Personality and Individual Differences 241 (2025) 113175

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Trait and state emotion regulation and parental wellbeing during war

Mor Keleynikov [a,*], Noga Cohen [a,b], Dana Lassri [c], Reuma Gadassi-Polack [d,e], Joy Benatov [a,b]

[a] Department of Special Education, Faculty of Education, University of Haifa, Israel
[b] Edmond J. Safra Brain Research Center for the Study of Learning Disabilities, University of Haifa, Israel
[c] The Paul Baerwald School of Social Work and Social Welfare, The Hebrew University of Jerusalem, Jerusalem, Israel
[d] Faculty of Education and Gonda Multidisciplinary Brain Research Center, Bar Ilan University, Israel
[e] Department of Psychiatry, Yale University, United States of America

ARTICLE INFO

Keywords:
Emotion regulation
War
Parenting
Family
Rumination
Reappraisal
Trauma
Parental burnout

ABSTRACT

The Israel-Hamas war and the events of October 7th caused psychological distress among the entire population in Israel, including parents. This study explores the role of emotion regulation in buffering war-related stress and its impact on parental burnout and negative mood. One month after October 7th, 577 parents (79 % females, mean age = 37.9) were assessed for their emotion regulation tendencies (traits) and the effectiveness of two strategies—reappraisal and rumination—in mitigating negative emotions (state emotion regulation). Participants completed an emotion regulation task involving writing about a personal adverse event related to the war's aftermath and subsequently wrote a self-directed letter to promote emotional relief. Findings revealed that while trait reappraisal correlated with lower parental burnout, rumination significantly moderated the relationship between war-related stress and burnout, exacerbating stress effects. Additionally, state reappraisal reduced negative emotions, while rumination heightened them. These results highlight the importance of emotion regulation, particularly the protective role of reappraisal and the detrimental effects of rumination, in managing the psychological impact of acute war-related stress. This study provides valuable insights into parental mental health during crises and emphasizes the need to promote adaptive emotion regulation strategies to support parental well-being in high-stress environments.

1. Introduction

On October 7th, 2023, the terror organization Hamas carried out one of the deadliest terrorist attacks in modern history (Statista.com, 2023). The attack led to the murder of 1145 Israelis and the kidnapping of 250 children, women, and men. The fighting caused thousands of Israelis to lose their loved ones and over 300,000 Israeli citizens were evacuated from their homes (Levi-Belz et al., 2024; Statista.com, 2023; United Nations Human Rights Council, 2024). Psychological distress surged, with PTSD, depression, and anxiety rates nearly doubling compared to two months earlier (Levi-Belz et al., 2024). Our study examined the effects of the war on parental burnout of Israeli parents and the moderating role of emotion regulation strategies. However, it is crucial to acknowledge the broader context of this ongoing long conflict, which caused profound human suffering and a heavy toll on both Israelis and Palestinians (Khatib et al., 2024).

Parents are a critical group requiring research focus during wartime due to their dual roles in managing their own distress and significantly influencing children's adaptation to war-related stress (Eltanamly et al., 2021; Slone & Mann, 2016). Parental functioning and the home environment can buffer the effects of war exposure on children's psychological and behavioral symptoms (Slone & Mann, 2016). Yet, compared to non-parents, parents face unique stressors, such as protecting children, coping with school closures, and addressing emotional challenges (Murphy et al., 2017). War exposure negatively impacts parenting behaviors, increasing harshness and reducing warmth, which strains family dynamics (Eltanamly et al., 2021). A critical but understudied aspect of war exposure on parents is parental burnout (PB), characterized by exhaustion, emotional distancing, and feelings of ineffectiveness (Mikolajczak et al., 2023, 2018; Roskam et al., 2017). PB harms parents' mental health, disrupts parent-child relationships, and increases children's vulnerability to stress, making it a crucial area for research during war (Griffith, 2022).

While wars harm mental health, not everyone reacts the same way

* Corresponding author at: Department of Special Education, Faculty of Education, University of Haifa, 199 Aba Khoushy Ave. Mount Carmel, Haifa, Israel.
E-mail addresses: Moravraham38@gmail.com (M. Keleynikov), noga.cohen@edu.haifa.ac.il (N. Cohen), dana.lassri@mail.huji.ac.il (D. Lassri).

https://doi.org/10.1016/j.paid.2025.113175
Received 23 October 2024; Received in revised form 16 March 2025; Accepted 17 March 2025
Available online 27 March 2025

(Gewirtz et al., 2018). Protective and risk factors, such as emotion regulation, shape individual responses to stress (Troy & Mauss, 2011). Emotion regulation (ER) involves cognitive and behavioral processes to manage emotions in line with goals (Gross, 1998) and is a key predictor of stress adjustment and positive parenting outcomes in times of stress (Keleynikov et al., 2023; Vertsberger et al., 2022). For example, mothers' ER has been shown to moderate the link between maternal PTSD and children's emotional dysregulation in war-exposed families (Pat-Horenczyk et al., 2015). Furthermore, studies conducted during the COVID-19 pandemic found that ER strategies moderate the link between pandemic-related stress and PB and well-being (e.g., Keleynikov et al., 2024; Vertsberger et al., 2022). Moreover, a study condcted during the current Israel-Hamas war, found that parental ER diffuculties mediated the link between child behavioral problems and PB (Shnitzer-Meirovich et al., 2024).These findings highlight the importance of ER for both parental mental health and effective parenting under stress.

