Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Resilience during times of enduring challenge: Brazilian Child Protection Professionals' resilience and psychological distress one year into the COVID-19 pandemic

Deborah Goldfarb\textsuperscript{a}, Murilo R. Zibetti\textsuperscript{b}, Jenny J.W. Liu\textsuperscript{c}, Sidnei R. Priolo Filho\textsuperscript{d,\ast}, Carlos Aznar-Blefari\textsuperscript{e}

\textsuperscript{a} Florida International University, Miami, FL
\textsuperscript{b} Universidade do Vale do Rio dos Sinos, São Leopoldo, Brazil
\textsuperscript{c} Schulich School of Medicine and Dentistry, Western University, London, Canada
\textsuperscript{d} Laboratório de Pesquisa, Prevenção e Intervenção em Psicologia Forense, Universidade Tuiuti do Paraná, Curitiba, Brazil
\textsuperscript{e} Universidade Tuiuti do Paraná, Curitiba, Brazil

\begin{abstract}
Background: The impact of the COVID-19 pandemic on Child Protection Professionals (CPPs) was widespread. Evidence regarding how those professionals dealt with the pandemic adversities and consequences for their wellbeing are scarce.

Objective: We sought to analyze whether predictors of resilience had changed one year into the COVID-19 pandemic in Brazil. Specifically, we explored the resiliency of CPPs as the stress of the pandemic evolved from an acute stressor to a more chronic and persistent stressor.

Participants and setting: 263 CPPs from the five regions of Brazil engaged in this study. Participants had a mean age of 40 years and, on average, 13 years of experience in their field.

Methods: CPPs were recruited between March and April of 2021 via professional social media outlets to complete an online survey. CPPs answered questions regarding their perceptions of their work conditions, psychological distress, and resilience. Survey questions were adopted from a prior survey distributed in 2020.

Results: We replicated findings from our earlier study in the pandemic: A model of CPPs' resilient behaviors showed good indices of fit even one year into the pandemic. Despite this, paths related to individual importance for personal resilient behavior were not significant in this model. Unmet resilient needs significantly predicted general psychological distress.

Conclusions: CPPs revealed some changing resiliency needs as the pandemic progressed. Results revealed that meeting resilience-related needs is key to decreasing the psychological distress of this population. This work adds to the literature on the understudied topic of CPPs' psychological distress and resilience during international challenges.
\end{abstract}

As the novel coronavirus (COVID-19) pandemic persists, it has become increasingly apparent that the wide-spread impacts of the pandemic are differentially experienced by countries around the world. Adding a layer of complexity, the experiences of coping with...
the pandemic are also differentially felt by certain groups and professions. The child protection systems experienced evolving challenges in relation to the pandemic and related changes across countries (Katz et al., 2021a). For example, some countries implemented lockdowns that inadvertently created additional barriers for the reporting of child abuse (e.g., school closures, professional restrictions in duties, etc.). As we face additional pandemics and other international health crises, more measures are needed to evaluate the longitudinal impacts of such stressors and to help anticipate emerging needs ahead. Moreover, much of the emerging research conducted on the effects of the pandemic are focused on either Asian countries, or Western Educated Industrialized Rich and Democratic countries (WEIRD; Akintunde et al., 2021). Despite the emergence of findings to aid our understanding of the effects of the pandemic, such an understanding is incomplete when it excludes research on developing nations, like Brazil (Akintunde et al., 2021).

The impact of the COVID-19 pandemic in Brazil was significant during both the first wave that was experienced in 2020 and in the second wave as the pandemic continued into 2021. These impacts were experienced at multiple levels. Brazil reported some of the highest rates of infections and deaths in relation to other countries throughout the whole pandemic period (Johns Hopkins University, 2021). Children experienced these challenges and changes in multiple forms with their education, health, and safety all potentially negatively impacted. Brazil reported the second highest number of child deaths during the pandemic with over 800 children dying from the virus (Kitano et al., 2021; Oliveira et al., 2021). Brazilian schools were physically closed for more than a year, resulting in disrupted learning. Children's physical removal from schools also decreased access to social services, including those provided by Child Protection Professionals (CPPs; Katz et al., 2021a). This led to professional concerns regarding the efficacy of child protection work, and opportunities to explore how CPPs might provide further protection and be further protected, including building their resilience, during the pandemic (Priolo Filho et al., 2020).

1. Systems of resilience

Resilience, or the capacity to respond to challenges, is a particularly relevant construct during periods of adversity, such as the COVID-19 pandemic. Emerging consensus among researchers suggests resilience is a dynamic construct that shifts and changes in varying contexts, rather than a dispositional trait. Indeed, resilience can best be defined as a process of responding to challenges, utilizing resources from internal (e.g., personality and health behaviors) and external (e.g., accessing social support) systems in response to varying needs (Liu et al., 2017, 2020). In this study, we sought to test whether CPPs' availability to and use of pandemic-specific resources predicts their wellbeing during the ongoing pandemic.

We also test and apply Liu et al.'s (2017) integrative model of resilience, the Multi-System Model of Resilience (MSMR), to define structures and components that we predict will relate to individuals' resilience. The systems of resilience include internal resources, such as emotion regulation, external resources, such as access to important services, and resources related to goals and pursuits, such as meaning-making and other coping-related skills and strategies (Liu et al., 2020). Importantly, Liu et al. (2020) posited that resilience is a bi-factorial construct of resources and needs; the process of resilience is represented as navigating resources from different systems in response to varying levels of needs. These needs include essential needs related to keeping safe, situational needs related to managing constant and/or evolving changes, and actualization needs related to reaching one's full potential (Liu et al., 2020).

