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Research Article

Psychological support for witnesses in war-related criminal proceedings

Apoyo psicológico para testigos en procesos penales relacionados con la guerra

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ABSTRACT

Introduction: The importance of psychological support for witnesses during war is determined by the need to protect their mental health and, at the same time, collect reliable evidence to bring perpetrators to criminal responsibility.

Objective: To evaluate an Integrated Psychosocial Support Model combining Rational Emotive Behavior Therapy (REBT) and Dance Movement Therapy (DMT) to reduce Post-Traumatic Stress Disorder (PTSD) symptoms and improve emotional regulation in war crime witnesses.


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Methods: The sample was formed from 100 people. The experimental group received the Integrated Psychosocial Support Model, which included the techniques of REBT and DMT, while the control group received standard psychological care. The data were collected using self-report assessment methods at baseline and after the intervention. A mixed-design analysis of variance (ANOVA) was used to test for differences in symptom reduction between groups.

Results: Statistical analysis showed significantly greater reductions in core PTSD symptoms, hyperarousal, and dissociation in the experimental group (EG) compared to the control group (CG). The reduction in the average level of dissociation reached 35% in the EG, which is confirmed by a high efficiency indicator (large effect size $\eta_p^2 = 0.21$).

Conclusions: The Integrated Psychosocial Support Model appears to be a promising and contextually appropriate intervention. These findings suggest that implementation in humanitarian and international justice settings may support both mental health recovery and forensic evidence integrity.

Keywords: forensic psychology; post-traumatic; stress disorders; violent crime; war crimes.

RESUMEN

Introducción: La importancia del apoyo psicológico para los testigos de guerra radica en la necesidad de proteger su salud mental y recopilar pruebas fiables para que los perpetradores rindan cuentas ante la justicia.

Objetivo: Evaluar un modelo integrado de apoyo psicosocial, que combina la terapia racional emotiva conductual (TREC) y la terapia de danza movimiento (TDM), para reducir los síntomas del trastorno de estrés postraumático (TEPT) y mejorar la regulación emocional en testigos de crímenes de guerra.

Métodos: La muestra estuvo compuesta por 100 sujetos. El grupo experimental recibió el modelo integrado de apoyo psicosocial, con técnicas de TREC y TDM; el grupo de control recibió atención psicológica estándar. Los datos se recopilaron mediante autoinformes, al inicio y después de la intervención. Se utilizó un análisis de varianza (ANOVA) de diseño mixto para evaluar las diferencias en la reducción de síntomas entre los grupos.

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Resultados: El análisis estadístico mostró reducciones significativamente mayores en los síntomas centrales del TEPT, la hiperactivación y la disociación en el grupo experimental en comparación con el grupo de control. La reducción del nivel promedio de disociación alcanzó el 35 % en el grupo experimental, lo cual se confirmó mediante un indicador de alta eficacia (tamaño del efecto grande ηp2= 0,21).

Conclusiones: El modelo integrado de apoyo psicosocial parece ser una intervención prometedora y apropiada para el contexto. Estos hallazgos sugieren que implementarlos en entornos humanitarios y de justicia internacional puede favorecer la recuperación de la salud mental y la integridad de las pruebas forenses.

Palabras clave: crimen violento; crímenes de guerra; estrés postraumático; psicología forense; trastornos por estrés.

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INTRODUCTION

The military conflict, as an extreme form of social conflict, has profound psychological consequences for those who witness or participate in it.[1,2] Witnesses play a key role in providing evidence to establish justice in war-related criminal proceedings (genocide, sexual violence, deportation).[3,4] However, criminal proceedings, especially in the face of ongoing conflict, such as the military conflict in Ukraine (since 2022), are accompanied by significant psychological challenges: stress, anxiety, re-traumatization and social stigmatization.[5,6]

According to the International Criminal Court (ICC), up to 14% of witnesses experience distress when testifying.[7] In Ukraine, where thousands of witnesses of war crimes need support, psychological support becomes critical to ensuring their well-being and the effectiveness of the


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judicial process.[8] The relevance of this study is determined by the need to develop effective strategies for psychological support for witnesses in the context of modern conflicts.

The study of psychological support for witnesses of war crimes is based on a synthesis of theoretical approaches: psychotraumatology,[9,10] the concept of procedural justice,[11,12] and the principles of psychosocial support.[13,14] The identified principles explain the psychological challenges faced by witnesses and justify the choice of dance and movement therapy (DMT)[15] and rational emotive behavior therapy (REBT)[16] as alternative methods. The theoretical foundation is the model of post-traumatic stress disorder (PTSD),[17] which explains how traumatic memories are activated during testimony, causing retraumatisation. The concept of procedural justice makes it possible to analyze how the perception of the fairness of judicial procedures affects the psychological state of witnesses, reducing their stress and increasing trust. The study is based on the World Health Organization (WHO) key principles of psychosocial support. These include: "Do no harm", promoting human rights and equality, building on existing resources of survivors and adapting multi-level integrated interventions, etc.[18]

The consequences of war crimes pose significant challenges for international criminal law and jurisprudence, requiring specialized approaches to working with witnesses. Modern psychology of war confirms that post-traumatic stress disorder and dissociation directly affect the reliability and quality of victims' court testimony. The study addresses a critical need for empirical evaluation of an integrated support model adapted to international standards of assistance to victims of conflict.