Many studies on war adjustment have focused on trait ER, which refers to the habitual or dispositional use of a strategy. In contrast, state ER involves choosing a strategy in a specific situation (McRae, 2013). While trait ER captures general patterns and is strongly linked to well-being, its reliance on generalized responses across contexts can limit understanding of context-specific impacts, which are especially critical during extreme circumstances like parenting in wartime (Heiy & Cheavens, 2014). To address this gap in the literature, this study examines both trait and state ER, focusing on two key strategies: reappraisal and rumination (Lewis et al., 2018).

Reappraisal involves rethinking situations more positively, generally benefiting psychological health (Gross & John, 2003), while rumination, defined as repetitive negative thinking, predicts anxiety and depression (Nolen-Hoeksema et al., 2008). Studies have offered that rumination and reappraisal are both driven by the same cognitive mechanism, which is the inability/ability to inhibit irrelevant negative information (Cohen et al., 2014). That is, a lower ability to inhibit negative content is linked to reduced reappraisal and an increased tendency to ruminate (Cohen et al., 2014). In wartime, where negative content is pervasive, these strategies are critical. Trait reappraisal buffers mental health issues like PTSD and depression, whereas rumination predicts higher symptoms in war-exposed individuals (Jenness et al., 2016).

In the parenting context, studies show that parents who effectively employ adaptive ER strategies (i.e., higher use of reappraisal and lower use of rumination) can mitigate the adverse effects of stress exposure on their own distress (Vertsberger et al., 2022). For instance, rumination strengthened the link between COVID-19 stress and PB, whereas reappraisal weakened it (Vertsberger et al., 2022). Furthermore, parents who were evacuated due to wildfire showed higher posttraumatic growth and better family functioning when they used reappraisal (Felix et al., 2015). However, the effects of reappraisal and rumination on parental-related aspects during wartime were not studied. Wars are considered a unique stressor due to the extreme stress they oppose. As stress exacerbates rumination (Michl et al., 2013) and dampens the effectiveness of reappraisal in reducing negative mood (Raio et al., 2013), it is possible that these emotion regulation strategies would have different effects on parents than those found in prior studies.

1.1. The current study

The current study examined the links between war exposure and PB and the moderating role of reappraisal and rumination. One month after the October 7th attack, parents filled out questionnaires assessing war-related stress, ER tendencies, and PB. We also evaluated how effectively these strategies reduce negative emotions using an ER task, where participants reflected on a parental stressor and wrote a letter to help themselves feel better. They reported their mood, and the ER strategies used. Notably, given prior research indicating that event controllability and intensity can influence the effectiveness of ER strategies (Sheppes et al., 2014), we included these variables as covariates in our analyses. We hypothesized that trait reappraisal would weaken the stress-PB link, while rumination would strengthen it. We also expected that using state reappraisal would reduce negative emotions, whereas state rumination would increase them. The second hypothesis regarding state reappraisal and rumination was preregistered (https://doi.org/10.17605/OSF.IO/Y7JEX).

2. Method

2.1. Procedure

Participants were recruited via social media platforms like Facebook and WhatsApp. A power analysis using G*Power determined a minimum sample size of 50 participants to detect a medium effect size (0.25) with 0.80 power and an alpha of 0.05. Eligible participants were parents of at least one child under 18 living at home. Of 623 respondents, 577 met the criteria after exclusions. The study was preregistered (https://doi.org/10.17605/OSF.IO/Y7JEX) and approved by the IRB committee of the Faculty of Education, University of Haifa (IRB approval 383/23). This study is part of a larger investigation on parents exposed to the Israel-Hamas war, only relevant measures are described. Participant recruitment began on November 10, 2023, about a month after the Israel-Hamas war started, and ended on November 25, when a hostage deal freed most children, and a temporary truce began. During this period, hundreds of thousands of Israelis were called for reserve duty, with intense fighting in Gaza and rocket fire in northern Israel from Syria and Lebanon (INSS, 2025). Respondents completed an anonymous Qualtrics survey, including an ER task and questionnaires, with an option to receive a $10 gift voucher. All the participants electronically signed an informed consent form prior to completing the study. At the end of the survey, participants were given information about mental health organizations offering free support services.

2.2. Measures

2.2.1. War exposure

This questionnaire, adapted from the Political Life Event Scale (Slone & Hallis, 1999), included 10 yes/no items and one on missile-alarm frequency. It had two subscales: five items on direct war exposure (e.g., "*I was injured during the war*") and five on indirect exposure (e.g., "*Someone close to me was killed during the war*"). The questionnaire was developed and validated among the Israeli population (Slone & Hallis, 1999). There is no theoretical rationale to expect that exposure to one war-related event would necessarily correlate with exposure to others (Slone & Hallis, 1999). Therefore, we did not calculate an internal consistency score for this questionnaire.

2.2.2. War-related stress

This 4-item scale, developed for this study, assessed subjective threat perceptions associated with war exposure, aligning with the A2 criteria for PTSD in the DSM-V (e.g., "I felt that my life was in danger"). Participants evaluated their experiences using a 5-point Likert scale. The scale showed strong internal consistency ($\omega = 0.89$).

