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COVID-19-related fear and stress among individuals who experienced child abuse: The mediating effect of complex posttraumatic stress disorder

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ABSTRACT

Background: The COVID-19 pandemic exposes individuals not only to health-related risks, but also to psychosocial fear and acute stress. Previous studies reveal that individuals who experienced child abuse (CA), especially those who suffer from complex posttraumatic stress disorder (CPTSD), are at a higher risk of reacting with fear and stress when faced with stressful life-events.

Objective: To test whether exposure to CA is implicated in a higher risk of COVID-19-related fear and acute stress, and whether CPTSD intervenes in such processes.

Participants and settings: A convenience sample of 837 adults participated in the study during the first peak of COVID-19 in Israel.

Methods: Participants completed self-report questionnaires, assessing child physical, sexual and emotional abuse, CPTSD (ITQ), COVID-19-related acute stress disorder (COVID-19 ASD; ASDS) and fear of COVID-19.

Results: Bivariate analyses showed that participants who experienced CA were higher than participants who did not experience CA in COVID-19 ASD ($p = .032$), but not in fear of COVID-19 ($p = .65$). Mediation analyses demonstrated two significant paths: in the first, CA was associated with elevated fear of COVID-19 (effect $= .061, .059; p < .05$) and COVID-19 ASD (effect $= .14, .084; p < .05$) through the mediation of CPTSD; in the second path, when controlling for the mediation of CPTSD, CA was associated with reduced fear of COVID-19 (effect $= -.15; p = 0.001$), and COVID-19 ASD (effect $= -.12; p = 0.024$).

Conclusions: The findings reveal a complex pattern, indicating that CPTSD may be a risk factor for elevated levels of COVID-19 distress among individuals who experienced CA. However, some CA survivors may express reduced COVID-19 distress.

1. Introduction

Humanity has been facing a significant challenge starting in the end of 2019 and the beginning of the year 2020. The outbreak of the COVID-19 pandemic has affected the lives of most human beings around the globe in numerous manners (World Health Organization, 2020). Aside of the emergency health concerns, the pandemic has also brought about momentous psychological, social, economic and political challenges. From a psychosocial perspective, the outbreak of the COVID-19 can be likened to an acute stressful or traumatic event, involving potential threat to self and close others’ survival. As such, COVID-19 can lead to the emergence of various...
sorts of psychosocial distress (Lima et al., 2020; Torales, O’Higgins, Castaldelli-Maia, & Ventriglio, 2020; Zheng, 2020), presumably reflecting the “second tsunami” of the COVID-19 pandemic (Dutheil, Mondillon, & Navel, 2020). Indeed, emerging initial findings are documenting the psychosocial toll of the pandemic, reflected in elevated levels of fear (Lee, Mathis, Joe, & Pappalardo, 2020), stress (Lai et al., 2020), general anxiety (Hyland et al., 2020; Shevlin et al., 2020), as well as health-related and economic anxiety (Bareket-Bojmel, Shahar, & Margalit, 2020).

Acute stress disorder (ASD) reflects the short term response to trauma as initiated 3 days, and up to one-month following the traumatic event/s. Considering that the COVID-19 pandemic is an ongoing stressor, responses to this stressor occur while the stressor is still taking place, therefore reflecting acute responses (Shechter et al., 2020; Xiao, Zhang, Kong, Li, & Yang, 2020; Zhang et al., 2020). ASD is characterized by intrusive, dissociative and avoidant symptoms (American Psychiatric Association, 2013; Bryant, Moulds, & Guthrie, 2000), and a negative mood (American Psychiatric Association, 2013). Indeed, initial findings document acute stress symptoms as a response to the COVID-19 outbreak among self-isolated adults (Xiao et al., 2020), healthcare workers (Shechter et al., 2020), and school-aged children (Zhang et al., 2020).

The experience of the COVID-19 outbreak, including its accompanied perceptions and reactions, may vary across individuals. For individuals with previous exposure to trauma, especially for those exposed to interpersonal violence in early stages in their lives, the imminent danger that accompanies the COVID-19 outbreak may be perceived and experienced as an excessive threat. Similar to the invasion to subjectivity that is an inherent constituent of CA (Herman, 1998; Van der Kolk, 2017), the COVID-19 may be perceived as a potential invader (Shahar & Lerman, 2013; Tsur, Shahar, Defrin, Lahav, & Ginzburg, 2017), endangering physical and mental existence.