Global experience confirms the effectiveness of DMT and REBPT in dealing with stress and trauma. DMT effectively reduces physiological stress in victims of violence, enabling them to express emotions through movement without the risk of retraumatisation.[19,20] REBT helps witnesses to replace irrational beliefs that cause anxiety with rational ones. These methods are particularly valuable in the context of Ukraine, where witnesses face high levels of stress. They offer unique opportunities for support, as they can be implemented in both group and individual formats.

Despite the recognized importance of psychological support for witnesses, there is a lack of empirical data on the effectiveness of specific psychological interventions for this group in war-


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related criminal proceedings. Witnesses, especially during active conflict, face unique challenges: fear of retaliation, anxiety about the trial, and insufficient preparation for testimony. The lack of standardized follow-up protocols leads to the risk of re-traumatization and reduced quality of testimony, which can undermine the legal process.

The study focuses on witnesses to war crimes trials in Ukraine, in particular those who participated in trials related to events since 2022. The focus is on assessing the psychological needs of witnesses (anxiety, stress, retraumatisation) and the effectiveness of short-term psychological interventions, such as cognitive behavioral therapy (CBT) and psychoeducation. The study offers an empirical approach to assessing the impact of psychological support on reducing witnesses' anxiety and stress, as well as on their perceptions of procedural justice. The study assesses the effectiveness of short-term interventions and develops recommendations for integrating psychological support into judicial processes using a mixed methodological design (quantitative surveys and qualitative interviews). This will contribute to reducing retraumatisation and increasing the effectiveness of testimony.

Hypothesis: The Integrated Psychosocial Support Model (REBT + DMT) will lead to a significantly greater reduction in PTSD symptoms (PCL-5) and anxiety (HAM-A) compared to standard psychological care. Additionally, participants in the experimental group will show greater improvement in testimony quality and reliability.

The study is the first in the context of Ukraine to empirically assess the impact of psychological support on witnesses of war crimes using a mixed methodological approach. It expands knowledge about the relationship between psychological interventions and the perception of procedural justice, offering new practical recommendations for judicial and psychological practices in post-conflict societies. The results can be applied to the development of standardized witness support protocols in international and national courts.

The aim of the study was to empirically verify the effectiveness of an integrated model of psychosocial support, which includes cognitive and somatic approaches; including: To identify the psychological needs of witnesses (level of anxiety, stress, and risk of retraumatisation) in war-related criminal proceedings; To assess the effectiveness of short-term psychological interventions


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(CBT, psychoeducation) in reducing witnesses' anxiety and stress; and empirically verify the effectiveness of an Integrated Psychosocial Support Model, which combines cognitive and somatic components, in comparison with standard care in reducing symptoms of PTSD.

METHODS

Design

A mixed-method study combining quantitative and qualitative designs was conducted. The study is quasi-experimental (no randomization in the formation of the control and experimental groups) and longitudinal. A quantitative design with repeated measures was used to assess the effectiveness of the adapted model of psychological support. A qualitative descriptive design was also used to study the subjective experiences of witnesses and victims.

Subjects

The sample was formed from witnesses of war crimes involved in criminal proceedings. The source was regional psychological assistance centers and public organizations. The time frame of the study: January 2024 - July 2025. The total sample consisted of one hundred people (n = 100) who had the procedural status of witnesses in criminal proceedings related to military aggression.

The sample size was determined to be sufficient to ensure statistical power and identify average effects of the intervention. Limited access to the population of traumatized persons was taken into account. The average age of the participants was M = 42.5 years (SD = 12.1). The sample included 55% women and 45% men. All participants were at various stages of pre-trial investigation. Inclusion in the sample was based on the criteria of age 18 years and older and the official procedural status. Informed consent was obtained to participate and use the obtained data. Exclusion criteria were acute psychotic states, confirmed severe cognitive impairment, or concurrent participation in other psychotherapeutic programs.

A non-random principle of group formation was applied, which corresponds to a quasi-experimental design. Participants were divided into two subgroups (CG and EG) of 50 people each. The distribution was carried out according to the principle of logistical accessibility (participants

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can easily get to the training venue). The EG received the Integrated Psychological Support Model developed by the authors. It was based on the principles of REBT and DMT (Fig. 1).

The duration of the intervention was eight weeks — eight individual sessions. The CG was provided with standard psychological support: crisis counselling and psychoeducation. The duration of support was up to four weeks. The observation and evaluation period lasted eight weeks for both groups. The dynamics of psychological recovery was recorded by monitoring the mental state during the experiment.

