

# Psychological Impact of War Trauma in School-Aged Children: Development and Validation of a Trauma Assessment Tool Aligned with the Hibuki Therapy Approach

## *Impacto Psicológico del Trauma de Guerra en Niños en Edad Escolar: Diseño y Validación de una Herramienta Psicodiagnóstica para la Terapia Hibuki*

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### ABSTRACT

This article presents a comprehensive empirical study focused on the modification of psychodiagnostic tools—specifically the Shai Hen-Gal questionnaire—to evaluate the psychological impact of trauma in primary school children exposed to war conditions. The research includes a metatheoretical analysis of the effectiveness of Hibuki Therapy, an innovative therapeutic method that incorporates a stuffed animal to support emotional expression and resilience in traumatized children. Using a multi-stage empirical research design, the study developed and validated a specialized psychodiagnostic instrument tailored to the Hibuki Therapy framework, assessing children's stress reactions to war and other traumatic events. Factor analysis identified six core dimensions of trauma impact: Anxiety and Tension, Aggression and Behavioral Manifestations, Memories of the Traumatic Event, Impact of Life Events, Loneliness, and Physical Well-being. The findings emphasize the complex effects of trauma on children, underscoring the urgent need for psychological interventions that address both emotional and somatic symptoms. The reliability and internal consistency of the adapted questionnaire support its use as an effective diagnostic tool within therapeutic settings. Moreover, the study reinforces the potential of Hibuki Therapy as

a child-centered, evidence-based intervention to aid emotional recovery. This research adds significant value to the expanding field of trauma therapy for children, offering evidence-based support for integrating psychodiagnostics and therapeutic innovations like Hibuki Therapy into comprehensive trauma recovery programs.

**Keywords:** trauma; Hibuki Therapy; psychological impact; stress reactions; psychodiagnostics; therapeutic interventions; trauma in children; war trauma.

## RESUMEN

Este artículo presenta un estudio empírico integral enfocado en la modificación de herramientas psicodiagnósticas, específicamente del cuestionario de Shai Hen-Gal, para evaluar el impacto psicológico del trauma en niños de primaria expuestos a condiciones de guerra. La investigación incluye un análisis metateórico sobre la eficacia de la Terapia Hibuki, un método terapéutico innovador que utiliza un muñeco de peluche como herramienta emocional para apoyar la expresión afectiva y la resiliencia en niños traumatizados. Mediante un diseño de investigación empírica en múltiples etapas, el estudio desarrolló y validó un instrumento psicodiagnóstico especializado, adaptado al marco metodológico de la Terapia Hibuki, para diagnosticar las reacciones de estrés infantil ante la guerra y otros eventos traumáticos. El análisis factorial permitió identificar seis dimensiones centrales del impacto del trauma: Ansiedad y Tensión, Agresión y Manifestaciones Conductuales, Recuerdos del Evento Traumático, Impacto de los Eventos Vitales, Soledad y Bienestar Físico. Los resultados destacan los efectos complejos del trauma infantil, y subrayan la necesidad urgente de intervenciones psicológicas que aborden tanto los síntomas emocionales como somáticos. La alta fiabilidad y consistencia interna del cuestionario validado respalda su uso como herramienta diagnóstica efectiva en contextos terapéuticos. Además, el estudio confirma el potencial de la Terapia Hibuki como intervención basada en evidencia, centrada en el niño, para apoyar la recuperación emocional. Esta investigación aporta un valor significativo al campo en expansión de la terapia del trauma en niños, ofreciendo evidencia para integrar enfoques psicodiagnósticos y terapias innovadoras como la Terapia Hibuki en programas integrales de atención y recuperación del trauma infantil.

**Palabras clave:** trauma; Terapia Hibuki; impacto psicológico; reacciones al estrés; psicodiagnóstico; intervenciones terapéuticas; trauma infantil; trauma de guerra.

## 1. INTRODUCTION

The psychological impact of trauma on children, particularly those in their formative years, has emerged as a critical area of concern within the fields of psychology and child development. Traumatic experiences, ranging from natural disasters and domestic violence to war and

displacement, significantly affect children's emotional, cognitive, and social development. Understanding the multifaceted nature of trauma's impact is crucial for developing effective interventions that can address the complex needs of affected children. The advent of therapeutic approaches tailored to the unique experiences of children is a testament to the evolving landscape of trauma treatment. Among these, Hibuki Therapy, with its innovative use of a therapeutic stuffed animal, represents a promising avenue for facilitating emotional healing and resilience in young children who have experienced trauma.

This article aims to explore the psychological characteristics of traumatic experiences in younger school-aged children and to evaluate the effectiveness of Hibuki Therapy in transforming these traumatic experiences. By conducting an empirical study that encompasses a comprehensive theoretical foundation, development, and implementation of a specialised questionnaire, as well as subsequent analysis, this research seeks to illuminate the various dimensions through which trauma impacts children. The study's insights into the effectiveness of Hibuki Therapy not only contribute to the academic discourse on child trauma but also offer practical implications for therapeutic interventions. Through a detailed examination of the factors identified via factor analysis, the research underscores the importance of addressing trauma's emotional, behavioral, cognitive, social, and physical dimensions in the treatment process.