Individuals who have been exposed to early trauma have been considered at greater risk of responding with increased fear and stress when faced with later stressors (Bremner, 1995; Post, Weiss, & Smith, 1995). Particularly, individuals who were exposed to CA may react to health-related threats with elevated fear and anxiety as well (Hein & Monk, 2017; Van der Kolk, 2015). Such understanding arises from findings showing that individuals who were exposed to interpersonal trauma tend to perceive bodily signals as catastrophic and frightening, presumably indicating dreadful consequences (Sansone, Watts, & Wiederman, 2013; Tsur, Defrin, Lahav, & Solomon, 2018). Furthermore, findings reveal that CA is often implicated in elevated levels of health anxiety in adulthood (Reiser, McMillan, Wright, & Asmundson, 2014). Other findings, however, point to a more complex pattern, where adults with hypochondriasis report more emotional abuse, yet no associations were found between CA and hypochondriasis when controlling for background variables and CA other than emotional abuse (Bailer et al., 2014). Thus, when confronted with the COVID-19 outbreak, a question arises as to whether individuals previously exposed to CA respond differently from other individuals. The first aim of this study is therefore to test whether, as compared to individuals who did not experience CA, individuals with a history of CA experience higher levels of both COVID-19 fear and COVID-19 ASD.

Further on this vein, another important question is whether the exposure to CA itself or rather its long-term sequelae that affects the way CA survivors face and cope with the COVID-19 outbreak. Particularly, extensive findings indicate that CA is often implicated in multifaceted and complex reactions (Afifi, Boman, Fleisher, & Sareen, 2009, 2014; Annerbäck, Sahlqvist, Svedin, Wingren, & Gustafsson, 2012). Among these reactions, perhaps the most conspicuous is encapsulated in PTSD (Dworkin, Menon, Bystrynski, & Allen, 2017; Ullman & Filipas, 2005), manifested in intrusive, dissociative, avoidant symptoms, and negative alterations in mood and cognition (American Psychiatric Association, 2013), with research estimating the lifetime prevalence of PTSD among CA victims to be about one-third (Gilbert et al., 2009). Moreover, it has been shown that exposure to an ongoing interpersonal trauma, such as CA, may instigate a complex posttraumatic stress disorder (CPTSD; Herman, 1992; Van der Kolk, Roth, Pelcovitz, Sunday, & Spinazzola, 2005). CPTSD is manifested in self-regulatory disturbances that transpire along with PTSD symptomatology (Cloitre et al., 2009). These disturbances in self-organization are displayed in a negative self-concept, problems with interpersonal relatedness and affective dysregulation (Cloitre et al., 2018). Findings demonstrate that CPTSD is one of the most prevalent malevolent outcomes of CA (Cloitre et al., 2009; Messman-Moore & Bhupatni, 2017; Van der Kolk, 2017).

Ostensibly, findings show that for individuals who were exposed to trauma, it is rather the reaction to trauma, and not the exposure in and of itself, that is linked with maladaptive derivatives. For example, findings reveal that PTSD plays a cardinal role in illuminating the long lasting consequences of exposure to trauma for health-related concerns, including perceived health (Hoge, Terhakopian, Castro, Messer, & Engel, 2007) and physical morbidity (Benyamini & Solomon, 2005; Sharp & Harvey, 2001). Nevertheless, other findings show that while medical problems are better predicted by exposure to CA, physical well-being is rather better predicted by PTSD (Cloitre, Cohen, Edelman, & Han, 2001). Additionally, although ASD is often tested as precursor to PTSD, several findings indicate that child sexual abuse survivors who suffer from PTSD related to CA, are at greater risk of reacting with ASD to daily stressors they face as adults (Koopman, Gore-Felton, Classen, Kim, & Spiegel, 2002). Much less is known, however, on the role of CPTSD for underlying such processes. Thus, the second aim of this study is to test whether the reaction to CA as seen in CPTSD may explain the link between CA and the response to the COVID-19 outbreak, as seen in fear of COVID-19 and COVID-19 ASD.

