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Fear of COVID-19 and parental violence: The mediating role of parental burnout and child perceived as difficult

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ABSTRACT

Background: Since the beginning of the COVID-19 pandemic, there has been a worldwide increase in the incidence of child abuse. Studies show that the pandemic context contributes to exacerbate several risk factors usually associated with the use of violent disciplinary practices.

Objective: This study aims to better understand the role of parental burnout and child perceived as difficult as a parental stressor in the link between fear of COVID-19 and the use of parental violence (minor and severe physical violence and repeated psychological aggression).

Participants: The sample includes 467 mothers living in Québec (Canada) with a child aged 5 or less.

Method: An online questionnaire, administered one year after the beginning of the COVID-19 pandemic in Québec (March to May 2021), was used to measure parental violence, parental burnout, parental stress related to the perception of the child as difficult and fear of COVID-19. Serial mediation analyses were performed.

Results: The main analyses confirmed the indirect association between fear of COVID-19 and the three forms of parental violence studied, through parental burnout and the child perceived as difficult. Unlike physical violence (minor and severe), the association between fear of COVID-19 and repeated psychological aggression is explained only by parental burnout.

Conclusions: This study has identified new mechanisms that allow a better understanding of processes underlying parental violence during the pandemic. It also shows that parental violence can also occur in low-risk families. It is crucial to develop strategies to prevent the use of violent disciplinary practices in future socio-health crises such as the COVID-19 pandemic.

1. Introduction

Parenting practices are defined as all the decisions and actions that a parent takes when caring for a child (Belsky, 1984). While some parenting practices are recognized as favorable to the proper development of the child (O'Brien & Mosco, 2012), others are harmful and are prohibited by law, as in the case of practices involving violence (Gershoff & Grogan-Kaylor, 2016; Piché et al., 2016). Since 2020, an increase in violent parenting practices has been observed in the general population (Kovler et al., 2021; Lee et al., 2022; Rodriguez et al., 2021). According to experts, the COVID-19 pandemic has accentuated several risk factors associated with violence,

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while reducing those acting as protective factors (Campbell, 2020; Laforest et al., 2020; Usher et al., 2020). Up to now, some research has documented the contribution of certain processes associated with violent parenting practices in the pandemic context, such as parental stress, financial insecurity and social isolation (Lee et al., 2022; Rodriguez et al., 2021; Wong et al., 2021). The present study explores the role of some understudied mechanisms related to the parent and the child, namely the role of parental burnout and the stress associated with having a child perceived as difficult.

1.1. Violent parenting practices

Violent parenting practices can be grouped into three forms: minor physical violence, severe physical violence and psychological aggression (Clément et al., 2019). Minor physical violence, or corporal punishment, is defined as the use of physical actions likely to cause discomfort to the child (and not an injury; e.g., pinching the child), with the objective of correcting disturbing behavior (Clément et al., 2019). In Canada, its use is still legal and socially accepted (Clément & Chamberland, 2014; Durrant et al., 2009), unlike several other countries that have explicitly criminalized all forms of physical violence towards children (Zolotor & Puzia, 2010). Severe physical violence refers to the use of actions that have the potential to cause serious harm to the child, such as punching or hitting him/her with an object (Clément et al., 2019). Psychological aggression refers to any verbalization likely to harm the integrity or well-being of the child, such as yelling or swearing at the child, insulting or humiliating him/her, or threatening to hit the child or to kick him/her out (Clément et al., 2019). A more accurate assessment of violent practices within families must take into account all the adults likely to perpetrate them.

1.2. Factors associated with violent parenting practices

According to conceptual models on the determinants of parenting (Belsky, 1984; Belsky & Jaffee, 2015), the nature of parenting practices is influenced by the accumulation and interaction between the risk factors associated with the child and the parent as well as the context in which they evolve. Studies suggest that the pandemic has shaken all the ecosystems, both proximal and distal, gravitating around the child (Bavel et al., 2020; Prime et al., 2020). At the height of the crisis, it led decision-makers to implement drastic preventive measures such as lock-down and social distancing, the closure of schools and daycares and the cancellation of extra-family activities (e.g., sports activities). These measures have in turn been associated with an increased risk of child maltreatment (Katz et al., 2021). Normally, school and preschool workers have direct and privileged contact with children, which allows them to detect situations at risk of compromising their well-being and safety and report them to youth protection (Alazri & Hanna, 2020; Institut national d'excellence en santé et en services sociaux, 2020). It is therefore not surprising that a significant drop in the number of reports received for maltreatment has been observed in several countries following the closure of these organizations at the beginning of the pandemic (Katz et al., 2021; Renov et al., 2022). In Canada (Quebec), between the months of April and June 2020, a 20.5 % drop in the number of reports received was recorded compared to the previous year at the same period (Gouvernement du Québec, 2020). Of the 43,549 reports retained during that year (2019–2020), 33 % ($n = 14,174$) involved children aged between 0 and 5 years old (Gouvernement du Québec, 2020). This drop in child abuse report received at the very beginning of the pandemic was not explained by a real drop in the phenomenon, but rather by a decrease in detection opportunities during this period (Baron et al., 2020; Lavergne et al., 2021). Moreover, some health organizations reported having admitted more young patients with severe physical injuries (e.g., fractures, non-accidental head trauma) during the pandemic (Katz et al., 2022; Kovler et al., 2021; Obry et al., 2023).

The context of the pandemic also had more direct impact on the family system (Prime et al., 2020). Indeed, some authors reported that the pandemic and preventive measures associated with it have contributed to the exacerbation of stress related to the parental role, in particular by forcing a major readjustment of the familial and professional spheres (Brown et al., 2020; Calvano et al., 2021; Cluver et al., 2020). Studies suggest that some parents have experienced high levels of anxiety and fear specifically related to the pandemic (Suffren et al., 2021; Wissemann et al., 2021). The study by Wissemann et al. (2021) showed that the presence of fear related to COVID-19 in the parent at the start of the pandemic was positively associated with controlling parenting practices (e.g., coercion, overprotection) a month later. However, the results of this study should be interpreted with caution due to the small sample size ($N = 87$) and the high rate of attrition between the two time points.

While parenting stress is generally transient for the majority of parents (Deater-Deckard, 2014), Mikolajczak and Roskam (2018) propose that a prolonged imbalance between the resources available to the parent (e.g., supportive social network) and the number of stressors he/she faces (e.g., poor quality of the co-parenting relationship) can lead to parental burnout, a condition characterized by four primary symptoms (facets) which consist in an intense exhaustion related to parenting, emotional distancing from one's children, feelings of being fed up with one's parental role, and contrast with how the parent used and wanted to be. It occurs when parenting stress severely and chronically overwhelms parents' resources to cope (Mikolajczak & Roskam, 2018). In Western countries, the prevalence of parental burnout is among the highest (5–8 %) in the world (Roskam et al., 2021). Although all parents may experience burnout symptoms at some point, not all parents will be diagnosed with parental burnout (Roskam & Mikolajczak, 2018). The diagnosis depends on the number of symptoms and their frequency (Mikolajczak & Roskam, 2020). Secondary symptoms, not specific to parental burnout, may also be part of the picture, but are not necessarily present (e.g. sleep problems, anxiety, memory loss), but primary symptoms are the only ones that allow a differential diagnosis of other disorders with similar symptomatology (e.g., job burnout, depression) (Roskam & Mikolajczak, 2018).

At the start of the pandemic, a significant increase in the prevalence of parental burnout was noted worldwide (26 countries) compared to pre-pandemic data (4.2 % vs. 5.8 %, van Bakel et al., 2022). Early in the pandemic, higher COVID-19 concerns were associated with parental burnout (Prikhidko et al., 2020). The consequences of burnout on the parent-child relationship are well

documented in studies (Mikolajczak et al., 2018; Mikolajczak et al., 2020; Roskam & Mikolajczak, 2020). The results of the longitudinal study by Mikolajczak et al. (2020) showed strong links between parental burnout and the use of violent practices towards the child, which was not the case for other psychological conditions examined such as depression and job burnout. Parental burnout is recognized as a problem likely to affect all sociodemographic profiles (Méhauden & Piraux, 2018), which suggests that violent parenting practices resulting from a parent's excessive feeling of burnout are likely to occur in any type of family, even the wealthiest (Mikolajczak et al., 2018). To date, however, no empirical study has yet verified the relation between parental burnout and violent parenting practices in the context of the pandemic. Since the population is not safe from future crises like that of COVID-19, it is necessary to better understand the role of burnout on the nature of the parenting practices used in these particular times.