In doing so, the article navigates through the theoretical underpinnings of trauma and its effects on children, the methodology employed in assessing these impacts, and the innovative approach of Hibuki Therapy. By articulating the specific needs and experiences of traumatized children and assessing the utility of tailored therapeutic interventions, this research endeavors to advance our understanding of effective trauma treatment strategies. The goal is to provide empirical evidence that supports the integration of Hibuki Therapy into broader trauma treatment frameworks, thereby enhancing the well-being and recovery of young children facing the aftermath of traumatic experiences.

The study also introduced a model for the vectors of transformation of traumatic experiences in younger schoolchildren, detailing cognitive-reflective, emotional-affective, motivational-behavioral, and physical-somatic transformation spheres. Each sphere was linked to specific indicators and evaluation methodologies, enabling a structured approach to understanding and treating trauma.

However, while the therapeutic efficacy of Hibuki Therapy has been empirically established (Bryl & Maksimov, 2023; Maksimov, 2022, 2023; Nauchitel & Maksimov, 2023; Nauchitel & Kharchenko, 2023), one critical gap remains: the absence of a psychodiagnostic tool specifically designed to assess trauma responses within the Hibuki Therapy framework. Various therapeutic modalities borrow their own diagnostic tools in line with their conceptual foundations. For example, cognitive-behavioral therapy (CBT) uses structured clinical interviews and symptom-based inventories, while play therapy often uses projective techniques

and observational ratings. Hibuki Therapy, as a treatment with a unique methodological basis, requires an assessment tool in line with its basic therapeutic principles.

Thus, this study's primary objective is not the validation of Hibuki Therapy's effectiveness - that has been the objective of previous research - but the development of a specialized diagnostic instrument that is aligned with the underlying principles of Hibuki Therapy. This diagnostic tool will be an essential instrument for the evaluation of children's stress reactions and emotional states in the methodological framework of Hibuki Therapy, thereby providing a systematic approach to the diagnosis of trauma and the tailoring of therapy accordingly.

By developing and testing this psychodiagnostic instrument, the current study makes a step towards the systematic integration of Hibuki Therapy into trauma treatment systems, enabling assessments and interventions to be methodologically aligned. Second, it establishes a scientific foundation for additional research on Hibuki Therapy, facilitating the possibility of conducting more controlled evaluations of its long-term effects and generalizability

## 2. LITERATURE REVIEW

### ***2.1. Addressing trauma in school-aged children through Hibuki Therapy***

The prevalence and impact of adverse childhood experiences (ACEs) and early trauma in school-aged children have been extensively documented in the literature, highlighting the urgent need for effective interventions. Research by Bückner *et al.* (2012), Gonzalez *et al.* (2016), and others have underscored the profound effects of early trauma on cognitive, emotional, and psychological development, pointing to the necessity of addressing these issues through therapeutic means.

Bückner *et al.* (2012) reveal that cognitive impairments in school-aged children can often be traced back to early traumatic experiences. This aligns with Gonzalez *et al.* (2016), who detail the extent of trauma exposure in elementary school children and its correlation with posttraumatic stress symptoms. The findings from these studies underscore the critical need for therapeutic interventions that are specifically tailored to the developmental needs of children. Wood *et al.* (2017) discuss the importance of understanding and responding to crises and trauma within the school setting, indicating that the school environment plays a significant role in both the exacerbation and amelioration of trauma symptoms. Hébert *et al.* (2018) further emphasize the link between cumulative childhood trauma and a range of issues, including emotion regulation difficulties, dissociation, and behavior problems in school-aged victims of sexual abuse.

Research by Swanston *et al.* (2014) provides valuable insights into the experiences of school-age children exposed to domestic violence, highlighting the importance of listening to and understanding the perspectives of children and their mothers. This qualitative

dimension is crucial for developing interventions that are both effective and sensitive to the needs of traumatized children. Martinez *et al.* (2023) advocate for trauma-informed approaches within the educational system to address the widespread issue of trauma among school-aged children. McKinsey Crittenden (2015) discusses assessing self-protective attachment strategies in school-aged children, suggesting that understanding children's coping mechanisms is vital for effective intervention. Bou-Karroum *et al.* (2022) focus on preventing unintentional injuries in school-aged children, which can also be traumatic events leading to long-term psychological effects. This research underscores the importance of prevention as a component of addressing trauma.

Arvidson *et al.* (2011) highlight the importance of developmental and cultural considerations in the treatment of complex trauma in young children. This is particularly relevant for Hibuki Therapy, which integrates these considerations into its therapeutic approach. Given the documented impacts of trauma on school-aged children, Hibuki Therapy emerges as a promising intervention. This therapy utilizes a therapeutic stuffed animal to provide comfort, facilitate emotional expression, and foster a sense of security. The approach is grounded in play therapy principles and aims to address the emotional and psychological needs of children in a manner that is both developmentally appropriate and culturally sensitive.