2. Psychological distress

Psychological distress is one's responses to external stressors, such as the stressors that arose during the pandemic (Riehm et al., 2021). Barkham et al. (2013) present the CORE-10 as a validated measure of psychological distress that highly correlates with anxiety, depression, and other mental health issues.

Psychological distress has been studied with resilience. In a randomized trial with university students, a mindfulness intervention was found to bolster individual resilience while lowering psychological distress (Galante et al., 2016). Other findings mirrored this relationship. In research with American adults, those with higher resilience showed a lower chance of presenting psychological distress during the pandemic (Riehm et al., 2021). Such research has not, however, been thoroughly considered within CPPs and within lower resourced countries, such as Brazil. While research has shown that females presented more psychological distress, compared to males (Riehm et al., 2021), much of the focus has been on health care workers (Vizheh et al., 2020) and other frontline workers, such as social workers (Ben-Ezra & Hamama-Raz, 2021). We sought in this paper to address this gap and carefully consider the role that resilience plays in psychological distress under times of extreme global stress.

3. Brazilian CPPs’ resilience at the outset of the pandemic

Building on the MSMR's prediction that resilience is evolving as it is contextually specific, in the Summer of 2020, at the outset of the pandemic, our team surveyed Brazilian CPPs as to their current workplace conditions (Wave 1). Specifically, CPPs were asked about their views on the import of pandemic-specific resilient behaviors, their workplace's support of such behaviors, and their actual engagement in these behaviors (Priolo Filho et al., 2020). Mirroring the multidimensional resilience posited by the MSMR (Liu et al., 2017), we queried CPPs as to their views of the importance, support, and engagement of three levels of resilient behaviors: personal, familial, and workplace. We thus sought to tap into individuals' attitudes and behaviors on internal and external levels.

Wave 1 findings revealed CPPs overwhelmingly found the pandemic had a negative impact on them during those initial months (Priolo Filho et al., 2020). In the face of such stressors, CPPs still engaged in resilient behaviors. Such engagement was, however, predicted by whether the individuals themselves believed such behaviors had value and whether their workplace supported such behaviors (Fig. 1). We thus found support for models that recognize the role that environment plays on resiliency, particularly under
the stressors of an international pandemic.

Our findings were, of course, snapshots of resilience during the pandemic in the Summer of 2020 and they did not provide insights as to whether such a model would replicate once a stressor moved from acute to persistent. Deleterious conditions persisted for CPPs over the intervening months. Given the unprecedented nature and scale of the global pandemic, what we may observe or expect regarding resiliency trajectories of any group may be drastically different as the contexts or milieu evolve. Data from different countries show that developing countries had distinct patterns of notifications and continuity of services during the pandemic (Katz et al., 2022). How those aspects impact CPPs, especially the consequences and their resilient behaviors in those contexts, is still unknown.

Here, we attempted to address this gap in the literature. The results of this study can further educate efforts to provide CPPs with the necessary resources to meet their daily challenges and their increased challenges in times of increased stressors. Using the MSMR as a framework of understanding the pandemic and its effects, we can map out different levels of resource use and evolving resilience needs to better understand the resilience trajectories of CPPs, and possibly predict future challenges and resource strains. For example, at the onset of the pandemic or other acute stressors, resilience efforts may be largely focused on safe keeping practices related to maintaining health and essential safety. As stressors such as the pandemic wage on, priorities may shift to focus on career, family, or individual characteristics, and thus require different sets of resources, internally and externally, to support these needs. Comparing our data collected both at the early onset of the pandemic to the data analyzed here, we provide unique insights into both resource use and evolving needs as posited by the MSMR, as well as interpret findings towards the understanding of the multidimensional impact of the pandemic on CPP’s capacities to protect the children and families that they serve.

4. Present study

We sought to understand how dimensions of resiliency had evolved as the pandemic continued to impact Brazilian CPPs one year after it began (Wave 2). As with Wave 1 (Priolo Filho et al., 2020), Wave 2 data collection occurred during a time when the Coronavirus was particularly active and spreading throughout the country. At Wave 1, the average number of daily cases was 36,070, with approximately 1022 deaths per day. Wave 2 data was collected over 21 days in the late March to early April timeframe. During this time, Brazil had, on average, 57,227 new cases per day, the highest occurrence of new cases in the world. During the data collection all states had indoor mask mandates, schools were physically closed, and social distancing enforced through state and local legislation.

This study had four goals: (1) capture data on the current state of practice for CPPs in Brazil; (2) analyze the resilient behaviors undertaken by CPPs during March and April of 2021 of the ongoing COVID-19 pandemic, during the second peak of viral infection in Brazil. Specifically, we sought to determine if our model and predictors from Wave 1 held or if new predictors emerged as the stressors of the pandemic persisted; (3) consider whether engaging in resilient behaviors predicted CPPs’ current psychological distress; (4) explore a multi-dimensional model of resilience under a time of persistent international stress, specifically investigating how aspects of the MSMR proposed by Liu et al. (2017, 2020) might relate to the psychological distress experienced during a period of prolonged stress.

