

Treating post-traumatic stress disorder in survivors of community and domestic violence using narrative exposure therapy: a case series in two public health centers in Rio de Janeiro/Brazil

Terapia de exposição narrativa para o tratamento do transtorno de estresse pós-traumático com pessoas que passaram por violência doméstica e comunitária: estudo de série de casos em dois centros de saúde no Rio de Janeiro, Brasil

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Abstract Prevalence of violence in Brazil is high, which contributes to an increasing number of trauma-related disorders, especially post-traumatic stress disorder (PTSD). This study aims to present a case series of PTSD patients treated with narrative exposure therapy (NET) in two public health centers in Rio de Janeiro (Brazil). Health professionals were trained in a two-week workshop to deliver NET. Exposure to violence and other potentially traumatic events, as well as PTSD were assessed by interviewers before treatment and six months later in follow-up interviews conducted by blind assessors. Multiple traumatic events, including different types of childhood and sexual abuse, intimate partner violence and community violence were reported. Five patients were exposed to community violence, and one to domestic violence, during or after NET treatment. Treatment delivery was integrated into the routine of health centers. Eight patients completed NET and presented a substantial reduction in PTSD severity at six-month follow-up. NET is a feasible and effective treatment for PTSD patients exposed to ongoing violence, and can be integrated into established public health services.

Key words Post-traumatic stress disorder, Narrative exposure therapy, Violence, Trauma, Mental health

Resumo A prevalência de exposição à violência é alta no Brasil, contribuindo para o aumento do número de transtornos relacionados a traumas, especialmente o transtorno de estresse pós-traumático (TEPT). Este estudo tem por objetivo apresentar uma série de casos de pacientes com TEPT que passaram pela terapia de exposição narrativa (NET) em dois centros de saúde do Rio de Janeiro. Os profissionais de saúde receberam duas semanas de treinamento NET. A exposição à violência e a outros eventos potencialmente traumáticos, bem como o TEPT, foram avaliados por entrevistadores antes do tratamento e seis meses depois em entrevistas de acompanhamento conduzidas por avaliadores sob condição cega. O tratamento foi integrado à rotina dos serviços. Oito pacientes completaram a NET e apresentaram redução substancial na severidade do TEPT. Todos reportaram exposição a eventos traumáticos múltiplos, incluindo diferentes tipos de abuso infantil, sexual, violência por parceiro íntimo e comunitária. Cinco pacientes foram expostos à violência comunitária e um à violência doméstica durante ou após o tratamento. Esta série de casos mostra que a NET é um tratamento eficaz para pacientes com TEPT expostos a violências contínuas e pode ser integrado nos serviços públicos de saúde.

Palavras-chave Transtorno do estresse pós-traumático, Terapia de exposição narrativa, Violência, Trauma, Saúde mental

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Introduction

Community and domestic violence levels in Brazil are high. One-year prevalence of traumatic events vary between 20-35%¹. Community violence, such as physical assault with a weapon, kidnapping and being victim of conflicts between gangs/drug dealers, was found to be the most common type. This type of violence was also common among adolescents². Moreover, domestic violence cases have tripled in the last decade³. Interpersonal violence cases increased by 42.4%, going from the sixth to the second leading cause of death from 1990 to 2016⁴. This seems to be especially associated with firearm-related child homicides⁵. Trauma and violence are particularly prevalent in, but not restricted to low-resource urban areas^{6,7}. On a worldwide scale, about one third of women are estimated to have experienced intimate partner violence (IPV)⁸. This corresponds to the numbers in Brazil, where 37% and 29% of women in rural and urban regions respectively suffered from IPV⁹. About 19%¹⁰ and 30%¹¹ of women experience IPV during the perinatal and postnatal periods respectively, a time that is especially sensitive for mother and child. For many women living in urban settings, chronic violence within their families and within their communities are often co-occurrent¹².