1.1. The current study

This study was carried out during the peak of the COVID-19 outbreak in Israel, between March-May 2020. During this time, all Israeli population was under lock-down, with essential and emergency services exclusively opened. The aim of this study was to test whether adults with a history of CA show elevated levels of COVID-19 distress, as compared to adults who did not undergo CA. Additionally, the study examined whether CPTSD explains such potential COVID-19 distress. Specifically, we tested whether CPTSD mediates the association between CA and fear of COVID-19 as well as COVID-19 ASD.
2. Methods

2.1. Participants and procedure

This study was conducted during the peak of the COVID-19 outbreak in Israel, between March 30 to May 16. During the initial stage of data collection, there were 4,695 verified cases of COVID-19 in Israel, and 16,607 verified cases by the end of data collection. As for death from COVID-19, there were 16 cases of deaths in the initial stage, and 268 cases by the end of data collection. During this time, the Israeli government had imposed quarantine on the whole population, except for limited activities, such as healthcare and food supply. The educational system was closed, while classes taking place online, and most people were working from home. Notably, during the COVID-19 outbreak, unemployment rates in Israel increased from 4% to about 27% of population (1.276 million people; Central Bureau of statistics, 2020).

A convenience sample of 837 participants were recruited via two avenues of social media (i.e., Facebook, WhatsApp) and a snowball technique. Participants were invited to participate in a study on the topic of coping with COVID-19 psychosocial challenges. Questionnaires were distributed in Hebrew and Arabic languages and were filled out using Qualtrics Research Software. Inclusion criteria were a) age above 18, b) fluent in Hebrew or Arabic, and c) living in Israel. Other than these general criteria, there were no particular exclusion criteria. The study was approved by the Institutional Review Board (reference number: 000122S-1), and all participants signed a consent form.

2.2. Measures

Background variables included information about gender, age, family status, education, religious affiliation, and income. Additionally, 11 questions were included to assess participants’ exposure to COVID-19 (Zhen & Zhou, 2020). Participants were asked whether or not they were exposed to various COVID-19-related incidents (e.g., getting infected, quarantined, a family member got infected or quarantined, knowing someone who died from COVID-19). Overall exposure was calculated by summing all positive answers to exposure questions, with higher scores indicating higher exposure to COVID-19.

Child abuse was assessed using the stressful life-event checklist (Schouten et al., 2017). Participants were asked to report whether they experienced three forms of CA, i.e., being sexually abused, physically abused, and/or emotionally abused before the age of 18. Exposure to CA was assessed dichotomously (yes or no). Respondents were considered as exposed to CA if they reported experiencing at least one of the three CA forms.

Complex Posttraumatic Stress (CPTS) symptoms were assessed using the International Trauma Questionnaire (ITQ; Cloitre et al., 2018). The ITQ is a self-report measure that assesses CPTSD symptoms in accordance with the International Classification of Diseases, 11th version (ICD-11). The scale consists of six items that represent the three posttraumatic stress clusters (PTS symptoms), i.e., re-experiencing (e.g., “having upsetting dreams that replay part of the traumatic experience or are clearly related to the experience”), avoidance (e.g., “avoiding internal reminders of the traumatic experience for example, thoughts, feelings or physical sensations”) and hyperarousal (e.g., “being ‘super-alert’, watchful or on guard”), and another six items that represent the three disturbances in self-organization clusters (DSO symptoms), i.e., affective dysregulation (e.g., “When I am upset, it takes me a long time to calm down”), negative self-concept (e.g., “I feel worthless”), and disturbances in relationships (e.g., “I feel distant or cut-off from people”). Participants were asked to rate the extent to which each symptom has been bothering them over the past month on a Likert-scale, ranging between 0 (not at all) to 4 (extremely). PTS and DSO symptoms were separately averaged, yielding two scores of PTS and DSO, with higher scores indicating higher PTS and DSO symptoms. Previous findings testify to the validity of the original scale (Cloitre et al., 2018; Karatzias et al., 2017), as well as the validity of its Hebrew version (Ben-Ezra et al., 2018; Gilbar, Hyland, Cloitre, & Dekel, 2018). Cronbach’s alphas of posttraumatic stress PTS symptoms for the current sample was 0.87, and 0.86 for DSO symptoms, indicating high reliability.

