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Treatment stigma mediates relationships between morally injurious events and depression, PTSD and anxiety symptoms

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ABSTRACT

Background: Morally injurious events (MIEs), encompassing personal transgressions, witnessing others commit transgressions, or experiencing betrayal by leaders, can conflict with one's moral/ethical principles, evoking outrage and profound mistrust. Although MIEs are associated with depression, PTSD, and anxiety, the mechanisms linking MIEs to psychiatric symptomatology remain unclear, especially among civilians in times of collective trauma.

Objective: This study explored one potential mechanism: stigma toward mental-health treatment, which can deter help-seeking and exacerbate guilt, shame, and mistrust.

Method: We focused on civilians ($N = 1,052$) exposed to MIEs in conflict zones in southern and northern Israel following the 7 October 2023 attack. Participants were recruited using an online platform and assessed for depression, PTSD, and anxiety symptoms. We hypothesised that stigma toward treatment would mediate relationships between MIE exposure levels and depression, PTSD, and anxiety symptoms.

Results: Results showed high MIE exposure levels and symptomatology among civilians in conflict zones. Moreover, we found significant indirect effects of stigma toward treatment on all three symptom types.

Conclusions: Our findings suggest that while MIEs directly link to symptoms, stigma toward treatment plays a significant role in understanding this link. These findings emphasise the importance of addressing stigma toward treatment for individuals experiencing MIEs and underscore the need for targeted interventions in conflict zones.

HIGHLIGHTS
- Civilians exposed to morally injurious events (MIEs) in conflict zones showed high levels of depression, PTSD, and anxiety symptoms.
- Stigma toward mental health treatment plays a key role in the relationship between MIEs and psychiatric symptoms.
- Addressing stigma in conflict zones is crucial for improving mental health outcomes for those affected by MIEs.

El estigma de tratamiento media la relación entre los eventos moralmente perjudiciales y los síntomas de depresión, TEPT y ansiedad

Antecedentes: Los eventos moralmente perjudiciales (MIEs por sus siglas en inglés), que incluyen transgresiones personales, presenciar transgresiones por parte de otros o experimentar la traición de los líderes, pueden entrar en conflicto con los principios morales/éticos de una persona, lo que provoca indignación y una profunda desconfianza. Aunque los MIEs se asocian con depresión, TEPT y ansiedad, los mecanismos que vinculan los MIEs a los síntomas psiquiátricos siguen siendo poco claros, especialmente entre civiles en tiempos de trauma colectivo.

Objetivo: Este estudio exploró un mecanismo potencial: el estigma hacia el tratamiento de salud mental, que puede disuadir la búsqueda de ayuda y exacerbar la culpa, la vergüenza y la desconfianza.

Método: Nos centramos en civiles ($N = 1,052$) expuestos a MIEs en zonas de conflicto en el sur y norte de Israel tras el ataque del 7 de octubre, 2023. Los participantes fueron reclutados utilizando una plataforma en línea y se evaluaron síntomas de depresión, TEPT y ansiedad. Hipotetizamos que el estigma hacia el tratamiento mediaría las relaciones entre los niveles de exposición a MIEs y síntomas de depresión, TEPT y ansiedad.

Resultados: Los resultados mostraron altos niveles de exposición a MIEs y sintomatología en los civiles en zonas de conflicto. Además, encontramos efectos significativos indirectos de estigma hacia el tratamiento en los tres tipos de síntomas.

Conclusiones: Nuestros hallazgos sugieren que, si bien los MIEs se vinculan directamente con los síntomas, el estigma hacia el tratamiento juega un papel significativo en la comprensión de este vínculo. Estos hallazgos enfatizan la importancia de abordar el estigma hacia el tratamiento para las personas que experimentan MIEs y resaltan la necesidad de intervenciones específicas en las zonas de conflicto.

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1. Introduction

Moral injury is defined as an intense cognitive and emotional response arising when individuals experience traumatic events conflicting with their moral or ethical principles (Litz et al., 2009; Shay, 2014). This stressor-related condition begins with exposure to morally injurious events (MIEs). These events can encompass personal transgressions, observing others commit transgressions, or experiencing betrayal by leaders and peers, resulting in profound mistrust (Shay, 2014). MIEs of betrayal can be partially understood by individuals' expectations that leaders provide support, a sense of security, and necessary resources to preserve life (Karmel & Kuburic, 2021). MIEs have primarily been studied in veterans who have been asked to follow orders they cannot morally countenance (Griffin et al., 2019; Litz et al., 2009). The application to civilians who experience MIEs of betrayal by leaders or authorities during times of conflict remains unclear.

