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Research Paper

Parental peritraumatic distress and feelings of parental competence in relation to COVID-19 lockdown measures: What is the impact on children's peritraumatic distress?

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ABSTRACT

The objective of this study was to measure, via an online survey, the peritraumatic impact of COVID-19-related lockdown measures on parents and their sense of parental competence, as well as the link with their children's peritraumatic distress. We investigated the links between the distress felt by the parent and the distress felt by the child in the lockdown from March to May 2020. Participants were 287 parents and 161 children. The results of our study indicated that there is a significant association between the parents' and the children's peritraumatic stress. We also found a significant relationship between the sense of parental competence and the trauma suffered as a result of the lockdown. We also showed that people who usually felt more stressed have lower peritraumatic distress. In addition, the data indicated that mothers were more affected than fathers by the lockdown, whereas there was no difference between girls and boys in the sample of children. The peritraumatic feelings appeared to be more related to the difficulty of combining teleworking with the daily management of children than to the fear of the virus itself. All these results bear witness to the differences in the experience of lockdown between mothers and fathers, and the impact on their children's well-being.

Introduction

In late 2019, a new virus called the coronavirus or COVID-19 appeared in China (Velavan & Meyer, 2020). In order to avoid overloading hospital facilities, many governments decided to lock down their populations at home, thus limiting the spread of COVID-19. This kind of lockdown is completely new, since, unlike previous quarantines, it involved confining the entire population, whether sick, at risk or healthy. The confinement has completely disrupted the social system in the broadest sense (professional, family, friends, etc.) for everyone (Gignoux-Froment et al., 2020). Consequently, according to Mengin et al. (2020), it is important to anticipate the various psychological problems that could arise during and after the lockdown. The effect of this kind of confinement of a population at home at the country level had never been assessed before and a series of studies have been carried out since the measures were first implemented in different countries (Auxéméry & Tarquinio, 2020).

In addition to the issue of the lockdown, the pandemic makes us confront death, which is a taboo subject in our society and may cause psychotraumatic distress (Ramade et al., 2016). Research on social isolation and the consequences of earlier quarantines in epidemics showed that confinement can lead to possible post-traumatic stress, as well as many other traumatic symptoms (Allé, Berna, Vidailhet, Giersch, & Mengin, 2020). According to various authors, quarantined individuals may report a high prevalence of distress symptoms and psychological disorders such as general psychological symptoms (Mihashi et al., 2009), emotional disorders (Yoon, Kim, Ko, & Lee, 2016) and psychosocial difficulties such as signs of depression and/or anxiety (Brooks et al., 2020; Xie et al., 2020). In addition to these symptoms, bad moods (Lee, Chan, Chau, Kwok, & Kleinman, 2005), stress (DiGiovanni, Conley, Chiu, & Zaborski, 2004), increased paranoia and hallucinatory experiences (Cochrane & Freeman, 1989; Gunderson & Nelson, 1963; Smith, 1969; Strange & Klein, 1973), and irritability and post-traumatic stress symptoms (Reynolds et al., 2008) may be prevalent. Other qualitative studies report confusion and fear (Pan, Chang, & Yu, 2005), anger (Cava, Fay, Beanlands, McCay, & Wignall, 2005), grief (Wang et al., 2011), compulsive eating and weight gain (Boswell & Kober, 2016) and anxiety-induced numbness and insomnia

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(DiGiovanni et al., 2004). Brooks et al. (2020) pointed out that length of quarantine, fear of infection, frustration and boredom were stressors with effects that are similar to emotional shock disorders. In addition, they mentioned that a lack of information from the authorities was a source of anxiety for the participants in their study. A recent study by Qiu et al. (2020) investigated the different risk factors for peritraumatic distress in lockdown. They showed that women experienced greater psychological distress than men, that people between the ages of 18 and 30 and over 60 also scored higher, and that people with higher education tended to experience more distress.

Nevertheless, Allé et al. (2020) explained that post-traumatic stress usually involves reliving particular sensory events such as the sound of a bomb, the feeling of an aggressor's hand on you, the smell of blood, etc. However, during quarantine, most people found themselves in a closed environment that was familiar to them, with few apparent violent sensory elements. They felt protected from outside threats thanks to their isolation, provided of course that they were not victims of mistreatment or domestic violence within their home. As a result, Brooks et al. (2020) believed that we should expect to find no post-traumatic stress related to this lockdown. Indeed, some studies reported that some individuals have not suffered at all during the lockdown, and that most people have even demonstrated prosocial and altruistic behaviours (Dezecache, Frith, & Deroy, 2020). Thus, Bouville (2020) highlighted another scenario, which was much more positive: for many singles, couples and families, this period was an opportunity to change their lives, and experience another, less consumerist lifestyle. Working remotely, sometimes with more flexible hours, being partially unemployed or on leave freed up more unstructured time: time devoted to family, sports or cooking, which, combined with the break from social life, sometimes led to real relief or at least a reduction in daily stress (Slate.fr, 2020). Forced to slow down the hectic pace of their daily lives, some people had the opportunity to watch their children grow up, enjoy experiences they never had the time to do, or simply to take the time to do nothing and enjoy it (Les Défricheurs News, 2020). Paradoxically, some people with psychological disorders have felt relieved by the lockdown. Auxéméry and Tarquinio (2020) mentioned the example of a patient who suffers from social phobia and feels better in the now empty streets. The same authors noted a clear decrease in suicidal crises, according to reports from several hospitals.