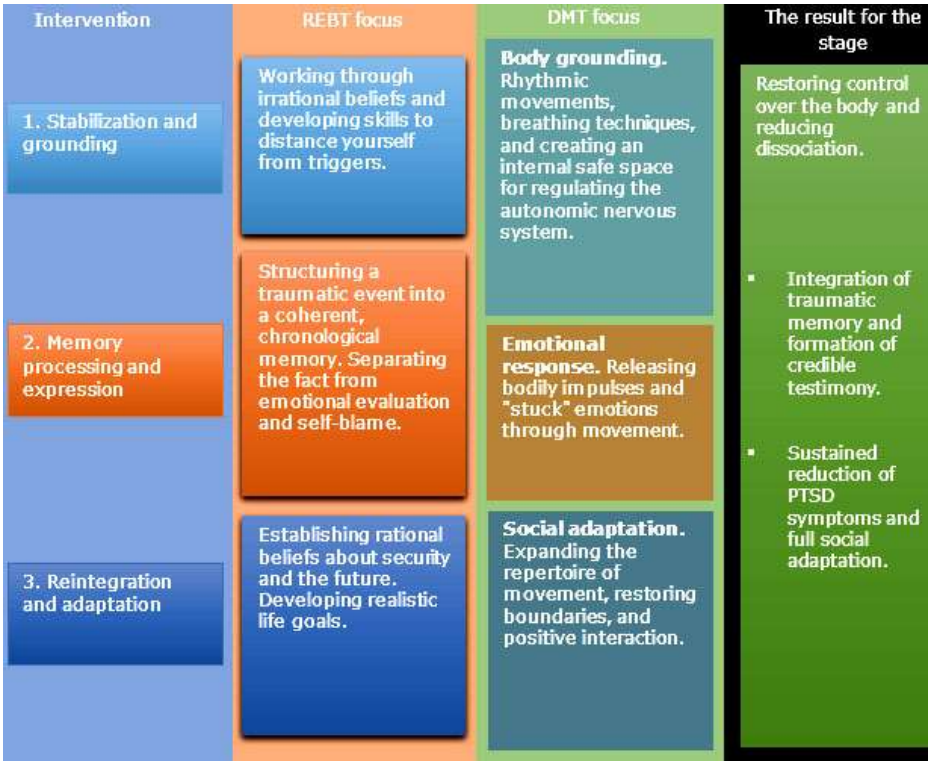

Fig. 1 - Visualizations of the integrated model of the EG support.

Variables

The primary dependent variables were: (1) severity of PTSD symptoms, (2) level of anxiety, and (3) quality and reliability of testimony. PTSD symptoms were measured using the PTSD Checklist for DSM-5 (PCL-5), which consists of 20 items rated on a 0–4 scale (total score range 0–80).


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Higher scores indicate more severe symptoms. The PCL-5 captures four symptom clusters: re-experiencing, avoidance, negative alterations in cognition/mood, and hyperarousal. Anxiety was assessed with the Hamilton Anxiety Rating Scale (HAM-A), a 14-item clinician-rated instrument (range 0–56, higher scores = greater anxiety). Testimony quality and reliability were evaluated using an author-developed 20-item questionnaire completed by independent experts based on court hearing transcripts. Items are grouped into four subscales: consistency (internal and external), detail richness, absence of trauma-related confabulations, and logical coherence. Each item is rated on a 1–5 Likert scale; the total score (20–100) is positively correlated with testimony quality. Preliminary validation showed good inter-rater reliability (ICC = 0.84) and internal consistency (Cronbach's $\alpha = 0.87$). Demographic and procedural variables (age, gender, time since trauma, status in criminal proceedings) were recorded as covariates.

Procedures

A set of standardized instruments and semi-structured procedures were used to collect empirical data. The collected information was carefully recorded in a detailed study protocol. The main instruments were used to measure the psychological state of the participants. To assess PTSD symptoms, the PTSD Checklist for DSM-5 (PCL-5) was used (Cronbach's $\alpha = 0.94$ in this sample). Anxiety symptoms were measured using the Hamilton Anxiety Rating Scale (HAM-A) (Cronbach's $\alpha = 0.89$). These instruments were selected for their clinical utility and prior validation in trauma-exposed populations.[21,22]

To objectively assess the impact of the integrated model on the outcomes of the trial, the author's Testimony Quality and Reliability Questionnaire was developed for independent expert assessment of interrogation transcripts. The tool consists of 20 questions grouped into four sections that measure the structure of the testimony (consistency, detail), the impact of psychological trauma (dissociation, emotional overstrain), logicality (absence of confabulations), and the general preparedness of the witness. To partially control for baseline differences, analysis of covariance (ANCOVA) was conducted with baseline scores as covariates. However, the lack of randomization and the difference in intervention duration (8 weeks for EG vs. up to 4 weeks for CG) were acknowledged as major limitations (see Discussion). The assessment was carried out on a Likert


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scale from 1 to 5. The total score enabled to quantitatively compare the effectiveness of the Integrated Model in terms of its impact on judicially relevant outcomes. In addition to quantitative data, semi-structured interviews were used for an in-depth study of subjective experience. They were conducted by the authors of the study individually with the participants of the EG remotely, via protected video platforms, to ensure confidentiality.