2.2.3. Trait reappraisal

The reappraisal subscale of the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) was used to measure trait use of reappraisal. This self-report subscale includes six items (e.g., "When I want to feel more positive emotion… I change what I'm thinking about"). Responses are rated using a 7-point scale with 1 (strongly disagree) and 7 (strongly agree). The Hebrew version was validated in prior research (Matsumoto et al., 2008). The current study's omega coefficient was also strong ($\omega = 0.84$).

2.2.4. Trait rumination

The 5-item brooding subscale of The Ruminative Responses Scale

(RRS; Nolen-Hoeksema & Morrow, 1991) was used to measure the tendency of passively focus on one's negative mood or situation (e.g. "*I was thinking why can't I handle things better?*"). Respondents rated the questionnaire items on a scale from 1 (almost never) to 4 (almost always). The Hebrew version of this questionnaire was validated previously (Daches et al., 2010). In this study, the Omega coefficient was strong (ω = 0.85).

2.2.5. Parental burnout

The Parental Burnout Assessment (PBA; Roskam et al., 2017) is a 23-item questionnaire used to measure parental burnout. We obtained permission for its use and translation, which was carried out by two Hebrew-speaking psychology researchers. An English native speaker then back-translated the items, and an independent researcher ensured that the meanings were consistent. Parents rated their frequency of experiencing each item (e.g., "I feel completely run down by my role as a parent") on a seven-point Likert scale (1 = Never, 7 = Every day), with higher scores indicating greater burnout. The scale demonstrated strong internal consistency (ω = 0.97).

2.2.6. Emotion regulation task

The task consisted of five stages: (1) Participants recalled and briefly described a personally upsetting parenting event related to the war that happened in the past two weeks. (2) They rated the event's intensity and controllability (1 to 5) and their negative affect using five items from the PANAS (Watson et al., 1988). (3) Participants wrote a letter to themselves addressing the event to alleviate negative emotions (detailed instructions are available on OSF). (4) They rated their current use of reappraisal (e.g., "I think about the situation differently") and rumination (e.g., "I think over and over about the situation"), using one item for each strategy, as was used in previous studies (Short et al., 2018). (5) Participants rated their negative affect again. While we collected data on additional strategies, this study focused on reappraisal and rumination. The events reported by parents varied, with many highlighting the challenge of explaining war to their children and managing children's fears. For example, one participant shared, "My 8-year-old daughter saw images of kidnapped children and asked if she could be kidnapped too. I didn't know how to answer her. Since seeing those pictures, she's been afraid to leave the house without me". Other challenges included managing parents' anxieties (e.g., "Since the war, every time my 5-month-old daughter's cries it triggers my anxiety, I just feel I can't function as a parent"), feelings of guilt (e.g., "When my daughter said, 'A hug from mom is the best,' I thought of the children and parents who can't hug, and I felt guilty and helpless"), and coping with a partner's reserve enlistment (e.g., "My husband has been in the reserves since the war began, and I feel overwhelmed and impatient with our three children").

2.3. Data analysis

The data were analyzed using JASP Version 0.18.3 (JASP Team, 2024). To test the first hypothesis regarding the moderating effect of trait ER on the relationship between war-related stress and PB, linear regression was employed. The child's age was included as a control variable to account for potential age-related differences. To test the second hypothesis on the effect of state reappraisal and rumination on negative affect, a repeated measures ANOVA was conducted. Importantly, to avoid possible effects related to the content of the events, we controlled the event's perceived controllability and intensity as reported by the participant.

2.4. Transparency and openness

To ensure transparency in our research, we preregistered our study design before data collection. The preregistration and all research materials, are available on OSF: https://doi.org/10.17605/OSF.IO/Y7JEX

3. Results

3.1. Participant characteristics

The sample included 577 parents (79 % female; mean age = 37.9, SD = 7.4) of children aged 0–18 living at home (M = 6.8 years, SD = 4.6). See Table 1 for more details. Out of the sample, 20 % stated that their spouse was drafted into reserve service, and 6 % reported that they were displaced from their home following the attack. The study participants also reported a high percentage of exposure to war-related events, as detailed in Table 1. Regarding PB, 12 % of parents experienced moderate PB, and 7 % reported severe burnout.

3.2. Correlation analysis

Table 2 lists the means, standard deviations, and Pearson correlation coefficients between the study variables. War exposure (direct or indirect) was not correlated with PB. While war-related stress was associated with a higher tendency to use trait rumination and higher PB, reappraisal was negatively correlated with parents' tendency to use rumination and with PB. Finally, there was a strong positive link between rumination and PB.

