> </ul>

**Table 5.** Emotional Reactions and Coping Strategies.

<b>Emotional Reactions and Coping Strategies</b>	
<b>Stress</b>	<ul style="list-style-type: none"> <li>• Since this Covid situation began, have you been feeling particularly stressed?</li> <li>• What do you notice you are stressed by?</li> <li>• What do you do to feel better?</li> </ul>
<b>Boredom</b>	<ul style="list-style-type: none"> <li>• Since this Covid situation began, do you feel particularly bored?</li> <li>• What do you notice you are bored by?</li> <li>• What do you do to feel better?</li> </ul>
<b>Sadness</b>	<ul style="list-style-type: none"> <li>• Since this Covid situation began, do you feel particularly sad?</li> <li>• What do you notice you are sad by?</li> <li>• What do you do to feel better?</li> </ul>
<b>Concern</b>	<ul style="list-style-type: none"> <li>• Since this Covid situation began, do you feel particularly concerned?</li> <li>• What do you notice you are concerned by?</li> <li>• What do you do to feel better?</li> </ul>

#### Appendix B. Mother's Interview Protocol

**Table 6.** Mothers' Interview Protocol Questions: Emotional Reactions and Coping Strategies of Mothers Related to Covid-19 Difficulties.

<b>Mothers' emotional reactions and coping strategies</b>
<ul style="list-style-type: none"> <li>• Over the past few months, have you been in difficulties with the Covid-19 pandemic?</li> <li>• How did you react to these difficulties?</li> <li>• How did you feel on a psychological level?</li> <li>• How did you feel on a physical level?</li> <li>• How did you feel on a cognitive level?</li> <li>• What did you do to overcome that moment?</li> </ul>

**Table 7.** Mothers' Protocol Interview Questions: Children's Difficulties Related to Covid-19 Recognized by Mothers and Parenting Strategies Used to Manage Them.

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### Recognition and management of children's difficulties

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Children's difficulties	Social contest	<ul style="list-style-type: none"> <li>• Have you noticed difficulties in relationships with his/ her friends?</li> <li>• How did he/she react to them?</li> <li>• How did he/she handle them?</li> </ul>
	School contest	<ul style="list-style-type: none"> <li>• Have you noticed any difficulties in the school context?</li> <li>• How did he/she react to them?</li> <li>• How did he/she handle them?</li> </ul>
	Family contest	<ul style="list-style-type: none"> <li>• Have you noticed any difficulties in the family context?</li> <li>• How did he/she react to them?</li> <li>• How did he/she handle them?</li> </ul>
Parenting		<ul style="list-style-type: none"> <li>• With respect to the difficulties encountered by your children, you in general how did you deal with them?</li> </ul>

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