Processing

The reliability of the instruments was assessed by Cronbach's alpha coefficient (α). Structural validity was confirmed by factor analysis. The effectiveness of the intervention was tested by repeated measures analysis of variance (Mixed ANOVA). The method was recognized as the most powerful for assessing the dynamics of changes in groups. The study of the interaction of the factors "group" and "time" became key to establishing a association. Analysis of covariance (ANCOVA) was also applied to increase the internal validity of the design and control for initial differences between non-randomized groups. The relationships between variables, such as traumatization and quality of evidence, were analyzed using Pearson and Spearman correlation coefficients. The statistical software package R (R Foundation for Statistical Computing) was used for all calculations and statistical analysis. The addition of thematic analysis for qualitative data provides comprehensiveness (mixed design) of the methodology. The set of methods was recognized as complete and optimally adapted.

Bioethical aspects

The study was conducted in full compliance with the ethical standards set out in the World Medical Association Declaration of Helsinki (2024) on the ethical principles of medical research involving human subjects. These ensure that the protection of the rights, dignity and well-being of participants is a priority, while minimizing the risks of retraumatisation, which is particularly relevant for witnesses of war crimes who may experience PTSD symptoms. Written informed consent was obtained from all participants before the study, which included a detailed description of the procedures, potential risks, benefits, and the right to withdraw from participation. Unique numerical codes were used for identification, and all data were stored in a secure digital environment with limited access. This approach is adapted to the research context, where witnesses


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may be at risk of retaliation or social stigmatization related to their role in war crimes trials. In the event of signs of participants' significant distress, the study included mechanisms for immediate psychological assistance and referral to specialists, which further emphasizes the ethical orientation towards the well-being of participants.

RESULTS

Table 1 presents the results of a comparative analysis of the dynamics of the psychological state of participants in the CG and EG, where the measurement was carried out at the beginning and after the end of psychological support. The mean (M) and standard deviation (SD) of the indicators on the PTSD (PCL-5) and anxiety (HAM-A) scales were calculated to demonstrate the effectiveness of the integrated model.

Table 1 - Dynamics of psychological state indicators in the CG and EG

Group	Time of measurement	Variable	M	SD	Min	Max	95% CI	SE
CG	Beginning	PCL-5	41.8	9.2	19	67	[38.6; 45.0]	1.56
	End		40.2	8.9	18	65	[37.1; 43.3]	1.51
ЕГ	Beginning	PCL-5	42.3	9.6	18	68	[39.3; 45.3]	1.52
	End		31.5*	7.8	14	52	[29.0; 34.0]	1.23
КГ	Beginning	HAM-A	25.5	6.0	12	41	[23.4; 27.6]	1.01
	End		24.8	5.8	11	40	[22.8; 26.8]	0.98
ЕГ	Beginning	HAM-A	25.9	6.2	13	42	[23.9; 27.9]	0.98
	End		18.3*	5.1	9	32	[16.7; 19.9]	0.81

*p < 0.01 (compared to baseline in the group).

The analysis showed stability of the results in the CG without statistically significant changes. The EG participants demonstrated a significant reduction in symptoms on both scales. The differences

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established confirmed the effectiveness of psychological support ($p < 0.01$). Table 2 presents the mean scores for both groups at baseline and after the intervention.

Table 2 - Testimony Quality and Reliability Questionnaire scores (author-developed)

Group	Time	M (SD)	95% CI	p
EG	Baseline	2.8 (0.6)	[2.6; 3.0]	–
EG	Post-intervention	4.1 (0.5)*	[3.9; 4.3]	<.01
CG	Baseline	2.9 (0.7)	[2.7; 3.1]	–
CG	Post-intervention	3.2 (0.6)	[3.0; 3.4]	.12

*$p < .01$ for Time × Group interaction (Mixed ANOVA), $\eta^2 = 0.19$.

At baseline, the experimental group (EG) and the control group (CG) had comparable scores (EG: M = 2.8, SD = 0.6; CG: M = 2.9, SD = 0.7). After the intervention, the EG showed a significant increase in testimony quality (M = 4.1, SD = 0.5), while the CG remained largely unchanged (M = 3.2, SD = 0.6). A mixed ANOVA revealed a significant Time × Group interaction, $F(1, 98) = 22.14$, $p < .01$, $\eta^2 = 0.19$, indicating that the improvement in the EG was significantly greater than in the CG. These results suggest that the Integrated Psychosocial Support Model not only reduces PTSD symptoms but also enhances the quality and reliability of witness testimony in war-related criminal proceedings.

Analysis of the proportion of individuals with clinical PTSD demonstrated the effectiveness of psychological support. Figure 2 presents the comparative dynamics of changes in the CG and EG. The visualization reflects the percentage of participants with PCL-5 scores above the clinical threshold.