The evidence presented by Bückner *et al.* (2012), Gonzalez *et al.* (2016), and others points to a clear need for effective, developmentally appropriate interventions for school-aged children who have experienced trauma. Hibuki Therapy, with its innovative use of a therapeutic stuffed animal, offers a promising avenue for addressing the complex needs of these children, providing them with the tools to process their experiences and develop healthy coping mechanisms. By integrating insights from the extensive body of research on trauma in school-aged children, Hibuki Therapy stands as a significant contribution to the field of child psychology and trauma treatment.

The early school years, typically ranging from ages six to twelve, represent a pivotal stage in a child's life, marking significant milestones in their psychological, emotional, and social development. It is a period characterized by the expansion of social circles, increased cognitive abilities, and greater emotional complexity. However, this stage of development also renders children particularly susceptible to the effects of traumatic experiences. Trauma, defined as a response to a deeply distressing or disturbing event that overwhelms an individual's ability to cope, can significantly derail a child's developmental trajectory.

Traumatic experiences during these formative years can vary widely, encompassing events like domestic violence, abuse, natural disasters, severe illness, or loss of a loved one. The impact of such experiences can be profound, potentially leading to a range of emotional and behavioral issues. Children may exhibit signs of anxiety, depression, post-traumatic stress disorder (PTSD), or display significant changes in behavior and academic performance.

The way these traumatic experiences are processed and addressed significantly influences the child's long-term well-being.

Understanding the sensitive nature of this developmental stage, it becomes crucial to implement therapeutic interventions that are both effective and cognizant of a child's emotional and cognitive capacity. Traditional therapeutic approaches may not always resonate with young children due to their complex nature and the requirement of verbal expression, which can be challenging for this age group.

Enter Hibuki Therapy, a novel therapeutic approach developed to specifically address the unique needs of traumatized young children. The therapy employs a stuffed animal named Hibuki, which serves as a therapeutic tool to aid in the emotional healing process. Hibuki, meaning "hug" in Hebrew, is designed to provide comfort, facilitate emotional expression, and foster a sense of security in children who have undergone traumatic experiences. This approach is grounded in the principles of attachment theory, play therapy, and emotional regulation, making it particularly suited for young school-aged children.

## ***2.2. The impact of war on children's psyche: a crucial context for research***

In the vast expanse of research on trauma, the impact of war on children's psychological health stands out as a profoundly distressing domain, necessitating focused attention and innovative therapeutic interventions. The effects of war extend beyond the immediate physical dangers to encompass deep psychological scars that can alter the trajectory of a child's emotional and cognitive development. Studies such as those by Antic (2022), Isobel *et al.* (2019), and Denton *et al.* (2017) provide a foundational understanding of how the constructs of childhood and psychological trauma intersect, particularly in contexts marked by political conflict and familial disintegration.

Antic (2022) critically explores the politicization of childhood through transcultural constructions, shedding light on the profound psychological trauma inflicted upon children in modern conflicts. This perspective is crucial for comprehending the broader sociopolitical dynamics that exacerbate the psychological distress experienced by children in war-torn regions. Similarly, Isobel *et al.* (2019) delve into the relational contexts of psychological trauma, highlighting how familial relationships can both mitigate and compound the effects of trauma. These insights underscore the importance of considering the child's immediate social environment in addressing psychological trauma.

The systematic review by Denton *et al.* (2017) on assessing developmental trauma in children further emphasizes the need for precise and sensitive diagnostic tools to identify and address the multifaceted impacts of trauma. The nuanced understanding of trauma's effects provided by these studies forms a critical backdrop for the current research on Hibuki Therapy, underlining the therapy's potential relevance and utility. Manzanero *et*

*al.* (2021) and Simonds *et al.* (2022) offer empirical evidence on the exposure to traumatic events and their subsequent psychological impact on children, particularly in contexts like the Gaza Strip and areas affected by natural disasters or war. These studies validate the pervasive nature of trauma among children in conflict zones and the dire need for effective therapeutic interventions.

Research by Llabre *et al.* (2015) on young adults exposed to war-related trauma in childhood and Bager *et al.* (2020) on the psychiatric risks in offspring of parents with torture and war trauma further illuminate the long-term psychological ramifications of childhood exposure to war. These findings highlight the critical window of opportunity for interventions in childhood to mitigate long-term distress. In the context of ongoing conflicts, such as the Russo-Ukrainian War, research by Greenblatt-Kimron *et al.* (2023) and Lunov *et al.* (2022; 2023) provides contemporary insights into the psychological distress and terror awareness among children and youth. These studies illustrate the immediate and pressing nature of psychological interventions in current conflict zones.

The body of research outlined above establishes a compelling case for the importance of the current study's investigation into the effectiveness of Hibuki Therapy for young school-aged children who have experienced trauma related to war. By situating this research within the broader context of war's impact on children's psyche, we underline the critical need for therapeutic interventions that are both accessible and effective. The empirical validation of Hibuki Therapy, as explored in this article, contributes to the expanding repertoire of strategies aimed at mitigating the psychological effects of war on children, offering hope for recovery and resilience in the face of adversity.