Another factor that seems to us to be decisive in this situation is that, during this lockdown, the nature and modalities of social support have been profoundly changed. It should be remembered that social support plays a crucial role in the management of a stressful event and in the development of peritraumatic distress connected to it. Studies showed that perceived social support has a positive effect on the belief that others can help one cope with the stressful event. It therefore alleviates the impact of stress by providing solutions for the victim's problems, reducing the perceived importance of the traumatic event, facilitating the adoption of rational cognitions and preventing or diminishing inappropriate behavioural responses, such as avoidance. Finally, social support acts directly on physiological processes, making individuals less reactive to perceived stress (Cohen & Wills, 1985). Bourdeau-Lepage (2020) pointed out that more than half of the surveyed individuals did not claim to be socially isolated before the lockdown, and only slightly more than a third have done so since. Some 20% of people reported feeling socially isolated often during the lockdown, compared with 9% before. Social ties were greatly modified: 57% of people were in contact with only 1–5 people, compared with 27% before the lockdown, and 6.2% of them were in contact with no one at all, compared with 0.8% before the lockdown (Bourdeau-Lepage, 2020). However, although people had more contacts before the lockdown, they maintained them in the virtual world: 46% of people installed a new application to communicate with people, and 30% enjoyed virtual happy hours (Bourdeau-Lepage, 2020). In this context, social support at the individual level did not disappear; instead, it manifested itself virtually rather than physically and immediately (Powell, 2020). Unfortunately, virtual support has proven to be less beneficial for mental and physical health than real-world contact (Olson, 2020).

Finally, another essential factor is the intergenerational transmission of trauma and the protective or, conversely, risky role of parental reaction in the development of trauma in children. Indeed, previous studies showed that parents tend to communicate their stress to their children when unusual and unpleasant event happens, particularly when the event is perceived as traumatic by parents (e.g., in case of domestic accident, Blavier, Fivet, Gallo, & Wertz, 2020; Gallo, Wertz, Kairis, & Blavier, 2019). In this context, our study is particularly interested in the experience of parenthood during the lockdown. Despite the presence of a new and potentially traumatic event, parents had to fulfil many obligations: maintaining the home, organizing themselves for work or telework, cooking meals, and looking after their children and their schooling. As a result, they felt a lot of pressure (Cluver et al., 2020) and this may have contributed to high levels of stress in the home (Griffith, 2020). In addition, during the lockdown, parents were left alone, without their usual helpers and support staff, to manage their children's education and pastimes, which proved to be extremely stressful (Powell, 2020). This also resulted in a decrease in the tolerance threshold over the long term, which may even lead to an increase in the rate of child abuse in some families (Cluver et al., 2020).

According to Griffith (2020), COVID-19 has led to significant changes in almost every aspect of daily life. These changes exposed parents to an increased risk of parental burnout. Some parents suffered from burnout experience physical exhaustion (decreased sleep, somatic complaints, etc.), but also reported a feeling of being incompetent parents (Mikolajczak, Raes, Avalosse, & Roskam, 2018; Roskam, Brianda, & Mikolajczak, 2018). According to Roskam et al. (2018) and Séjourné, Sanchez-Rodriguez, Leboullenger, and Callahan (2018)), stress regarding their efficacy at parenting can reach the burnout level in 5%–20% of parents. In addition to financial insecurity and rising unemployment, Griffith (2020) explained that the lockdown deprived parents of access to the help usually offered by the extended family, such as grandparents or friends, for example for childcare. This loss of family supports was worrisome, as Parkes, Sweeting, and Wight (2015)) reported that social supports were important to parents' well-being. Moreover, Orgilés et al. (2020) found that parents perceived changes in their children's emotional state and behaviours during confinement. Parents who considered themselves more stressed felt that their children were more worried, agitated, anxious, sad, frustrated, and bored, had more difficulty concentrating and sleeping, and were more dependent on them during the lockdown (Orgilés et al., 2020). Some studies in other settings have also shown significant links between parental and child distress (Gallo et al., 2019; Kassam-Adams, Fleisher, & Winston, 2009).

However, for many families, it seems that the lockdown has gone well, as they enjoyed the bubble of protection offered by being confined together as a family. This respite has allowed many parents and children to organize personal activities and share family activities. For some families then, during the COVID-19 lockdown, the family space has thus become a place of safety where the risks of exposure to the virus are minimized (Sénécal & Martin, 2020).

In face of these heterogeneous results, our study used an online survey to measure the peritraumatic impact of COVID-19-related

lockdown measures on parents and their sense of parental competence, as well as the relation with their children's peritraumatic distress.