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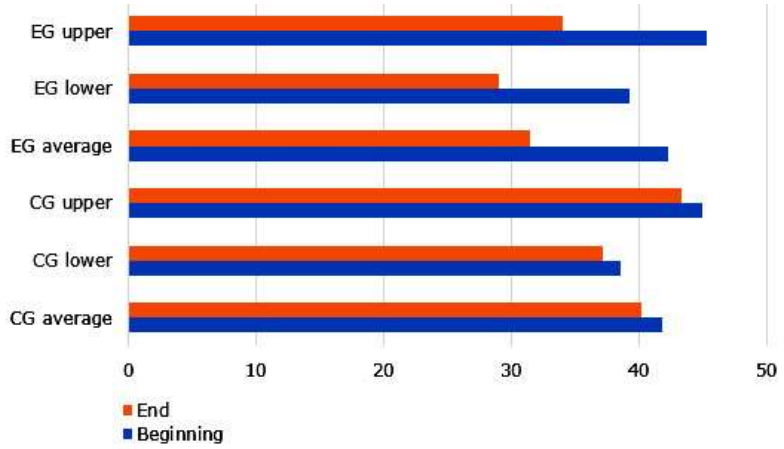

Fig. 2 - Dynamics of average PCL-5 scores in the CG and EG.

The CG showed a slight decrease in mean values from 41.8 to 40.2 points. The EG showed a statistically significant improvement from 42.3 to 31.5 points. Confidence intervals confirmed the reliability of the identified changes in the EG.

Table 3 shows the results of the repeated ANOVA for the main variables. The effects of time, group, and their interaction on the PCL-5 and HAM-A scores were analyzed. F values, significance levels, and the proportion of explained variance (η^2) are presented.

Table 3 - Results of the repeated ANOVA

Variable	Effect	F	p	η^{2*}
PCL-5	Time	28.45	< .001	.28
	Group	15.67	< .001	.18
	Time × Group	22.91	< .001	.24
HAM-A	Time	19.83	< .001	.22
	Group	12.45	.001	.15
	Time × Group	18.92	< .001	.21

*η^2 – proportion of explained variance.


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Significant effects of time, group, and their interaction were found for both variables. The time factor demonstrated the greatest contribution to the variation in the indicators. The results confirmed the effectiveness of psychological support in reducing PTSD symptoms and anxiety.

Correlation analysis using individual participant data (n = 100) revealed moderate-to-strong positive correlations between PTSD symptom clusters: Hyperarousal and Reexperiencing (r = 0.67), Hyperarousal and Avoidance (r = 0.59), Reexperiencing and Avoidance (r = 0.72). All correlations were significant at $p < .001$. These values are substantially lower than those previously reported from aggregated data (which artificially inflated correlations), and they suggest distinct but related symptom dimensions.

DISCUSSION

The study provides preliminary evidence supporting the effectiveness of the integrated model of psychological support for witnesses in criminal proceedings. The obtained results meet the set goals. The results are largely consistent with the research hypotheses. The analysis showed a significant reduction in symptoms of PTSD in both study groups. The fact indicates the effectiveness of psychological intervention in general. At the same time, the key was the detection of a statistically significant effect of the interaction "group × time". It was established using the analysis of variance with repeated measures (Mixed ANOVA). The result was a direct confirmation of the main hypothesis. The findings suggest that the developed support model may be more effective than standard care, although causal attribution is limited by the quasi-experimental design. The positive dynamics in the EG was significantly greater than in the CG. The fact indicates the superiority of targeted, protocoled work methods.

The results obtained in this study are integrated into the global academic paradigm. They have something in common with a number of influential empirical works that have investigated similar problems. The conclusions strengthen the existing evidence of the effectiveness of targeted psychological interventions. In particular, *Patrick DJ*[23] provided evidence for the effectiveness of somatic and expressive methods in trauma intervention. The researcher found that intensive work


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with bodily emotional reactions contributes to a significant reduction in symptoms. Similarly, the study of *Kuhfuß M* et al.[24] showed that a combination of different therapeutic modalities is superior to the effectiveness of monotherapy. The above conclusion confirms the authors' concept. The model, combining REBT (cognitive component) and DMT (somatic component), functions as a powerful hybrid mechanism that affects both thinking and bodily memory. Qualitative data also confirmed the conclusions of *Bond LF*.[25] His work shows that psychological support contributes to increasing trust in the justice system. The link between trauma and the quality of testimony was also confirmed by *Chandler TL* et al.[26] Trauma is a source of cognitive distortions in the process of memory formation.

In order to objectively assess the effectiveness of the applied model, the obtained results should be compared with the results of studies that reach different conclusions. For example, *Messinger JC* et al.[27] investigated the effectiveness of short-term therapy in civilian victims of robberies. The researchers did not find a significant difference in the dynamics of symptoms between the CG and the EG. According to the authors, the discrepancy can be explained. A limitation is the different specifics of the traumatic event. Trauma associated with war crimes is unique and requires targeted somatic methods, which was provided by DMT.