COVID-19 distress was assessed with two measures. First, Acute Stress Disorder was assessed using the Acute Stress Disorder Scale (ASDS; Bryant et al., 2000). The ASDS assesses four ASD symptom clusters, including dissociation (“emotional numbness,” “things seem unreal”), re-experiencing (“sense of reexperiencing,” intrusive memories”), avoidance (“avoid reminders of COVID-19,” “avoid thinking about COVID-19”), and arousal symptoms (“feeling irritable,” “difficulty concentrating”) – all referring to COVID-19. Participants were asked to rate, on a five-point Likert scale ranging between 1 (not at all) to 5 (very much) the frequency in which they experience each of the 19 symptoms since the COVID-19 outbreak. Previous findings revealed the scale’s validity (Bryant et al., 2000). The ASD score was calculated by averaging the responses to all items, with higher scores indicating higher COVID-19 ASD. Cronbach’s alpha for the current sample was 0.89, indicating high reliability.

Second, Fear of COVID-19 was assessed using five questions particularly tailored for the COVID-19 experience (Zhen & Zhou, 2020). Participants were asked to rate on a five-point Likert scale, ranging between 1 (not at all) to 5 (very much), the extent to which they fear the situations presented to them (“e.g., “I or someone from my family gets infected or quarantined,” “I am afraid that COVID-19 will spread all over the world and will stay for a long time,” “I am afraid of the negative impact the COVID-19 will have on my life.”) The fear of COVID-19 score was calculated by averaging the responses to all items, with higher scores indicating higher COVID-19 fear. Cronbach’s alpha for the current sample was 0.84, indicating high reliability.

2.3. Data analyses

Little’s Missing Completely at Random (MCAR) test (Collins, Schafer, & Kam, 2001) revealed that the data were missing completely
3. Results

3.1. Differences between participants exposed and not exposed to CA

Among the participants in this study, 254 (30.3%) reported a history of at least one type of CA, i.e., physical, sexual, and/or emotional abuse. Specifically, 20.4% of participants reported experiencing child physical abuse, an identical 20.4% reported experiencing child sexual abuse, and 25.4% reported emotional abuse. As for the number of abuse types, 17.3% reported experiencing one type of abuse, 12.7% reported experiencing two types of abuse, and 7.6% reported experiencing all three types of abuse. These numbers are in line with global estimates of child abuse rates (Barth, Bermetz, Heim, Trelle, & Tonia, 2013; Finkelhor, 2009; Stoltenborgh, Van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011).

Significant differences were found between men and women in the report of child sexual abuse, with women reporting higher rates than men (Chi square (1) = 7.76; p = 0.005). No differences between men and women were found in the report rates for physical abuse (p = 0.073), emotional abuse (p = 0.39), or for the number of abuse types (p = 0.059).

As can be seen in Table 1, Chi square and independent sample t-tests showed that participants exposed to CA did not differ from participants not exposed to CA in terms of their gender, age, education or religious affiliation. Nevertheless, some differences were found in relational status, indicating that participants who were exposed to CA were more likely to be single or divorced, while participants who were not exposed to CA were more likely to be married. Additionally, a significant difference was found for income, showing that participants who were exposed to CA had significantly lower income compared to participants who were not exposed to CA.

Independent sample t-tests were performed to test whether the groups differed from each other in PTS symptoms, DSO symptoms, fear of COVID-19, COVID-19 ASD, and exposure to COVID-19. Table 2 presents the results of these analyses. The analyses revealed that participants exposed to CA were higher than participants not exposed to CA in PTS symptoms and in DSO symptoms. Additionally, participants exposed to CA were higher than participants not exposed to CA in COVID-19 ASD. However, no differences were found between these groups neither in fear of COVID-19, nor in exposure to COVID-19.