Method

Procedure

Participants were contacted via social networks and offered the opportunity to complete a series of online questionnaires. After completing a form that gathered certain sociodemographic data (sex, age, highest diploma they had obtained, family situation, living environment, living with a person at risk during the lockdown), parents answered two questionnaires. The first was the Peritraumatic Distress Inventory (PDI; Brunet et al., 2001). We chose this questionnaire because it measures peritraumatic distress, which is a good indicator of the risk of developing post-traumatic stress disorder (PTSD) and of the psychopathological severity of a traumatic event. In addition, this questionnaire exists in both adult and child versions.

The second scale was the Questionnaire d'Auto-Évaluation de la Compétence Parentale (QAECP; Terrisse & Trudelle, 1988). We chose this questionnaire because it measures the sense of parental competence, which is a parent's belief in their ability to adequately meet their child's needs. Several studies have shown that actual competence was affected by the sense of parental competence (Mouton & Roskam, 2015; Duclos, 2009) and that improving the sense of parental competence was essential for improving the parenting practices (Baiverlin, Gallo, & Blavier, 2020; Roskam, Brassart, Loop, Mouton, & Schelstraete, 2015).

Finally, parents were also asked how much stress they felt in general and how much stress they felt they were currently experiencing.

The children completed the PDI after their parents, so that the questionnaires were linked by family. They checked a box to indicate whether they had completed the questionnaire alone or with their parents. The children completed a sociodemographic form (conditions under which they took the test (alone or with a parent), sex, age, frequency of discussions about the coronavirus with their parents) and completed the PDI (Brunet et al., 2001). In addition, they were asked how much stress they usually experienced and how much stress they were currently experiencing.

The different scores obtained on the scales were entered in correlation and regression analyses with a significance level of $p \leq 0.05$. Some variables were also analysed with Student *t*-tests and analyses of variance.

Measures

Typical stress

Participants defined their usual level of stress by answering the question 'How much stress do you generally experience?' on a 10-point Likert scale ranging from 1 = very low to 10 = very high. The higher the score on this scale, the more stressed the participant considered himself or herself to be in general.

Current stress

Participants defined their current state of stress by answering the question 'How much stress do you feel at the moment?' on a 10-point Likert scale ranging from 1 = very low to 10 = very high. The higher the score on this scale, the more stressed the participant considered himself or herself to be at the moment.

Peritraumatic Distress Inventory (Brunet et al., 2001)

This is a validated questionnaire that assesses the presence of criterion A for PTSD according to the DSM-IV. The participant responds to different situations on a 5-point Likert scale ranging from 'not at all true' to 'extremely true'. The higher the score on this scale, the more peritraumatic distress the subject presents.

Questionnaire d'Auto-Évaluation de la Compétence Parentale (Terrisse & Trudelle, 1988)

This questionnaire assesses the parent's sense of competence. It is a validated questionnaire with 16 items to which the parent respond on a 5-point Likert scale ranging from 'strongly agree' to 'strongly disagree'. The higher the score on this scale, the higher the sense of parental competence. Furthermore, this tool is interesting because it highlights the two dimensions of parenting competence: the sense of efficacy and the sense of satisfaction in the parental role. The sense of efficacy corresponds to the instrumental dimension of parenting and assesses the perceived degree of competence and ability. The sense of satisfaction corresponds to the affective dimension of parenting and measures the degree of frustration, anxiety and motivation related to this affective aspect.

Participants

In this study, 287 parents completed the first questionnaire, while 161 children completed the second. The sample of parents consisted of 80% (n = 228) women and 20% (n = 56) men. The mean age was 42.38 years (SD = 7.69). All sociodemographic information on the parents is presented in Table 1.

The child sample consisted of 161 children between the ages of 8 and 18. The children were mostly girls (55.28%, n = 89), with a mean age of 12 years (SD = 3.82). Most of the children had completed the questionnaire accompanied by a parent (63.35%, n = 102). Student's *t*-tests did not show significant differences between the children who completed the questionnaire with their parents or alone.

In our sample, 38.10% (n = 56) of the children spoke with their parents about COVID-19 a few times a week, 34.69% (n = 51) spoke about it once a day, and 25.17% (n = 37) a few times a day. Only a few children never talked about it (n = 2) or talked about it constantly (n = 1). Most of the children in our sample watched media a few times a week (38.10%, n = 56) or once a day (36.05%, n = 53). The remaining children never watched media (14.29%, n = 16), watched a few times a day (10.88%, n = 16) or watched constantly (0.68%, n = 1).

Results

Descriptive analyses

The main descriptive statistics are presented in Table 2.

The mean parental score on the PDI was 14.82, while the mean score for children was 12.51 (a score of 14 or more represents significant distress). Thus, 51.6% of the parents and 35% of the children in our sample presented significant distress. Concerning the feeling of parental competence, the average score on the QAECP was 68.91, which corresponds to a high feeling of parental competence. More specifically, the feeling of satisfaction of these parents was considered high (M = 39.81), while their feeling of efficacy was considered medium (M = 29.04).

Impact of COVID-19 lockdown on parents

The results indicate that parents who were typically stressed had a higher sense of parenting competence (β = 0.427, p = 0.000)

Table 1
Sociodemographic data of the parents in our sample.