The work of *Gilbert DJ* et al.[28] also contradicts the obtained results, arguing about the risk of confabulation. The researchers found that psychotherapeutic intervention can lead to retraumatisation, which negatively affects the accuracy of the readings. The authors believe that stabilization techniques, which are a basic component of DMT (rhythmic movement, grounding, etc.), help to prevent this risk. Current study also enters into an academic dialogue with other important works. The work of *Weems CF* et al.[29] found that early psychological intervention significantly reduces the risk of developing chronic PTSD. The results, demonstrating the effectiveness of support initiated at the stage of pre-trial investigation, reinforce this conclusion. The authors of our study found a significant correlation between PTSD clusters. The relationship is consistent with the findings of *Otis JD* et al.[30] The researchers found that changes in symptoms in one cluster (e.g., avoidance) are a strong predictor of changes in another (hyperarousal). Such synchrony of changes suggests a profound therapeutic effect.


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However, the findings of *Reed DE* et al.[31] are somewhat different. The researcher found a smaller correlation between trauma symptoms and the quality of evidence than was found in our study. Current study also extends the findings of *Arshed F* et al.[32] The work focuses on the effectiveness of REBT for emotional dysregulation. Current study shows that REBT combined with DMT may be a key component in reducing post-traumatic symptoms. This fact reinforces the importance of integrated approaches. Finally, *Morales N* et al.[33] in their review emphasize the importance of developing specialized intervention models for working with post-traumatic conditions. They demonstrate the development and empirical validation of an integrated intervention model (REBT + DMT) that takes into account the specifics of wartime trauma.

The lack of random assignment and the unequal duration of intervention (8 vs. 4 weeks) prevent definitive conclusions about the specific effects of REBT/DMT. A Hawthorne effect (extra attention) cannot be ruled out. Future studies should use active control groups matched for time and attention.

The theoretical significance of the study is filling critical gaps in international trauma science. The study provides empirical justification for the effectiveness of integrating REBT with MDT in conditions of mass traumatization. Such a combination strengthens the theory that PTSD is not only a cognitive, but also a deeply somatic disorder, for which the most effective approach is one that simultaneously works with cognitive distortions and bodily memory. The study also deepens the understanding of how high-quality psychological support affects the justice process, confirming that a decrease in PTSD symptoms increases the reliability and consistency of testimony. This fact is of crucial importance for international criminal law. Finally, the work offers a specific theoretical framework for working with traumas related specifically to war crimes, confirming the need to develop models adapted to the contextual specifics of trauma.

The practical significance of the study is to provide an empirically suggested Integrated Model (REBT + MDT) for psychologists, which ensures rapid stabilization of PTSD and dissociation in victims. The results are critically important for law enforcement agencies and courts, as they confirm that support increases the quality and reliability of testimony, reducing the risk of confabulation. Therefore, the model contributes to the implementation of trauma-informed justice


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and increases the legitimacy of court decisions on war crimes. The results of the study can serve as the basis for the development of new protocols for psychological support of witnesses in international courts (such as the ICC). The integration of REBT and MDT is a ready-made empirically based solution for psychosocial support in conflict and crisis zones, as it provides rapid and effective symptom reduction. There is a need for specialized training for international staff, which should include techniques that focus on bodily responses and emotional regulation. The long-term effectiveness of an integrated intervention that reduces chronic PTSD symptoms also reduces the burden on national health systems.

The findings should be interpreted with the following limitations in mind. The main methodological limitations are the convenience sample (non-probability sample), which reduces generalizability, and the use of self-reported symptom assessment methods, which are prone to subjectivity. The follow-up period is also critical: the lack of long-term follow-up does not allow us to confirm the durability of the effect. The effect of therapeutic attention (Hawthorne effect) and the influence of high levels of external stress from ongoing conflict, which may have prevented the full recovery of the participants, should also be taken into account.

Based on empirical research, all formulated hypotheses were confirmed. It was found that the integrated model of psychological support for witnesses is significantly more effective than standard assistance, which was directly supported by the statistically significant interaction effect of “group × time” in the ANOVA. A significant reduction in symptoms of post-traumatic stress disorder in the EG was achieved. Therefore, it was supported that the applied integrated model is an optimal and highly effective tool for working with the consequences of trauma caused by war crimes.

Prospects for further research should focus on assessing the long-term stability of the therapeutic effect of the integrated model (REBT + MDT) by conducting repeated measurements six and twelve months after the support. Comparative studies using active control should be conducted to isolate the influence of specific components (REBT and MDT) and increase the internal validity of the model. It is also promising to expand the sample to include other groups of victims (e.g.,

military personnel or rescue workers) to confirm the generalizability of the model in the context of war-related trauma.

BIBLIOGRAPHIC REFERENCES

1. Oliinyk O, Zholdoshbaev D, Koshonova S, Kravtsov Y, Bocheliuk V. Psychology of stress and adaptation during complex crises: Practical aspects of assisting people in difficult circumstances [Internet]. Eur J Trauma Dissociation. 2025; 100541. DOI: https://doi.org/10.1016/j.ejtd.2025.100541

2. Somo CM. The mental well-being and inclusion of refugee children: Considerations for culturally responsive trauma-informed therapy for school psychologists [Internet]. Educ Sci. 2024; 14(3):249. DOI: https://doi.org/10.3390/educsci14030249

3. Farajallah I. Behind the Rubble: Psychological trauma of wars and human rights abuses on women and children in Gaza [Internet]. Anatolian Clin J Med Sci. 2024; 29(Special Issue on Gaza):119-36. DOI: https://doi.org/10.21673/anadoluklin.1575372