Post-traumatic stress disorder (PTSD) typically manifests as an effect of repeated and severe trauma¹³. The impact of traumatic experiences on mental health have been shown to be associated with different factors including specific trauma history characteristics such as type, proximity, and frequency, as well as with individual and societal characteristics¹⁴. A particularly robust factor associated with trauma-related suffering is the number of lifetime traumatic events. Research has consistently shown that exposure to different types of traumatic events increases the probability of someone developing PTSD, an effect called the *building block*^{15,16}. In big urban areas in Brazil, such as Rio de Janeiro and São Paulo, it is estimated that 11% of people suffer from PTSD. These rates are expected to be higher in areas marked by high levels of violence¹⁷.

Individuals with PTSD suffer from recurring intrusive memories, flashbacks, and/or nightmares; have difficulties concentrating; avoid places, people, and thoughts that are associated with the trauma; report continuous feelings of guilt, anger, and shame; have difficulties in experiencing positive feelings; and suffer from hypervigilance¹³. Daily functioning at work or in

relationships declines. Suicidal ideation is also associated with PTSD¹⁸. Following research into the underlying pathology of PTSD, there is now a convergent consensus that symptoms are caused as a result of pathological representations of traumatic events in the memory¹⁹. Human long-term memory is organized in two systems – the explicit memory from which information about time and space is retrieved (innervated specifically by the hippocampus, as well as the implicit memory which refers to sensory, cognitive, emotional and interoceptive cortical representations of learned cues (innervated inter alia by the amygdalae²⁰. These two systems are disconnected in patients with PTSD, thus when activated sensory, cognitive, emotional, and interoceptive memories of accumulated traumatic experiences fail to associate with information about when and where each of the traumatic events happened (contextualization), they induce a sense of horror happening again here and now¹⁹. Higher levels of trauma exposure prevent the contextualization of events, and more frequent activation of these networks (consolidation) leads to a dominance of intrinsic dynamics of the brain and remission becomes more unlikely²¹. At the same time, the verbal accessibility of the trauma memory is hampered, preventing the patient from speaking about the experience and the suffering and from activating inherent strategies of trauma healing²². Evidence-based gold standard psychotherapeutic interventions are available, e.g., trauma-focused cognitive behavioral therapy (tfCBT)²³, narrative exposure therapy (NET)^{24,25} or eye movement desensitization and reprocessing (EMDR)²⁶.

Public health centers in Brazil are strategically important institutions to identify and ensure appropriate care for people suffering from the mental consequences of violence. Health services, especially primary care, are often the entryway for PTSD patients who commonly express symptoms such as panic attacks, hypertension and depression²⁷. Without further assessment, doctors commonly prescribe psychopharmacological measures to treat these symptoms. Consequently, PTSD is under-recognized in outpatient settings despite its high prevalence²⁸ and patients often require frequent re-referral for further treatment. The roots of post-traumatic stress are thus not treated and in consequence treatment is inefficient and inadequate, bringing high costs to health services and patients.

In addition to service restrictions, ongoing violence experienced by patients is an obstacle for the provision of trauma-focused treatment.

During the process of exposure, the patient is reminded of previous traumas and at the same time, the current threats must be dealt with. Common clinical practice would therefore first establish a safe and stable living arrangement before starting trauma-focused treatment^{29,30}. However, if such a mandate were to be applied consistently, a large percentage of patients would be excluded from receiving effective treatment, e.g., patients who live in settings of war, conflict, or with other security issues such as in neighborhoods with urban violence. A study with women exposed to intimate partner violence in Iran showed that NET not only promoted a decrease in PTSD symptoms but also a reduction in the violence experienced at home³¹. In a recent systematic review of trauma-focused cognitive behavioral therapy delivered under the ongoing threat of violence, Ennis et al. (2021) found 21 clinical trials that showed robust improvements in PTSD between and within treatment groups, indicating effectiveness despite the ongoing threat of violence. Moreover, there was no evidence that the treatment caused adverse effects or retraumatization. The strongest evidence for positive effects was for Narrative Exposure Therapy (NET)^{24,25}, which also showed beneficial effects on depression, appetitive aggression and violent behavior^{31,33,34}. Amongst other evidence-based trauma-focused PTSD treatments, NET is particularly suited to contexts marked by humanitarian challenges and scarce resources, due to its pragmatic approach and focus on multiple traumatic events²⁴. Evidence for the effectiveness of NET has been established in clinical studies and randomized controlled trials conducted in European, African and Asian settings with high levels of ongoing violence and a high range of psychopathology within the population³⁵.

