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Prior trauma, PTSD long-term trajectories, and risk for PTSD during the COVID-19 pandemic: A 29-year longitudinal study

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ABSTRACT

This study assessed the contributions of prior war captivity trauma, the appraisal of the current COVID-19 danger and its resemblance to the prior trauma, and long-term trajectories of posttraumatic stress disorder (PTSD) to risk for PTSD during the COVID-19 pandemic. Capitalizing on a 29-year longitudinal study with four previous assessments, two groups of Israeli veterans – ex-Prisoners-of-War (ex-POWs) of the 1973 Yom Kippur War and comparable combat veterans of the same war – were reassessed during the COVID-19 pandemic. Previous data were collected on their PTSD trajectory 18, 30, 35, and 42 years after the war and exposure to stressful life events after the war. Currently, we collected data on their PTSD during the COVID-19 pandemic and their appraisal of similarities of past trauma with the current pandemic. Previously traumatized ex-POWs were found to be more vulnerable and had significantly higher rates of PTSD and more intense PTSD during the current pandemic than comparable combat veterans. Moreover, veterans in both groups who perceived the current adversity (captivity, combat) as hindering their current coping were more likely to suffer from PTSD than veterans who perceived it as a facilitating or irrelevant experience. In addition, chronic and delayed trajectories of PTSD among ex-POWs increased the risk for PTSD during the pandemic, and lifetime PTSD mediated the effects of war captivity on PTSD during the current pandemic. These findings support the stress resolution perspective indicating that the response to previous trauma – PTSD and its trajectories – increased the risk of PTSD following subsequent exposure to stress.

1. Introduction

The COVID-19 pandemic is a public health emergency of international concern (World Health Organization, 2020). Given its highly infectious nature, in many countries Covid-19 has led to quarantine, which entails social distancing and restriction of movement. As a result, people have had to make significant changes in their daily routines. These include the curtailment of daily activities and interaction with others. The COVID-19 pandemic and its restrictions are even more distressing for the elderly who are seen as a high-risk group for both morbidity and mortality. While many young people continue to work, community support and senior citizen centers are closed. This is especially difficult for those who live alone and are unable to socialize.

While the pandemic may be stressful for all elderly people, there is one group in particular that could be exceptionally affected – elderly individuals with a history of trauma. One such group is former prisoners-of-war (ex-POWs) who endured severe deprivations, torture, and mock executions repeatedly for extended periods of time. Ex-POWs traumatic experiences often leave them with severe and debilitating psychological damage (Sutker et al., 1990), in particular posttraumatic stress disorder (PTSD; Solomon et al., 2012). Yet, what these trauma survivors lived through may not end with repatriation. Studies have shown that prior exposure to trauma increases the risk of future stressful life incidents and exposure to more traumatic events (Breslau et al., 2008).

According to the sensitivity perspective (Selye, 1976; Solomon, 1993), when traumatized individuals are faced with subsequent adversity they are more likely to suffer from heightened psychological vulnerability and distress than individuals without a history of trauma. Moreover, previously traumatized individuals are likely to endure reactivation following further exposure to stressors, particularly if there is a resemblance to the initial trauma (Christenson et al., 1981; Solomon, 1993). Reactivation is also known to be prevalent among the elderly.
who tend to shift their attention from present and future activities to reviewing and reminiscing about their lives. In fact, studies conducted among previously traumatized older veterans (Christenson et al., 1981; Solomon, 1993) have shown that ensuing stressful experiences serve as triggers that unmask and accelerate latent PTSD.

Although trauma history is a risk factor for traumatized survivors, some may be more vulnerable than others. Those who perceive the current adversity as resembling their previous trauma are likely to assess the risk to be greater and, thus, are more likely to experience reactivation and exacerbation of their posttraumatic symptoms (Hantman et al., 1994). The stress resolution perspective contends that it is not merely previous exposure but rather the psychological impact of the previous trauma that affects the outcome of the subsequent adversity (Solomon, 1993). Namely, survivors who already suffered from PTSD are more vulnerable than those who did not and, therefore, are at the greatest risk for recurrent PTSD upon additional traumatic exposure (Sreslau et al., 2008). When applied to the current COVID-19 pandemic, elderly veterans who had previously suffered from PTSD are more likely to experience reactivation and exacerbation of PTSD than those who had similar trauma exposure but did not develop PTSD.