4. Popovych I, Semenov O, Hrys A, Aleksieieva M, Pavliuk M, Semenova N. Research on mental states of weightlifters' self-regulation readiness for competitions [Internet]. J Phys Educ Sport. 2022; 22(5):1134-44. DOI: https://doi.org/10.7752/jpes.2022.05143

5. Hubanova T, Shchokin R, Hubanov O, Antonov V, Slobodianiuk P, Podolyaka S. Information technologies in improving crime prevention mechanisms in the border regions of southern Ukraine [Internet]. J Inf Technol Manage. 2021; 13:75-90. DOI: https://doi.org/10.22059/JITM.2021.80738

6. Koliadenko NV, Zhyvago KS, Bursa AI. Provision of Medical-psychological and Psychiatric Care to Patients with Post-covid Syndrome in Telemedicine Conditions [Internet]. Bangladesh J Med Sci. 2022; 21(4):719-30. DOI: https://doi.org/10.3329/bjms.v21i4.60256Gillett

7. M. Ecocide, environmental harm and framework integration at the International Criminal Court [Internet]. Int J Hum Rights. 2025; 29(6):1009-45. DOI: https://doi.org/10.1080/13642987.2024.2433660

8. Zasiekin S, Zasiekina L, Altman E, Hryntus M, Kuperman V. The narratives of war (NoW) corpus of written testimonies of the Russia-Ukraine war [Internet]. Lang Resources Eval. 2025; 59:2415-26. DOI: https://doi.org/10.1007/s10579-025-09813-8

9. Kuhn E, Sayers SL, Babusci C, Conroy C, Erbes CR. Internet-based family training with telephone coaching to promote mental health treatment initiation among veterans with posttraumatic stress disorder: A pilot study [Internet]. J Trauma Stress. 2023; 36:549–556. DOI: https://doi.org/10.1002/jts.22900

10. Frankova I, Bahmad ML, Goloktionova G, Suvalo O, Khyzhniak K, Power T. Mental health and psychosocial support in Ukraine: Coping, help-seeking and health systems strengthening in times of war [Internet]. Amsterdam: ARQ National Psychotrauma Centre & Vrije Universiteit Amsterdam; 2024. [access: 10/05/2025] Available from: https://arq.org/sites/default/files/2024-03/ARQ%20desk%20review%202024%20-%20MHPSS%20in%20Ukraine%20-%20full%20report.pdf

11. van de Kamp MM, Scheffers M, Hatzmann J, Emck C, Cuijpers P, Beek PJ. Body- and movement-oriented interventions for posttraumatic stress disorder: A systematic review and meta-analysis [Internet]. J Trauma Stress. 2019; 32(6):967–976. DOI: https://doi.org/10.1002/jts.22465

12. Olff M, Hein I, Amstadter AB, Armour C, Birkeland MS, Bui E, et al. The impact of trauma and how to intervene: a narrative review of psychotraumatology over the past 15 years [Internet]. Eur J Psychotraumatol. 2025; 16(1):2458406. DOI: https://doi.org/10.1080/20008066.2025.2458406

13. Taiwo EO, Tozer L. Community energy justice: A review of origins, convergence, and a research agenda [Internet]. Energy Res Soc Sci. 2025; 123:104036. DOI: https://doi.org/10.1016/j.erss.2025.104036

14. Shved O, Liakh T, Spirina T, Klishevych N, Slozanska H, Horishna N, et al. Psychosocial Support for Victims of Sexual Violence During the War in Ukraine: Challenges for Social Work [Internet]. J Hum Rights Soc Work. 2024; 9:464-73. DOI: https://doi.org/10.1007/s41134-024-00336-w

15. Gray AK. Art as Refuge: A Trauma-Sensitive Art Education Program for Professionals Working With Ukrainian Refugees [Internet]. Art Educ. 2025; 78(1):54-62. DOI: https://doi.org/10.1080/00043125.2024.2428130

16. Liao Y, Wu M, Pan J, Xie L, Wang L. Application and Effect of Rational-emotive Therapy Combined with Mindfulness Breathing in Psychological Intervention of Triple-negative Breast Cancer Patients [Internet]. Z Psychosom Med Psychother. 2025; 71(3):241-56. DOI: https://doi.org/10.13109/zptm.2025.71.3.241

17. Kassa MA, Fenta S, Anbesaw T, Tesfa NA, Zemariam AB, Kassaw GM, et al. Post-traumatic stress disorder and associated factors among high school students who experienced war in Woldia town [Internet]. Front Psychiatry. 2024; 15:1359370. DOI: https://doi.org/10.3389/fpsyt.2024.1359370

18. Yohannes AM. Psychosocial support in pulmonary rehabilitation [Internet]. Respir Care. 2024; 69(6):664-77. DOI: https://doi.org/10.4187/respcare.11850

19. Weiss A. Beyond Retraumatisation: Trauma-Informed Political Science Research [Internet]. Br J Polit Sci. 2025; 55:e82. DOI: https://doi.org/10.1017/S0007123424000620