Finally, some studies conducted since the start of the pandemic showed an association between the psychological difficulties (e.g., stress, fear, anxiety, depression) experienced by the parent and the emotional and behavioral difficulties of the child (Kerr et al., 2021; Li & Zhou, 2021; Suffren et al., 2021). In the study by Kerr et al. (2021), parents who perceived a negative impact of COVID-19 on their psychological health reported more difficult behaviors in their child. This association was mediated by the level of parental burnout (Kerr et al., 2021). While behavioral problems in children are often identified as a direct consequence of the violence they experience, transactional process theories have shown a far more complex relationship between child behavior and child maltreatment, such as physical violence (MacKenzie et al., 2015). Indeed, MacKenzie et al. (2015) argue for the existence of reciprocal processes that take hold early, with violent practices influencing later externalized behaviors, which, in turn, predict later violent practices. Thus, it is possible that the emergence of behavioral problems in children since the pandemic may lead some parents to feel more stressed, less well equipped, thus leading to the use of inadequate rearing practices (Kerr et al., 2021; Menter et al., 2022).

Based on current scientific knowledge, the identification of the mechanisms underlying the increase in violent parenting practices during the pandemic remains incomplete. Few studies have documented parenting practices while considering their link with a fear specifically related to COVID-19, parental burnout and the perception of the child as difficult. Researchers who have done so have not studied these variables simultaneously.

1.3. Objective and hypotheses

This study aims to explore the link between the presence of fear related to COVID-19 and violent parenting practices within the family home. To meet this objective, the role of some mechanisms underlying parental violence is examined, in particular parental burnout and the perception of the child as difficult. These two mechanisms are considered as mediating variables in the relation

Table 1
Descriptive statistics of the sample.

	n	%	M	SD
Mothers' characteristics				
Age during the study			33.25	4.66
Age at child birth			31.16	4.60
Education				
Elementary/high school	29	6.2		
Collegial/professional	174	37.3		
University	264	56.5		
Occupation				
Employed	248	53.1		
Unemployed	219	46.9		
Annual income (CAD\$) ^a				
<30,000\$	35	7.5		
30,000–50,000\$	43	9.2		
50,000–90,000\$	168	36.6		
>90,000\$	213	46.1		
Family characteristics				
Family structure				
Two-parent	366	78.4		
Single parent	42	9.00		
Blended family	59	12.6		
Number of children in the family				
Under 18 years old			2.14	0.95
Under 5 years old			1.55	0.64
Children's characteristics				
Age			2.10	1.52
Sex				
Girls	233	49.9		
Boys	234	50.10		

Note.

^a Missing data for 16 participants who refused to communicate their income.

between COVID-19-related fear and parental violence, while controlling for some sociodemographic characteristics associated with parents (e.g., age, occupation), the child (e.g., age) and the family (e.g., number of children) given their established link to parental violence. Regarding the study hypothesis, it is expected that parental burnout and the perception of having a difficult child will mediate the relation between the presence of fear related to the pandemic and violent parenting practices.

2. Method

2.1. Participants

The total sample is composed of 467 mothers of children aged 0–5 who agreed to answer an online questionnaire. Sociodemographic data of the sample are presented in Table 1. Mothers' average age was 33 years ($M = 33.25$; $SD = 4.66$) and the age range varied between 23 and 51 years. The majority of participants declared an annual income greater than \$50,000 (82.7 %) and had a university degree (56.5 %). At the time of recruitment, 53.1 % of the respondents were employed while 46.9 % were not for various reasons (e.g., parental leave, preventive withdrawal, sick leave, studies, at-home mother).

In terms of household characteristics, 78.4 % of participants lived in a two-parent family, 12.6 % in a blended family, and 9 % were single parents. On average, households were composed of two children under the age of 18 ($M = 2.14$; $SD = 0.96$) and one child aged five or under ($M = 1.55$; $SD = 0.65$). Participants were asked to answer the questionnaire according to the youngest child living at home (i.e., five years old or younger). Data were collected for 233 female children (49.9 %) and 234 male children (50.1 %). The average age of the children was 2.1 years ($SD = 1.52$).

2.2. Procedure

This study was approved by the Research Ethics Committee of the Université du Québec à Trois-Rivières (UQTR). Recruitment took place between March and May 2021, approximately one year after the start of the COVID-19 pandemic in Quebec. The recruitment of participants was therefore conducted between the end of the second wave (August 23, 2021 to March, 20, 2021) and the beginning of the third wave (March 21, 2021 to July 17, 2021) of the pandemic in Quebec. At that time, the health measures put in place to limit the spread of the coronavirus varied from one administrative region to another in Quebec but, in the most populated regions of Quebec, the various health measures that were still in effect included a ban on private gatherings, encouraging telework, closing public places, wearing of masks in public places and curfews between 9:30 pm and 5 am. During the first year of the pandemic, the province of Quebec was the most affected in terms of deaths, number of confirmed cases, and strict health measures (Urrutia et al., 2021). Schools and daycares were closed until May 1, 2020 and remained closed in the greater Montreal area for a longer period (May 25, 2020 for daycares and August 2020 for schools). The reopening was accompanied with some restrictions (e.g., preventive withdrawal of children with symptoms of COVID-19 from the daycare or school setting). In the first months of the pandemic, the occupancy rate of childcare services was the lowest in Canada, with Ontario, at 5 % (Statistiques Canada, 2020). Parents have thus mostly had to deal with the presence of their young children at home during working hours. This was also true for older children when schools were closed or when children were having symptoms of COVID-19 once schools and daycares reopened.

The study was posted on social networks and invited mothers (biological, adoptive or foster mothers) of children aged between 0 and 5 years to complete a strictly confidential questionnaire, aimed at documenting parenting stress and parenting practices during the pandemic. To be eligible, respondents had to consent, in a free and informed manner, to participate in the study and meet the following four inclusion criteria: 1) be 18 years of age or older; 2) live in Quebec; 3) live with a child aged 0 to 5 years for at least 40 % of the time; 4) be a parental figure for that child.

2.3. Instruments

2.3.1. Violent behavior towards the child

The French adaptation of the *Parent-Child Conflict Tactics Scales* (PC-CTS; Straus et al., 1998) was used to assess the frequency of violent parenting practices in the last 12 months (Clément et al., 2018). The PC-CTS is composed of 21 items divided into three subscales, minor physical violence (e.g., “In the past year -since February 2020, how often has an adult in the home pinched your child to punish him/her?”), severe physical violence (e.g., “In the past year, how many times has an adult in the home hit your child with anything other than a belt, stick, or other hard object on the buttocks?”) and repeated psychological aggression (e.g., “In the past year, how often has an adult in the home yelled or screamed at your child?”). Responses are distributed on a four-point Likert scale (Never [1], 1 or 2 times [2], 3 to 5 times [3], 6 or more times [4]). Respondents must indicate the number of times in the past 12 months that an adult in the household has used the type of disciplinary practice described in the statement. The introduction to the section specifies that an adult in the household can refer to the respondent herself or to any other adult (18 years and older) living in the family home (e.g., father, older sister, grandfather). For the purposes of statistical analyses, the answers obtained for each of the statements were modified so that the data were treated dichotomously and took the values of 0 (absence of violence) and 1 (presence of violence). The presence of minor physical violence and severe physical violence was established according to whether these forms of violence occurred at least once during the last 12 months. As for psychological aggression, the measure of repeated acts was used as an indicator of its severity as suggested by previous studies using the PC-CTS in Quebec (Clément et al., 2015; Clément et al., 2019; Gagné et al., 2021; Gagné et al., 2023). In fact, the original subscale of the questionnaire over-estimates the number of parents resorting to any act of psychological aggression in a year-period (e.g., yelling at the child). This led the authors to propose an alternative way to measure

psychological aggression using its recurrence (Straus et al., 1998). In the present study, the presence of repeated psychological aggression (3 times or more) was established when the answers “3 to 5 times” or “6 times or more” were chosen for a question related to this scale or when the answer “1 or 2 times” was chosen for at least three of these questions.