PTSD is recognized as a labile disorder, with a heterogeneous and fluctuating course (Bonanno et al., 2012; Bryant, 2019), and both increase and decrease over time. Indeed, several studies have identified distinct PTSD trajectories (American Psychiatric Association, 1994), with a predominant trajectory of resilience (Bonanno et al., 2012) alongside chronic, recovered, delayed, and reactivated (Magruder et al., 2016). In this study, we capitalized on data from a 29-year longitudinal study comprising of Israeli ex-POWs of the 1973 Yom Kippur War and comparable combat veterans of the same war, who were evaluated at four previous time points—1991 (T1), 2003 (T2), 2008 (T3), and 2015 (T4)—and then during the COVID-19 outbreak April–May 2020 (T5), with the initial four waves identifying PTSD trajectories (Solomon et al., 2012). While both ex-POWs and controls had similar trajectories, the two groups differed in proportions of the trajectories, with more ex-POWs exhibiting ongoing and severe clinical profiles (chronic and delayed) and less mild trajectories (resilient and recovered) than controls. Given the various trajectories may represent different levels of vulnerability, we aim to examine the role of PTSD trajectories in predicting war-related PTSD during the COVID-19 pandemic.

The study aims to (1) assess the implication of previous traumatic exposure (war captivity) in PTSD and PTSD clusters during the current COVID-19 pandemic, that is, whether ex-POWs were at increased risk for PTSD during the pandemic; (2) examine the extent to which veterans’ appraisal of their wartime experiences affects the risk for PTSD during the pandemic; and (3) assess whether lifetime PTSD and PTSD trajectories were associated with PTSD during the pandemic.

2. Methods

2.1. Participants and procedure

240 Israeli ground forces were captured during the 1973 Yom Kippur War. 164 of these ex-POWs participated at T1, 103 participated at T2 (41 could not be located/refused, 4 had died, and 6 could not participate due to a deteriorated mental status), 183 at T3 (29 could not be located/refused, 20 had died, and 6 could not participate due to mental deterioration), and 158 at T4 (49 could not be located/refused, 36 had died, and three suffered from physical or mental problems). One-hundred and twenty of these ex-POWs participated in the assessment conducted during the COVID-19 outbreak (T5; 66 could not be located/refused, 36 had died, and 18 could not participate due to mental deterioration). In addition, 280 veterans were sampled from the Israeli Defense Forces (IDF) computerized database (Solomon et al., 1994). These individuals also participated in the Yom Kippur War on the same fronts, but were not taken captive, and were matched to ex-POWs on military background and socio-demographic variables. Among them, 185 participated at T1, 106 took part at T2 (78 could not be located/refused and 1 had died), 118 took part at T3 (20 could not be located/refused, and five had died), and 101 participated at T4 (60 could not be located/refused, 1 was abroad, and 18 had died). At T5, the target group included 136 controls; of those, 65 participated at the study (65 could not be located/refused, 3 had died, and 3 could not participate due to mental deterioration).

Data on exposure to stressful life events were assessed at T1, T2, T3, and T4. Level of exposure to COVID-19 and participants’ appraisals of the extent to which their war-related experiences affected their current adjustment were assessed at T5. PTSD was assessed at T1, T2, T3, T4, and T5. The study was approved by the institutional review board (IRB) and all participants signed a consent form.

2.2. Measures

2.2.1 Background variables

Participants were asked their age, education, occupational status, and with whom they lived. Additionally, participants were asked in T5 for their appraisals of whether their wartime experiences affected the way they adjusted to the current lockdown and social restrictions (1 = it facilitated their adjustment, 2 = it did not affect their adjustment, 3 = it hindered their adjustment).

2.2.2 Exposure to COVID-19

At T5, 10 questions were included to assess exposure to COVID-19 (Tsur and Abu-Raiya, 2020; Zhen and Zhou, 2020). Participants were asked whether they had been exposed to 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, with higher scores indicating higher exposure to COVID-19.

2.2.3 Exposure to stressful life events

At T1, T2, and T3 participants completed a brief scale on exposure to stressful life events (Ginzburg, 2006) and reported whether they experienced a targeted event (e.g., death of a significant other, motor vehicle accident). At T4, participants were asked to list the events they experienced since T3. For each participant we computed the overall number of reported stressful events.