In this study we aim to pilot NET in a Latin American setting, in Rio de Janeiro, Brazil, to test the feasibility of the intervention when delivered to PTSD patients who live under ongoing threat of violence, and when NET is integrated into local public health services. We further aim to provide insight into the level of lifetime and ongoing trauma exposure and PTSD symptom levels of an *ad hoc* sample of PTSD patients re-visiting the health centers, and to elaborate in more detail how NET can be applied in this specific context.

Methods

Procedure

This study was implemented during the period from August 2018 to February 2019. Family doctors and psychologists who participated in a NET training course were asked to identify patients with PTSD symptoms. Exclusion criteria were acute intoxication during the sessions, cognitive impairment, neurological problems, and acute psychosis. Before the start of the interview, the study was explained to the patients and written informed consent was obtained. A follow-up interview was conducted six months after the treatment by blinded interviewers. The study was approved by the ethical boards of the University of Konstanz, the National School of Public Health (ENSP/Fiocruz), the Municipal Health Secretariat of Rio de Janeiro, and by the National Commission for Research Ethics in Brazil (CONEP, CAAE: 82095418.8.0000.5240, 82095418.8.3002.5279).

Participants

In total we conducted 28 screening interviews ($n = 21$ female), of which 5 patients met the exclusion criteria (two patients presented with acute psychotic symptoms, two with cognitive impairment, and one with a neurological problem). A total of $n = 13$ patients ($n = 10$ female) fulfilled the diagnostic criteria for PTSD according to the DSM-5(13) and were recommended to the health professionals for NET; of these, one patient was already receiving psychological treatment in a private institution, one was about to move cities and was not available to come to the health center on a regular basis, and two patients could not be offered immediate treatment due to limited capacities of the therapists. One patient started NET and dropped out during the treatment (due to comorbid alcohol use disorder and family legal problems). Eight patients (23-76 years old, $M = 44$) completed NET and are described in more detail in this study (Figure 1).

Training of the NET therapists

The therapists delivering NET were family physicians from primary care and clinical psychologists from public health centers who had participated in a two-week NET training course. The health professionals had different backgrounds and no previous experience with trauma