3.3. Trait emotion regulation as a moderator of the link between war-related stress and PB

We conducted a regression analysis to examine whether the link between war-related stress and PB is moderated by reappraisal and rumination. The child's age was entered as a control variable. The model accounted for 28 % of the variance, F (6, 571) = 36.76, $p < .001$. The effect of war-related stress was marginally significant ($B = 2.77$, $t = 1.78$, $p = .073$). Trait reappraisal contributed to the prediction of PB ($B = -6.85$, $t = -2.01$, $p = .045$), while rumination did not ($B = 6.34$, $t = 1.18$, $p = .238$). In contrast to our hypothesis, reappraisal did not moderate the link between war-related stress and PB ($B = 0.37$, $t = 1.48$, $p = .139$) (Table 3). Supporting our prediction, the war-related stress × rumination interaction was a significant predictor for PB ($B = 0.96$, $t = 2.53$, $p = .012$). Simple slope analysis indicated that in low level of rumination there was no significant link between war-related stress and PB ($B = 0.33$, $t = 0.82$, $p = .41$), whereas in moderate and high levels of rumination there was a positive association between war-related stress and PB ($B = 0.88$, $t = 3.02$, $p = .003$; $B = 1.63$, $t = 4.08$, $p < .001$, respectively), see Fig. 1.

3.4. Sensitivity analysis

To test the robustness of our findings, we conducted a sensitivity analysis by including additional stressors: whether the partner was called to reserve duty and whether the family was displaced. The results showed that neither being called to reserve duty (B = 4.75, SE = 2.68, $p = .078$) nor displacement (B = 3.70, SE = 3.71, $p = .319$) significantly predicted PB in the full model (being called to serve duty was marginally significant). Furthermore, including these variables in the model did not

Table 1
Participants war-exposure.

Direct exposure		Indirect exposure	
Was in real danger	5 %	A close person to them was injured	26 %
Was injured	1 %	A close person to them was kidnapped	13 %
Serves in the army/ police	5 %	A close person to them was murdered	30 %
Was evacuated	6 %	A close person to them is a survivor of the terrorist attack	35 %
A rocket hit their residential area	32 %		

Table 2
Means, standard deviations, and correlations ($N = 577$).

	M	SD	1	2	3	4	5
1. Direct war exposure	0.53	0.84					
2. Indirect war exposure	2.86	2.04	0.30***				
3. War-related stress	10.76	3.89	0.14***	0.23***			
4. Trait reappraisal	4.73	1.11	−0.02	0.09*	−0.01		
5. Trait rumination	10.56	3.48	0.04	0.05	0.23***	−0.16***	
6. Parental burnout	29.51	29.76	0.07	0.03	0.23***	−0.14**	0.48***

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 3
Linear regression analysis with parental burnout as the outcome variable.

	B	SD	*t*	*p*	95 % CI	
					Lower	Upper
Child's age	0.22	0.23	0.94	0.35	−0.24	0.068
War-related stress	−2.77	1.54	−1.79	0.073	−5.80	0.26
Reappraisal	−6.85	3.40	−2.01	**0.045**	−13.54	−0.17
Rumination	6.34	5.37	1.18	0.238	−0.42	16.89
War-related stress × Reappraisal	0.37	0.25	1.48	0.139	−0.12	0.86
War-related stress × Rumination	0.96	0.38	2.53	**0.012**	0.21	1.70

Note: Bold results are significant.

alter the effect sizes or the significance of other predictors.

3.5. State emotion regulation analysis

Repeated measures ANOVA was conducted to examine the effect of state reappraisal on negative affect before and after the emotion regulation task. The perceived controllability and intensity of the event were entered as covariates. First, results showed a significant main effect for time, $F(1, 381) = 5.45$, $p < .05$, partial $\eta^2 = 0.014$, suggesting the emotion regulation task was effective in reducing negative affect. Next, an interaction emerged between time and state use of reappraisal, $F(2, 381) = 3.17$, $p = .04$, partial $\eta^2 = 0.016$. As illustrated in Fig. 2a, high reappraisal levels effectively mitigate the negative emotions elicited by adverse events. Furthermore, the interaction between time and state use of rumination was significant, $F(2, 381) = 4.61$, $p = .011$, partial $\eta^2 = 0.022$. Accordingly, high use of rumination was associated with an increase in the subjects' negative mood, as can be seen in Fig. 2b.

4. Discussion

This study examines how trait ER influences the relationship between war-related stress and PB, while also exploring state ER's role in managing negative emotions. It is the first to investigate both trait and state ER in parents during war, focusing on reappraisal (reframing a situation) and rumination (repetitive thinking about distress). Our findings indicate that trait reappraisal is associated with lower PB, while trait rumination exacerbates the impact of war-related stress, increasing the risk of burnout. In terms of state ER, state reappraisal reduced negative emotions, while state rumination increased them. These results highlight the crucial role of ER for parents during wartime.

The traumatic events of the October 7th attack and subsequent war profoundly affected Israelis and Palestinians, causing horrendous consequences for their mental health (Kienzler et al., 2024; Levi-Belz et al., 2024). Many are grieving, fearing for loved ones, and dealing with ongoing security threats (Kienzler et al., 2024; Levi-Belz et al., 2024). Within the current study, Israeli parents reported they faced challenges such as explaining the situation to their children, managing their children's anxiety, and maintaining routines amidst fears, often without educational support or while partners were on reserve duty. The study revealed a notable prevalence of PB, with 7 % of parents experiencing severe burnout. While data on PB in Israel during peacetime is unavailable, a comparison with peacetime prevalence rates in other Middle Eastern Mediterranean countries—such as Egypt (2.6 %), Lebanon (5.5 %), Italy (0.6 %), and Turkey (0.4 %)—indicates that the observed prevalence is comparatively high (Roskam et al., 2021). These findings underscore the heightened risk of PB during wartime and emphasize the importance of investigating resilience factors to mitigate its impact during such challenging periods.