2.2.4 PTSD

PTSD was measured at all assessments using the PTSD-Inventory (Solomon, 1993; Solomon et al., 2012), a 17-item self-report scale corresponding to DSM PTSD symptom criteria (American Psychiatric Association, 1994). Each of the PTSD symptoms was anchored to the participants’ war experiences. Participants indicate whether they experienced the symptom in the past month, on a four-point scale ranging from 1 (not at all) to 4 (1 usually did). An answer of 3 or above was considered a positive endorsement. PTSD trajectories were derived from PTSD status (meeting/not meeting DSM criteria). In addition, intensity of PTSD and of each of its symptom clusters (intrusion, avoidance, and arousal) was calculated as the mean of the relevant items. Lifetime PTSD was defined as meeting clinical criteria at least one wave of measurement.

Previous studies have supported the validity and reliability of the PTSD Inventory (Solomon et al., 1993). Rate of agreement between diagnoses made by the PTSD Inventory and by clinical interviews reached 85% (Solomon et al., 1993). Reliability of the scale’s score was high at all assessments (Cronbach’s alpha ranging from 0.91 to 0.96).

2.3. Data analysis

A series of Chi square analyses examined group differences (ex-POWs vs. controls) in PTSD rates at T1–T5. To examine whether ex-POWs are at an increased risk for PTSD during the COVID-19 pandemic (T5), we
conducted a binomial logistic regression, examining the effect of group (ex-POWs vs. control) to the prediction of PTSD at T5, controlling for stressful life events and exposure to COVID-19. This analysis was followed by multivariate analysis of variance (MANOVA) examining the effect of group on PTSD symptom intensity (total, intrusion, avoidance, hyperarousal), while controlling for stressful life events. The effects of captivity and appraisal of the extent to which war-related experiences affected adjustment to COVID-19 on PTSD at T5 were examined by (a) a Chi square analysis assessing group differences (ex-POWs vs. controls) in appraisals, and (b) a two-way ANOVA assessing the effects of group, appraisal, and their interaction on intensity of PTSD at T5.

To examine the effect of PTSD trajectories (T1-T4) on PTSD at T5, participants were divided into five groups according to their PTSD classification at T1-T4: chronic PTSD (participants who met the criteria for PTSD in all four waves), delayed PTSD (participants who did not endorse the PTSD criteria in the first wave/s but did in subsequent wave/s), recovered PTSD (participants who endorsed PTSD criteria in either of the first waves but not in the later/last waves), resilient (veterans who never endorsed the criteria for PTSD), and reactivation (participants who initially had PTSD, recovered, and then had a delayed reactivation of PTSD at a later measurement). Chi square analysis examined differences in the trajectory rates between ex-POWs and controls. Another Chi-square analysis, conducted among the ex-POWs, examined differences between PTSD trajectories in rates of PTSD at T5. And, an one-way ANOVA assessed differences between PTSD trajectories groups in intensity of PTSD at T5.

Finally, a logistic regression examined the contribution of different factors to rates of PTSD at T5. The predictors entered were group (step 1), life events since the war (step 2), lifetime PTSD (step 3), and appraisal of the effect of war-related experiences on current adjustment as a dummy variable (1 = hindering effect; 0 = appraisal as facilitating of irrelevant).

3. Results

3.1. Are ex-POWs at an increased risk for PTSD during the COVID-19 pandemic?

A series of Chi square ($\chi^2$) analyses indicated higher rates of PTSD among ex-POWs as compared to controls across all assessments (T1-T5; see Table 1).

The logistic regression revealed that, overall, the model was significant, Chi square (df = 3) = 27.73, p < 0.001, Cox & Snell $R^2 = 15.4\%$. Cooptivity had a significant contribution to rates of PTSD at T5 ($B = -2.33$, SE = 0.55, Wald = 17.64, p < 0.001). Chi square with Fisher exact showed a significant difference, as the ex-POW group presented higher PTSD during the COVID-19 pandemic, while of the recovery trajectory, 16.7% of the ex-POWs developed PTSD ($B = 0.01$, SE = 0.03, Wald = 0.16, p = 0.69) nor did the level of exposure to COVID-19 ($B = -0.12$, SE = 0.13, Wald = 0.85, p = 0.36).

The comparison between ex-POWs and controls in the intensity of PTSD and symptom clusters at T5, while controlling for life events since the war, resulted in a significant multivariate effect ($F(4,160) = 12.59, p < 0.001$). Further examination yielded significant group differences in each of the symptom clusters as well as the total PTSD score (Table 1). Ex-POWs reported higher intensity of total PTSD, intrusion, avoidance, and hyperarousal than controls. The effects of life events since the war were not significant, ($F(4, 160) = 0.33, p = 0.855$).