3.2. The associations between CA and fear of COVID-19 and COVID-19 ASD: the mediating role of CPTSD

To examine whether CPTSD mediated the associations between CA and fear of COVID-19 and COVID-19 ASD, multiple mediation analyses were computed using the PROCESS procedure (Hayes et al., 2011; Hayes, 2013). First, we examined the association between exposure to CA and fear of COVID-19, through the mediation of PTS symptoms and DSO symptoms, while controlling for age, sex, and exposure to COVID-19. The multiple mediation model is displayed in Fig. 1. The analysis revealed a significant negative direct effect of exposure to CA on fear of COVID-19 (effect = -0.15; p = 0.001). Additionally, two significant indirect effects emerged, revealing a significant association between exposure to CA and fear of COVID-19 through the mediation of PTS symptoms (effect = 0.059; CI: 0.033, 0.096), as well as through DSO symptoms (effect = 0.061; CI: 0.032, 0.098). None of the covariates were significantly associated with fear of COVID-19, except for age which was inversely related to fear of COVID-19 (effect = 0.005; p = 0.004). These findings imply that although exposure to CA is associated with reduced fear of COVID-19, a significant indirect effect emerges, revealing that exposure to
CA is associated with elevated levels of fear of COVID-19 through the mediation of PTS and DSO symptoms. Second, we examined the association between exposure to CA and COVID-19 ASD. The multiple mediation model is displayed in Fig. 2. The analysis revealed a significant negative direct effect of exposure to CA on COVID-19 ASD (effect = -.12; p = 0.024). Additionally, two significant indirect effects emerged, revealing a significant association between exposure to CA and COVID-19 ASD through the mediation of PTS symptoms (effect = .084; CI: 0.045, 0.14), as well as through DSO symptoms (effect = .14; CI: 0.096, 0.20). None of the covariates were significantly associated with fear of COVID-19, except for age, which showed that younger participants experienced higher fear of COVID-19 (effect = .005; p = 0.004). Taken together, as in fear of COVID-19, the findings imply that although exposure to CA is associated with reduced COVID-19 ASD, a significant indirect effect emerges, revealing that exposure to CA is associated with elevated levels of COVID-19 ASD through the mediation of PTS and DSO symptoms.

Table 1
Demographic Characteristic by Study Group.

|                      | Participants not exposed to CA (n = 582) | Participants exposed to CA (n = 254) | Chi square / Independent sample t-test |
|----------------------|------------------------------------------|-------------------------------------|---------------------------------------|
| Sex                  |                                          |                                     |                                       |
| Male                 | 96 (16.4 %)                              | 46 (18.1 %)                         | Chi square (2) = 633                  |
| Female               | 481 (82.9 %)                             | 207 (81.5 %)                        | p = 0.73                              |
| Agea (M, SD)         | 47.69, 14.02                             | 46.39, 13.58                        | t test (834) = 1.24                   |
| Years of educationb (M, SD) | 14.56, (3.84 %)                      | 14.33, (3.47 %)                     | t test (599) = 0.779                  |
| Family status        |                                          |                                     |                                       |
| Married/in a couple relationship | 276 (67.3 %)                           | 136, (54.8 %)                       | Chi square (4) = 14.8                 |
| Single               | 77 (18.8 %)                              | 64 (25.8 %)                         | p = 0.005                            |
| Divorced             | 38 (9.3 %)                               | 39, (15.7 %)                        |                                       |
| Widowed              | 15 (3.7 %)                               | 5 (2%)                              |                                       |
| Other                | 4 (1%)                                   | 4 (1.6 %)                           |                                       |
| Religious affiliation|                                          |                                     |                                       |
| Jewish               | 353, (85.9 %)                            | 208, (84.2 %)                       | Chi square (3) = 1.6                  |
| Muslim               | 30 (7.3 %)                               | 16 (6.5 %)                          | p = 0.66                             |
| Christian            | 2 (0.5 %)                                | 1, (0.4 %)                          |                                       |
| Other                | 26 (6.3 %)                               | 22 (8.9 %)                          |                                       |
| Incomec (M, SD)      | 3.38, 0.94                               | 3, 1.07                             | t test (656) = 4.8                   |

Note: a Age range: 18–99 years. b Years of education range:3–25. c Income: 1=low, 5=high.

Table 2
Study Variables by Study Group.

|                      | Participants not exposed to CA (n = 582) | Participants exposed to CA (n = 254) | Independent sample t-test |
|----------------------|------------------------------------------|-------------------------------------|---------------------------|
| PTS symptoms (M, SD) | 1.76, 0.68                               | 2.17, 0.96                          | t test (834) = 6.99       |
| DSO symptoms (M, SD) | 2.02, 0.65                               | 2.47, 0.91                          | t test (834) = 8.1        |
| Fear of COVID-19 (M, SD) | 2.37, 0.63                           | 2.35, 0.64                          | t test (834) = 0.46       |
| COVID-19 ASD (M, SD)  | 1.83, 0.69                               | 1.95, 0.81                          | t test (834) = 2.15       |
| Exposure to COVID-19 (M, SD) | 1.77, 0.17                            | 1.76, 0.18                          | t test (815) = 0.79       |

Note: PTS symptoms: Posttraumatic Stress symptoms; DSO symptoms: Disturbances in Self-Organization; COVID-19 ASD: COVID-19 Acute Stress Disorder.