We predicted that, based the results from our Wave 1 study, CPPs would still report increased levels of adversities but that those

| Variable                      | Mean/Percentage | SD  |
|-------------------------------|-----------------|-----|
| Age (mean)                    | 39.87           | 11.51 |
| Gender (%)                    |                 |     |
| Female                        | 85.1            |     |
| Male                          | 14.5            |     |
| Non-binary                    | 0.4             |     |
| Professions (%)               |                 |     |
| Health Professionals          | 11.5            |     |
| Legal Professionals           | 11.5            |     |
| Education                     | 34.6            |     |
| Psychologists                 | 34.2            |     |
| Social Workers                | 8.1             |     |
| Professional experience (mean)| 13.32           | 10.09 |

| Services available (%)        |                 |     |
| Family Health Program         | 81.4            |     |
| Basic Health Unit             | 92.4            |     |
| Hospital                      | 86.7            |     |
| Public Defense Attorneys      | 77.6            |     |
| Social Welfare Center         | 90.9            |     |
| Specialized Social Welfare Center | 82.5  |     |
| High School                   | 87.8            |     |
| University (public or private)| 75.3            |     |

Note. Health professionals - includes physicians, nurses, speech therapists and physical therapists; Legal professionals - includes lawyers and child protective services.
who valued resilient behaviors and were supported by their workplaces would continue to engage in such behaviors. We also predicted that our Wave 1 model would hold. However, we anticipated changes regarding the importance, support, and behavioral engagement of these resilient behaviors in relation to the onset of the pandemic. Based on prior work showing that increased engagement in resiliency-related behaviors decreases psychological distress, we expected a similar relation here.

5. Method

5.1. Participants

A total of 263 CPPs responded to at least 80% of the survey. This included 85 psychologists, 70 teachers, 20 social workers, 8 clinicians (pediatricians), 8 lawyers, 7 nurses, and 62 other CPPs (e.g., governmental support, speech language therapists). Participants are represented from each of the five regions in Brazil, with a majority of our sample from the South and Southeast regions (94.3%) and the remaining professionals were from the Central, North, and Northeast. This pattern was described in our previous work, and it is similar to professionals’ distribution in the country (Priolo Filho et al., 2020).

Participants were, on average, 40 years of age (SD = 11.60), with approximately 13.33 (SD = 10.11) years of experience in their professional capacities. A t-test revealed no differences between the Wave 1 and Wave 2 samples in terms of participants’ age (t(253) = −0.20, p = .94), years of professional experience (t(258) = 21.23, p = .96), and number of services available at the cities of the CPPs (t(306) = 59.65, p = .68). Chi-square tests showed no differences between the Waves among participants professions distribution (X(1) = 13.91, p = .065). Further demographic information on the Wave 2 sample can be found in Table 1.

Services available to participants and their clients varied based on the location of practice. The availability of services reported by CPPs was similar across the two waves (Priolo Filho et al., 2020) as to healthcare (e.g., family health, basic health, and hospital access), education (e.g., access to high schools or universities in the city), social welfare (e.g., access to social welfare centers), and legal access (e.g., access to public defendants).

5.2. Measures

5.2.1. Demographics questionnaire

Participants completed the same demographics questionnaire that was used at Wave 1 (Priolo Filho et al., 2020). This measure gathered information on participants’ characteristics, including their age, their occupation, the years that they have worked as a CPP, and their gender.

5.2.2. Professionals’ resilient behaviors measure (Priolo Filho et al., 2020)

This measure was specifically designed for data collection at Wave 1 and measures the role of the COVID-19 pandemic on CPP’s resilient behaviors during this unique period. Participants rated each of 14 resilience behaviors as to their: (1) Importance: whether participants thought the behaviors were important (important/not important); (2) Level of Work Support: if the participant’s work supports, enables, or permits them to perform that item (yes/no); and (3) Behavior: if the participants performed that activity (yes/no). Three categories of resilient behaviors were measured: personal resilience (e.g., “Caring about my own mental health”; “Time available for hobbies/exercises/meditation”); familial resilience (e.g., “Time for a family-work balance”; “Shared household tasks”); and career resilience (e.g., “Direct communication with work during the pandemic”; “Shared responsibility at work”). These are the same questions that participants were asked at Wave 1.

Unlike the MSMR, which focuses on more general dimensions of resiliency, the behaviors in this measure were focused both chronologically and topically around the pandemic. For instance, participants would answer whether they had direct communication with their workplace in the past month, how important they felt such communication was for them, if their work provided the opportunity for and helped support such communication. To ensure that participants were thinking about the relevant period, rather than the pandemic as a whole, they were instructed to respond as to their behaviors during the last month. Our goal was not to validate this measure, although the Wave 1 data (Priolo Filho et al., 2020) showed theoretical coherence. Also, Wave 1 result presents our interpretation of the measure and its correlations with other variables associated with resilience. The present study deepens this comprehension with correlate measures.