3.2. The effect of captivity and appraisal of the extent to which war-related experiences affected adjustment to COVID-19 on PTSD at T5

Overall, ex-POWs and controls differed in their appraisal of the extent to which their war-related experiences affected their adjustment to COVID-19, $\chi^2(2) = 23.02, p < 0.001$. Forty-three (38.1%) of the ex-POWs perceived their war-related experiences as hindering their adjustment to COVID-19 compared to $11.3\%$ (n = 7) of the controls; $20.4\%$ (n = 23) of the ex-POWs appraised it as facilitating adjustment compared to $9.7\%$ (n = 6) of the controls; and, $41.6\%$ (n = 47) of ex-POWs perceived their war-related experiences as irrelevant to their current adjustment compared to $79\%$ (n = 49) of the controls.

A two-way ANOVA on intensity of PTSD during COVID-19 yielded a significant main effect for captivity, $F(1,169) = 22.19, p < 0.001$ with higher PTSD intensity for ex-POWs ($M = 2.37$, SD = 0.73) than controls ($M = 1.58$, SD = 0.55). Analysis also revealed a significant main effect for the appraisal of the effect of war-related experiences on current adjustment, $F(2,169) = 16.99, p < 0.001$. That is, participants who appraised their experiences as hindering adjustment ($M = 2.81$, SD = 0.59) had a higher intensity of PTSD compared to veterans who perceived it as facilitating adjustment ($M = 1.96$, SD = 0.61) or irrelevant ($M = 1.75$, SD = 0.63). However, the interaction was not significant, $F(2,169) = 0.55, p = 0.58$, indicating that the effect of appraisal on PTSD intensity at T5 was similar among ex-POWs and controls.

3.3. Are the PTSD trajectories of ex-POWs’ related to PTSD during the COVID-19 pandemic?

First, participants were divided into five groups according to their PTSD classification from the first four measurements (T1-T4): Ten participants (5.4%) were included in the chronic PTSD trajectory, 65 (35.1%), in the delayed PTSD trajectory, six (3.2%) in the recovered PTSD trajectory, 101 (54.6%) in the resilient trajectory, and three (1.6%) in the reaction trajectory. Further examination yielded a significant difference between groups in the distribution of the trajectories, $\chi^2(4) = 49.38, p < 0.001$. The resilient trajectory was less prevalent in the ex-POWs (n = 43, 35.8%) compared to controls (n = 58, 89.7%). However, the chronic and delayed trajectories were more prevalent in the ex-POWs group (n = 8, 6.7% and n = 60, 50%, respectively) compared to controls (n = 2, 3.1% and n = 5, 7.7%, respectively). The recovery and reactivation trajectory were similar for the ex-POWs (n = 6, 5.0% and n = 3, 2.5%, respectively) compared to controls (n = 0, 0% and n = 0, 0%, respectively).

Chi-square analysis revealed that PTSD trajectories of ex-POWs were associated with different rates of PTSD at T5, $\chi^2(4) = 30.09, p < 0.001$. Specifically, of the resilient ex-POWs, only 11.6% developed PTSD during the COVID-19 pandemic, while of the recovery trajectory, 16.7% had PTSD during the pandemic. Of the ex-POWs in the chronic and delayed trajectories groups, 50% and 63.3% had PTSD during the pandemic. Accordingly, of the ex-POWs in the reactivation trajectory group, 66.7% had PTSD during the pandemic.

The ANOVA, assessing differences between PTSD trajectories groups in PTSD intensity at T5, yielded a significant effect, $F(4,139) = 16.19, p < 0.001$. Bonferroni post hoc tests showed that resilient ex-POWs had the lowest levels of PTSD intensity during the pandemic ($M = 1.73$, SD = 2.37).
3.4. Predicting risk for PTSD during the COVID-19 pandemic – a holistic model

The logistic regression examining the contribution group, stressful life events, lifetime PTSD, and appraisals of wartime experiences to PTSD at T5 yielded a significant model, $\chi^2(df = 4) = 79.04, p < 0.001$, Cox & Snell $R^2 = 36.2\%$. In the final step, lifetime PTSD was associated with a greater risk of 8.15 times more to develop PTSD at T5 (see Table 2). Appraisal war-related experiences were not significant predictors of PTSD rates at T5. Finally, the significant association between captivity trauma and PTSD rates during the COVID-19 pandemic was reduced when lifetime PTSD was entered into the model (step 3). This reduction, depicted in Table 2 was significant according to the Sobel test, $Z = 2.00, p = 0.02$, indicating that the indirect effect was significant. In other words, there is a higher risk for ex-POWs to develop PTSD during the pandemic as mediated by lifetime PTSD.