This study found that reappraisal was linked to lower PB during war but did not moderate the relationship between war-related stress and burnout. Reappraisal likely helped parents manage demands by

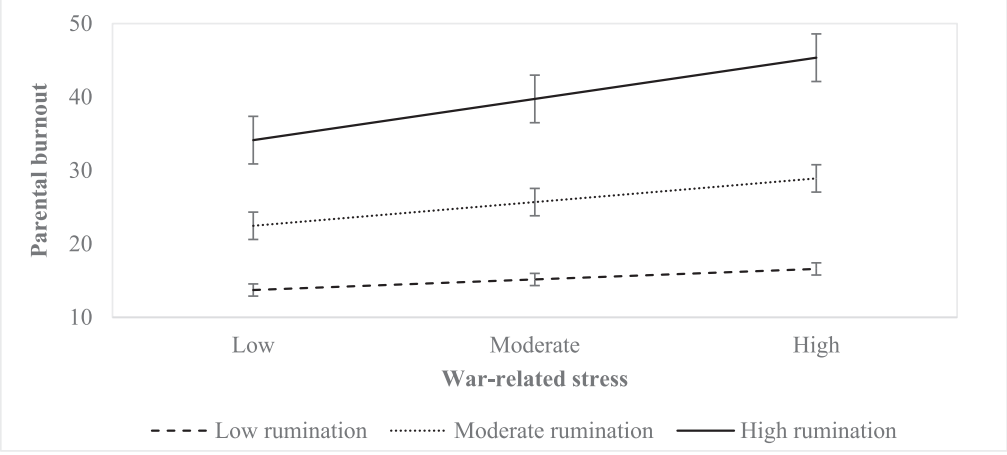

Fig. 1. Trait rumination moderates the link between war-related stress and parental burnout.

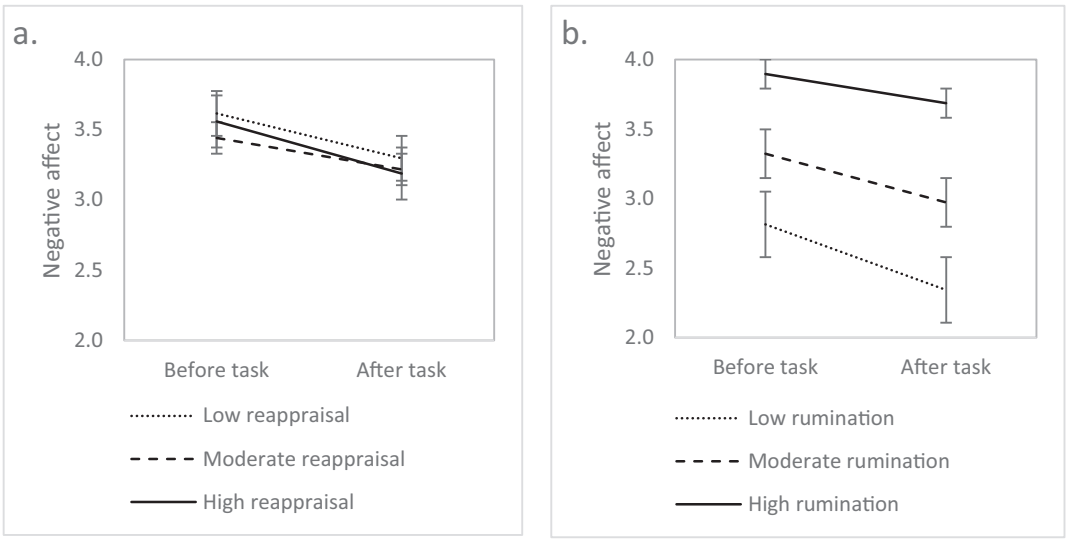

Fig. 2. Repeated measures ANOVA of negative affect before and after emotion regulation task. a. Repeated measures ANOVA with state reappraisal as the moderator. b. Repeated measures ANOVA with state rumination as the moderator.

reframing events and emotions, aligning with research identifying it as a resilience factor (Riepenhausen et al., 2022; Troy et al., 2013). However, while reappraisal tendencies were negatively associated with burnout, they did not buffer against stress's adverse effects. In contrast, rumination emerged as a risk factor, amplifying the impact of stress on burnout. A recent meta-analysis (Brandão et al., 2024) confirmed rumination's role in increasing PB, with this study being the first to examine its effects in a war context. These findings highlight how war-related stress, combined with maladaptive strategies like rumination, intensifies PB.

In the current study we aimed to understand how ER affects parents during wartime, assessing both trait and situational influences on negative mood. Parents described a negative event since the war's onset and reported their ER strategies. As hypothesized, reappraisal was associated with reduced negative emotions, highlighting its effectiveness even in acute stress. While prior research suggests individuals struggle to use reappraisal during intense negative experiences (Sheppes et al., 2014; Wessa et al., 2024), our findings indicate it can mitigate negative emotions under extreme conditions like war. This may be because war exposure represents an uncontrollable stressor—a category of stress for which reappraisal is particularly effective (in contrast to controllable stressors; Troy et al., 2013). Alternatively, reappraisal may be impaired shortly after acute stress but less affected in the longer aftermath (Wessa et al., 2024). Conversely, rumination was linked to increased negative emotions, consistent with prior research (Lyubomirsky et al., 2015). Stress may impair executive functions, making it harder to inhibit or disengage from negative thoughts, which fosters rumination and heightens negative mood and depressive symptoms (Joormann et al., 2006; Keleynikov et al., 2023). These findings deepen our understanding of how state rumination exacerbates distress in highly stressful contexts, such as parental exposure to war.