5.2.3. Multi-System Model of Resilience Inventory (MSMR-I; Liu et al., 2020)

The MSMR-I is a 27-item tool to measure resilience. Items were constructed to represent the three systems proposed by the MSMR (internal, external, coping & pursuits) in response to three levels of resilience needs (essential, actualization, and situation). The scale has been tested in university students and community members in Canada (Liu et al., 2020). Scale items include health-related sources of resilience such as diet and emotion regulation, coping-related sources such as creativity and meaning, and socio-structural sources of resilience such as feelings of belonging and accessibility to services (Liu et al., 2020). Items were translated to Portuguese and back translated to English with consultation from native Brazilians and the authors of the original questionnaire. Questions are scored on a 4-point Likert-type scale, with 0 corresponding to “not at all like me,” and 3 to “very much like me” with higher scores showing higher resilience in each of the factors. In its original version the MSMR shows excellent internal consistency overall (α = 0.90 to 91) and good internal consistency for each of the factors (α = 75 to 0.85) (Liu et al., 2020). The internal consistency for the MSMR-I in this study was good (Cronbach’s α = 0.86).
5.2.4. Clinical Outcomes in Routine Evaluation (CORE-10; Barkham et al., 2013)

The CORE-10 is a brief, unidimensional measure of general psychological distress (Rosenstrom et al., 2022). This measure utilizes 10 questions from the longer CORE-OM that has 34 items. The CORE-10 has shown high levels of internal reliability (Cronbach’s $\alpha = 0.90$) in prior samples. The internal consistency was good in this sample as well (Cronbach’s $\alpha = 0.86$). Items from the CORE-10 were selected from the Brazilian Portuguese complete version of the CORE-OM adapted by Santana et al. (2015) following CORE System Trust standards.

5.3. Procedure

This study was approved by the relevant Institutional Review Board at Universidade Tuiuti do Paraná (approval number 32833920.3.0000.8040). Participant recruitment efforts mirrored those at Wave 1. Specifically, CPPs were contacted about the possibility of participating in this study via professional Facebook groups and snowball sampling (Baltar & Brunet, 2012). During Wave 2 data collection, a social media campaign raised awareness of the study. Regardless of the method of recruitment, participants received an invitation with an anonymous link to the study.

After participants consented to participating in the study, they completed the demographics questionnaire. Participants then completed the remaining scales described above. Presentation of the other scales was randomized. After participants completed the study, they could engage in exercises to bolster their resilience: watching a relaxation video, doing a crossword puzzle, or reading a paper by one of the authors about fostering children’s resilience (Priolo Filho & de Barros Rodrigues, 2018). The same materials were made available in Wave 1. Following Brazilian ethical guidelines for research, participants did not receive compensation for completing the study.

5.3.1. Data analytic strategy

Preliminary analyses considered the correlations between the key theorized and non-theorized variables using SPSS 22 (IBM Corp. Released, 2013). The theorized variables are resilience factors measured by MSMR-I, resilience importance, support, and behaviors. The non-theorized variables are years of experience, gender, and age. First, we replicated the analysis from Wave 1 (Priolo Filho et al., 2020); specifically, we performed a Path Analysis assessing both the direct and indirect effects of individuals’ beliefs about the importance of resilient behaviors on the mean number of behaviors practiced. We also tested whether importance was mediated by job support. The effects of these predictors were tested on CPP’s reports of three categories of resilient behaviors (i.e., personal, familial, and career). Next, we analyzed the MSMR and its relation to current levels of distress. Participants’ reports of their work conditions and vaccination status were then analyzed. Finally, we compared these reports, treating them as independent measures of the working conditions during the pandemic in Wave 1 and Wave 2. To avoid the impact of non-parametric variables, confidence intervals (95 %) for the estimated parameters and standard errors were presented by bootstrapping the sample (n = 10,000). For this analysis we used ML estimators following Brown (2015) criteria for adjustment indices (CFI > 0.95; TLI > 0.95; RMSEA < 0.06 and SRMR < 0.08). For these analyzes, the Lavaan package (Rosseel, 2012) was implemented using the JASP program (JASP Team, 2020).

As an extension of our prior work, we sought to explore additional predictors of mental health to capture the complex interactions that may impact resilience and psychological distress. A second set of analysis examined the link between individuals’ dimensions of resilience, their pandemic-related resilience, and psychological distress. We conducted Multiple Linear Regression for Psychological Distress (total score of CORE-10) including as predictors the following variables: a) Needs of MSMR (Essential, Actualization and Situational); b) Resilience Importance (personal, familial and career); c) Resilience Support (personal, familial and career); and d) Resilient Behavior (personal, familial and career). We implemented this model using the Stepwise method. Cook’s distance revealed no distinct cases and VIF showed acceptable level of multicollinearity (<10) (Hair et al., 2009).
Neither the path from personal importance to personal support nor the path from personal importance to personal resilient behavior were significant in the Wave 2 sample. Views that career resilience behaviors were important had small direct ($R^2 = 0.07; p < .01$) and indirect ($R^2 = 0.13; p < .01$) effects on resilient career behaviors. On the other hand, views that familial resilience behaviors were important had an effect on familial resilient behaviors ($R^2 = 0.55$). The direct effect was $R^2 = 0.42 (p < .01)$ and the indirect effect, through support to engage in those behaviors, was $R^2 = 0.13 (p < .01)$. In all cases, support of resilient behaviors (personal, career and familial) by the participants’ workplace significantly predicted individuals’ engagement in the resilient behaviors. There was no residual covariance between the perception of importance of resilient behaviors but residual covariances were observed in the perception of support to engage in resilient behavior. Unlike in Wave 1, career resilient behaviors also no longer correlated familial resilient behaviors. Our comparisons are based on statistically significant pathways among the waves (Fig. 1).