Category	Contents	Sample	
		N	%
Sex	Women	228	80
	Men	56	20
Nationality	Belgian	254	89.44
	French	27	9.51
	Other	3	1.06
Level of education	No diploma or certificate	32	11.27
	Primary	1	0.35
	Lower secondary	19	6.69
	Upper secondary	46	16.20
	Post-secondary non-university	13	4.58
	University	173	60.92
	No response	2	0.69
Family structure	Classic	177	66.79
	Blended	38	14.34
	Homoparental	2	0.75
	Single parent	41	15.47
	Other	7	2.64
	No response	21	7.32
Relative at risk	Yes	112	39.44
	No	172	60.56
	No response	2	0.69
Living environment	Urban	133	46.83
	Rural	146	51.41
	Other	5	1.76
	No response	2	0.69
Surface area of the dwelling	Less than 50 m^2 without terrace/garden	24	8.45
	Less than 50 m^2 with terrace/garden	1	0.35
	50 m^2–100 m^2 without terrace/garden	12	4.23
	50 m^2–100 m^2 with terrace/garden	53	18.66
	100 m^2–200 m^2 without terrace/garden	12	4.23
	100 m^2–200 m^2 with terrace/garden	124	43.66
	More than 200 m^2 without terrace/garden	2	0.70
	More than 200 m^2 with terrace/garden	56	19.72
	No response	2	0.69
Discusses COVID-19 with the child	Never	11	4.20
	A few times a week	118	45.04
	Once a day	93	35.50
	2 to 5 times a day	37	14.12
	More than 5 times a day	3	1.15
	No response	24	8.36
Follows up on COVID-19 news with the child	Yes	220	77.46
	No	64	22.54
	No response	2	0.69
Frequency of media consultation about COVID-19	Never	15	5.64
	A few times a week	75	28.20
	Once a day	98	36.84
	2 to 5 times a day	74	27.82
	More than 5 times a day	4	1.50
	No response	20	6.97

Table 2
Descriptive data (mean, standard deviation, median) for the different tests and questionnaires.

Test	Category	Sample		
		Mean	Standard deviation	Median
PDI – parent	Total	14.82	7.24	14.64
	Dysphoric	7.02	4.56	6.65
	Threat perception	7.86	3.71	7.98
QAECEP	Total	68.91	10.54	69.5
	Efficacy	29.04	5.07	29
	Satisfaction	39.81	7.42	40
PDI – child	Total	12.51	7.79	11.97
	Dysphoric	6.23	4.15	5.32
	Threat perception	6.15	4.42	5.32

and better COVID-19 stress management ($\beta = -0.291$, $p = 0.000$) than typically low-stressed parents. Conversely, parents with low levels of typical stress had a higher peritrauma score ($\beta = -0.327$, $p = 0.00$), were more prone to dysphoric emotions ($\beta = -0.351$, $p = 0.00$) and perceived the lockdown as more threatening ($\beta = -0.215$, $p = 0.001$) than other parents.

Currently stressed parents, on the other hand, showed more peritraumatic distress ($\beta = 0.575$, $p = 0.000$), had more dysphoric emotions (0.558, $p = 0.000$) and perceived the situation as more threatening ($\beta = 0.399$, $p = 0.000$). These parents also felt less competent as parents ($\beta = -0.308$, $p = 0.000$) and were less satisfied in their parenting role ($\beta = -0.349$, $p = 0.000$).

Our results also indicate that parents with high peritraumatic distress during the lockdown had a lower sense of parenting competence ($\beta = -0.54$, $p = 0.0001$), a lower sense of parenting satisfaction ($\beta = -0.42$, $p < 0.0001$) and a lower sense of parenting efficacy ($\beta = -0.13$, $p = 0.007$) than parents without peritraumatic distress.

Impact of COVID-19 lockdown on children

Children who were typically more stressed had less stress related to the lockdown ($\beta = -0.32$, $p = 0.0001$), less peritraumatic

distress (β = –1.64, $p < 0.0001$), and less dysphoric emotions (β = –0.237, $p = 0.006$); they also tended to perceive the situation as less threatening (β = –0.166, $p = 0.053$) than other children.

Children who were currently more stressed, on the other hand, showed more peritraumatic distress (β = 1.49, $p < 0.0001$) and more dysphoric emotions (β = 0.85, $p < 0.0001$) and perceived the lockdown as more threatening (β = 0.51, $p = 0.0005$).

Impact of parent's peritraumatic stress and distress on child's peritraumatic stress and distress

Our results indicate a significant impact of the parent's typical stress on the child: the more stressed parents generally were, the more stressed the children also tended to be (β = –0.247, $p = 0.004$), but the less stressed they were currently (β = –0.252, $p = 0.003$), the less peritraumatic distress related to the lockdown they were experiencing (β = –0.241, $p = 0.005$), the less dysphoric emotions they felt (β = –0.237, $p = 0.006$), and the less likely they were to view the lockdown as a threatening situation (β = –0.166, $p = 0.053$).