4.1. Strengths, limitations, and future directions

This study captures parents' early reactions during the Israel-Hamas war, shedding light on how ER, war-related stress, and PB interact in high-stress contexts. It examines both trait and state ER tendencies, providing valuable insights. However, its cross-sectional design limits causal conclusions, and reliance on self-reported questionnaires introduces potential biases. The war-related stress measure was study-specific and lacked comprehensive validation. The focus on parents of children under 18 may overlook age-specific differences in outcomes like burnout. Future research should consider examining these dynamics across more narrowly defined age groups to better understand potential differences. Moreover, given that our sample was predominantly female (79 %), it is important to consider gender differences in ER. Prior research indicates that men generally engage in emotion regulation with greater efficiency and less cognitive effort than women (McRae et al., 2008), potentially influencing the way they cope with war-related stress. These differences suggest that gender-based variations in regulatory strategies may shape the observed effects of reappraisal and rumination. Future research should explore whether the effectiveness of these strategies differs by gender in the context of extreme stress. Additionally, the use of convenience sampling, which included only Jewish participants may restrict the generalizability of the findings. This homogeneity in ethnicity and recruitment method might not fully represent the experiences of other demographic groups affected by the war. Furthermore, security constraints required us to focus exclusively on parents from the Israeli side, resulting in the absence of data from Palestinian parents. These limitations suggest that future research should consider longitudinal designs which allow us to examine changes over time, more diverse sampling methods, and additional measures to enhance the accuracy and generalizability of the findings. In addition, more studies on the role of emotion regulation in the context of stressful events can provide more insight into the temporal dynamics of stress response.

5. Conclusions

This study highlights war's severe impact on parents and children, focusing on PB and mental health. It underscores the critical role of ER strategies—reappraisal and rumination—in managing war-related stress. Reappraisal emerges as a protective factor, reducing negative emotions, while rumination increases vulnerability to PB. By examining both trait and state ER, the study reveals their dynamic effects on parental well-being under acute stress. These findings emphasize the need to promote adaptive strategies like reappraisal to help parents navigate wartime challenges and encourage further research on interventions to enhance ER skills in high-stress contexts.

CRediT authorship contribution statement

Mor Keleynikov: Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Noga Cohen:** Writing – review & editing, Writing – original draft, Supervision,

Investigation, Conceptualization. **Dana Lassri:** Writing – review & editing, Writing – original draft, Supervision, Investigation, Conceptualization. **Reuma Gadassi-Polack:** Writing – review & editing, Writing – original draft, Supervision, Investigation. **Joy Benatov:** Writing – review & editing, Writing – original draft, Supervision, Investigation, Conceptualization.

Ethics approval statement

This study was approved by the IRB committee of the Faculty of Education, University of Haifa (IRB approval 383/23).

Funding statement

The authors received neither financial nor non-financial support for the research (including data acquisition) and/or authorship and/or publication of this article.

Declaration of competing interest

The current research was funded by the Research Authority of the University of Haifa.

Data availability

The data is available on the Open Science Framework (OSF): https://doi.org/10.17605/OSF.IO/QNMEC

References

Brandão, T., Diniz, E., Basto-Pereira, M., & Babore, A. (2024). Emotion regulation and parental burnout: A systematic review and meta-analysis. *Clinical Psychology: Science and Practice, 31*(1), 97–109. https://doi.org/10.1037/cps0000181

Cohen, N., Daches, S., Mor, N., & Henik, A. (2014). Inhibition of negative content—A shared process in rumination and reappraisal. *Frontiers in Psychology, 5*. https://doi.org/10.3389/fpsyg.2014.00622

Daches, S., Mor, N., Winquist, J., & Gilboa-Schechtman, E. (2010). Brooding and attentional control in processing self-encoded information: Evidence from a modified Garner task. *Cognition and Emotion, 24*, 876–885. https://doi.org/10.1080/02699930902954825

Eltanamly, H., Leijten, P., Jak, S., & Overbeek, G. (2021). Parenting in times of war: A meta-analysis and qualitative synthesis of war exposure, parenting, and child adjustment. *Trauma, Violence, & Abuse, 22*(1), 147–160. https://doi.org/10.1177/1524838019833001

Felix, E., Afifi, T., Kia-Keating, M., Brown, L., Afifi, W., & Reyes, G. (2015). Family functioning and posttraumatic growth among parents and youth following wildfire disasters. *American Journal of Orthopsychiatry, 85*(2), 191–200. https://doi.org/10.1037/ort0000054

Gewirtz, A. H., DeGarmo, D. S., & Zamir, O. (2018). Testing a military family stress model. *Family Process, 57*(2), 415–431. https://doi.org/10.1111/famp.12282

Griffith, A. K. (2022). Parental burnout and child maltreatment during the COVID-19 pandemic. *Journal of Family Violence, 37*(5), 725–731. https://doi.org/10.1007/s10896-020-00172-2

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

Heiy, J. E., & Cheavens, J. S. (2014). Back to basics: A naturalistic assessment of the experience and regulation of emotion. *Emotion, 14*(5), 878–891. https://doi.org/10.1037/a0037231

Institute for National Security Studies (INSS). War Data: Information on the War in Israel. Retrieved March 20, 2025, from https://www.inss.org.il/he/publication/war-data/.