Exposure to MIEs is associated with a range of psychiatric diagnoses, including depression, posttraumatic stress disorder (PTSD), and anxiety (Braitman et al., 2018; Bryan et al., 2018; Levi-Belz et al., 2024). Although moral injury and PTSD may co-occur, research suggests behavioural and attitudinal differences between the two (Bryan et al., 2018; Frankfurt et al., 2019; Litz et al., 2018). As stated above, exposure to MIEs involves a sense of betrayal, loss of trust, feelings of worthlessness, self-blame, and shame. While individuals with PTSD may also experience these feelings, these do not consitutue PTSD diagnostic criteria according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association, 2013). Hence, it is possible to experience moral injury without meeting PTSD criteria (Bryan et al., 2018), and *vice versa*.

Despite increasing understanding of the emotional sequelae of MIEs, the mechanisms by which MIEs relate to psychiatric outcomes such as depression, PTSD, and anxiety symptoms remain largely unexplored (Hall et al., 2022). One possible mechanism that could explain their association is stigma toward mental health treatment (Jin et al., 2022). Stigma toward treatment entails negative self-perceptions and concerns about social judgment, such as viewing the need for psychological help as a sign of inferiority, weakness, or social undesirability (Corrigan et al., 2004). These stigmatising beliefs can discourage individuals from seeking help, thereby exacerbating mental health symptoms and perpetuating distress. Self-stigma, as defined by Vogel et al. (2006), involves the internalisation of public stigma, leading to feelings of inadequacy and unworthiness for treatment. In the context of MIEs, emotions such as betrayal or guilt may amplify these negative self-perceptions, compounding self-stigma and discouraging treatment engagement (Purcell et al., 2018).

Stigma toward treatment has been linked to persistent psychopathology across various disorders (Cerully et al., 2018). Feelings inferior or inadequate when considering treatment can diminish self-esteem and self-efficacy (Corrigan et al., 2004; Holmes & River, 1998). The shame attached to needing help is often perceived as worse than the suffering itself, leading many to avoid treatment to maintain a positive self-image, which in turn aggravates psychopathology (Vogel et al., 2006). Indeed, stigma toward treatment has been associated with avoidance of help-seeking, symptom chronicity and severity, and limited remission across schizophrenia, alcohol dependence, psychosis (Outcalt & Lysaker, 2012, mood disorders (Hofmann et al., 2023), and PTSD (Schröder et al., 2021).

Proximity to conflict zones raises the risk of exposure to MIEs and experiencing severe psychiatric conditions like major depression and PTSD. While most moral injury studies have focused on military populations, recent research suggests that civilians also experience MIEs, worsening mental health outcomes (Levi-Belz et al., 2023). A recent study of Ukrainian civilians showed high MIEs and PTSD levels, with greater severity among respondents more geographically proximal to conflict zones (Zasiekina et al., 2023). Studying populations living in conflict zones is ideal for exploring the potential mediating role of stigma toward treatment in the relationship between MIEs and psychopathology.

The current study focuses on MIEs experienced by civilians in southern and northern Israel following the 7 October 2023 attack by Hamas and the ensuing war. The attack on southern Israel led to over 1,000 fatalities and the abduction of 253 individuals, mostly civilians (Vinograd & Kershner, 2023). A day later, the Lebanese militant group Hezbollah launched rockets at positions near the northern Israeli border. Hundreds of thousands of southern and northern Israel citizens were compelled to flee their homes, disrupting their stability and security and exacerbating mental health disorders. Many of these individuals lost loved ones, potentially provoking prolonged grief and major depression; or faced income loss, causing further acute stress and anxiety. A recent study showed a surge in depression and PTSD symptoms post-attack (Levi-Belz et al., 2024).

Another prospective national cohort study highlighted the impact of exposure to MIEs on these symptoms, finding MIEs effects greater than those of pre-existing depression, anxiety, PTSD, and other trauma-related factors (Levi-Belz et al., 2024). Additionally, the researchers observed a significant exacerbation of depression and PTSD symptoms among participants who experienced MIEs during

the attack, as assessed in an online survey. These findings underscore the importance of investigating MIEs to explore the rise in psychopathology following the attack, and the need for research on mechanisms linking MIEs exposure to mental health.