Children were also influenced by their parents' current stress; the more stressed the parents currently were, the more stressed the children felt by the lockdown (β = 0.310, $p = 0.000$), the more peritraumatic distress (β = 0.395, $p = 0.000$) dysphoric emotions (β = 0.272, $p = 0.002$) they showed, and the more likely they were to perceive the situation as life-threatening (β = 0.251, $R^2 = 0.053$).

Similarly, our results indicate that the more peritraumatic distress parents presented, the more peritraumatic distress their children presented as well (β = 0.32, $p = 0.0004$). When we differentiate between fathers and mothers, we observe a significant effect of mothers' peritraumatic distress on their children's peritraumatic distress (β = 0.30, $p = 0.001$), while the effect tends to be significant for fathers (β = 0.47, $p = 0.08$).

Impact of sociodemographic variables

Gender

Statistics show an effect of the parent's gender on current stress ($t = -3.02$, $p = 0.0028$), peritraumatic distress ($t = -2.36$, $p = 0.01$), dysphoric emotions ($t = -2.10$, $p = 0.03$), feelings of parental competence ($t = 2.14$, $p = 0.03$) and feelings of satisfaction ($t = 2.03$, $p = 0.04$). Indeed, women were more stressed currently ($M = 5.24$, $SD = 2.22$) than men ($M = 4.03$, $SD = 2.35$) and they presented more peritraumatic distress ($M = 15.28$, $SD = 7.21$) than men ($M = 12.39$, $SD = 7.19$). In addition, women had more dysphoric emotions ($M = 7.28$, $SD = 4.59$) than men ($M = 5.63$, $SD = 4.15$). On the other hand, their feeling of parental competence ($M = 68.21$, $SD = 10.69$) was lower than that of men ($M = 72.66$, $SD = 9.18$), which could be explained by a lower feeling of satisfaction among women ($M = 39.36$, $SD = 7.6$) than men ($M = 42.33$, $SD = 5.95$), while the feeling of efficacy may not differ significantly ($t = 1.53$, $p = 0.13$) between women ($M = 28.79$, $SD = 5.19$) and men ($M = 30.33$, $SD = 4.19$). In addition, women felt less competent as mothers when their peritraumatic distress score was high (β = –0.60, $p < 0.0001$), whereas fathers did not feel less competent when they had high peritraumatic distress (β = –0.03, $p = 0.89$).

The results showed that the effect of the children's gender on typical stress ($t = 1.36$, $p = 0.17$), current stress ($t = -1.23$, $p = 0.22$) and peritraumatic distress ($t = -1.02$, $p = 0.31$) was not significant. Thus, girls and boys in the sample did not differ.

Age

The results show that the older the parents were, the more they talked about COVID-19 with their children (β = 0.241, $p = 0.0001$). Similarly, they watched the news for longer ($t = 2.64$, $p = 0.009$) and more frequently (β = 0.229, $p = 0.000$). Older parents were more satisfied with their role as parents (β = 0.163, $p = 0.027$) and felt more competent (β = 0.182, $p = 0.013$) as parents. On the other hand, the younger the parents were, the more traumatized they were (β = –0.142, $p = 0.02$) and the more dysphoric moods they had (β = –0.132, $p = 0.03$).

As far as children are concerned, the results showed that the older the children were, the more stressed they felt currently ($F = 5.61$, β = 0.12, $p = 0.01$). Children of older parents felt more stressed currently (β = 0.202, $p = 0.019$). On the other hand, the regression of children's age on their peritraumatic distress was not significant (β = 0.14, $p = 0.39$).

Residence

The results indicate that the larger the home, the more stressed the parents typically were ($r = 0.20$, $p = 0.001$). Conversely, the larger the parent's home, the less peritraumatic distress related to the lockdown the parent presented ($r = -0.14$, $p = 0.01$) and the more competent he or she felt as a parent ($r = 0.26$, $p = 0.0003$).

As for the children, the larger the home, the less stressed they were currently ($r = -0.19$, $p = 0.02$), the less peritraumatic distress they presented ($r = -0.18$, $p = 0.03$) and the less they perceived the lockdown as threatening ($r = -0.18$, $p = 0.02$).

Level of education

Parents with a higher level of education had less peritraumatic distress ($r = -0.14$, $p = 0.01$) and considered the event less threatening ($r = -0.20$, $p = 0.001$). Children whose parents had a higher level of education considered the event less threatening than other children ($r = -0.20$, $p = 0.01$).

Monitoring of media coverage and discussions of COVID-19

The more the parents consulted the media, the more peritraumatic distress ($r = 0.16$, $p = 0.008$) and dysphoric emotions ($r = 0.12$, $p = 0.03$) they presented and the more threatening they found the situation ($r = 0.16$, $p = 0.007$). On the other hand, the results regarding the effect of media watching on children's current stress ($F = 0.88$, $p = 0.47$) and their peritraumatic distress ($F = 1.30$, $p = 0.27$) were not significant.