1 These analyses were also tested for women and men separately. The analyses showed similar results for men and women, except for two differences; for women, the direct path between CA and COVID-19 ASD was insignificant (effect = -.08; p = 0.15). Additionally, for men, the association between CA and COVID-19 ASD was mediated by DSO symptoms (effect = 0.12; .009, 0.28), but not PTS symptoms (effect = 0.05; -.004, 0.2).

2 These analyses were also tested for women and men separately. The analyses showed similar results for men and women, except for two differences in men only; first, the direct path between CA and fear of COVID-19 was insignificant (effect = -0.15; p = 0.23). Second, the association between CA and fear of COVID-19 was mediated by DSO symptoms (effect = 0.076; .004, 0.2), but not PTS symptoms (effect = 0.023; -.022, 0.11).
Fig. 1. Multiple mediation of the association between exposure to CA and fear of COVID-19 through PTS and DSO symptom severity.
Fig. 2. Multiple mediation of the association between exposure to CA and COVID-19 ASD through PTS and DSO symptom severity.
4. Discussion

The findings of this study provide initial insight into the ways in which a history of CA intervenes in the way individuals perceive and cope with the COVID-19 pandemic. The findings portray a complex pattern of findings, according to which individuals with a history of CA may experience elevated levels of COVID-19 distress (i.e., fear of COVID-19 and COVID-19 ASD), through the mediation of CPTSD (i.e., PTS and DSO symptoms). Nevertheless, when controlling for this mediation effect, the findings show that, as compared to individuals without a history of CA, CA survivors may experience reduced levels of COVID-19 distress. Taken together, the dual-directed findings of this study echo the heterogeneity of responses to trauma (Bonanno & Mancini, 2012).

Simple comparison between participants with and without a history of CA revealed that CA survivors experience elevated levels of COVID-19 ASD, and no higher levels of fear of COVID-19, as compared to participants with no history of CA. However, once CPTSD is examined for its potential explanatory role in the link between CA and COVID-19 distress, two potential paths emerge: leading to two opposite links between CA and COVID-19 distress. The first path, reflecting a “negative route,” reveals that CA survivors tend to experience more CPTSD symptoms, and these symptoms, in turn, are implicated in elevated levels of both fear of COVID-19, as well as COVID-19 ASD, as compared to participants who did not experience CA. These findings are in line with previous findings demonstrating that posttraumatic psychopathology, as mostly captured through the lens of PTS, underlies the link between exposure to trauma and mental distress and physical morbidity (Asmundson & Katz, 2009; Sharp & Harvey, 2001; Tsur et al., 2017). Furthermore, the current findings unveiled that alongside PTS symptoms, DSO symptoms also show a significant mediation effect, uncovering the role of self-organization disruption for COVID-19 distress. These findings add to the mounting evidence showing that DSO symptoms, and not only PTS symptoms, are responsible for explaining posttraumatic morbidity (Elklit, Hyland, & Shevlin, 2014; Tsur, 2020).

The second path of finding emerging from this study, reflecting a “positive route,” shows that when controlling for the mediation effect of CPTSD, an inverse association is revealed between exposure to CA and COVID-19 distress. These findings indicate that some CA survivors express lower levels of COVID-19 distress as compared to individuals who did not undergo CA. This negative association between CA and COVID-19 distress may reflect a statistical suppression effect, which characterizes situations where a direct effect and an indirect effect appear in opposite directions (Tzelgov & Henik, 1991). Such situations are considered inconsistent mediation (Davis & Weber, 1985), which may indicate statistical artifacts, or “real” complex mechanisms (Mackinnon, Krull, & Lockwood, 2000).

Aside from being an outcome of statistical suppression effect, the inverse association between CA and COVID-19 distress might reflect a phenomenon, whereby CA may, in some cases, be linked with reduced distress in the face of the COVID-19 pandemic. Such reduced distress may be explained in two different ways. First, the findings may reflect a potential “shielding” effect of exposure to CA in the face of later acute stressors. Specifically, the findings may indicate that for some individuals who experienced CA, other stressors, such as faced during the COVID-19 pandemic, may be perceived as less threatening. Although most literature reveals that CA instigates malicious long-lasting derivatives, some findings unveil a perplexing combination of both positive and negative derivatives, including better coping skills. In one study, for example, while sexual and emotional abuse were associated with negative outcomes in adulthood, physical abuse and neglect were linked with better coping, as well as less fear and anxiety, especially among men (Sudbrack, Manfro, Kuhn, de Carvalho, & Lara, 2015). Another study conducted among aging Swiss former indentured child laborers, revealed that positive aging was apparent in these survivors and explained through social purpose, lightheartedness, and motivation for self-enhancement (Holte, McGee, Maercker, & Thoma, 2018).