Regarding the psychometric properties of the PC-CTS, the French adaptation presents an internal consistency varying between 0.76 and 0.88 depending on the sex of the responding parent (Clément et al., 2018). The internal consistency of the subscales in the present study was lower, varying between 0.38 and 0.59. Considering that violence is not a homogeneous reality and that episodes are sometimes rare and isolated, researchers underline that low internal consistency does not necessarily entail a measurement problem (Lorber & Slep, 2018; Straus et al., 1998). The PC-CTS is one of the rare instruments for documenting violence towards children in the general population and its use remains recommended to study this phenomenon (Clément et al., 2018; Hillis et al., 2016). The PC-CTS has good discriminant and construct validity (Lorber & Slep, 2018; Straus et al., 1998).

2.3.2. Perception of the child as difficult

The *Difficult Child* subscale of the *Parental Stress Index — Short Form* (PSI-4-SF; Abidin, 1990), translated in Quebec by Bigras et al. (1996), was administered to participants to assess perceived stress in relation to their child. Respondents are asked to indicate their level of agreement with various characteristics related to their child's temperament (e.g., “My child gets easily upset over little things”) and behaviors (e.g., “My child does some things that upset me a lot”). This subscale is composed of 12 items scored on a five-point Likert-type scale (Strongly Agree [1], Agree [2], Uncertain [3], Disagree [4], Strongly Disagree [5]). In the context of the current study, the internal consistency of the subscale was excellent ($\alpha = 0.90$).

2.3.3. Parental burnout

The French adaptation of the *Parental Burnout Assessment* (PBA; Roskam, Brianda, & Mikolajczak, 2018) was used to assess symptoms of parental burnout in the last 12 months, as for the parental violence measure. The PBA is composed of 23 items divided into four facets (exhaustion in parental role, feelings of being fed up, emotional distancing from one's children, contrast in parental self). Only the result on the global scale was used in the context of this study (e.g., “I do not feel pleasure in being with my children”; “I am ashamed of the parent I have become”). The responses are distributed on a seven-point Likert-type scale (Never [0], A few times a year or less [1], Once a month or less [2], A few times a month or less [3], Once a week [4], A few times a week [5], Every day [6]). The addition of the scores to the 23 items allows for the interpretation of the respondent's level of burnout according to a pre-established clinical threshold (≤ 30 = no burnout; 31–45 = low risk of burnout; 46–60 = moderate risk of burnout; 61–75 = high risk of burnout; ≥ 76 = burnout) (Roskam, Brianda, & Mikolajczak, 2018). The PBA has good internal structure validity and convergence as well as good fidelity (Roskam, Brianda, & Mikolajczak, 2018). The initial validation of the tool revealed an internal consistency of 0.96 (α) for the global score, which is similar to the value obtained for the global score of the current study ($\alpha = 0.97$).

2.3.4. Fear related to COVID-19

A translation of the *Fear of COVID-19 Scale* (FCV-19S; Ahorsu et al., 2020) was used to assess participants' level of fear related to the COVID-19 pandemic. This questionnaire is composed of seven items (e.g., “I am most afraid of the coronavirus-19”) scored on a five-point Likert-type scale (Strongly disagree [1], Disagree [2], Neither agree nor disagree [3], Agree [4], Strongly agree [5]). Adding the scores obtained for each item gives an overall score between 7 and 35, the higher the overall score, the higher the level of fear (Ahorsu et al., 2020). Since its initial validation, the FCV-19S has been the most widely used instrument to assess fear related to COVID-19. It has robust psychometric qualities and has been the subject of several meta-analyses (Ahorsu et al., 2020; Alimoradi et al., 2022; Blázquez-Rincón et al., 2021; Luo et al., 2021). The translated version has been used in other studies (Dubois-Comtois et al., 2021; Suffren et al., 2021). The Cronbach's alpha obtained in the current study was 0.88.

2.3.5. Sociodemographic information

In order to properly describe the composition of the sample, participants were asked sociodemographic questions (e.g., age, sex, level of education, family income). Questions relating to the composition of the household (e.g., number of children in the family), the family structure (e.g., two-parent, single-parent) and the characteristics of the child targeted by the study (e.g., age, sex) were also asked.

2.4. Analytic plan

Statistical analyses were performed with SPSS software (version 28.0). Preliminary analyses were conducted in order to describe the sample and verify the normality of the distribution. Levels of skewness and kurtosis for each variable were within acceptable range to proceed with further analyses. The covariates associated with each form of violence were also identified using *t*-tests and chi-square analyses. In order to estimate the indirect effect of the presence of COVID-19-related fear on each type of violence, a serial mediation model was tested using PROCESS v3.4 (Hayes, 2018).

3. Results

3.1. Preliminary analyses

Results of the questionnaires relating to parental burnout ($M = 34.91$; $SD = 28.47$), the perception of having a difficult child ($M =$

27.21; $SD = 9.09$) and the presence of fear related to COVID-19 ($M = 14.88$; $SD = 5.38$) showed that the sample means for each scale or subscale were below the established or suggested clinical threshold (Abidin, 1990; Nikopoulou et al., 2022; Roskam, Raes, et al., 2018). Regarding the prevalence of violent practices, results showed that 51 % of children in the sample experienced repeated psychological aggression, 26 % experienced minor physical violence and 9 % severe physical violence during the first pandemic year.

Results of the t -tests on the link between violence and sociodemographic characteristics are presented in Table 2. The age of the child was significantly linked to the presence of repeated psychological aggression ($t[465] = 5.14$, $p < .001$, $d = 0.48$), minor physical violence ($t[259] = 4.77$, $p < .001$, $d = 0.50$) and severe physical violence ($t[465] = 3.60$, $p < .001$, $d = 0.58$). Older children are therefore more often victims of these three forms of parental violence. Cohen's d estimates showed a moderate effect size of child age across the three types of parenting practices. A significant link (small effect size) between the presence of minor physical violence and living with more than one child aged five years or less was also observed ($t[465] = 1.97$, $p = .049$, $d = 0.21$). Mother's age at the birth of the child ($t[465] = -2.26$, $p = .024$, $d = -0.36$) was also significantly (small to medium effect size) related to the presence of severe physical violence, the younger mothers at the birth of the child reporting more. Finally, occupation (employed or not) was significantly associated (small to medium effect size) to the presence of repeated psychological aggression ($\chi^2 [1, N = 467] = 22.07$, $p < .001$, $d = 0.45$), minor physical violence ($\chi^2 [1, N = 467] = 5.06$, $p = .027$, $d = 0.21$) and severe physical violence ($\chi^2 [1, N = 467] = 6.86$, $p = .01$, $d = 0.24$). For all three forms of violence, working mothers reported more violent parental practices towards their child.

3.2. Main analyses

A serial mediation model was used to test the hypothesis of the indirect effect of fear related to COVID-19 on the use of violent parenting practices, with parental burnout and the perception of having a difficult child as mediators (Hayes, 2018). The covariates identified in the preliminary analyses were included in the mediation analyses. Figs. 1–3 present the results of the serial mediation analyses for each type of violence. The numerical data indicated in the figures correspond to the standardized regression coefficient (β). The significance of the coefficients was determined by calculating confidence intervals (CI; 95 %) of the resampling type (Bootstrap) based on 10,000 samples. Regression coefficients are significant if the confidence interval does not include zero.