Table 2 presents the CPPs’ mean ratings for each item on the Resilient Behaviors Measure for Wave 1 and 2. We present the results of $t$-tests of comparisons between the two waves. Between the two waves, participants' ratings as to the importance of resilient behaviors, as well as the amount of support provided by their workplace for resilient behaviors and engagement in career-related resilient behaviors, all increased.

### 6.2. General resilience and CPPs’ psychological distress

In this set of analyses, we sought to explore the predictors of psychological distress (measured by the CORE-10) in CPPs. We considered whether either Pandemic-Related resilience or participants’ resilience needs as assessed by the MSMR (Liu et al., 2020) correlated to or predicted their levels of psychological distress (CORE-10; Barkham et al., 2013) during Wave 2. Table 3 presents the correlations among CORE-10, MSMR, and professionals’ resilient behaviors. Data shows negative correlations between psychological distress and MSMR essential, actualization, situational, and with support and behavior of the three categories of the Professionals’ Resilient Behaviors Measure (career, family, and individual). Variables that had no statistical significance were excluded from the final model. Finally, psychological distress was negatively predicted by all factors relating to the needs of the MSMR and, of all other variables, the Familial Importance resilience. The final model’s fit was satisfactory [$F (236,4) = 96.17, p < .01,\text{ Adjusted } R^2 = 0.613$](Table 4).

### 6.3. CPPs’ work conditions during the pandemic

Brazilian CPPs reported on their current working conditions during the second wave of the pandemic and its comparison with Wave 1 through chi-square tests are shown in Table 5. Contrary to Wave 1, when professionals reported a decrease in work hours, the majority of CPP’s in Wave 2 reported an increase in their work hours (38.4 %) or reported that the work hours had stayed stable (35.7 %) when compared to months previous to the pandemic. A vast majority of the professionals (80.41 %) who reported an increase in work hours after the start of the pandemic worked in either education, healthcare, or psychology. As shown in Table 5, more participants reported at Wave 2 that the quarantine was having a negative impact on their community. CPPs did report, however, that more of them were conducting home visits in Wave 2 than Wave 1.

### 7. Discussion

We sought to analyze here CPPs resilience in the high-stress work environment of child protection in a developing country during a time of an ongoing global pandemic. Specifically, this paper sought to understand how dimensions of resiliency had evolved as the COVID-19 pandemic continued to impact Brazilian CPPs. We leveraged our data collection during Wave 1 of the study to determine the current state of practice of CPPs in Brazil, whether our model of CPPs’ resilient behaviors changed as the state of stress moved from acute to persistent, whether resilient behaviors predicted CPPs’ current psychological distress in a time of chronic stress, and how different factors within the resilience model proposed by Liu et al. (2017, 2020) might predict psychological distress in such an environment.
Wave 1 and 2 comparisons of the professionals' resilient pandemic-related behaviors.

| Professionals' resilient pandemic-related behaviors | Wave 1 M (SD) | Wave 2 M (SD) | t     | p       |
|---------------------------------------------------|---------------|---------------|-------|---------|
| Career importance                                 | 5.46 (1.18)   | 5.86 (0.41)   | −5.325| <0.01*  |
| Career support                                    | 4.16 (1.54)   | 4.44 (1.35)   | −2.110| 0.04*   |
| Career behavior                                   | 4.20 (1.42)   | 4.43 (1.26)   | −1.987| 0.05*   |
| Individual importance                             | 3.76 (0.76)   | 3.98 (0.15)   | −4.227| <0.01*  |
| Individual support                                | 2.50 (1.35)   | 2.70 (1.28)   | −0.857| 0.39    |
| Individual behavior                               | 2.70 (1.18)   | 2.87 (1.13)   | −0.948| 0.34    |
| Family importance                                 | 3.21 (0.94)   | 3.40 (0.68)   | −2.500| 0.01*   |
| Family support                                    | 2.42 (1.30)   | 2.58 (1.20)   | −0.244| 0.80    |
| Family behavior                                   | 2.71 (1.09)   | 2.75 (1.04)   | 0.538 | 0.59    |

Overall, our results underscore the evolving nature of resiliency during the unprecedented pandemic. Specifically, our findings revealed two key patterns. First, CPPs' views of the needs, availability, and import of resilient behaviors shifted as the pandemic moved from an acute to a persistent or chronic stressor. Second, as predicted by the MSMR, the CPPs who reported the greatest unmet needs during Wave 2 were more likely to report increased psychological distress than those who reported lower levels of needs. We review below each of these findings and end with practical implications, limitations, and future directions.

7.1. Shift in needs, resources, and beliefs about resiliency during the pandemic

As the stressor of the ongoing international pandemic persisted, CPPs reported a shift in their perceived resilience needs. CPPs overall reported an increasing belief that pandemic-related resilient behaviors were important across all three of the resilience domains tapped here: career, family, and individual. This is in line with prior findings that balancing personal and work life was important for CPPs during the pandemic (Baginsky & Manthorpe, 2021) and the use of self-care behaviors within their families (Self-Brown et al., 2020). One change between the two waves of data collection was that CPPs were more likely to report that family and individual resiliency was important in Wave 2 than they did at Wave 1. Given these findings, it may be that CPPs thus continue to value resiliency-promoting domains, and particularly those relating to family and themselves in the face of persistent stressors such as the pandemic.