### 3. METHODOLOGY

With the objective of investigating the psychological characteristics of traumatic experiences in younger schoolchildren and the implementation and verification of the effectiveness of Hibuki Therapy using a toy (Hibuki dog) in transforming traumatic experiences arising from psychological trauma or post-traumatic stress disorder, an empirical study was conducted between 2022 and 2024. This study, structured in several consecutive stages, aimed to deepen our understanding of trauma's impact on this vulnerable age group and to explore the therapeutic potential of Hibuki Therapy.

Because of the sensitivity of the topic and the vulnerability of the subjects (war-traumatized children), the study followed rigorous ethical guidelines. The study protocol was approved by the meeting of the Laboratory of Organizational and Social Psychology of the G.S. Kostyuk Institute of Psychology (Approval No. 2, 06.02.2025), as per ethical research standards. Written consent was obtained from parents or legal guardians before children participated in the study. Additionally, verbal assent from the children was obtained

in a language and way suitable for their ages. The anonymity of the participants was strictly maintained, and no personally identifiable information was collected. The research was monitored by a group of licensed child psychologists who ensured that children who showed signs of severe distress were provided with referrals to mental health counseling services.

The first stage of the research involved a thorough theoretical examination of the trauma experienced by younger schoolchildren and how Hibuki Therapy could serve as a means of transformation. This stage included a comprehensive analysis of both domestic and international scientific literature through theoretical research methods such as analysis, synthesis, generalization, and systematization. The main approaches to studying mental trauma and its personal experience, along with the age-related characteristics of traumatic experiences, were scrutinized. Based on this material, a theoretically grounded model of child trauma transformation through Hibuki Therapy was developed. This stage established the scientific hypothesis and objectives of the study, leading to the formulation of a research plan and selection of psychodiagnostic methods to explore the issue.

The empirical research's methodological component comprised various methods and techniques aimed at addressing the study's objectives. These included:

- *Questionnaires*. Utilized to examine the socio-demographic characteristics of the subjects, enabling a deeper statistical analysis. Questions focused on gender, age, child's status related to displacement due to war, educational setting, family composition, number of children in the family, area of residence, and living arrangements before and after the war.
- *Observations*. Aimed at diagnosing the propensity for social interaction, seeking support from others to stabilize emotional states, and more. Observations were formalized through a questionnaire assessing responses as "no," "hard to say," or "yes."
- *Interviews*. Investigated the characteristics of traumatic experiences, understanding of one's emotions and feelings, etc., with responses also categorized as "no," "hard to say," or "yes."
- *Projective Technique "Safe Place"*. Explored the emotional-affective sphere of experiencing a traumatic event through the diagnosis of modal emotions and feelings.
- *Diagnostic Technique for Developmental Defects (DDOR) by Z. Karpenko*. Examined the level of developmental defects manifestation (anxiety, aggression).
- *Author's Questionnaire on Children's Stress Reactions Related to War*. Modified from Shai Hen-Gal's questionnaire (Sadeh, Shai, Liat, 2007) to diagnose stress reactions related to war.

Here is the Table 1 based on the provided text, outlining the stages of the research, their descriptions, and the methods/techniques used in each stage.



**Table 1.**

*The empirical research's methodological component (descriptions and the methods/techniques used in each stage)*

Stage	Description	Methods/Techniques Used
Theoretical	Study of theoretical-methodological foundations of research on traumatic experiences in younger schoolchildren and their transformation through Hibuki Therapy. Analysis of scientific literature to develop a theoretically grounded model for the transformation of child trauma using Hibuki Therapy. Formulation of scientific hypothesis and research objectives.	Analysis, synthesis, generalization, systematization, comparison, interpretation of scientific psychological literature on the psychology of trauma and its personal experience, age-related characteristics of traumatic experiences, transformation of child trauma through Hibuki Therapy.
Adaptation of Questionnaire	Development and adaptation of the questionnaire to study children's stress reactions related to war (modification of the Shai Hen-Gal questionnaire).	Questionnaire survey (adapted Shai Hen-Gal questionnaire).
Constatative	Conducting research to study the psychological characteristics of traumatic experiences in younger schoolchildren. Data collection and generalization through Google Forms, followed by quantitative and qualitative analysis of the data.	Google Forms for data collection and analysis.
Formative	Development and organization of a program to transform traumatic experiences in younger schoolchildren based on the results of the constative stage. Training program development, conducting a formative experiment, and analyzing its effectiveness.	Program development, training, formative experiment, effectiveness analysis.

*Source: calculated by author*

This table provides a structured overview of the research process, from theoretical groundwork through to the practical application and analysis of Hibuki Therapy's effectiveness in treating trauma in younger schoolchildren.

## 4. RESULTS

### ***4.1. Understanding trauma in young school-aged children***

Trauma in young school-aged children, a critical yet vulnerable period, is not merely an event that happened to them; it is also about their response to those events. This phase of life is characterized by rapid developmental changes and the formation of foundational psychological processes, which makes children in this age group particularly susceptible to the long-term effects of trauma.