In the first model on repeated psychological aggression (see Fig. 1), the child's age and the mother's occupation (employed or not) were included as covariates. According to the results, the indirect effect of fear related to COVID-19 through parental burnout was significant ($\beta = 0.03$, $CI = [0.01–0.05]$), as was the indirect effect through the serial mediation of parental burnout and the perception of having a difficult child ($\beta = 0.01$, $CI = [0.004–0.02]$). No direct link was observed between a fear related to COVID-19 and repeated psychological aggression ($\beta = -0.02$, $CI = [-0.06–0.02]$).

In the second model on minor physical violence (see Fig. 2), the child's age, the mother's occupation (employed or not) and the number of children under the age of five in the family were included as covariates. Results showed the significant presence of the indirect effect of fear related to COVID-19 through the serial mediation of parental burnout and the perception of having a difficult child ($\beta = 0.01$, $CI = [0.01–0.02]$). No direct link was observed between fear related to COVID-19 and minor physical violence ($\beta = -0.04$, $CI = [-0.08–0.005]$).

In the third model on severe physical abuse (see Fig. 3), the child's age, the mother's occupation (employed or not) and age at the birth of the child were included as covariates. Results showed the presence of the significant indirect effect of a fear related to COVID-19 on violence through the serial mediation of parental burnout and the perception of having a difficult child ($\beta = 0.01$, $CI = [0.01–0.03]$). No direct link was observed between fear of COVID-19 and severe physical violence ($\beta = -0.02$, $CI = [-0.08–0.05]$).

Table 2

Comparison of sociodemographic characteristics and study variables according to presence or absence of repeated psychological aggression, minor physical violence and severe physical violence.

	Repeated psychological aggression			Minor physical violence			Severe physical violence		
	Presence $n = 236$	Absence $n = 231$	t	Presence $n = 123$	Absence $n = 344$	t	Presence $n = 43$	Absence $n = 424$	t
	M (SD)	M (SD)		M (SD)	M (SD)		M (SD)	M (SD)	
Mothers' age	33.48 (4.50)	33.03 (4.82)	1.06	33.19 (4.55)	33.28 (4.71)	-0.19	32.53 (4.17)	33.33 (4.71)	-1.06
Mothers' age-child birth	31.03 (4.45)	31.28 (4.76)	-0.59	30.59 (4.53)	31.36 (4.62)	-1.61	29.65 (4.28)	31.31 (4.61)	-2.26*
Children's age	2.45 (1.41)	1.75 (1.55)	5.14***	2.60 (1.29)	1.92 (1.56)	4.77***	2.88 (1.38)	2.02 (1.51)	3.60***
Nb children (<18 ans)	2.19 (0.93)	2.08 (0.98)	1.30	2.24 (0.90)	2.10 (0.97)	1.45	2.05 (0.79)	2.15 (0.97)	-0.78
Nb children (<5 ans)	1.58 (0.64)	1.52 (0.65)	1.06	1.65 (0.68)	1.52 (0.63)	1.97*	1.60 (0.66)	1.55 (0.64)	0.56
Parental burnout	44.84 (29.88)	25.19 (23.27)	7.92***	45.76 (30.64)	31.03 (26.64)	4.73***	46.63 (29.45)	33.72 (28.13)	2.86**
Difficult child	30.59 (9.31)	23.90 (7.54)	8.52***	32.50 (8.99)	25.32 (8.36)	8.02***	35.14 (9.20)	26.41 (8.70)	6.24***
Fear of COVID-19	15.06 (5.31)	14.69 (5.44)	0.73	14.57 (5.47)	14.99 (5.35)	-0.74	14.81 (5.00)	14.88 (5.42)	-0.08

Note. Nb = Number.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

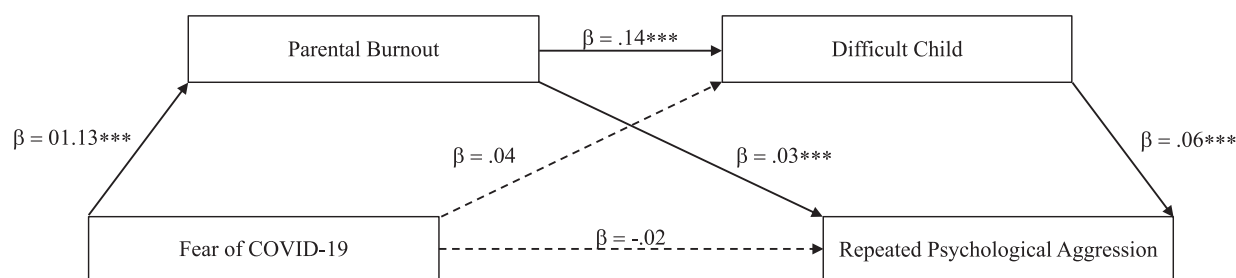


Fig. 1. Model of COVID-19-related fear as a predictor of repeated psychological aggression (3 or more times), mediated by level of burnout and perception of the child as difficult. The indirect interaction effect between variables is represented by a solid arrow. *** $p < .001$.

4. Discussion

The objective of this study was to explore the link between the presence of fear specifically related to COVID-19 and violent parental practices towards young children (0–5 years old) within the home, by considering the mediating role of parental burnout and child perceived as difficult. To this aim, the self-reported results of 467 Quebec women identifying themselves as the maternal figure (biological, adoptive or foster mother) of a young child were analyzed. Results showed that the mothers generally did not present major psychological difficulties (parental burnout, fear of COVID-19, parenting stress related to the child). However, the data showed that half of the children in the sample (51 %) experienced repeated psychological aggression during the first year of the pandemic, that a quarter (26 %) experienced minor physical violence and, finally, that one child in ten (9 %) experienced severe physical violence. In comparison with data from the most recent population-based survey on family violence in Quebec (Clément et al., 2019), the percentage of children (0–5 years old) victims of minor physical violence in the present study was lower than the annual prevalence in 2018 (26 % vs. 35 %), while the prevalence rate of repeated psychological aggression (51 % vs. 42 %) and severe physical violence (9 % vs. 3 %) was higher.

The mediation analyses confirmed the study hypothesis that parental burnout and the perception of having a difficult child explained the indirect association between a high level of fear related to COVID-19 and the presence of parental violence (physical and psychological) towards the child within the family home. On the one hand, it is possible that mothers in the study who experienced more COVID-19-related fear were more likely to be exhausted in their parental role and more likely to perceive their child as difficult. The combination of these factors may then contribute to an increase in the use of violent disciplinary practices in the home environment, whether in the form of physical violence (minor and severe) or repeated psychological aggression. On the other hand, if the mother in the current study is not the one committing the violence, it is possible that the exhaustion she might experience in her parental role prevents her from stopping the violence she witnesses towards the child. In this research, despite the fact that the respondent is not necessarily the perpetrator of the violent act, the fact remains that tolerating the violence inflicted to the child, for whatever reason (fear, lack of energy), contributes to its maintenance in the child's life. Failure to intervene to stop physical violence and psychological aggression towards the child is indeed considered a form of parental neglect (World Health Organization, 1999). While no direct link was observed between the presence of fear related to COVID-19 and violent parenting practices, our results support the importance of focusing on the underlying mechanisms during a pandemic. Indeed, this study has shown that the presence of fear related to COVID-19 is directly and indirectly related to the presence of other known risk factors for violence towards children within the home, that is, parental burnout and perceiving one's child as particularly difficult (Mikolajczak et al., 2018; Miragoli et al., 2018).

Our results are compatible with those of previous studies that have identified a strong association between parental burnout and the use of violence as a disciplinary method (Mikolajczak et al., 2018; Mikolajczak et al., 2020; Roskam & Mikolajczak, 2020). Parental burnout is recognized as a condition likely to lead to alterations in the mother-child relationship, which can manifest as a feeling of anger and disproportionate irritability in relation to a triggering event (Roskam & Mikolajczak, 2018). During the pandemic, the closure of schools and daycares led parents to spend significantly more time with their children (Lee et al., 2021; Swit & Breen, 2022). Having to manage school at home in addition to balance work and family responsibilities has been associated with more mental health problems in parents (Deacon et al., 2021). Forced to exercise altogether the roles of parent, teacher/educator at home, and worker, it is possible that some parents felt overwhelmed, less patient and more easily irritated by the behaviors or lack of cooperation of their child. However, not all parents who experienced these symptoms would have used violence as a disciplinary method. In fact, one study showed that specific dimensions within the parental burnout construct were associated with increased risk of using violence as a disciplinary strategy (Hansotte et al., 2021). Parents with higher levels of exhaustion and of emotional distancing showed much higher levels of violence (and neglect) in this study (Hansotte et al., 2021). These dimensions could not be isolated in the current study as an overall parental burnout score was used.