There was a significant effect of the frequency of discussions of COVID-19 on children's current stress ($F = 2.69$, $p = 0.03$), but not on the parents' stress levels ($F = 0.25$, $p = 0.91$). The results of Fisher's LSD test suggested that children who discussed COVID-19 a few times a day were currently more stressed than those who never discussed it or discussed it only a few times a week. On the other hand, the results regarding the effect of the frequency of discussions on peritraumatic distress for children ($F = 1.30$, $p = 0.27$) and parents ($F = 0.34$, $p = 0.85$) were not significant.

Presence of an at-risk relative

Parents who had a relative considered at risk perceived the situation as more threatening than parents who did not ($t = 3.77$, $p = 0.0002$). On the other hand, we did not find significant results for the impact of the existence of an at-risk relative on the dysphoric emotions felt by parents ($t = -0.79$, $p = 0.43$) or on their peritraumatic distress ($t = 0.95$, $p = 0.34$). There were no significant results concerning the influence of an at-risk relative on the children's dysphoric emotions ($t = 1.03$, $p = 0.30$), their perception of threat ($t = 0.87$, $p = 0.39$) or their peritraumatic distress ($t = 1.20$, $p = 0.23$).

Discussion

The objective of this study was to measure the peritraumatic impact of COVID-19-related lockdown measures on parents, their

sense of parental competence and the impact on their children. We observed that many parents experienced peritraumatic distress following the lockdown: 51.6% of the parents were significantly distressed at the time of our study. Peritraumatic distress is an indicator/risk factor for developing post-traumatic stress. This finding is consistent with other research on the subject (Brown, Doom, Lechuga-Peña, Watamura, & Koppels, 2020; Spinelli, Lionetti, Pastore, & Fasolo, 2020; Twenge & Joiner, 2020), which indicates that parents reported high rates of anxiety, depressive symptoms, stress and distress during the pandemic. In addition, research by Chung, Lanier, and Wong (2020)) demonstrated that parents experienced increased parental stress related to COVID-19. These findings are not surprising: COVID-19- subjected parents to many stressors (Brown et al., 2020; Ramade et al., 2016). For example, parents' routine was abruptly disrupted by the lockdown: some parents continued to work outside the home while others started working at home. Parents were jointly responsible for the care and education of their children at home and lost many sources of extra-familial support (Romero, López-Romero, Domínguez-Álvarez, Villar, & Gómez-Fraguela, 2020). In addition, some families have experienced financial problems, due to unemployment and the collapse of markets. As a result, parents were under a lot of pressure during this period (Cluver et al., 2020), which may contribute to high levels of stress in the home (Griffith, 2020).

Our results suggest that mothers and young parents were more affected by this confinement; they were currently more stressed, had more peritraumatic distress and had a lower sense of parental competence. We can hypothesize that, because resilience is an adaptive process that develops over time and in response to everyday adversity, older parents are more resilient and therefore less traumatized (Ong, Bergeman, & Boker, 2009).

However, these results are in accordance with the study by Qiu et al. (2020), which showed that women had greater psychological distress than men, and that people between 18 and 30 years of age had more peritraumatic distress. We hypothesize that younger parents are more affected, because they have younger children, who require increased vigilance and more care, thus making telework or work outside the home more difficult for these parents when they are deprived of their social network. As far as mothers are concerned, we hypothesize that they are more affected, because they have been responsible for more home-based care and education of children.

Several studies have shown that women spend more time caring for children than men and that social expectations are higher regarding the maternal role than the paternal role (Dubeau & Devault, 2009; Lapierre, Krane, Damant, & Thibault, 2008; Le Camus, 2000). As a result, women are more involved in child care and feel more pressure with respect to their role as mothers, which affects their sense of parental competence. Miller (2020) found that 45% of men versus 80% of women reported that they spent more time than their spouses on home schooling. Gender inequalities in the distribution of unpaid domestic work may therefore not have decreased during confinement (Powell, 2020). Eighty per cent of women spent more than four hours daily with children (compared with 52% of men) and 45% had a 'double day' of paid work and domestic work, with more than four hours of work and four hours with children per day, compared with 29% of men. Meanwhile, 35% of people with children had difficulties monitoring them (Insee Focus, 2020). Furthermore, the lockdown changed the 'traditional' functions of the stakeholders in education: the teacher at school and the parents at home. In this new period, parents found themselves with a new role as teachers in addition to being parents, which means they had to 'reconcile the irreconcilable'. The teleworking they must do, combined with an imposed teaching role for which they were never trained, has left some parents unable to cope with the expectations and demands of educational institutions.

The social isolation caused by the closure of day-care centres, schools and institutions, as well as the impossibility of relying on family and friends, leads some parents, particularly mothers, face a conflict between work and managing their children's education (Powell, 2020). This difficulty could explain the higher peritraumatic stress of mothers and young parents.

A study by Eanes and Fletcher (2006) found that parents felt less able to care for, protect, supervise or interact with their children as parental stress increased. The stressful and complex management of daily life can lead some parents to be psychologically or physically absent from their child. This can lead the parent to ignore signs of distress in the child, whether consciously or unconsciously. In addition, the child may perceive or feel the parent's worries and stress in the face of daily difficulties (Cyr, Euser, Bakermans-Kranenburg, & Van Ijzendoorn, 2010).