Children can encounter a range of traumatic events. Natural disasters like earthquakes, floods, or hurricanes can disrupt their sense of safety and normalcy. Exposure to violence, whether in the community, school, or home, can have profound impacts on their psychological well-being. The loss of a loved one, such as a parent or sibling, often results in intense grief and confusion. Severe illness, either experienced personally or by a close family member, can also be deeply traumatic, encompassing feelings of fear, uncertainty, and helplessness.

The manifestations of trauma in young children can be diverse and multifaceted. Emotional symptoms often include anxiety, fear, sadness, and depression. These may be accompanied by behavioral changes like aggression, withdrawal, or regression to earlier developmental stages (such as bedwetting or thumb-sucking). In school, children may exhibit decreased concentration, a drop in academic performance, or reluctance to attend school. Socially, traumatized children might struggle with forming or maintaining relationships, displaying difficulties in trust and interaction with peers and adults.

Iacona and Johnson (2018) highlight the significant impact of ACEs on both the physical and psychological development of children. They emphasize the long-lasting consequences that these experiences can have, potentially manifesting throughout adulthood. This aligns with the understanding that early school years are a critical period for psychological development, and trauma during this time can have profound effects. The authors underscore the importance of a supportive environment in mitigating the negative health consequences of ACEs. This reinforces the notion that the environment plays a crucial role in how trauma is processed and overcome by young children.

Iacona and Johnson's insights on the neurobiology of trauma can enrich the theoretical foundation for Hibuki Therapy by providing a deeper understanding of how trauma physically and psychologically affects young children. Their emphasis on supportive environments aligns with Hibuki Therapy's approach, which creates a nurturing and safe space for children to express and process their emotions. While Hibuki Therapy primarily uses a therapeutic stuffed animal and play-based techniques, integrating mindfulness practices, as suggested by Iacona and Johnson, could enhance its effectiveness in developing self-regulation and resilience in traumatized children.

#### ***4.2. Empirical verification of the questionnaire: insights and outcomes***

In our study, the empirical validation of the questionnaire was conducted on a sample of 618 individuals, aged between 4 to 15 years. The gender distribution within the sample was notably balanced, with 335 males (54.2%) and 283 females (45.8%). Regarding displacement status since the beginning of the full-scale invasion, the data indicated that 326 individuals (52.8%) had not been displaced, 140 individuals (22.7%) had returned home, 139 individuals (22.5%) were internally displaced, and a smaller fraction, 13 individuals (2%), were externally displaced. Additionally, 10.7% of the participants had experienced occupation, whereas a significant majority, 89.2%, had not, demonstrating a diverse range of experiences within the sample population (Standard Deviation = .309).

The study spanned various regions within Ukraine and extended internationally to Europe and Israel, ensuring a broad representation of experiences. Specifically, participants from the eastern regions of Ukraine (Kharkiv and Donetsk oblasts) accounted for 4.9% of the sample, the western regions (Lviv, Ternopil, Ivano-Frankivsk, and Rivne oblasts) constituted 5%, the northern regions (Zhytomyr, Kyiv, Sumy, and Chernihiv oblasts) comprised 40.4%, the southern regions (Zaporizhzhia, Dnipropetrovsk, Odesa, and Mykolaiv oblasts) made up 13.9%, and the central regions (Vinnitsia, Kirovograd, Poltava, and Cherkasy oblasts) represented 30.1% of the sample. Additionally, a small proportion of the participants were located in Europe (3.1%) and Israel (0.5%).

The questionnaire was administered individually, allowing participants to engage with various statements and response options, thereby selecting the option most applicable to the child's experiences. To determine the measurement parameters, factor analysis was employed to ascertain the validity structure of the model. This process, coupled with an analysis of the internal consistency of items (Cronbach's Alpha), led to the reduction of the number of statements to 70. The overall adjusted Cronbach's Alpha value was .950, indicating a high level of internal consistency among the questionnaire items according to the scales, and thus enabling the exploration of the specific characteristics and features intended by the questionnaire.