JASP Team. (2024). *JASP* (Version 0.19.3) [Computer software].

Jenness, J. L., Jager-Hyman, S., Heleniak, C., Beck, A. T., Sheridan, M. A., & McLaughlin, K. A. (2016). Catastrophizing, rumination, and reappraisal prospectively predict adolescent PTSD symptom onset following a terrorist attack. *Depression and Anxiety, 33*(11), 1039–1047. https://doi.org/10.1002/da.22548

Joormann, J., Dkane, M., & Gotlib, I. H. (2006). Adaptive and maladaptive components of rumination? Diagnostic specificity and relation to depressive biases. *Behavior Therapy, 37*(3), 269–280. https://doi.org/10.1016/j.beth.2006.01.002

Keleynikov, M., Benatov, J., & Cohen, N. (2023). Emotion regulation among parents raising a child with disability: A systematic review and conceptual model. *Journal of Child and Family Studies, 32*(3), 858–875. https://doi.org/10.1007/s10826-022-02530-8

Keleynikov, M., Cohen, N., & Benatov, J. (2024). Maternal distress during the COVID-19 outbreak: A socio-ecological perspective. *PLoS One, 19*(5), e0302266. https://doi.org/10.1371/journal.pone.0302266

Khatib, R., McKee, M., & Yusuf, S. (2024). Counting the dead in Gaza: Difficult but essential. *The Lancet, 404*(10449), 237–238. https://doi.org/10.1016/S0140-6736(24)01169-3

Kienzler, H., Daniel, G., Hammoudeh, W., Nashashibi, R., Abu-Jamei, Y., & Giacaman, R. (2024). Unbearable suffering: Mental health consequences of the October 2023 Israeli military assault on the Gaza Strip. *BMJ Global Health, 9*(9), e014835. https://doi.org/10.1136/bmjgh-2023-014835

Levi-Belz, Y., Groweiss, Y., Blank, C., & Neria, Y. (2024). PTSD, depression, and anxiety after the October 7, 2023 attack in Israel: A nationwide prospective study. *eClinicalMedicine*. https://doi.org/10.1016/j.eclinm.2023.102418

Lewis, E. J., Yoon, K. L., & Joormann, J. (2018). Emotion regulation and biological stress responding: Associations with worry, rumination, and reappraisal. *Cognition and Emotion, 32*(7), 1487–1498. https://doi.org/10.1080/02699931.2017.1310088

Lyubomirsky, S., Layous, K., Chancellor, J., & Nelson, S. K. (2015). Thinking about rumination: The scholarly contributions and intellectual legacy of Susan Nolen-Hoeksema. *Annual Review of Clinical Psychology, 11*(1), 1–22. https://doi.org/10.1146/annurev-clinpsy-032814-112733

Matsumoto, D., Yoo, S. H., & Nakagawa, S. (2008). Culture, emotion regulation, and adjustment. *Journal of Personality and Social Psychology, 94*(6), 925. https://doi.org/10.1002/9781118339893.wbeccp126

McRae, K. (2013). Emotion regulation frequency and success: Separating constructs from methods and time scale. *Social and Personality Psychology Compass, 7*(5), 289–302. https://doi.org/10.1111/spc3.12027

McRae, K., Ochsner, K. N., Mauss, I. B., Gabrieli, J. J., & Gross, J. J. (2008). Gender differences in emotion regulation: An fMRI study of cognitive reappraisal. *Group Processes & Intergroup Relations, 11*(2), 143–162. https://doi.org/10.1177/1368430207088035

Michl, L. C., McLaughlin, K. A., Shepherd, K., & Nolen-Hoeksema, S. (2013). Rumination as a mechanism linking stressful life events to symptoms of depression and anxiety: Longitudinal evidence in early adolescents and adults. *Journal of Abnormal Psychology, 122*(2), 339. https://doi.org/10.1037/a0031994

Mikolajczak, M., Aunola, K., Sorkkila, M., & Roskam, I. (2023). 15 years of parental burnout research: Systematic review and agenda. *Current Directions in Psychological Science, 32*(4), 276–283. https://doi.org/10.1177/09637214221142777

Mikolajczak, M., Brianda, M. E., Avalosse, H., & Roskam, I. (2018). Consequences of parental burnout: Its specific effect on child neglect and violence. *Child Abuse & Neglect, 80*, 134–145. https://doi.org/10.1016/j.chiabu.2018.03.025

Murphy, K. M., Rodrigues, K., Costigan, J., & Annan, J. (2017). Raising children in conflict: An integrative model of parenting in war. *Peace and Conflict: Journal of Peace Psychology, 23*(1), 46–57. https://doi.org/10.1037/pac0000195

Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta Earthquake. *Journal of Personality and Social Psychology, 61*(1), 115. https://doi.org/10.1037//0022-3514.61.1.115

Nolen-Hoeksema, S., Wisco, B. E., & Lyubomirsky, S. (2008). Rethinking rumination. *Perspectives on Psychological Science, 3*(5), 400–424. https://doi.org/10.1111/j.1745-6924.2008.00088.x

Pat-Horenczyk, R., Cohen, S., Ziv, Y., Achituv, M., Asulin-Peretz, L., Blanchard, T. R., … Brom, D. (2015). Emotion regulation in mothers and young children faced with trauma. *Infant Mental Health Journal, 36*(3), 337–348. https://doi.org/10.1002/imhj.21515

Raio, C. M., Orederu, T. A., Palazzolo, L., Shurick, A. A., & Phelps, E. A. (2013). Cognitive emotion regulation fails the stress test. *Proceedings of the National Academy of Sciences, 110*(37), 15139–15144. https://doi.org/10.1073/pnas.1305706110

Riepenhausen, A., Wackerhagen, C., Reppmann, Z. C., Deter, H.-C., Kalisch, R., Veer, I. M., & Walter, H. (2022). Positive cognitive reappraisal in stress resilience, mental health, and well-being: A comprehensive systematic review. *Emotion Review, 14*(4), 310–331. https://doi.org/10.1177/17540739221114642

Roskam, I., Aguiar, J., Akgun, E., Arikan, G., Artavia, M., Avalosse, H., … Barham, E. J. (2021). Parental burnout around the globe: A 42-country study. *Affective Science, 2*(1), 58–79. https://doi.org/10.1007/s42761-020-00028-4

Roskam, I., Raes, M.-E., & Mikolajczak, M. (2017). Exhausted parents: Development and preliminary validation of the parental burnout inventory. *Frontiers in Psychology, 8*. https://doi.org/10.3389/fpsyg.2017.00163

Sheppes, G., Scheibe, S., Suri, G., Radu, P., Blechert, J., & Gross, J. J. (2014). Emotion regulation choice: A conceptual framework and supporting evidence. *Journal of Experimental Psychology: General, 143*(1), 163–181. https://doi.org/10.1037/a0030831

Shnitzer-Meirovich, S., Aviad, S., Bechar-Katz, I., Araten-Bergman, T., Shenaar-Golan, V., & Gur, A. (2024). The associations between child behavioral problems, parents' emotional regulation difficulties, and parental burnout among Israeli parents of children with autism during wartime. *Frontiers in Psychology, 15*, 1439384. https://doi.org/10.3389/fpsyg.2024.1439384

Short, N. A., Boffa, J. W., Clancy, K., & Schmidt, N. B. (2018). Effects of emotion regulation strategy use in response to stressors on PTSD symptoms: An ecological momentary assessment study. *Journal of Affective Disorders, 230*, 77–83. https://doi.org/10.1016/j.jad.2017.12.063

Slone, M., & Hallis, D. (1999). The impact of political life events on children's psychological adjustment. *Anxiety, Stress, & Coping, 12*(1), 1–21. https://doi.org/10.1080/10615809908248320

Slone, M., & Mann, S. (2016). Effects of war, terrorism and armed conflict on young children: A systematic review. *Child Psychiatry & Human Development, 47*, 950–965. https://doi.org/10.1007/s10578-016-0626-7

Statista.com. (2023). https://www.statista.com/statistics/1330395/deadliest-terrorist-attacks-worldwide-fatalities/. retrieved on January 5th, 2025.

Troy, A. S., & Mauss, I. B. (2011). Resilience in the face of stress: Emotion regulation as a protective factor. *Resilience and Mental Health: Challenges Across the Lifespan, 30–44*. https://doi.org/10.1017/CBO9780511994791.004

Troy, A. S., Shallcross, A. J., & Mauss, I. B. (2013). A person-by-situation approach to emotion regulation: Cognitive reappraisal can either help or hurt, depending on the context. *Psychological Science, 24*(12), 2505–2514. https://doi.org/10.1177/0956797613496434

United Nations Human Rights Council. (2024). Detailed findings on attacks carried out on and after 7 October 2023 in Israel — Report of the Independent International Commission of Inquiry on the Occupied Palestinian Territory, including East Jerusalem, and Israel (A/HRC/56/CRP.3). Human Rights Council, Fifty-sixth session. https://www.ohchr.org/sites/default/files/documents/hrbodies/hrcouncil/sessions-regular/session56/a-hrc-56-crp-3.pdf.

Vertsberger, D., Roskam, I., Talmon, A., van Bakel, H., Hall, R., Mikolajczak, M., & Gross, J. J. (2022). Emotion regulation during the COVID-19 pandemic: Risk and resilience factors for parental burnout (IIPB). *Cognition and Emotion, 36*(1), 100–105. https://doi.org/10.1080/02699931.2021.2005544

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*(6), 1063–1070. https://psycnet.apa.org/journals/psp/54/6/1063.html?uid=1988-31508-001.

Wessa, M., Sandner, M., Rimpel, J., & Schönfelder, S. (2024). The influence of acute stress exposure on cognitive reappraisal: A psychophysiological study. *Stress, 27*(1), 2329663. https://doi.org/10.1080/10253890.2024.2329663