20. Jędraszczyk K. The Language of the Witness, the Language of the Researcher: Verbal and Nonverbal Communication in "Emergency Research" [Internet]. Communist Post-Communist Stud. 2025; 1-23. DOI: https://doi.org/10.1525/cpcs.2025.2472571

21. Norris FH, Hamblen JL. Standardized Self-Report Measures of Civilian Trauma and PTSD [Internet]. In: Wilson JP, Keane TM, editors. Assessing psychological trauma and PTSD. 2nd ed. New York: Guilford Press; 2004. p. 63-102. Available from: https://psycnet.apa.org/record/2004-21033-003

22. Wiener A. The dissociative experiences scale [Internet]. Am J Psychiatry. 1992; 149(1):143-a. DOI: https://doi.org/10.1176/ajp.149.1.143-a

23. Patrick DJ. Somatic Experiencing and Expressive Arts Therapy to Support Autonomic Regulation in Trauma Treatment with Adults: A Literature Review [Internet]. 2021. [access: 10/05/2025] Available from: https://digitalcommons.lesley.edu/expressive_theses/418


2026;55(2):e026077177

24. Kuhfuß M, Maldei T, Hetmanek A, Baumann N. Somatic experiencing–effectiveness and key factors of a body-oriented trauma therapy: a scoping literature review [Internet]. Eur J Psychotraumatol. 2021; 12(1):1929023. DOI: https://doi.org/10.1080/20008198.2021.1929023

25. Bond LF. The Emotional Body: A Somatic and Trauma-Informed Practice for Cultivating Expressive Capabilities for the Actor and the Individual. In: Simpson J, Miller C, editors. Trauma and Embodied Healing in Dramatherapy, Theatre and Performance. London: Routledge; 2024. p. 30-46. [access: 10/05/2025]. Available from: https://www.taylorfrancis.com/chapters/edit/10.4324/9781003322375-4/emotional-body-laura-facciponti-bond

26. Chandler TL, Shoemaker-Beal R, Coker ML. Creative Arts and Somatic Therapies: Psychodrama, Eye Movement Desensitization Regulation, and Body/Mind Therapies. In: Chandler TL, Shoemaker-Beal R, editors. Co-occurring Mental Illness and Substance Use Disorders. London: Routledge; 2022. p. 226-40. Available from: https://www.taylorfrancis.com/chapters/edit/10.4324/9781003220916-20/creative-arts-somatic-therapies-tricia-chandler-roberta-shoemaker-beal-lawless-coker

27. Messinger JC, Ikeda DJ, Sarpatwari A. Civil commitment for opioid misuse: do short-term benefits outweigh long-term harms? [Internet]. J Med Ethics. 2022; 48(9):608-10. DOI: https://doi.org/10.1136/medethics-2021-107735

28. Gilbert DJ, Allely CS, Mukherjee RAS, Gudjonsson G, Brown J, McGinn V, et al. An empirical examination of confabulation in adolescents with fetal alcohol spectrum disorder (FASD) [Internet]. J Pediatr Neuropsychol. 2025; 11(1):45-58. DOI: https://doi.org/10.1037/jpn0000016

29. Weems CF, McCurdy BH, Scozzafava MD. Toward a Developmental Model of Continuity and Change in PTSD Symptoms following Exposure to Traumatic and Adverse Experiences [Internet]. J Child Adol Trauma. 2023; 16:391-402. DOI: https://doi.org/10.1007/s40653-021-00398-2

30. Otis JD, Comer JS, Keane TM, Checko E, Pincus DB. Intensive treatment of chronic pain and PTSD: The PATRIOT program [Internet]. Behav Sci. 2024; 14(11):1103. DOI: https://doi.org/10.3390/bs14111103

31. Reed DE, Fischer IC, Williams RM, Na PJ, Pietrzak RH. Co-occurring chronic pain and PTSD among US military veterans: prevalence, correlates, and functioning [Internet]. J Gen Intern Med. 2024; 39(11):2009-16. DOI: https://doi.org/10.1007/s11606-024-08803-w

32. Arshed F, Siddiqui B. Effectiveness of Rational Emotive Behavior Therapy for Emotional Dysregulation and General Mental Health Problems in Adolescents [Internet]. J Polit Stab Arch. 2025; 3(3):506-21. DOI: https://doi.org/10.63468/jpsa.3.3.35

33. Morales-Durán N, León-Buitimea A, Morones-Ramírez JR. Unraveling resistance mechanisms in combination therapy: A comprehensive review of recent advances and future directions [Internet]. Heliyon. 2024 [access: 10/05/2025]; 10(6): e27814. Available from: https://www.cell.com/heliyon/fulltext/S2405-8440(24)04015-5

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Data availability

The qualitative and quantitative data supporting the findings of this study contain sensitive information related to war trauma and are subject to strict ethical restrictions imposed by the institutional review board. To protect participant confidentiality, the datasets are not available in a public repository. Access may be granted to qualified researchers by the corresponding author following a formal request and approval, provided the request complies with participant consent.