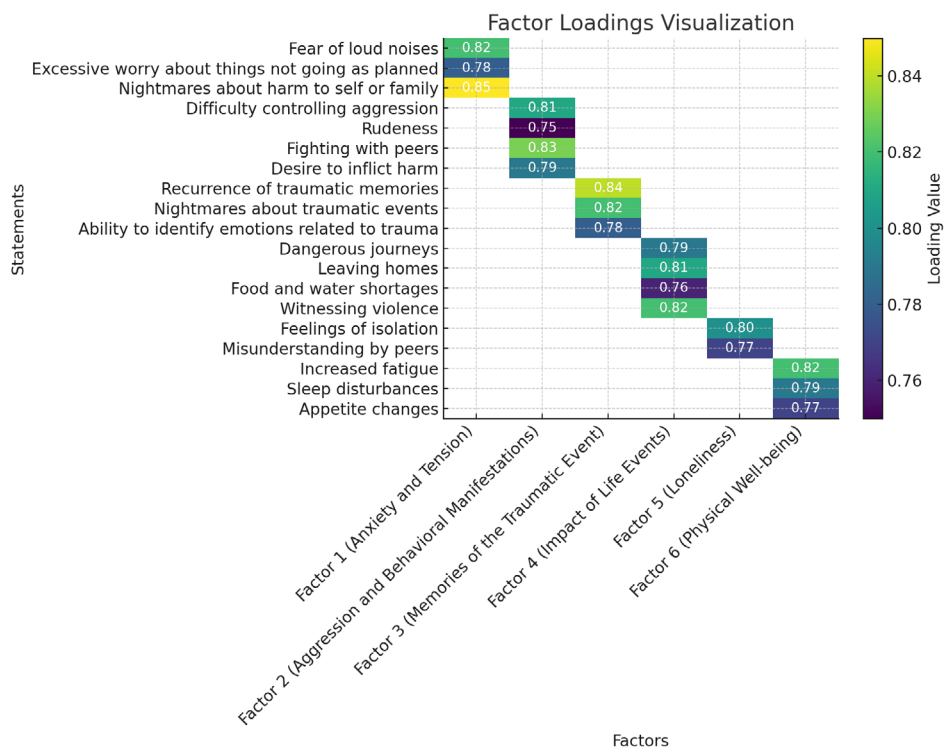
The results of the factor analysis, conducted using the principal component method (Kaiser-Meyer-Olkin measure of sampling adequacy = .962; Bartlett's test of sphericity = .000), identified six factors explaining 67.18% of the variance. This comprehensive approach not only reinforced the reliability and validity of the questionnaire but also highlighted its effectiveness in capturing the nuanced aspects of trauma experiences among young school-aged children in varied contexts. The findings underscore the importance of using empirically validated tools in trauma research and intervention, providing a robust foundation for the further implementation and evaluation of Hibuki Therapy in this demographic.

4.3. Empirical evaluation and factor analysis of the questionnaire

The empirical evaluation of our questionnaire was conducted on a sample of 618 individuals aged 4 to 15 years, revealing critical insights into the psychological landscape of children exposed to war and trauma. This rigorous analysis led to the identification of six distinct factors that significantly contribute to our understanding of trauma’s multifaceted impact on children (Fig.1).

*First Factor: Anxiety and Tension.* The first factor, contributing 20.86% to the total variance, was labeled “Anxiety and Tension.” This factor encapsulates the heightened state of fear and apprehension experienced by children in the face of solitude, separation from parents, and the overarching dread of impending harm to themselves or their loved ones. The factor is characterized by 16 statements, reflecting the diverse manifestations of anxiety and tension, such as fear of loud noises, excessive worry about things not going as planned, and nightmares about harm befalling them or their family members.

Figure 1.  
Heatmap of factorloadings



*Second Factor: Aggression and Behavioral Manifestations.* Contributing 13.34% to the total variance, the second factor, “Aggression and Other Behavioral Manifestations,” delineates the aggression and behavioral changes in children as a response to trauma. This scale, comprising 13 statements, highlights aggressive tendencies, difficulties in controlling aggression, rudeness, fighting with peers, and the desire to inflict harm on oneself or others as significant behavioral outcomes of traumatic experiences.

*Third Factor: Memories of the Traumatic Event.* The third factor, accounting for 11.22% of the variance, named “Memories of the Traumatic Event,” focuses on how children perceive and recall the traumatic event across different time frames - past, present, and future. With 15 statements (including three time-specific questions), this factor explores the recurrence of traumatic memories, nightmares, and the child’s ability to identify and articulate emotions and thoughts related to the trauma.

*Fourth Factor: Impact of Life Events.* Making up 9.18% of the total variance, the fourth factor, “Impact of Life Events,” examines the direct experiences of trauma, such as being in dangerous journeys, leaving homes, facing food and water shortages, and witnessing violence. With ten statements, this scale assesses the tangible life changes and experiences that significantly affect the child’s psychological state.

*Fifth Factor: Loneliness.* The fifth factor, contributing 7.04% to the variance, is termed “Loneliness.” This factor, through nine statements, evaluates the feelings of isolation, misunderstanding, and abandonment children experience, further exacerbating the trauma’s impact.

*Sixth Factor: Physical Well-being.* Lastly, the sixth factor, “Physical Well-being,” accounts for 5.54% of the variance and addresses the physical symptoms associated with trauma, such as increased fatigue, sleep disturbances, and appetite changes. This scale includes nine statements that collectively underscore the somatic manifestations of psychological distress.

#### **4.4. Reliability and distribution analysis**

The questionnaire’s reliability was further affirmed through retest reliability, assessed via correlation analysis between the first and second administrations of the questionnaire, with correlation coefficients ranging from .718 to .821. This indicates a high degree of stability in the questionnaire’s measurements over time. Frequency analysis, following the Kolmogorov-Smirnov test to verify the normality of scale distributions ( $p \geq .05$ ), facilitated the quantification of scale expressiveness across low, medium, and high levels. The distribution calculation, derived from the maximum and minimum scores plus one, divided by three, establishes a nuanced understanding of the scales’ expressiveness, reflecting the variability and intensity of the trauma-related symptoms and behaviors.