Increases in career-related resiliency practices may be due to workplaces becoming more aware of meeting CPPs' resiliency needs or CPPs requesting additional support from their workplace. Similar to observed trends during Wave 1, individuals' views of the import of resilient behaviors, as well as support from their workplace in engaging in resilient behaviors continued to predict actual engagement in such behaviors. Such findings highlight the value of the workplace environment for child protection professionals, particularly in an ongoing international health crisis (Ferrari et al., 2021; Miller et al., 2020; Priolo Filho et al., 2020; Katz et al., 2021a).

Changes in patterns of association between the three types of resilience also suggest that as we evolve to cope with the pandemic as a persistent rather than acute stressor, our use of resources and resilience needs may shift, which was previously theorized in the literature (Katz et al., 2021b; Miller et al., 2020). Specifically, the interrelated nature of the three resiliency contexts (family, career, and personal) did not persist at Wave 2. For instance, the importance of career resiliency and the importance of personal and familial resiliency were no longer significantly related to each other at Wave 2 (Fig. 1). Career resilient behaviors also no longer predicted familial resilient behaviors. There are thus signs in the data that there is a disentangling of personal, family, and workplace as the pandemic progresses. Indeed, recent reviews of resilience-supporting interventions highlight the domain-specificity nature of resiliency and the need to contextualize efforts to consider settings, populations, and needs (Liu et al., 2020).

Kuntz (2021) indicates potential paths that workplace support might muster to help mitigate stress and increase resilience during the pandemic. Theoretical discussions (Katz et al., 2021b) have approached the key impact of work support for CPPs and this data supports the importance of this variable. Our work builds on these discussions and provides data for the proposition that workplace support helps bolster the practice of resilient behaviors. We further show the persistent effects of workplace support across both Wave 1 and Wave 2 of the pandemic.

Despite valuing resiliency behaviors, CPPs did not, however, report an increased practice in all types of such behaviors. Although CPPs were more likely to practice career-related resilient behaviors in Wave 2 than they were in Wave 1, they did not report a similar increase in practicing family- and individual-resilience behaviors (Priolo Filho et al., 2020). Our data did not reveal an explanation or rationale for the lack of increase here, which is an area worthy of future research. Particularly given that, as discussed below, failures to engage in such behaviors or have unmet needs reveal potentially deleterious effects.

7.2. Unmet resiliency needs predicted increased psychological distress

In line with the multi-systems models of resilience (Liu et al., 2017), CPPs who reported having greater unmet needs also had higher levels of distress during the second wave of the pandemic. Of note, all three types of needs (essential, situational, and actualization) predicted overall mental health, but it was the situational and actualization needs that had the strongest predictive power. Although the initial months of the pandemic may have brought about higher needs related to keeping safe, as the pandemic waged, individual needs may have shifted towards adapting and living with the pandemic. These may include adjusting to ongoing changes as related to the pandemic health guidelines via situational needs (e.g., Cheng et al., 2021), as well as seeking ways to continue one's professional
Table 3
Means, standard deviations, and correlations for key variables.

| Score       | M (SD) | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | 11    | 12    |
|-------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| CORE-10     |        |       |       |       |       |       |       |       |       |       |       |       |       |
| Total       | 17.35  | 7.3   | –     | –     | –     | –     | –     | –     | –     | –     | –     | –     | –     |
| MSMR        | 16.07  | 4.86  | –0.60*** | –   | –     | –     | –     | –     | –     | –     | –     | –     | –     |
| Actualization| 17.35 | 4.74  | –0.72*** | 0.68** | –   | –     | –     | –     | –     | –     | –     | –     | –     |
| Situational | 15.52  | 3.98  | –0.62*** | 0.50*** | 0.58*** | –     | –     | –     | –     | –     | –     | –     | –     |
| Career      | 4.39   | 12.67 | –0.01 | 0.04  | 0.09  | 0.10  | –     | –     | –     | –     | –     | –     | –     |
| Support     | 5.62   | 0.77  | –0.18** | 0.07  | 0.15*  | 0.07  | 0.18** | –     | –     | –     | –     | –     | –     |
| Behavior    | 4.41   | 1376  | –0.21*** | 0.15*  | 0.22*** | 0.13*  | 0.21*** | 0.82*** | –     | –     | –     | –     | –     |
| Individual  | 2.86   | 1.14  | 0.14*  | –0.12 | –0.10  | –0.12 | –0.03  | –0.01  | –0.01  | –     | –     | –     | –     |
| Support     | 3.85   | 0.52  | –0.23*** | 0.24*** | 0.18**  | 0.21*** | 0.01  | 0.44*** | 0.30*** | –0.02 | –     | –     | –     |
| Behavior    | 2.67   | 1.3  | –0.21*** | 0.44*** | 0.24*** | 0.28*** | –0.02 | 0.20*** | 0.27*** | 0.03  | 0.44*** | –     | –     |
| Family      | 2.72   | 1.05  | –0.01  | –0.12* | –0.06  | –0.07  | 0.04  | 0.03  | 0.05  | 0.21*** | 0.02  | –0.06 | –     |
| Support     | 3.28   | 0.77  | –0.14*  | 0.02  | 0.09  | 0.05  | 0.08  | 0.34*** | 0.18**  | 0.01  | 0.52*** | 0.15*  | 0.30*** | –     |
| Behavior    | 2.59   | 1.19  | –0.20**  | 0.09  | 0.15*  | 0.12*  | 0.07  | 0.20*** | 0.167**  | 0.07  | 0.23*** | 0.18**  | 0.56*** | 0.58*** |

*p < 0.05.