In our study, more exhausted mothers were also more likely to maintain a perception of their child as being difficult, which in turn was associated with more violent practices in the family home, regardless of the form. These results echo those of multiple studies that have associated the experience of abnormally high parenting stress with coercive rearing practices and at risk of evolving towards violence (Clément et al., 2019; Combs-Orme & Cain, 2008; MacKenzie et al., 2011; Miragoli et al., 2018). Among the characteristics related to the child, Swit and Breen (2022) observed that having a more independent, and therefore older, child acted as a protective

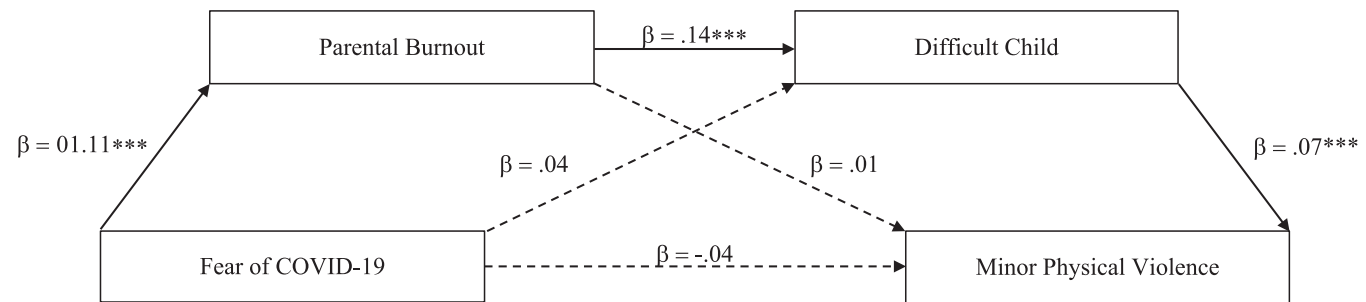


Fig. 2. Model of COVID-19-related fear as a predictor of minor physical abuse, mediated by level of burnout and perception of the child as difficult. The indirect interaction effect between variables is represented by a solid arrow. *** $p < .001$.

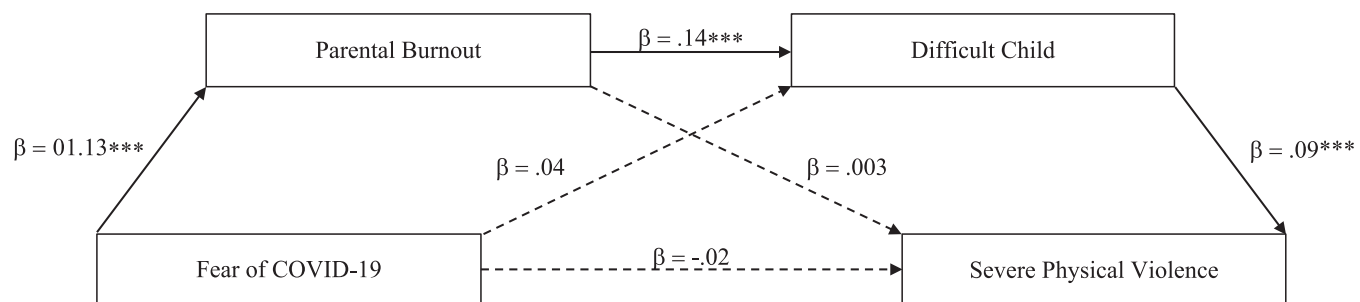


Fig. 3. Model of COVID-19-related fear as a predictor of severe physical abuse, mediated by level of burnout and perception of the child as difficult. The indirect interaction effect between variables is represented by a solid arrow. *** $p < .001$

factor against stress and parental burnout during the pandemic. These same authors raise the idea that being a parent of a young child during the pandemic, particularly during lockdown, is more demanding because young children require more attention and are more dependent on their parents for the satisfaction of their needs, which in turn leaves fewer opportunities for parents to take time for themselves. The present study therefore documented these variables (age, number of children under the age of 5), which have been found to be correlated with the presence of physical violence (minor and severe) and repeated psychological aggression. The analyses were then performed while controlling for the child's age and the number of children under five years old in the family (for minor physical violence). These results point to the role of some child-specific characteristics that may be associated with violent disciplinary practices.

In addition, mothers who were employed during the pandemic also reported significantly more psychological aggression and physical violence (minor and severe) towards their child within the family home than mothers who were not employed during this period. It is possible to hypothesize that difficulties of establishing a balance between family and professional obligations among working mothers contributed to the display of inappropriate practices within households during the pandemic, especially since seeking help from friends and extended family (e.g., having grandparents look after children) was strongly discouraged, and even prohibited at certain times in some regions of Canada, and particularly in Quebec. This hypothesis could probably contribute to explain why, contrary to physical violence (minor and severe), the presence of repeated psychological aggression can be explained, not only through the serial mediation of parental burnout and the child perceived as difficult, but also by the effect of burnout alone. According to the available data, parents of young children (0–5 years) with a high level of conflicts related to the work-family balance are more likely to get angry with their child at least once a day and to lose patience several times a week when their child demands attention (Lavoie, 2016). Thus, it is possible that frightened and exhausted mothers, for whom work-family balance was an issue during the pandemic, used or tolerated psychological aggression more at home.

Furthermore, during the pandemic lockdown in Australia, both women and men felt that mothers were more involved in childcare and child-rearing and household maintenance, while fathers were more engaged in paid and personal activities (Waddell et al., 2021). These gender inequalities in family and work obligations were associated with more marital problems and less marital satisfaction among the women in the study (Waddell et al., 2021). In their book, Roskam and Mikolajczak (2018) reported that marital satisfaction is a protective factor against parental burnout and that, conversely, marital dissatisfaction, as for marital conflicts, is associated with increased parental stress. They also point out that marital problems can have an impact on the parent-child relationship and on the functioning of the child, who, in response to recurrent episodes of conflict, exhibits more behavioral, emotional management and attachment problems. As a vicious circle, these behaviors are in turn associated with the exacerbation of parental stress. Along with parental burnout, marital dissatisfaction could therefore be a variable that mediates the associations between fear of COVID-19, difficult behaviors of the child and parental violence.

4.1. Clinical implications

The results of this study justify the importance of being concerned about the impacts of the pandemic on the well-being and safety of children. They highlight the need to develop prevention and intervention strategies to reduce episodes of violence towards children during periods of great upheaval. Fundamentally, parental violence is a problem that is difficult to detect because of the restricted access that the outside world has to the family unit, a situation that the context of the pandemic has accentuated with the need to limit social contacts. Through the identification of key mediators, our study provides indicators on which the actors gravitating around the family system (e.g., relatives, workers, doctors) can rely on to identify which families are at risk of resorting to violence as a disciplinary method. Since it is unlikely that parents will openly declare that they use violence or even tolerate these practices within the family, the symptoms and comments reported by parents (e.g., feeling overwhelmed) constitute valuable information to focus on, because they can potentially hide the use of parental practices that risk compromising the safety and well-being of the child. In addition, offering support or guidance to parents who seem to encounter challenges in exercising their parental role could prevent situations of parental violence. In North America, parental burnout is a subject that still receives little attention from the scientific community, compared to the efforts made in Europe to understand, prevent and treat this problem. In fact, preliminary results of the study by Brianda et al. (2020) showed the positive effects of two intervention groups (2 h/week for 8 weeks, $N = 151$ parents). Both the first group, whose interventions focused on factors closely related to parental burnout, and the second, who presented non-directive interventions based on common therapeutic factors (e.g., active listening, effect of group dynamics) have been shown to be efficient for the treatment of parental burnout (Brianda et al., 2020). Regardless of the group, a significant reduction (37 % on average) in symptoms of burnout was observed at the end of the treatment and maintained three months later (Brianda et al., 2020). Improvements in burnout symptoms were also correlated with better parenting practices at the end of the program, as shown by reductions (35 % and 32 %, respectively) in child neglect and child abuse (Brianda et al., 2020). These results are relevant since they suggest that general intervention programs for exhausted parents, led by qualified mental health professionals, could be implemented in Canada, without requiring specialization or expertise in parental burnout. By intervening on the symptoms of burnout, it would be possible to act indirectly on violence towards children.