4. Discussion

The findings of this study demonstrated that previously traumatized ex-POWs were more vulnerable during the current pandemic and had significantly higher rates and intensity of PTSD than comparable combat veterans. Moreover, veterans in both groups who perceived their war-related experiences as hindering their current coping with the COVID-19 related stress were more likely to suffer from PTSD during the pandemic than veterans who perceived it as a facilitating or irrelevant experience. Most importantly, the results of this longitudinal study showed that chronic and delayed trajectories of PTSD among ex-POWs increased the risk for PTSD during the pandemic and lifetime PTSD mediated the effects of war captivity on PTSD during the current pandemic.

### Table 2

| Logistic regression predicting PTSD rates at T5. | b | SE | Wald p-value | OR | OR CI 95% |
|-----------------------------------------------|---|----|-------------|----|----------|
| **Step 1**                                    |   |    |             |    |          |
| Group                                         | 1.60 | 0.60 | 7.20 | 0.007 | 4.96 | 1.54 | 15.99 |
| **Step 2**                                    |   |    |             |    |          |
| Group                                         | 1.59** | 0.59 | 7.16 | 0.007 | 4.96 | 1.53 | 15.94 |
| Life events since war                         | 0.01 | 0.04 | 0.08 | 0.78  | 1.01 | 0.93 | 1.10  |
| **Step 3**                                    |   |    |             |    |          |
| Group                                         | 0.27 | 0.75 | 0.13 | 0.81  | 1.32 | 0.30 | 5.71  |
| Life events since war                         | 0.01** | 0.05 | 0.05 | 0.001 | 1.01 | 0.92 | 1.11  |
| Lifetime PTSD                                 | 2.84*** | 0.85 | 11.09 | 0.000 | 7.15 | 3.22 | 19.15 |
| **Step 4**                                    |   |    |             |    |          |
| Group                                         | 0.052 | 0.065 | 0.642 | 0.423 | 1.05 | 0.927 | 1.19 |
| Life events since war                         | -1.252 | 1.460 | 0.736 | 0.391 | 0.29 | 0.016 | 4.99 |
| Lifetime PTSD                                 | 2.097* | 0.992 | 4.472 | 0.034 | 8.15 | 1.166 | 9.911 |
| Appraisal of previous trauma as related to COVID-19 adjustment | 1.100 | 0.805 | 1.866 | 0.172 | 3.01 | 0.62 | 11.568 |

**Notes.** **p < 0.001; **p < 0.01; *p < 0.05.**

In keeping with the vulnerability perspective (Selye, 1976), and supported by numerous studies (Hantman et al., 1994; Kessler et al., 2018), the previously traumatized ex-POWs were more vulnerable to PTSD decades later when faced with the current stressors of COVID-19. Their prior trauma undermined their sense of safety (Janoff-Bulman, 2010), and taxed and eroded their self-efficacy and trust in their own abilities (Titchener and Ross, 1974). As a result, their coping rendered them less prepared to cope with subsequent stressors. Moreover, our findings indicated that the current vulnerability of ex-POWs cannot be attributed to the life events that they experienced after their repatriation. It is plausible that the brutal and extreme experiences of war captivity, in which human lives are of no consequence, are likely to dwarf the meaning and effects of more common and mundane subsequent life events (Ruch et al., 1980).

Our findings revealed considerable variability in both the ex-POWs and the combatants regarding the effects of prior trauma on their current perceptions. In both groups, some survivors felt that their previous trauma (captivity, combat) negatively affected their adjustment to the current COVID-19 and thus made it more difficult to endure. Interestingly, more ex-POWs felt that their previous trauma affected their perception of the current adversity in comparison to control combatants. It transpired that the vast majority of the controls and most of the ex-POWs reported that their war experiences had no relevance in the context of COVID-19. However, when we assessed the relationship between the participants’ evaluation of the effects of previous trauma as enhancing or hindering coping with the current stress, we found that in both groups their attribution was significantly associated with their current PTSD. In both study groups, individuals who felt that their prior trauma made the current stress easier to endure had lower rates of PTSD than those who felt that their trauma history made COVID-19 more difficult to endure. This is consistent with an earlier Israeli study of Holocaust survivors who reportedly perceived the 1992 Gulf War as similar to their prior trauma and, as such, reacted with intense distress (Hantman et al., 1994). These findings clearly underscore the role of meaning-making of the prior trauma in the psychiatric response to current trauma.