This comprehensive empirical evaluation not only substantiates the questionnaire’s validity and reliability but also offers invaluable insights into the psychological effects of

trauma on children, laying a foundation for targeted therapeutic interventions like Hibuki Therapy. In the empirical evaluation of the questionnaire designed to assess children's stress reactions related to war, distinct expressiveness levels across various scales were identified. This nuanced approach allows for a comprehensive understanding of the psychological impact on children. Table 2 detailing the distribution features of expressiveness levels in the questionnaire designed to assess children's stress reactions related to war (modified from the Shai Hen-Gal questionnaire).

**Table 2.**  
*The distribution features of expressiveness levels in the questionnaire designed to assess children's stress reactions related to war*

Scale	Maximum Possible Score	Minimum Achieved Score	Maximum Achieved Score	Levels of Formation
Anxiety and Tension	80	16	80	Low $\leq 38$ , Medium 39-61, High 62-80
Aggression and Other Behavioral Manifestations	57	13	57	Low $\leq 28$ , Medium 29-44, High 45-57
Memories of the Traumatic Event	42	14	42	Low $\leq 23$ , Medium 24-34, High 35-42
Impact of Life Events	60	10	60	Low $\leq 27$ , Medium 28-45, High 46-60
Loneliness	45	9	45	Low $\leq 21$ , Medium 22-34, High 35-45
Physical Well-Being	45	9	45	Low $\leq 21$ , Medium 22-34, High 35-45

*Source: calculated by author*

*Anxiety and Tension Scale.* This scale, with a maximum possible score of 80, saw scores ranging from a minimum of 16 to a maximum of 80. The expressiveness levels are categorized as Low ( $\leq 38$ ), Medium (39-61), and High (62-80), facilitating an in-depth analysis of anxiety and tension levels among children affected by war.

*Aggression and Other Behavioral Manifestations Scale.* With a scoring range from 13 to 57 out of a maximum possible 57, this scale identifies three expressiveness levels: Low ( $\leq 28$ ), Medium (29-44), and High (45-57). It highlights the varying degrees of aggression and behavioral changes in children as responses to trauma.

*Memories of the Traumatic Event Scale.* This scale focuses on how children perceive and recall the traumatic event, offering a maximum possible score of 42. The achieved scores

span from 14 to 42, with expressiveness levels defined as Low ( $\leq 23$ ), Medium (24-34), and High (35-42).

*Impact of Life Events Scale.* Reflecting direct experiences of trauma, this scale has a maximum possible score of 60, with children's scores ranging from 10 to 60. The formation levels are divided into Low ( $\leq 27$ ), Medium (28-45), and High (46-60), shedding light on the tangible life changes and experiences that significantly affect the child's psychological state.

*Loneliness Scale.* With scores ranging from 9 to 45 out of a possible 45, this scale assesses feelings of isolation and abandonment, categorizing expressiveness levels into Low ( $\leq 21$ ), Medium (22-34), and High (35-45). It underscores the emotional impact of trauma on children's sense of belonging and social connections.

*Physical Well-Being Scale.* This scale, addressing the somatic manifestations of psychological distress, has scores that vary from 9 to 45 out of a possible 45. The expressiveness levels are set as Low ( $\leq 21$ ), Medium (22-34), and High (35-45), highlighting the physical symptoms associated with trauma, such as increased fatigue and sleep disturbances.

This structured classification into three levels of expressiveness for each scale allows for a detailed analysis of the children's responses. It is noteworthy that some questions are direct, requiring no recoding during scoring, while others in certain scales are reverse-scored. A detailed key to the questionnaire is provided in the appendix, ensuring that the assessment can be accurately interpreted and utilized for further analysis and intervention planning. This methodical segmentation into expressiveness levels enhances our ability to discern the varying degrees of psychological impact across different dimensions of children's experiences related to war and trauma. It underscores the significance of adopting a multifaceted approach in assessing and addressing the complex needs of children affected by such profound stressors.

## 5. DISCUSSION

The empirical evaluation and subsequent factor analysis of the questionnaire designed to assess the stress reactions of children related to war, as modified from the Shai Hen-Gal questionnaire, provide profound insights into the psychological ramifications of trauma on young minds. The discussion below delves into the findings and their implications for both theory and practice.

The "Anxiety and Tension" scale, which emerged as the most significant factor, underscores the pervasive sense of fear and apprehension that trauma induces in children. This scale, contributing 20.86% to the total variance, highlights how traumatic experiences manifest in fears of being alone, separation from parents, and nightmares about harm, reflecting the deep psychological impact of war and violence. The high levels of internal consistency

(Cronbach's Alpha = .950) across this scale confirm the reliability of the questionnaire in capturing the nuanced aspects of anxiety and tension.

The "Aggression and Other Behavioral Manifestations" scale sheds light on the externalizing behaviors often observed in children as a response to trauma. The identification of aggression, difficulty in controlling impulses, and increased irritability as key components of this scale speaks to the need for therapeutic interventions that address not only the emotional but also the behavioral dimensions of trauma.