4.2. Limitations

A few limitations should be noted in relation to this study. The questionnaire used (PCCTS; Straus et al., 1998) does not make it possible to identify beyond any doubt that the reported violence is committed by the parental respondent, since the participants in the study were asked to indicate the number of times that an *adult* in the household (e.g., mother, brother 18 years or older) performed the

action stated in the question. This approach is used with the aim of limiting response bias linked to social desirability and thus, obtaining results that are more representative of the violence suffered by young children within their family. This principle has also been adopted many times by the Institut de la statistique du Québec in large population-based surveys on family violence (Boucher et al., 2019). The use of a self-reported measures also carries a risk of bias, as they are based on the respondent's subjective perception.

In addition, the characteristics of the sample (high level of education, high annual family income, predominantly two-parent families) prevent the generalization of study results to at-risk populations. Future studies could be conducted with samples of parents more vulnerable on a sociodemographic level. Since parental burnout is observed in both mothers and fathers (Roskam & Mikolajczak, 2020), it would also be relevant to focus on the experience of the latter. It is also important to keep in mind that the cross-sectional design of the present study does not make it possible to establish a causal effect. While children's difficult behaviors may increase the risk of violence against them, it is also possible that these behaviors are intensified by parental violence. For two out of three models, the relationships found could only be explained by mothers' perceptions of having a more difficult child. Indeed, it is possible that the observed effects were related to the child. Because its consequences on children's development are disastrous (Gershoff, 2013; Gershoff & Grogan-Kaylor, 2016), violence should never constitute an educational practice, no matter how difficult the child's behavior is. As it is perfectly normal to experience ups and downs as parents, more public health campaigns should be organized so that parents who see themselves slowly slipping into violent and harsh parenting practices ask for support. Finally, as avenues for further research, it could be interesting to explore other forms of maltreatment (e.g., neglect) and to adopt a qualitative approach to better understand parents' experiences and obtain their opinion about what could really support them on a daily basis in their parenting role.

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Declaration of competing interest

The authors report no conflict of interest.

Data availability

The authors do not have permission to share data.

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References

- Abidin, R. R. (1990). *Parenting stress index short form* (Test manual).
- Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2020). The fear of COVID-19 scale: Development and initial validation. *International Journal of Mental Health and Addiction*, 20(3), 1537–1545. <https://doi.org/10.1007/s11469-020-00270-8>
- Alazri, Z., & Hanna, K. M. (2020). School personnel and child abuse and neglect reporting behavior: An integrative review. *Children and Youth Services Review*, 112. <https://doi.org/10.1016/j.childyouth.2020.104892>
- Alimoradi, Z., Lin, C.-Y., Ullah, I., Griffiths, M. D., & Pakpour, A. H. (2022). Item response theory analysis of the fear of COVID-19 scale (FCV-19S): A systematic review. *Psychology Research and Behavior Management*, 15, 581–596. <https://doi.org/10.2147/PRBM.S350660>
- Baron, E. J., Goldstein, E. G., & Wallace, C. T. (2020). Suffering in silence: How COVID-19 school closures inhibit the reporting of child maltreatment. *Journal of Public Economics*, 190. <https://doi.org/10.1016/j.jpubeco.2020.104258>
- Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, 4(5), 460–471. <https://doi.org/10.1038/s41562-020-0884-z>
- Belsky, J. (1984). The determinants of parenting: A process model. *Child Development*, 55(1), 83–96. <https://doi.org/10.2307/1129836>
- Belsky, J., & Jaffee, S. R. (2015). The multiple determinants of parenting. In D. Cicchetti, & D. J. Cohen (Eds.), *Developmental psychopathology* (pp. 38–85). <https://doi.org/10.1002/9780470939406.ch2>
- Bigras, M., LaFrenière, P. J., & Abidin, R. R. (1996). *Indice de stress parental: Manuel francophone en complément de l'édition américaine*.
- Blázquez-Rincón, D., Durán, J. I., & Botella, J. (2021). The fear of COVID-19 scale: A reliability generalization meta-analysis. *Assessment*, 1-9. <https://doi.org/10.1177/1073191121994164>
- Boucher, M., Courtemanche, R., & Julien, D. (2019). *La violence familiale dans la vie des enfants du Québec, 2018. Les attitudes parentales et les pratiques familiales. Méthodologie de la 4e édition de l'enquête*. Québec Institut de la statistique du Québec.
- Brianda, M. E., Roskam, I., Gross, J. J., Franssen, A., Kapala, F., Gérard, F., & Mikolajczak, M. (2020). Treating parental burnout: Impact of two treatment modalities on burnout symptoms, emotions, hair cortisol, and parental neglect and violence. *Psychotherapy and Psychosomatics*. <https://doi.org/10.1159/000506354>
- Brown, S. M., Doom, J. R., Lechuga-Peña, S., Watamura, S. E., & Koppels, T. (2020). Stress and parenting during the global COVID-19 pandemic. *Child Abuse & Neglect*, 1–14. <https://doi.org/10.1016/j.chiabu.2020.104699>
- Calvano, C., Engelke, L., Di Bella, J., Kindermann, J., Renneberg, B., & Winter, S. M. (2021). Families in the COVID-19 pandemic: Parental stress, parent mental health and the occurrence of adverse childhood experiences-results of a representative survey in Germany. *European Child & Adolescent Psychiatry*, 31(7), 1–13. <https://doi.org/10.1007/s00787-021-01739-0>
- Campbell, A. M. (2020). An increasing risk of family violence during the COVID-19 pandemic: Strengthening community collaborations to save lives. *Forensic Science International: Reports*, 2. <https://doi.org/10.1016/j.fsir.2020.100089>
- Clément, M.-É., & Chamberland, C. (2014). Trends in corporal punishment and attitudes in favour of this practice: Toward a change in societal norms. *Canadian Journal of Community Mental Health*, 33(2), 13–29. <https://doi.org/10.7870/cjcmh-2014-013>