Moreover, previous studies (Baiverlin et al., 2020; Blavier et al., 2020) showed the more intense the psychological trauma, the weaker the sense of parental competence. This lack of trust is partly due to the high responsibility attached to the role of mother and the high and sometimes unrealistic social expectations that circumscribe what constitutes 'good parenting' (Olshtain-Mann & Auslander, 2008). In addition, expectations about parenting and perceptions of stigma can increase the stress felt in difficult situations and deplete mothers' already strained resources (Scannell, 2020).

We also found that people living in smaller spaces perceived the lockdown as more traumatic. This confirms the findings of Kinzie, Sack, and Riley (1994), who identified socioeconomic level as a risk factor for the development of peritraumatic stress. People from lower social levels live in smaller spaces and are at more risk of developing PTSD. Indeed, being on top of each other reinforces existing power relations: the family hierarchy (parents/children), domination (men/women, siblings) and increased dependency (young people, elderly). Some people have therefore experienced confinement as more like imprisonment (Giardinelli, 2020). Moreover, in overcrowded housing, most of the occasions normally conducive to sharing between parents and children become synonymous with stress rather than shared pleasure. The tensions generated by overcrowding can sometimes lead to violence on the part of parents and/or children or between spouses (Fondation abbé Pierre, 2020). We can therefore hypothesize that people living in larger spaces have the opportunity to isolate themselves and not be in enforced close quarters, making the lockdown less stressful or traumatic.

We found that the higher the parents' level of education, the less traumatized they are by the confinement, which confirms the results of a meta-analysis that highlighted the fact that a low level of education is a risk factor for developing peritraumatic stress (Xue et al., 2015). Indeed, in their study, Guay and Marchand (2006) found that people with a low socioeconomic status and a low level of education are more likely to develop peritraumatic stress because they already have to deal with other issues such as social precariousness, addiction problems and health problems. In addition, they have less social support. Moreover, it is also likely that their socio-economic index would not allow them to access larger housing units, which may, as we have seen, have a positive effect.

Our study also found that the frequency with which parents consulted the media increased their feelings of peritraumatic distress. It is likely that more anxious parents tended to consult the media more often in order to be reassured by keeping abreast of the situation. However, depressing information generated the opposite effect and increased their anxiety. This is confirmed by Liu and Liu (2020), who showed that repeated exposure to the media during the COVID-19 crisis can generate anxiety that can lead to vicarious trauma.

Logically, people who have a loved one at risk have a greater perception of threat, but they do not present more peritraumatic distress than others. This result suggests that it is not the threat of the disease or fear for a loved one that generates peritraumatic distress, but the lockdown itself.

Our data suggest that this distress was generated by the combination of teleworking and managing children on a daily basis without any social support. Some studies have shown that even teleworkers who are not in lockdown find it difficult to cope with the joint requirements of work and family and respond to the demands of the people around them (which are more pressing when they work from home) (Golden, Veiga, & Simsek, 2006; Ortar, 2009; Tietze & Musson, 2005). They found it difficult to keep work in bounds and not allow themselves to be overwhelmed by it, just as they considered that the spatiotemporal entanglement of professional and personal activities in the home disrupted their performance (McNaughton, Rackensperger, Dorn, & Wilson, 2014; Metzger & Cléach, 2004; Ortar, 2009; Rey & Sitnikoff, 2006; Sullivan & Lewis, 2001; Taskin & Devos, 2005; Vayre & Pignault, 2014; Wilton, Páez, & Scott, 2011). We can therefore easily imagine that these feelings were worse during periods of confinement.

In a meta-analysis of risk factors for peritraumatic distress, Brewin, Andrews, and Valentine (2000) revealed that, among a range of factors, poor-quality social support was one of the three most important risk factors for the development of trauma. Moreover, there is evidence to suggest that social support has more effects, both positive and negative, on women than on men (Caron & Guay, 2005). The inability to rely on family and friends has placed parents, and especially mothers, in a conflict between work and managing schooling or child care that may have been extremely stressful (Powell, 2020). It is therefore logical that mothers who were required to telework while managing their children and deprived of their social support showed the highest levels of peritraumatic distress.

Nevertheless, during this lockdown period, most parents had a high sense of parental competence. In particular, it would appear that parents who typically felt stressed had a higher sense of parental competence and were better able to manage COVID-19-related stress. We hypothesize that habitually feeling stressed caused these parents to develop more internal resources to cope with stress. Thus, parents in this situation probably believe they are able to cope with difficult events, which would decrease the impact of the lockdown on their feelings of parental competence. These results are similar to those of the study by Barzilay et al. (2020), who demonstrated that individual resilience was inversely correlated with concerns about COVID-19, generalized anxiety symptoms and symptoms of depression. According to Cyrulnik (2001), resilience develops mainly in people who have previously experienced stress. We can also hypothesize that, for these habitually stressed parents, the lockdown may have been experienced as a break from the demands of their daily life, allowing them to organize personal concerns and share family activities away from their usual stressors (Sénécal & Martin, 2020). The same is true for children: those who usually feel more stressed have less stress related to the lockdown and present less peritraumatic distress.