4.1. Lifetime PTSD

While many of participants met PTSD symptom criteria, many others did not. One-third of the ex-POWs, and almost 90% of the controls, were not identified as having PTSD at any of the first four times. Consistent with the crisis resolution perspective (Solomon, 1993) and earlier studies (Solomon, 1993; Solomon et al., 1987), our findings indicated that it is not the history of prior exposure to trauma per se but rather the psychological outcome that affects reactions to subsequent trauma. We found that a lifetime prevalence of PTSD (that in endorsing PTSD at least once in previous assessments was associated with an increased risk for PTSD during the COVID-19 pandemic among ex-POWs but not in the control group. In other words, the elevated risk of current PTSD among ex-POWs was accounted for by their lifetime PTSD. Inspection of the regression analysis clearly demonstrated that lifetime PTSD prevalence, rather than trauma exposure, is implicated in risk for PTSD upon subsequent stress. This finding is consistent with a prospective systematic study of young adults (Breslau et al., 2008), which found that the presence of PTSD as a result of subsequent trauma was limited to respondents with a history of PTSD. Why did their prior PTSD increase the risk of PTSD in response to the subsequent trauma? One cannot negate the possibility that a pre-existing vulnerability predated the first trauma (war captivity) and led to PTSD following other traumas. Yet, as Titchener and Ross (1974) argued as well as numerous studies of various populations (Solomon and Mikulincer, 2006), the initial psychological rupture set in motion a process of posttraumatic decline leaving permanent effects, particularly a proneness to anxiety reactions entrenched in vulnerability. This vulnerability is likely to give rise to the reactive and exacerbation of PTSD upon exposure to subsequent trauma.
PTSD, like other anxiety disorders, is not a stable entity. To the best of our knowledge, this is the first study that examined not only PTSD following prior trauma but also the implication of PTSD trajectories measured prospectively at four time points over 29 years. As PTSD symptoms fluctuate over time, they are likely to tax and deplete trauma survivors’ psychiatric resources differently and thus have a differential effect on their ability to cope with subsequent stress. Accordingly, our results reflect differential risk for PTSD during the COVID-19 pandemic as a function of PTSD trajectories over a four waves of measurement (24 years). At the greatest risk and most severely affected were those who had not recovered and suffered for decades from chronic debilitating PTSD. Second were those with delayed onset PTSD who lived for years after the war with residual subclinical symptoms, however, over time and due to aging their PTSD symptoms were reactivated and exacerbated, leaving them emotionally depleted and vulnerable. The most robust were those in the resilient trajectory who were initially better emotionally equipped and, therefore, subsequent stress only had limited pathogenic effects.

4.3. Limitations

The findings of the current study should be considered in light of its limitations. The sample size, especially that of the controls, is modest. Additionally, an initial assessment was not conducted within the first few years following the war, as the first assessment was conducted 18 years after the war. Although self-report symptom checklists based on the DSM criteria, as the PTSD Inventory used in the current study, were evaluated as valid and reliable effective for research purposes, especially when the questionnaire refers to specific traumatic events, such as captivity or combat-related events (McDonald and Calhoun, 2010; Wilkins et al., 2011), the use of self-report questionnaires to identify PTSD might be considered another limitation. Finally, as the study was conducted among Israeli ex-POWs and combat veterans, generalizing from these results to other populations, in other times and cultures, should be undertaken cautiously.

4.4. Clinical implications

The results call for a need to monitor and provide support and clinical help to previously traumatized individuals during the current COVID-19 pandemic. This is particularly needed for elderly trauma survivors who suffer from PTSD and are currently in double jeopardy as an identified high-risk group for COVID-19. Given the lockdowns and social restrictions that compound the already restricted movement of the elderly, it is incumbent upon the medical staff and other helping professionals, in care homes as well as in the community, to pay close attention to the psychological distress and needs of those with a history of PTSD following an event which may bear a resemblance to the current stressful experience, who are at risk for reactivation and exacerbation. Furthermore, as previous studies indicated that PTSD is often comorbid with other disorders (Ginzburg et al., 2010), other manifestations of distress should also be monitored and targeted. Support and evidence-based trauma treatments should be available and offered when relevant. Given that this pandemic is not over and another potentially worse wave may return, preparedness and precautions are called for.

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Declaration of interest

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