- Clément, M.-È., Chamberland, C., & Bouchard, C. (2015). Prevalence, co-occurrence and decennial trends of family violence toward children in the general population. *Canadian Journal of Public Health*, 106(7), 1–7. <https://doi.org/10.17269/CJPH.106.4839>
- Clément, M.-È., Gagné, M.-H., & Chamberland, C. (2018). Adaptation et validation francophone d'un questionnaire sur les conduites parentales à caractère violent (PC-CTS). *Revue Européenne de Psychologie Appliquée*, 68, 141–149. <https://doi.org/10.1016/j.erap.2018.04.004>
- Clément, M.-È., Julien, D., Lévesque, S., & Flores, J. (2019). *La violence familiale dans la vie des enfants du Québec, 2018. Les attitudes parentales et les pratiques familiales. Résultats de la 4^e édition de l'enquête.*
- Cluver, L., Lachman, J. M., Sherr, L., Wessels, I., Krug, E., Rakotomalala, S., ... McDonald, K. (2020). Parenting in a time of COVID-19. *Lancet Review*, 395. [https://doi.org/10.1016/S0140-6736\(20\)30736-4](https://doi.org/10.1016/S0140-6736(20)30736-4)
- Combs-Orme, T., & Cain, D. S. (2008). Predictors of mothers' use of spanking with their infants. *Child Abuse & Neglect*, 32(6), 649–657. <https://doi.org/10.1016/j.chiabu.2007.08.006>
- Deacon, S. H., Rodriguez, L. M., Elgendy, M., King, F. E., Nogueira-Arjona, R., Sherry, S. B., & Stewart, S. H. (2021). Parenting through a pandemic: Mental health and substance use consequences of mandated homeschooling. *Couple and Family Psychology: Research and Practice*, 10, 281–293. <https://doi.org/10.1037/cfp0000171>
- Deater-Deckard, K. (2014). *Parenting stress*. Yale University Press.
- Gouvernement du Québec. (2020). Plus forts ensemble! Bilan des directeurs de la protection de la jeunesse/directeurs provinciaux, 2020.
- Dubois-Comtois, K., Suffren, S., St-Laurent, D., Milot, T., & Lemelin, J. P. (2021). Child psychological functioning during the COVID-19 lockdown: An ecological, family-centered approach. *Journal of Developmental & Behavioral Pediatrics*, 42(7), 532–539. <https://doi.org/10.1097/dbp.0000000000000935>
- Durrant, J. E., Trocme, N., Fallon, B., Milne, C., & Black, T. (2009). Protection of children from physical maltreatment in Canada: An evaluation of the supreme court's definition of reasonable force. *Journal of Aggression, Maltreatment & Trauma*, 18(1), 64–87.
- Gagné, M.-H., Clément, M.-È., Milot, T., Paradis, H., & Voyer-Perron, P. (2023). Comparative efficacy of the triple p program on parenting practices and family violence against children. *Child Abuse & Neglect*, 141, Article 106204. <https://doi.org/10.1016/j.chiabu.2023.106204>
- Gagné, M.-H., Piché, G., Clément, M.-È., & Villatte, A. (2021). Families in confinement: A pre-post COVID-19 study. *Couple and Family Psychology: Research and Practice*, 10, 260–270. <https://doi.org/10.1037/cfp0000179>
- Gershoff, E. T. (2013). Spanking and child development: We know enough now to stop hitting our children. *Child Development Perspectives*, 7(3), 133–137. <https://doi.org/10.1111/cdep.12038>
- Gershoff, E. T., & Grogan-Kaylor, A. (2016). Spanking and child outcomes: Old controversies and new meta-analyses. *Journal of Family Psychology*, 30(4), 453–469. <https://doi.org/10.1037/fam0000191>
- Hansotte, L., Nguyen, N., Roskam, I., Stinglhamber, F., & Mikolajczak, M. (2021). Are all burned out parents neglectful and violent? A latent profile analysis. *Journal of Child and Family Studies*, 158–168. <https://doi.org/10.1007/s10826-020-01850-x>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis. A regression-based approach* (2 ed.). Guilford Press.
- Hillis, S., Mercy, J., Amobi, A., & Kress, H. (2016). Global prevalence of past-year violence against children: A systematic review and minimum estimates. *Pediatrics*, 137(3). <https://doi.org/10.1542/peds.2015-4079>
- Institut national d'excellence en santé et en services sociaux. (2020). *COVID-19 et filet de sécurité social autour des enfants et des jeunes à risques de subir de mauvais traitements et pratiques de la protection de la jeunesse.*
- Katz, I., Katz, C., Andresen, S., Bérubé, A., Collin-Vezina, D., Fallon, B., ... Wekerle, C. (2021). Child maltreatment reports and child protection service responses during COVID-19: Knowledge exchange among australia, Brazil, Canada, colombia, Germany, Israel, and South Africa. *Child Abuse & Neglect*, 116(Pt 2), Article 105078. <https://doi.org/10.1016/j.chiabu.2021.105078>
- Katz, I., Priolo-Filho, S., Katz, C., Andresen, S., Bérubé, A., Cohen, N., ... Yamaoka, Y. (2022). One year into COVID-19: What have we learned about child maltreatment reports and child protective service responses? *Child Abuse & Neglect*, 130, Article 105473. <https://doi.org/10.1016/j.chiabu.2021.105473>
- Kerr, M. L., Fanning, K. A., Huynh, T., Botto, I., & Kim, C. N. (2021). Parents' self-reported psychological impacts of COVID-19: Associations with parental burnout, child behavior, and income. *Journal of Pediatric Psychology*, 46(10), 1162–1171. <https://doi.org/10.1093/jpepsy/jsab089>
- Kovler, M. L., Ziegfeld, S., Ryan, L. M., Goldstein, M. A., Gardner, R., Garcia, A. V., & Nasr, I. W. (2021). Increased proportion of physical child abuse injuries at a level I pediatric trauma center during the COVID-19 pandemic. *Child Abuse & Neglect*, 116, Article 104756. <https://doi.org/10.1016/j.chiabu.2020.104756>
- Laforest, J., Roberge, M.-C., & Maurice, P. (2020). *Réponse rapide: Covid-19 et répercussions psychosociales*. Québec: Institut national de santé publique du Québec.
- Lavergne, C., Vargas Diaz, R., Lessard, G., & Dubé, M. (2021). La COVID-19 et ses impacts sur la violence conjugale et la violence envers les enfants: Ce que nous disent la recherche et la pratique. *Intervention*, 1, 27–35.
- Lavoie, A. (2016). Les défis de la conciliation travail-famille chez les parents salariés. In *Un portrait à partir de l'enquête québécoise sur l'expérience des parents d'enfants de 0 à 5 ans 2015*. Institut de la statistique du Québec.
- Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the transition to home-based education during the COVID-19 pandemic. *Children and Youth Services Review*, 122, Article 105585. <https://doi.org/10.1016/j.childyouth.2020.105585>
- Lee, S. J., Ward, K. P., Lee, J. Y., & Rodriguez, C. M. (2022). Parental social isolation and child maltreatment risk during the COVID-19 pandemic. *Journal of Family Violence*, 37(5), 813–824. <https://doi.org/10.1007/s10896-020-00244-3>
- Li, X., & Zhou, S. (2021). Parental worry, family-based disaster education and children's internalizing and externalizing problems during the COVID-19 pandemic. *Psychological Trauma: Theory, Research, Practice, and Policy*, 13(4), 486–495. <https://doi.org/10.1037/tra0000932>
- Lorber, M. F., & Slep, A. M. S. (2018). The reliability paradox of the parent-child conflict tactics corporal punishment subscale. *Journal of Family Psychology*, 32(1), 145–150. <https://doi.org/10.1037/fam0000307>
- Luo, F., Ghane Gheshlagh, R., Dalvand, S., Saedmoucheshi, S., & Li, Q. (2021). Systematic review and meta-analysis of fear of COVID-19. *Frontiers in Psychology*, 12, 1–11.
- MacKenzie, M. J., Nicklas, E., Brooks-Gunn, J., & Waldfogel, J. (2011). Who spans infants and toddlers? Evidence from the fragile families and child well-being study. *Children and Youth Services Review*, 33(8), 1364–1373. <https://doi.org/10.1016/j.childyouth.2011.04.007>
- MacKenzie, M. J., Nicklas, E., Brooks-Gunn, J., & Waldfogel, J. (2015). Spanking and children's externalizing behavior across the first decade of life: Evidence for transactional processes. *Journal of Youth and Adolescence*, 44(3), 658–669. <https://doi.org/10.1007/s10964-014-0114-y>
- Méhauden, F., & Piraux, V. (2018). Un trouble qui touche tous les profils sociodémographiques. In I. Roskam, & M. Mikolajczak (Eds.), *Le burnout parental: Comprendre, diagnostiquer et prendre en charge* (pp. 141–158). De Boeck Supérieur.
- Menter, K., Ritchie, T., Ogg, J., Rogers, M., Shelleby, E. C., Santuzzi, A. M., & Wendel, M. J. (2022). Changes in parenting practices during the COVID-19 pandemic: Child behavior and mindful parenting as moderators. *School Psychology Review*, 51(2), 132–149. <https://doi.org/10.1080/2372966X.2020.1869497>
- Mikolajczak, M., Brianda, M. E., Avalosse, H., & Roskam, I. (2018). Consequences of parental burnout: Its specific effect on child neglect and violence. *Child Abuse & Neglect*, 80, 134–145. <https://doi.org/10.1016/j.chiabu.2018.03.025>
- Mikolajczak, M., Gross, J. J., Stinglhamber, F., Lindahl Norberg, A., & Roskam, I. (2020). Is parental burnout distinct from job burnout and depressive symptoms? *Clinical Psychological Science*, 8(4), 673–689.
- Mikolajczak, M., & Roskam, I. (2018). A theoretical and clinical framework for parental burnout: The balance between risks and resources (br2). *Frontiers in Psychology*, 9(886), 1–11. <https://doi.org/10.3389/fpsyg.2018.00886>
- Mikolajczak, M., & Roskam, I. (2020). Parental burnout: Moving the focus from children to parents. *New Directions for Child and Adolescent Development*. <https://doi.org/10.1002/cad.20376>
- Miragoli, S., Balzarotti, S., Camisasca, E., & Di Blasio, P. (2018). Parents' perception of child behavior, parenting stress, and child abuse potential: Individual and partner influences. *Child Abuse & Neglect*, 84, 146–156. <https://doi.org/10.1016/j.chiabu.2018.07.034>
- Nikopoulou, V. A., Holvea, V., Parlapani, E., Karamouzi, P., Voitsidis, P., Porfyri, G. N., ... Diakogiannis, I. (2022). Mental health screening for COVID-19: A proposed cutoff score for the greek version of the fear of COVID-19 scale (FCV-19S). *International Journal of Mental Health and Addiction*, 20(2), 907–920. <https://doi.org/10.1007/s11469-020-00414-w>