In this study, we aimed to examine the potential role of treatment-related stigma in the relationships between MIE exposure levels and symptoms of depression, PTSD, and anxiety in civilians living in conflict zones, following a large-scale traumatic event, a context that has been relatively underexplored in stigma research. We focused on individuals living in proximity to conflict, who presumably experience greater MIE exposure and higher clinical symptom levels than the general population. We hypothesised that treatment-related stigma would at least partially explain the relationships between MIE exposure levels and all three symptom clusters (see Hall et al., 2022, for a meta-analysis supporting these links).

2. Methods

2.1. Participants

Participants were recruited through Panel4All, an online platform, in February 2024 for this cross-sectional study. This crowdsourcing platform has access to a probability-based pool of approximately 100,000 Israeli panelists, facilitating representative sampling of Israeli society, and is often used in psychology and psychiatry research in Israel and worldwide (Amsalem et al., 2025a; Levi-Belz et al., 2024). Panel4All ensures the continuity of demographic responses over time, blocks participants who attempt to conceal their location, and uses tools and implements checks to detect bots. To ensure study validity, we excluded respondents with missing data, or those who were classified as bots (using Re-captcha questions).

All participants were Hebrew-speaking Israeli residents (Mage = 30.4, SD = 5.9), living in northern or southern Israel before October 7, whom we assumed had been most directly affected by the attacks. Post attacks, many such residents were displaced to more central regions. The study tracked participants based on their residences prior to displacement and offered them gift vouchers (around $2) in exchange for participation. Participants received an informed consent form assuring their anonymity, confidentiality, and right to withdraw from the study, and outlining the study purpose. Those agreeing to participate were directed to complete study procedures via Qualtrics.com, a secure online data-collection platform. All procedures complied with relevant laws and institutional guidelines and were approved by the Ethical Committee of the Tel Aviv University School of Psychological Sciences (No: 0007877-1, approved 28 January 2024).

The survey elicited demographic information including age, gender, ethnicity, educational level, socio-economic status, and forced displacement. Our primary variables included questionnaires assessing severity of MIE exposure, stigma toward mental health treatments, and symptom screeners for depression, PTSD, and anxiety. To mitigate the potential confounding effects for stigma towards treatment in the mediation models, we controlled for individuals currently undergoing treatment (n = 91, 9%).

2.2. Instruments

2.2.1. Potentially morally injurious events

The Moral Injury Events (MIES) scale assesses levels of exposure to war-related events involving self-perpetration ('I acted in ways that violated my own moral code or values'), other-perpetration ('I am troubled by having witnessed others' immoral acts'), and betrayal ('I feel betrayed by leaders who I once trusted'). The MIEs scale comprises nine statements designed to assess the extent to which individuals feel that specific morally injurious events – including perceived transgressions by oneself or others and perceived betrayal by others – apply to them. Responses range from 1 (strongly disagree) to 6 (strongly agree), with higher scores indicating greater exposure to MIEs. Consistent with previous research (Cameron et al., 2021; Levi-Belz et al., 2024; Levi-Belz & Zerach, 2022), we computed total scale scores by summing individual item scores. The MIEs has shown promising initial factor structure and reliability. It exhibits only small to moderate correlations with alternative measures of psychopathology, suggesting its distinctiveness as a construct (Bryan et al., 2014). The scale was adjusted for civilian use (Amsalem et al., 2025b; Levi-Belz et al., 2024; Nash et al., 2013; Thomas et al., 2023) and has demonstrated excellent internal consistency (a = .90; Nash et al., 2013). Internal consistency in the current study was $α$ = .73.

2.2.2. Stigma towards treatment

We utilised the ultra-brief Self-Stigma of Seeking Help scale (SSOSH-3; Brenner et al., 2021). Items included: 'I would feel inadequate if I went to a therapist for psychological help,' 'It would make me feel inferior to ask a therapist for help,' and 'If I went to a therapist, I would be less satisfied with myself.' Response choices ranged from 1, strongly disagree, to 5, strongly agree. Total scores ranged from 3 to 15, with higher scores indicating greater stigma. Internal consistency in this study was $α$ = .84.