With regard to the children in particular, our results indicate that 35% of the children showed significant distress at the time of this study, and that older children felt more current stress. These results support those of the study by Hizli, Taskintuna, Isikli, Kilic, and Zileli (2008)), who found that, following an earthquake, children aged 8–13 ha d lower rates of PTSD than those aged 14–18. These results suggest that older children may be more aware of issues related to quarantine and illness. Although youth is not a protective factor for peritraumatic distress (Vila, 2006), we can hypothesize that, in this case, older children with their greater conceptual abilities showed more peritraumatic distress than younger children because they had an increased perception of the threat of death or illness caused by the virus (Taïeb et al., 2004). Moreover, they probably had access to and consulted the media and social networks more than younger people, which increases peritraumatic distress (Liu & Liu, 2020).

Our data showed that children were affected by their parents' peritraumatic stress and distress; the more stressed the parents were and the more peritraumatic distress they presenedt, the more stressed by the lockdown children were, the more peritraumatic distress and dysphoric emotions they felt, and the more likely they were to perceive the situation as life-threatening. These results are in line with research by Gallo et al. (2019), who demonstrated that children's peritraumatic reactions are related to their parents' stress. According to Bailly (2001), seeing a parent's distress can traumatize a child. If parents overreact or show distress in a situation of imminent danger, they may increase their child's anxiety level (Gallo et al., 2019; Josse, 2011; Pynoos, Steinberg, & Piacentini, 1999). Tarabulsy et al. (2008) found that having parents who are available and comforting in stressful situations allows a child to develop a secure attachment style. A stressed parent who is less available for the child, and behaves inconsistently, is irritated or acts distant does not foster the same feelings of basic security role and increases the child's stress. How parents respond to different stressors is therefore critical to their parental functioning, the parent-child relationship and whether their children are traumatized (Hall et al., 2012; Trute, Hiebert-Murphy, & Levine, 2007). An appropriate parental response allows the child to understand the traumatic experience and integrate it into his or her autobiographical memory in order to make sense of it (Fonagy, Steele, Steele, Higgit, & Target, 1994). Our results also indicate that frequent parental talk about a stressful situation increases children's anxiety. Romano (2012) emphasizes that it is essential to avoid traumatizing children by not forcing anyone to talk about it and by avoiding trivialization, dramatization, and false reassurance. We can hypothesize that parents who often have talked about the COVID-19 situation have fallen into one of these pitfalls, thus increasing their child's peritraumatic distress.

Conclusion

The objective of this study was to measure the peritraumatic impact of COVID-19-related lockdown measures on parents, their sense of parental competence and the relations between parents' peritraumatic feelings and those of their children.

Our results indicate that many parents have experienced peritraumatic distress as a result of the lockdown, particularly mothers and young parents. Our results are compelling: they show that mothers were more affected by the lockdown; they presented more peritraumatic distress and had a lower sense of parental competence, even though they provided most of the care for their children during the confinement. These data seem to reflect the difficulty that women experienced during confinement (in particular, having to manage their professional and private lives simultaneously), leading to greater peritraumatic distress. Our results suggest that these two elements (organizational difficulties and peritraumatic distress) generated frustration and dissonance in relation to their maternal gold standards and that this impaired their sense of parental competence more than for fathers. This result should be considered with caution, given the smaller number of fathers in our sample, as well as the fact that fathers also looked after the children during the lockdown and that this investment on their part may have increased their sense of parental competence.

Furthermore, our data confirm that parents' reactions during the lockdown influenced their children's reactions. Parental

attitudes and behaviours following a potentially traumatic event are decisive factors in the development of post-traumatic disorders in children. Once again, mothers seem to play a fundamental role in mediating traumatic factors for their children. All of these very recent results still need to be further investigated by measuring other dimensions (resilience capacities, etc.), but they show the differences in the experience of confinement between mothers and fathers, which also have an impact on children's well-being.

Another innovative finding concerning the children is the lack of difference between girls and boys regarding peritraumatic stress and distress. The difference between women and men in adulthood, therefore, does not seem to exist, or at least not so clearly, in children. Either this result is a promising sign for future generations, since we can hope for a generational shift towards more equality between girls and boys, or, more likely, we can hypothesize that women's greater sensitivity to trauma develops over time. The latter explanation would be consistent with Mosconi and Marry's (2014) study, which found that there are prescribed behaviours between people of different sexes that are learned from childhood.

Strengths and limitations

One of the strong points of this research is that it took place during the lockdown, which made it possible to assess peritraumatic distress on the basis of an ongoing situation and not merely memories. Another strength is that it collected parents' and children's responses at the same time, which allowed us to establish significant links between these two populations. On the other hand, our method of recruiting participants in the study may have led to bias because the study was circulated through social networks by researchers or doctoral students. Thus, it was mainly distributed in high socioeconomic and educational environments. Questions were also missing on the possible causes of peritraumatic distress, such as abuse or domestic violence, but also the difficulty of teleworking or teaching children. These points should be examined in further research in order to validate the various hypotheses put forward in this article.

Conflict of interest

None.

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