Second, the lower levels of COVID-19 distress among CA survivors may also be explained by cognitive processes related to attention to threat. Particularly, it is possible that lower levels of COVID-19 distress imply a repressive coping style, where attention is distorted away from stressful experiences and negative affect that accompanies them (Bonanno & Singer, 1990). Indeed, previous findings show that repressive coping style following trauma may act as stress buffering (Ginzburg, Solomon, & Bleich, 2002), leading individuals to perceive health-related risks as less threatening (Myers, 2010). However, a complex picture is also seen within findings documenting attention bias following trauma. Particularly, while some findings show that children exposed to CA demonstrate increased attention to threat (Shackman, Shackman, & Pollak, 2007), other findings rather show that maltreated children demonstrate attention bias away from angry faces, alongside attention bias towards sad faces (Bertó et al., 2017). Presumably, this pattern may be explained by findings showing that individuals who suffer from PTSD tend to demonstrate a higher variability in attention-bias to threats (Naim et al., 2015), potentially indicating dysfunctional attentional control and abnormal buffering of threat-related content (Naim et al., 2015; Shechner & Bar-Haim, 2016). Further research is therefore needed to uncover the potential dual-direction findings of this study, and its underlying mechanisms.

Despite this call for further research, the current findings set the stage for the need to address COVID-19 related distress, particularly among individuals with a history of CA and who suffer from clinical or subclinical C/PTSD. Notably, the current study was carried out relatively a short time after the outbreak of the COVID-19. Thus, it is possible that as time goes by, with the pandemic still acutely threatening individuals and societies, COVID-19 distress may upsurge. Clinical and policy practitioners are therefore encouraged to implement short and sufficient psychosocial interventions for this population, with preference to online treatments that are accessible in times of quarantine. A few online interventions for individuals who suffer from PTSD have been proposed and tested for their effectiveness (e.g., Hobfoll, Blais, Stevens, Walt, & Gengler, 2016; Krupnick et al., 2017; Mitchell et al., 2014). However, these need to be adjusted for CA survivors, as well as to the challenges imposed by the COVID-19 pandemic, while overcoming its unique barriers.

Several limitations should be acknowledged when interpreting the current findings. First, the convenience sampling method jeopardizes the generalization of the findings. Additionally, the sample was consisted of a high variability in age, low representation of male participants, and relatively highly educated participants. Although these variables were controlled for in the analyses, more research is needed in order to account for diversity components and their effect on the COVID-19 distress. Particularly, although no
significant differences were found between men and women in any of the study variables, when the main analyses were separately tested among men and women, small differences emerged. Future research should expand on the question of whether the link between a history of CA and later distress differs between men and women. Furthermore, the cross-sectional research design impedes the ability to conclude causality. Finally, while most measures used in this study were well established and widely used (Bryant et al., 2000; Cloitre et al., 2018; Gilbar et al., 2018), some bias may result from the self-report methods utilized in this study. Special attention should be dedicated to the fact that CA was assessed as a dichotomized scale. A such, the current analyses did not account for the type of the abuse. Future research should therefore test for the potential divergent effects of the type of child abuse. Additionally, it should be taken into account that some bias may result from the potential similarities between the measures used to assess PTS symptoms and the ASD symptoms.

Alongside these limitations, the current study unveils the ways in which individuals who experienced CA react to “real-life” stressors during adulthood. Especially, the current findings uncover that rather than exposure to CA in and of itself, it is the chronic sequelae of CA, as seen in CPTSD, which may be implicated in heightened COVID-19 distress. Alongside this “negative route” the findings uncovered a potential “positive route,” indicating that some people who experienced CA do not experience heightened COVID-19 distress, presumably even lower levels of distress. The findings of this study demonstrate that CA is deeply engraved in the ways in which individuals perceive and cope with challenges, even decades after CA (at least objectively) has ceased.

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Declaration of Competing Interest

The authors report no declarations of interest.

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