2.2.3. Depression

Probable depression was assessed using the Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001), a brief instrument assessing nine depressive symptoms

experienced over the past two weeks. Responses are scored from 0 = 'not at all' to 3 = 'nearly every day.' The sum of all item scores indicates symptom severity. The psychometric properties of this measure proved adequate, with a robust factor structure and good internal consistency (Richardson & Richards, 2008). Internal consistency in the current study was $\alpha = .91$.

2.2.4. PTSD

We assessed symptoms of probable PTSD using the Primary Care PTSD Screen for DSM-5 (PC-PTSD-5; Prins et al., 2016). We adjusted PC-PTSD-5 items to focus on October 7 and the ensuing war-related events (e.g. 'In the past month, did you have nightmares about the October 7 event(s)/the war or thought about these related events when you did not want to?'). Higher scores indicate greater self-reported symptom severity. Internal consistency in the current sample $\alpha = .75$.

2.2.5. Anxiety

The Generalized Anxiety Disorder-7 (GAD-7; Spitzer et al., 2006) assessed seven generalised anxiety symptoms during the past two weeks, each rated from 0 ('not at all') to 3 ('nearly every day'), yielding an overall score range of 0–21 (33). Higher scores indicate greater self-reported anxiety. Internal consistency in the current study $a = .93$.

2.3. Procedure

The study was pre-registered on 2 February 2024 (https://aspredicted.org/T2K_T53). It contains unpublished data collected as part of a larger interventional study conducted to assess the efficacy of a brief video intervention in reducing treatment-related stigma and increasing help-seeking intentions (Amsalem et al., 2025a). The study was described as a research project on 'treatment-related stigma among Israeli civilians post October 7 and the ensuing war'. Consenting participants first completed a demographic questionnaire, followed by the above-described self-report measures.

2.4. Data analysis

We used IBM SPSS Statistics (version 29) to conduct analyses. G*Power software (Faul et al., 2007) was used to calculate sample size based on our previous studies (Amslaem et al., 2025). We assessed multicollinearity between MIEs and symptoms of PTSD, depression, and anxiety. No multicollinearity was detected (VIF = 1.02). To test our hypotheses, we conducted mediation models using Hayes Process Model 4 (Hayes, 2013), with MIE exposure levels as the independent variable, stigma toward treatment as the mediator, and symptoms of depression, PTSD, and

anxiety as the dependent variables (for a similar approach, see Haim-Nachum et al., 2023, 2024). This statistical approach is exploratory, as it does not adhere to the traditional temporal mediation sequence (see Limitations section).

3. Results

3.1. Sample characteristics

We recruited 1,248 individuals from northern and southern Israel. Of these, 196 (16%) participants failed validity tests or had missing data, yielding a final sample of 1,052 individuals: 550 (52%) from northern Israel and 502 (48%) from southern Israel. Mean age was 30.4 years (SD = 5.9, range 18–40), and 53.8% were women (see Table 1).

The percentages of participants who reported slightly agreeing or higher for the MIEs items were calculated. Most participants (76.1%) self-reported betrayal-related MIEs, e.g. 'I feel betrayed by leaders whom I once trusted' (76.1%). All MIEs sub-scales significantly intercorrelated (p's < .001). Consistent with other studies (e.g. Cameron et al., 2021; Zerach & Levi-Belz, 2022), we focused on MIEs total scores in our analyses.

Sample symptom levels were notably elevated, with approximately 36% of participants reporting probable moderate (PHQ-9≥10 and ≤ 14) or moderately severe depression (PHQ≥15) depression, over 40% exceeding the threshold for probable PTSD (PC-PTSD ≥3), and about one-third scoring above the cut-off for probable

Table 1. Demographics and Clinical Symptoms, N = 1,052.

Variable	n	%
Age [a] Mean (SD)	30.4	(5.9)
Gender – Female (%)	566	54
Ethnicity		
Jewish	969	92
Arab	64	6
Other	19	2
Education		
Never completed high school	11	1
High school graduate	318	30
Some college credit	231	22
Undergraduate	388	37
Graduate	104	10
Forced displacement	243	23
Psychological treatment		
No	708	67
Yes, in the past	253	24
Yes, currently	91	9
Depression severity (PHQ-9, range 0–27)		
Mild depression (PHQ-9≥5 and <10)	279	26.5
Moderate depression (PHQ-9≥10 and ≤ 14)	190	18.1
Moderately severe depression (PHQ = ≥15)	184	17.5
PTSD severity (PC-PTSD, range 0–5)		
PC-PTSD < 3	587	55.8
PC-PTSD ≥3	465	44.2
General anxiety severity (GAD-7, range 0–21)		
Mild general anxiety (GAD-7 ≥5 and < 10)	346	32.9
Moderate severe anxiety (GAD-7 ≥10)	332	31.6

Note: Pearson Chi-square; [a] Other: Druze (n = 5), Russian (n = 2), Christian (n = 3), no religion (n = 2), unspecified (n = 7); PHQ = Patient health questionnaire, PC-PTSD = Patient care screen for posttraumatic stress disorder, GAD = General anxiety disorder.