"Memories of the Traumatic Event" and "Impact of Life Events" scales focus on the cognitive and experiential aspects of trauma, respectively. These scales reveal how children's recollections of trauma and their direct experiences of adverse life events contribute to the overall trauma response. The distinction between these factors underscores the complex interplay between memory, perception, and experience in the trauma response.

The scales of "Loneliness" and "Physical Well-being" highlight the social and somatic dimensions of trauma, respectively. The loneliness scale points to the isolation and misunderstanding that children often feel, while the physical well-being scale emphasizes the bodily symptoms of trauma, such as fatigue and sleep disturbances. These findings emphasize the importance of holistic approaches to trauma treatment that consider the social and physical alongside the psychological impacts.

The detailed levels of expressiveness identified across the scales offer critical insights for tailoring interventions to the specific needs of traumatized children. By categorizing the expressiveness levels as low, medium, and high, the questionnaire enables practitioners to quantify the severity of trauma impact and to design targeted interventions that address the specific dimensions of trauma most relevant to each child's experience.

Furthermore, the identification of distinct factors related to trauma's impact provides a roadmap for developing comprehensive intervention programs. Such programs could integrate psychological counseling with social support and physical health interventions, ensuring a multi-faceted approach to healing.

This empirical evaluation not only validates the modified Shai Hen-Gal questionnaire as a robust tool for assessing children's stress reactions to war but also opens avenues for future research. Longitudinal studies could further explore how these trauma-related factors evolve over time and how early interventions might alter the trajectory of children's recovery from trauma.

In conclusion, the factor analysis of the questionnaire offers a nuanced understanding of the various dimensions of trauma impact on children. These insights are crucial for developing effective interventions and policies aimed at supporting the psychological well-being of children exposed to war and violence. As we move forward, it is imperative that these findings inform both clinical practice and policy-making, ensuring that children receive the comprehensive care and support they need to navigate the aftermath of trauma.



## 6. CONCLUSION

An empirical study conducted to assess the psychological characteristics of traumatic experiences in primary school children and to provide a metatheoretical analysis of the effectiveness of Hibuki therapy is a significant contribution to our understanding of childhood trauma and therapeutic interventions. This article explores the multifaceted nature of trauma, outlining its various impacts on children's emotional, behavioral, cognitive, social, and physical well-being. Through the careful development, implementation, and analysis of a specialized questionnaire adapted from the work of Shai Heng-Gal, this study has highlighted the profound and varied impact of war and conflict-related trauma on children.

Factor analysis of the responses to the questionnaire allowed us to identify six critical aspects of the impact of trauma: Anxiety and tension, aggression and other behavioral manifestations, memories of the traumatic event, the impact of life events, loneliness and physical well-being. Each factor revealed distinct ways in which trauma manifests in children, offering insight into their internal and external experiences of distress. The high level of internal consistency found across these scales (Cronbach's  $\alpha = .950$ ) and the detailed levels of severity of each scale confirm the reliability and validity of the questionnaire. Furthermore, the identification of these factors laid the groundwork for targeted interventions that can address the specific aspects of trauma most relevant to each child's experience.

The meta-theoretical analysis suggests that the introduction of Hibuki therapy as a new intervention in this context is a promising way to address the emotional and psychological needs of traumatized children. The use of a therapeutic soft toy to facilitate emotional expression and provide comfort offers an effective method of helping children process their traumatic experiences. This approach responds to the identified need for interventions that are not only effective, but also accessible and engaging for young children.

The findings of this study have important implications for both practice and policy. They emphasize the need to incorporate a holistic approach to trauma treatment that recognizes the complex interplay between different aspects of a child's trauma experience. For practitioners, it emphasizes the importance of using multifaceted therapeutic approaches that address the emotional, cognitive, behavioral, social, and physical consequences of trauma. For policymakers, the study highlights the urgent need to develop and implement comprehensive support systems for children affected by trauma, providing access to interventions such as Hibuki therapy. Although we did not directly test the efficacy of Hibuki Therapy, our research lays the groundwork for future research in this area. The novel questionnaire can now be utilized in controlled studies to measure how Hibuki Therapy helps children manage their emotions, change their behavior, and improve their overall mental health. Our findings point to the urgent need for special attention to children who have undergone war. Future research should seek to apply this instrument in real therapy

settings, track long-term healing, and explore how Hibuki Therapy can be incorporated into mainstream trauma treatment programs.

Future areas of research include longitudinal studies to examine the long-term effects of trauma on children and to assess the long-term impact of interventions such as Hibuki therapy. It is also important to further investigate the scalability and adaptability of such therapeutic interventions in different cultural and social contexts. This will allow the benefits of innovative therapies to be extended to a wider range of child survivors around the world.

In summary, this article contributes to a deeper understanding of childhood trauma, offers new diagnostic tools for its assessment, and highlights the potential of Hibuki therapy to support the healing process. By focusing on the specific needs and experiences of traumatized children, this study not only deepens our theoretical knowledge, but also offers practical advice on how to improve the well-being of children who have experienced trauma. The path to healing is multifaceted and ongoing, requiring concerted efforts by researchers, practitioners, and policymakers to ensure that every child has the opportunity to recover and thrive from trauma.

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