**p < 0.01.

***p < 0.001.
development and life trajectories despite setbacks caused by the pandemic via actualization needs (e.g., Moore et al., 2022).

Of note, CPPs who reported placing the most value on family-focused pandemic-related behaviors were also less likely to report signs of distress, even though the actual practice of such behaviors did not significantly predict distress. Our path analyses provide some clarity on these findings. Specifically, the import of family-related behaviors highly predicts one's practice of such behaviors. It may be that individuals who choose to value such practices in times of distress are more likely to ensure their needs are met. Indeed, families may provide an important source of formal and informal support during uncertain times, further promoting resilience and buffering against the deleterious effects of the pandemic (Ferrari et al., 2021; Prime et al., 2020).

7.3. CPPs' increasingly negative workplace conditions during the pandemic

Our findings present a potential contradiction. CPPs are reporting that they are increasingly seeing the value of resilient behaviors and they are engaging in more workplace resilient behaviors, but many have unmet needs and those with unmet needs are revealing increased psychological distress. Indeed, despite efforts to help mitigate the impact of the pandemic on the lives of individuals and professionals, our study revealed that Brazilian CPPs are reporting increased stressors as the pandemic persists. This data shows an even more dangerous trend when those professionals were already distressed before the pandemic (McFadden et al., 2019), or had a continuous pattern of psychological distress regarding the pandemic (Miller et al., 2020; Self-Brown et al., 2020). Research also shows that CPPs faced different levels of support by the society and government depending on the country in which they practiced (Katz et al., 2021a; Katz et al., 2022), which indicates the urgency to understand how the return to regular activities while still facing the impacts of COVID-19 can dampen CPPs psychological distress.

Table 4

| Variable                                      | B     | SE    | t     |
|-----------------------------------------------|-------|-------|-------|
| CORE-10 – Total                               | 41.70 | 2.06  | 20.235|
| Needs MSMR Actualization                      | –0.69 | 0.09  | –7.61 |
| Situational                                   | –0.53 | 0.09  | –5.72 |
| Essential                                     | –0.25 | 0.84  | –2.95 |
| Resilience Behavior                           | –1.05 | 0.43  | –2.42 |

* All variables are statistically significant (p < .05). Variables that had no statistical significance and that were excluded from the final model were career and individual (importance, support and behavior) and family (support and behavior).

Table 5

| Variables                                      | X²    | p     |
|-----------------------------------------------|-------|-------|
| Average hours worked per week                 |       |       |
| Wave 1 Increased                              | 127 (42.2 %) | 115 (38.2 %) | 59 (19.6 %) | 63.575 | <0.01* |
| Wave 2 Increased                              | 64 (24.3 %) | 100 (38.0 %) | 99 (37.6 %) |       |       |
| Impact of quarantine                           |       |       |
| Wave 1 Negative                               | 270 (89.7 %) | 13 (4.3 %) | 18 (6.0 %) | 6.265 | 0.04* |
| Wave 2 Negative                               | 247 (94.3 %) | 5 (1.9 %) | 10 (3.8 %) |       |       |
| Number of child abuse cases after COVID-19     |       |       |
| Wave 1 Increased                              | 86 (54.8 %) | 55 (35.0 %) | 16 (10.2 %) | 0.887 | 0.64  |
| Wave 2 Increased                              | 100 (64.1 %) | 46 (29.4 %) | 10 (6.5 %) |       |       |
| Do you conduct home-visits?                   |       |       |
| Wave 1 No, and it is not part of my work      | 197 (65.7 %) | 31 (10.3 %) | 73 (24.0 %) | 15.721 | <0.01* |
| Wave 2 No, but could/should                   | 141 (53.8 %) | 37 (14.1 %) | 84 (32.1 %) |       |       |
| Are you vaccinated?                           |       |       |
| Wave 1 Yes, two doses                         | 27 (10.3 %) | 67 (25.5 %) | 169 (64.2 %) |       |       |

D. Goldfarb et al.

Child Abuse & Neglect 134 (2022) 105925
not being significant, in both waves those factors indicate a challenging social and professional context, which are important determinants for resilience and psychological distress (Liu et al., 2017), especially during the pandemic (Twenge & Joiner, 2020).

7.4. Practical implications

CPPs face higher stress exposure as a result of their work. Specifically, higher rates of burnout, stress, and compassion fatigue have been linked to CPP populations (Bride et al., 2007; Griffiths & Royse, 2017; McFadden et al., 2019; Miller et al., 2018). Our findings reveal that the pandemic may have further exacerbated these concerns, amplifying the risks and challenges faced by CPPs. As a result, CPPs may be experiencing greater unmet needs and worsening mental health and wellbeing.

Our findings underscore the need to support CPPs to better navigate the challenging landscape shaped by the ongoing pandemic. One avenue supported by the literature is to provide additional training to help CPPs develop the necessary tools to cope with challenges (Carter et al., 2006). Yet, a limitation of a solely training-focused or work-focused approach may be that the support needed by CPPs may extend beyond work environments. As individuals navigate domains such as work and professional development, they may gradually shift to focus on unmet needs in other areas of their lives, such as personal behaviors and interpersonal relationships.