Table 2. Zero-order correlations between demographics, morally injurious events, stigma-towards treatment, and clinical symptoms.

Variable	1	2	3	4	5	6	7	8
1. Age	1							
2. Gender^	−.01	1						
3. Forced displacement	.03	.06	1					
4. Morally injurious events	−.09**	.14***	−.06*	1				
5. Stigma towards treatment	−.07*	−.22***	−.02	.15***	1			
6. PHQ-9	−.06*	.21***	−.10***	.43***	.21***	1		
7. PC-PTSD	−.08**	.30***	−.14***	.30***	.15***	.60***	1	
8. GAD-7	−.10***	.25***	−.11***	.43***	.14***	.80***	.55***	1

Note: PHQ-9 = depressive symptoms; PC-PTSD = PTSD symptoms; GAD-7 = anxiety symptoms.
^Gender was coded as 1 = mem, 2 = women.
*$p < .05$; **$p \leq .01$; ***$p \leq .001$.

Table 3. One-way ANOVAs for differences between prior treatment in morally injurious events, stigma-towards treatment, and clinical symptoms.

	Prior treatment								
	No		In the past		Currently				
	M	SD	M	SD	M	SD	F	p	η^2
Morally injurious events	25.11$_a$	7.96	26.65$_b$	7.29	28.95$_c$	7.50	11.76	<.001	.022
Stigma towards treatment	7.29$_a$	3.00	6.25$_b$	2.93	5.25$_c$	2.86	25.947	<.001	.047
PHQ-9	2.02$_a$	1.69	2.35$_b$	1.74	3.16$_c$	1.45	19.910	<.001	.037
PC-PTSD	6.85$_a$	5.64	8.08$_b$	5.54	11.69$_c$	6.17	30.767	<.001	.055
GAD-7	7.14$_a$	6.25	9.04$_b$	6.45	12.93$_c$	7.06	37.018	<.001	.066

Note: Values in the same row and subtable not sharing the same subscript are significantly different at $p < .05$ in the two-sided test (using the Bonferroni correction).

moderate-severe anxiety (GAD-7 ≥ 10; see Table 1). Table 2 presents correlation coefficients.

3.2. Preliminary analysis

As a preliminary analysis, we examined the associations between demographics and clinical variables. As can be seen in Table 2, age was negatively and significantly associated with MIE severity levels, stigma toward treatment, depression, PTSD, and anxiety. In addition, women were associated with higher levels of MIE exposure, depression, PTSD, and anxiety, but lower stigma toward treatment. Finally, one-way ANOVAs showed that MIE exposure levels, depression, PTSD, and anxiety symptoms were highest among those currently in psychological treatment, followed by those with past treatment, and lowest among those who had never received treatment. On the contrary, stigma towards treatment was highest among those who have never been in psychological treatment, followed by those who were in psychological treatment in the past, and finally, those who are currently in psychological treatment. Age, gender, and prior treatment were included as covariates in the mediation models (see Table 3).

3.3. Main analyses

As Figure 1 illustrates, the association between MIE severity (X) and stigma toward treatment (M, path a, Figure 1(A–C)) was significant, positive, and similar in all three models. Associations between treatment stigma (M) and symptoms of depression (Y_1, path b, Figure 1(A)), PTSD (Y_2, path b, Figure 1(B)), and anxiety (Y_3, path b, Figure 1(C)) were also positive and significant.

Regarding direct effects, the association between MIE severity and depressive symptoms (Y1, path c', Figure 1(A)) was significant, as were the direct effects for PTSD (Y2, path c', Figure 1(B)), and anxiety (Y3, path c', Figure 1(C)).

The indirect effect was significant for depression ($\beta = .04$, 95% CI = .02,.06), explaining 10.4% of the total variance (R^2) of 22%; for PTSD ($\beta = .04$, 95% CI = .02,.05), accounting for 14.8% of total explained variance of 11%; and for anxiety ($\beta = .03$, 95% CI = .02,.04), accounting for 7.7% of total explained variance of 17%.