- O'Brien, K., & Mosco, J. (2012). Positive parent-child relationships. In S. Roffey (Ed.), *Positive relationships: Evidence-based practice across the world* (pp. 91–107). Netherlands: Springer. https://doi.org/10.1007/978-94-007-2147-0_6.
- Obry, S., Roman, E., Tavernier, E., Boutry, N., Delval, A., Blouet, M., ... Morel, B. (2023). The monthly incidence of abusive head trauma, inflicted skeletal trauma, and unexplained skin lesion in children in six french university hospitals during the COVID-19 pandemic. *Child Abuse & Neglect*, 138, Article 106063. <https://doi.org/10.1016/j.chiabu.2023.106063>
- Piché, G., Huynh, C., Clément, M.-È., & Durrant, J. (2016). Predicting externalizing and prosocial behaviors in children from parental use of corporal punishment. *Infant and Child Development*, 1-18. <https://doi.org/10.1002/icd.2006>
- Prikhidko, A., Long, H., & Wheaton, M. G. (2020). The effect of concerns about COVID-19 on anxiety, stress, parental burnout, and emotion regulation: The role of susceptibility to digital emotion contagion. *Frontiers in Public Health*, 8.
- Prime, H., Wade, M., & Browne, D. T. (2020). Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, 75(5), 631–643. <https://doi.org/10.1037/amp0000660>
- Renov, V., Risser, L., Berger, R., Hurley, T., Villaveces, A., DeGue, S., ... Ragavan, M. (2022). The impact of the COVID-19 pandemic on child protective services caseworkers and administrators. *Child Abuse & Neglect*, 130. <https://doi.org/10.1016/j.chiabu.2021.105431>
- Rodriguez, C. M., Lee, S. J., Ward, K. P., & Pu, D. F. (2021). The perfect storm: Hidden risk of child maltreatment during the COVID-19 pandemic. *Child Maltreatment*, 26(2), 139–151. <https://doi.org/10.1177/1077559520982066>
- Roskam, I., Aguiar, J., Akgun, E., Arikian, G., Artavia, M., Avalosse, H., ... Mikolajczak, M. (2021). Parental burnout around the globe: A 42-country study. *Affective Science*, 2(1), 58–79. <https://doi.org/10.1007/s42761-020-00028-4>
- Roskam, I., Brianda, M.-E., & Mikolajczak, M. (2018). A step forward in the conceptualization and measurement of parental burnout: The parental burnout assessment (PBA). *Frontiers in Psychology*, 9(758). <https://doi.org/10.3389/fpsyg.2018.00758>
- Roskam, I., & Mikolajczak, M. (2018). *Le burnout parental: Comprendre, diagnostiquer et prendre en charge*. De Boeck Supérieur.
- Roskam, I., & Mikolajczak, M. (2020). Gender differences in the nature, antecedents, and consequences of parental burnout. *Sex Roles: A Journal of Research*. <https://doi.org/10.1007/s11199-020-01121-5>
- Roskam, I., Raes, M.-E., Hubert, S., & Mikolajczak, M. (2018). Diagnostiquer le burnout parental : Le parental burnout inventory et le parental burnout assesment. In I. Roskam, & M. Mikolajczak (Eds.), *Le burnout parental: Comprendre, diagnostiquer et prendre en charge*. Statistiques Canada. (2020). *Utilisation des services de garde d'enfants pendant et après la pandémie de COVID-19*.
- Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the parent-child conflict tactics scales: Development and psychometric data for a national sample of american parents. *Child Abuse & Neglect*, 22(4), 249–270. [https://doi.org/10.1016/S0145-2134\(97\)00174-9](https://doi.org/10.1016/S0145-2134(97)00174-9)
- Suffren, S., Dubois-Comtois, K., Lemelin, J. P., St-Laurent, D., & Milot, T. (2021). Relations between child and parent fears and changes in family functioning related to COVID-19. *International Journal of Environmental Research and Public Health*, 18(4). <https://doi.org/10.3390/ijerph18041786>
- Swit, C. S., & Breen, R. (2022). Parenting during a pandemic: Predictors of parental burnout. *Journal of Family Issues*. <https://doi.org/10.1177/0192513x211064858>
- Urrutia, D., Manetti, E., Williamson, M., & Lequy, E. (2021). Overview of canada's answer to the COVID-19 pandemic's first wave (january–april 2020). *International Journal of Environmental Research and Public Health*, 18(13), 7131. <https://www.mdpi.com/1660-4601/18/13/7131>.
- Usher, K., Bhullar, N., Durkin, J., Gyamfi, N., & Jackson, D. (2020). Family violence and COVID-19: Increased vulnerability and reduced options for support. *International Journal of Mental Health Nursing*, 29(4), 549–552. <https://doi.org/10.1111/inm.12735>
- van Bakel, H., Bastiaansen, C., Hall, R., Schwabe, I., Verspeek, E., Gross, J. J., ... Roskam, I. (2022). Parental burnout across the globe during the COVID-19 pandemic. *International Perspectives in Psychology*, 11(3), 141–152. <https://doi.org/10.1027/2157-3891/a000050>
- Waddell, N., Overall, N. C., Chang, V. T., & Hammond, M. D. (2021). Gendered division of labor during a nationwide COVID-19 lockdown: Implications for relationship problems and satisfaction. *Journal of Social and Personal Relationships*, 38(6), 1759–1781. <https://doi.org/10.1177/0265407521996476>
- Wisseemann, K., Mathes, B., Meyer, A., & Schmidt, N. B. (2021). Covid-related fear maintains controlling parenting behaviors during the pandemic. *Cognitive Behaviour Therapy*, 50(4), 305–319. <https://doi.org/10.1080/16506073.2021.1878274>
- Wong, J. Y.-H., Wai, A. K.-C., Wang, M. P., Lee, J. J., Li, M., Kwok, J. Y.-Y., ... Choi, A. W.-M. (2021). Impact of COVID-19 on child maltreatment: Income instability and parenting issues. *International Journal of Environmental Research and Public Health*, 18(4). <https://www.mdpi.com/1660-4601/18/4/1501>.
- World Health Organization. (1999). Report of the consultation on child abuse prevention, who, geneva, 29–31 march 1999. <https://apps.who.int/iris/handle/10665/65900>.
- Zolotor, A. J., & Puzia, M. E. (2010). Bans against corporal punishment: A systematic review of the laws, changes in attitudes and behaviours. *Child Abuse Review*, 19(4), 229–247. <https://doi.org/10.1002/car.1131>