Increasing resiliency for CPPs should thus promote skills building and adaptive coping that can be domain specific, as well as extend to benefit other areas of their lives. Adequate resources to support overall resiliency would allow CPPs to adjust to evolving challenges that may be put forth by the pandemic. Indeed, past research has shown that professionals who are not suffering from distress perform at a higher level (Hafner et al., 2015), and the same is theorized to be true for CPPs as well (Baldschun, 2018).

7.5. Limitations, future directions, and conclusion

This research presents some limitations. First, although our two waves of data collection tapped into the same overall populations (i.e., CPPs in Brazil), due to data privacy requirements in Brazil, participants were not necessarily identical across the two waves. This limited our ability to conduct longitudinal analyses. Although we attempted to analyze difference across the two samples and did not find any such differences, our findings may thus be limited in that we cannot correct for individual differences between the two different samples in the two studies. Further, CPPs that were not able to participate might face different challenges (e.g., internet access) compared to those who were able to respond to our study. Indeed, it may be that those CPPs who were not included in our sample are suffering more from constraints on time or as to their overall wellbeing. There is thus concern that we may be underrepresenting the overall psychological distress but also overrepresenting the ability to engage in resilient behaviors. That being said, to the extent the CPPs in our sample are perhaps higher functioning than those not included in our sample, it is disheartening to consider that most of our participants reported a very negative pandemic experience.

Second, our sample may also not be completely representative of CPPs at large as we did utilize snowball sampling as a recruitment strategy. Despite this fact, our sample did not reveal any differences in key professional characteristics across the two waves. Participants practiced in all five regions in Brazil and represented a number of different professional backgrounds. We cannot determine from our data, due to ethical constraints, the inter-related professional networks of our sample. It may be that individuals who are more interconnected with professional social media also have stronger support groups, and thus greater resilience. Future research should thus further analyze this issue as well as the use of snowball sampling of professionals (Baltar & Brunet, 2012).

Third, our data also does not respond to a key concern within the literature surrounding CPPs: what is the differential effect of the pandemic on subgroups of professionals? Researchers and practitioners have noted that we must be cognizant that individuals are differentially experiencing this chronic distress and that we must develop responsive programming and policies to better support changing needs to foster resilience of families and professionals (Katz et al., 2021b). Although our research cannot directly speak to this issue, it may be vital to the success of any resiliency interventions.

Here, we expanded research and theoretical models on resiliency into a unique and understudied context: a developing country in the face of an ongoing international pandemic. As in Wave 1, workplace matters in predicting the practice of resiliency behaviors and the psychological distress of professionals. CPPs with unmet resiliency needs appeared to be suffering during the pandemic. Continuing support for and access to resilient-related behaviors and resources should be a key focus for the child protection field as we find ourselves in a state of recovery and preparing to face the next international challenge.

Declaration of competing interest

None.

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Data availability

Data will be made available on request.

Acknowledgments

The authors thank all the professionals for taking their time during the pandemic to participate and for their continuous efforts to protect children and families during these arduous times.
Priolo Filho, Goldfarb, D., Zibetti, M. R., & Aznar-Blefari, C. (2020). Brazilian child protection professionals’ resilient behavior during the COVID-19 Pandemic. Child Abuse & Neglect, 110, Article 104701. https://doi.org/10.1016/j.chiabu.2020.104701

Riehm, K. E., Holingue, C., Smail, E. J., Kapteyn, A., Bennett, D., Thrul, J. Stuart, E. A., … (2021). Trajectories of mental distress among US adults during the COVID-19 pandemic. Annals of Behavioral Medicine, 55(2), 93–102. https://doi.org/10.1093/abm/kaaa126

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling and more. Version 0.5–12 (BETA). Journal of Statistical Software, 48(2), 1–36. https://doi.org/10.18637/jss.v048.i02.

Santana, M. R. M., Silva, M. M. D., Moraes, D. S. D., Fukuda, C. C., Freitas, L. H., Ramos, M. E. C., Fleury, H. J., & Evans, C. (2015). Brazilian Portuguese version of the CORE-OM: Cross-cultural adaptation of an instrument to assess the efficacy and effectiveness of psychotherapy. Trends in Psychiatry and Psychotherapy, 37, 227–231. https://doi.org/10.1095/2237-6089-2015-0002

Self-Brown, S., Reuben, K., Perry, E. W., Bullinger, L. R., Osborne, M. C., Bielecki, J., & Whitaker, D. (2020). The impact of COVID-19 on the delivery of an evidence-based child maltreatment prevention program: Understanding the perspectives of SafeCare® providers. Journal of Family Violence, 37(5), 825–835. https://doi.org/10.1007/s10896-020-00217-6

Twenge, J. M., & Joiner, T. E. (2020). Mental distress among US adults during the COVID-19 pandemic. Journal of Clinical Psychology, 76(12), 2170–2182. https://doi.org/10.1002/jclp.23096

Vizheh, M., Qorbani, M., Arzaghi, S. M., Muhidin, S., Javanmard, Z., & Esmaeili, M. (2020). The mental health of healthcare workers in the COVID-19 pandemic: A systematic review. Journal of Diabetes & Metabolic Disorders, 19(2), 1967–1978. https://doi.org/10.1007/s40200-020-00643-9