In summary, both direct and indirect effects showed that stigma toward treatment partially mediated the relationship between MIE severity and symptoms of depression, PTSD, and anxiety. This suggests that while MIEs directly affect these symptoms, stigma toward treatment plays a significant mediating role, explaining part of the effect of MIEs on these mental health outcomes. The overall pattern of results remained consistent regardless of whether demographic variables, such as age, gender, and prior treatment history, were controlled for.

4. Discussion

This study tested the mediating role of stigma toward treatment in the relationships between levels of
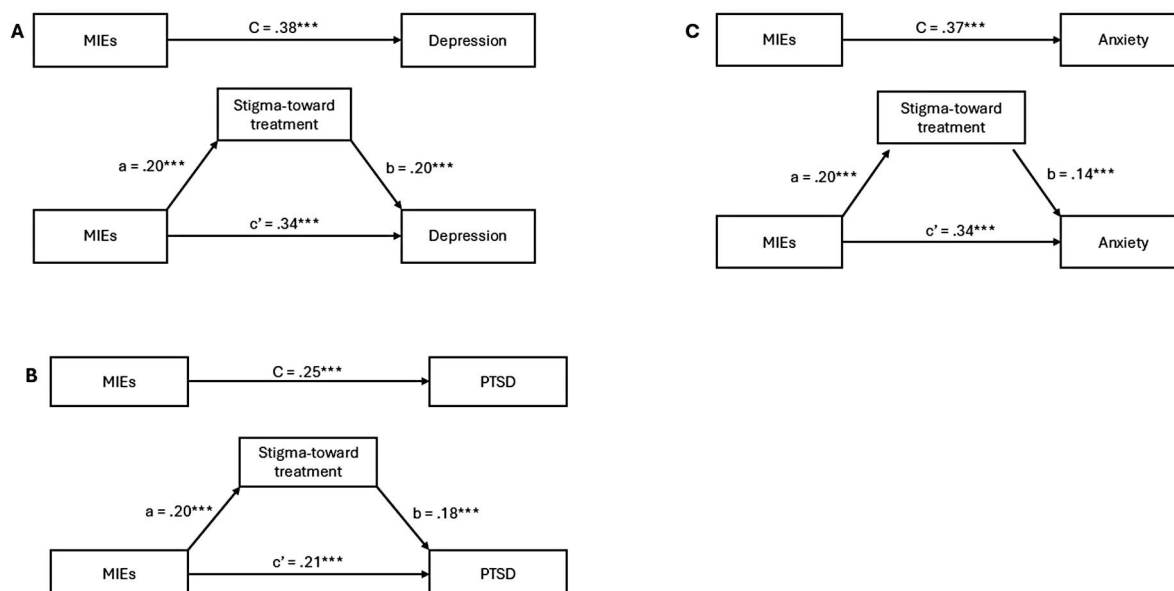
Figure 1. Mediation analyses of stigma toward treatment in the relationships between MIEs and depression (A), PTSD (B), and anxiety (C).

exposure to MIEs and symptoms of depression, PTSD, and anxiety in individuals living in conflict zones. Consistent with recent findings from this population, the sample reported high prevalence of clinical symptoms (Levi-Belz et al., 2024), indicating the need for research to identify factors that might elucidate the link between varying levels of MIE exposure and psychopathology. We found significant mediation effects of stigma toward treatment on the relationships between levels of exposure to MIEs and all symptoms of depression, PTSD, and anxiety. This is, to our knowledge, the first study to demonstrate the potential role of treatment stigma in this relationship among individuals living in conflict zones following a large-scale traumatic event.

These findings associating MIE exposure levels with stigma toward treatment in civilians living in conflict zones add to limited evidence about this link (Jin et al., 2022). Self-stigma, characterised by feelings of inadequacy and unworthiness for seeking psychological help, may be intensified by the emotional aftermath of MIEs, such as betrayal or guilt, further discouraging individuals from seeking treatment (Vogel et al., 2006). Moreover, MIEs often evoke intense feelings of shame and self-blame, which can amplify stigma and hinder help-seeking behaviour. Individuals who internalise these feelings might fear being judged or misunderstood by treatment providers, reinforcing reluctance to seek help (Currier et al., 2018; Held et al., 2021). While more research is needed to confirm this association using more sensitive scales to exclude potential contamination by confounds, such as overlapping symptoms of mood, anxiety, and PTSD disorders, our findings underscore the need to address treatment stigma, particularly for

those who have experienced MIEs. Specifically, interventions targeting self-stigma in therapeutic contexts could play a critical role in facilitating mental health engagement among this population.

Consistent with prior research, our results suggest that treatment stigma is an important characteristic of various mental health conditions, including depression, PTSD, and anxiety (Alkathiri et al., 2022; Benfer et al., 2023; Dubreucq et al., 2021; Mittal et al., 2013). Different aspects of stigma can contribute to worsening symptoms and reducing likelihood of getting treatment. An extensive research review found stigma associated with negative effects on recovery among individuals diagnosed with severe mental illnesses (Yanos et al., 2021). Our study contributes to extant research by simultaneously examining the concepts of MIEs, stigma toward treatment, and symptoms of depression, PTSD, and anxiety in a large sample of civilians living in conflict zones. We found strong correlations between stigma toward treatment and depressive symptoms. This may reflect the depressive tinge of the items used to assess treatment stigma, such as feelings of inferiority. Stigma toward treatment might be associated with depressive symptoms, or these symptoms might simply heighten stigma. Future longitudinal studies are needed to affirm causality and the direction of these relationships.

We also found gender and age differences related to our study's primary variables. Results suggest that women reported experiencing less stigma, more MIE exposure levels, and higher symptom levels than men. This finding aligns with previous literature, which shows that women tend to have lower stigma levels than men and seek more treatment (e.g. Kessler

et al., 1981; Rogler & Cortes, 2008). Similarly, our findings support prior studies suggesting that women experience higher levels of symptoms, including depression, anxiety, and PTSD (e.g. Christiansen & Hansen, 2015; Helpman et al., 2017; Olff, 2017).

Women in our study reported higher levels of MIEs than men. This aligns with the study of Maguen et al. (2020), who found higher self-reported rates of betrayal-based MIEs, especially by leaders or fellow service members, for women compared to men veterans post 9/11. Yet they found no significant gender differences in perpetration-based MIEs. These findings underscore the need to enhance conceptual clarity within the moral injury literature, particularly by exploring and clarifying the role of gender and exposure to different types of MIEs in civilian and veteran populations.

The finding that older participants reported lower levels of MIEs and symptoms is consistent with studies suggesting that the prevalence of mental disorders decreases with age (e.g. Pless-Kaiser et al., 2019; Reynolds et al., 2015; Zaragoza Scherman et al., 2020). This could be explained either by evidence that some aspects of resilience tend to increase with age (Gooding et al., 2012), or that older individuals may have developed more effective coping mechanisms reducing their vulnerability to stigma and psychopathology. Alternatively, younger individuals tend to identify and recognise mental health problems more than adults (Clarkin et al., 2024). Yet our sample was relatively young, comprising individuals aged 18–40 (Mage = 30.4, SD = 5.9). More research is needed to clarify the mixed findings in the literature (Christensen et al., 1999; Kessler et al., 2010).

Our findings align with prior research indicating that older adults exhibit the lowest levels of stigma and the most positive help-seeking attitudes (Mackenzie et al., 2019). However, studies comparing age groups have yielded mixed results. Sirey et al. (2001) suggest that stigma toward mental health care may be more prevalent among older adults and could influence treatment-seeking behaviours. While some studies report lower stigma among younger individuals (Bragg et al., 2018; Sirey et al., 2001), others reveal a more complex pattern, with stigma varying across age groups over time (Pescosolido et al., 2021).

Individuals currently receiving psychological treatment reported the highest symptom levels, followed by those with past treatment, and the lowest levels were seen in those who never received treatment. This suggests that treatment status may reflect either a higher symptom severity at the time of seeking treatment (Keeling et al., 2020) or a potential therapeutic effect in reducing symptoms for those who have engaged in past or current treatment. Alternatively, it is also possible that individuals in treatment may be more attuned to their psychological distress, leading to higher symptom reporting (Foulkes & Andrews, 2023). This pattern highlights the importance of early intervention and continued support for those with elevated symptoms. However, the cross-sectional nature of our data limits the ability to draw definitive conclusions about the directionality of these relationships. Future longitudinal research is needed to better understand how treatment-seeking behaviour may influence symptom severity over time.

Our findings suggest combating stigma toward treatment as a therapeutic aim to encourage help-seeking behaviour among individuals experiencing MIEs, especially for individuals residing in conflict zones (Haim-Nachum et al., 2024; Schröder et al., 2021). Mental health practitioners working in conflict zones should implement interventions to reduce stigma toward treatment and encourage help-seeking. Community-based programs can educate the public about the benefits of mental health treatment and address misconceptions. For example, Amsalem et al. (2021) demonstrated the effectiveness of a brief social contact-based video intervention in increasing treatment-seeking intentions among healthcare workers who experienced MIEs during the COVID-19 pandemic. Addressing treatment stigma is crucial to accelerate help-seeking in order to prevent chronic symptomatology. Individuals who avoid treatment due to stigma may experience symptomatic deterioration over time, exacerbated by recent traumatic events like MIEs. However, it is important to consider that stigma associated with general traumatic events – not just MIEs – may also contribute to the avoidance of mental health treatment. This is particularly relevant in conflict zones, where ongoing MIE exposure compounds past traumas. Tailored therapies focusing on the consequences of MIEs and associated stigma could improve outcomes for depression, PTSD, and anxiety, given the high prevalence of treatment stigma in these disorders (Lewis et al., 2022; Yokoya et al., 2018) and their relatively low treatment effectiveness (Campbell et al., 2016; Ociskova et al., 2018).

Our study findings require interpretation considering several limitations. The data quality of online panels has been criticised for sample representativeness and susceptibility to response bias (Kees et al., 2017). We used self-report measures, which are influenced by memory biases (Baldwin et al., 2019); and screening instruments, not diagnostic schedules, to assess symptoms. Although these instruments are widely used, they may be overinclusive, potentially inflating prevalence rates, and a more detailed clinical assessment is necessary for an accurate diagnosis. The context of the ongoing war/conflict also deserves consideration; typically, PTSD scales are used when individuals are in safe contexts but continue to experience symptoms, whereas the war in Israel is still ongoing. Therefore, the results should be interpreted with

caution, considering the circumstances of the participants. Moreover, the MIE scale primarily targets combat-related experiences of military veterans. This adaptation prompts a critical evaluation of the scale's relevance and applicability in civilian populations. Future studies should elucidate how civilian and military experiences of moral injury differ, and carefully define and design more suitable scales for assessing morally injurious events among civilians in conflict zones. In addition, the overlap between experiences of moral injury and PTSD symptoms (e.g. shame, guilt, mistrust) makes it challenging to draw definitive conclusions about the role of stigma toward treatment in explaining these symptoms. Future studies should use more sensitive assessments to explore how exposure to MIEs contributes to stigma toward treatment and mental health outcomes. Finally, the cross-sectional design of this study precludes causal inferences about the relationships between exposure to MIEs, stigma toward treatment, and symptoms. That is, treatment stigma can lower the likelihood of seeking treatment, leading to persistence of symptoms. Conversely, individuals with more persistent symptoms may seek treatment but find it discouraging and become more likely to give up on it. Furthermore, cross-sectional designs preclude controlling for baseline levels of mediators and outcomes, which is critical for reducing bias in estimating mediation effects (Gollob & Reichardt, 1987; Schuler et al., 2024; Selig & Preacher, 2009). Future studies should employ longitudinal designs to better establish causal pathways and account for baseline measures of mediators and outcomes. Additionally, our study observed a relationship between psychological treatment status and symptom severity, with current treatment recipients reporting higher levels of depression, PTSD, and anxiety. While this pattern may suggest that treatment status reflects greater symptom severity at the time of seeking treatment, or a potential therapeutic effect, the cross-sectional design limits our ability to draw definitive conclusions regarding the directionality of these relationships.

In summary, our findings highlight the role of treatment stigma in mediating relationships between levels of MIE exposure and symptoms of depression, PTSD, and anxiety. Mechanisms underlying these relationships might include mistrust, social isolation, internalised guilt, and shame, which are common among individuals experiencing MIEs, as well as among people experiencing depression, PTSD, and anxiety. These psychological factors can deter individuals from seeking necessary treatment and aggravate symptoms. Ultimately, this research could help guide the development of interventions and treatment strategies that target stigma toward treatment following exposure to MIEs to reduce symptoms of depression, PTSD, and anxiety in civilians living in conflict zones.

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