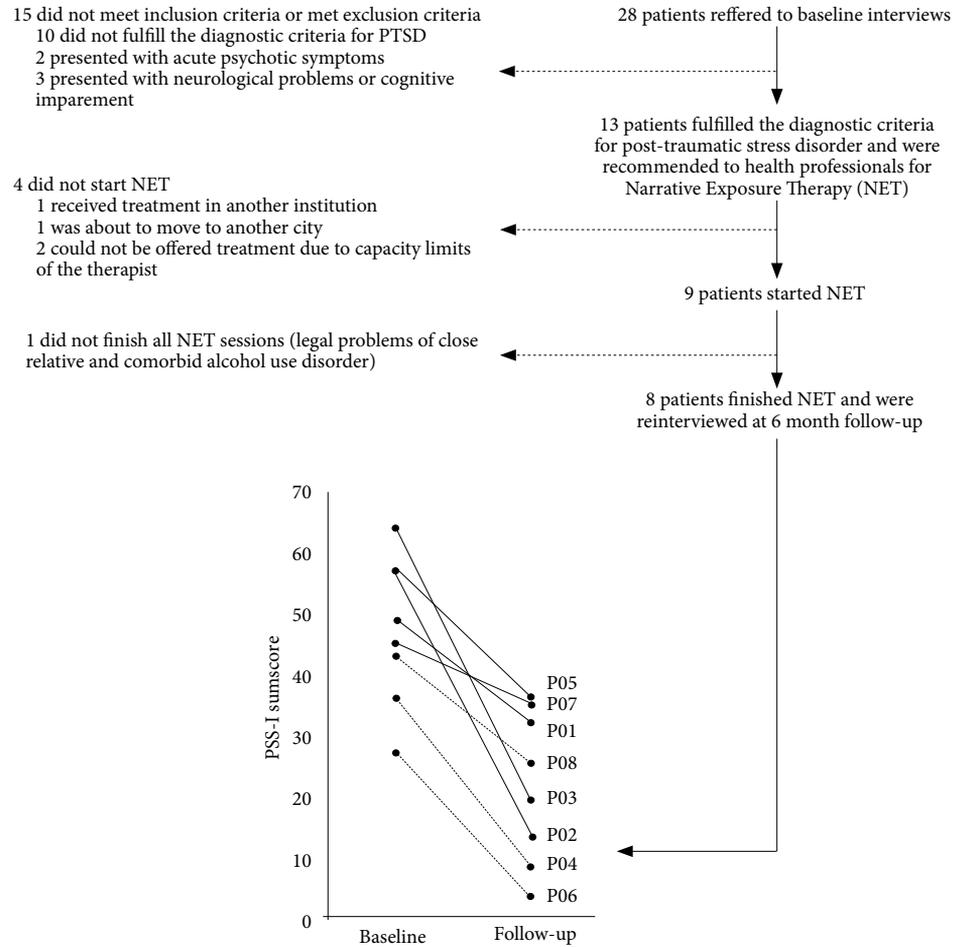


Figure 1. PTSD symptom severity per patient at baseline and six months after narrative exposure therapy.

Full lines represent the patients who experienced a new traumatic event during and/or after therapy. Dashed lines represent the patients who did not experience a new traumatic event during and/or after NET. PTSD severity was measured with PTSD Symptom Scale – Interview – DSM-5 (PSS-I-5)³⁶.

Source: Authors.

focused therapy. The training course was led by the first and last authors and included the theoretical background and clinical skills required for the exposition of traumatic events and for difficult situations that could occur (dissociation, avoidance, etc.). Oversight of the newly trained therapists included supervised initial sessions and regular case supervision (FS, AK). Fidelity to the treatment manual was ensured through the supervised initial sessions, the regular supervision and through oversight of written narratives from the sessions.

Assessment

A structured questionnaire was administered to each participant at baseline and follow-up. It contained questions for sociodemographic information such as age and place of residence. Traumatic experiences were assessed using a checklist for different types of traumatic events (56). The trauma event list is not presented in this case series, once the events are detailed in the lifeline exercise. PTSD symptom severity and diagnosis was assessed with the interview version of the PTSD Symptom Scale according to the DSM-5, PSSI-5³⁶. Consequently, PTSD was diagnosed

according to the Diagnostic and Statistical Manual version 5 (DSM-5)¹³. The 20 questions correspond to the symptoms of each cluster (intrusion, avoidance, changes in mood and cognition, and arousal and hyperactivity). Symptom severity is scaled regarding intensity and frequency, ranging from 0 (not at all) to 4 (six or more times per week/severe). Symptoms are considered present when rated 1 or higher. The sum of the 20 items yields a total PTSD symptom severity score that ranges from 0 to 80.

Narrative exposure therapy (NET)

NET^{24,25} is a universally applicable approach with efficacy shown in numerous countries and cultures³⁵. It is manualized, brief (6-12 sessions) and without copyright barriers. NET has been successfully scaled up through trained local therapists^{37,38}, addresses multiple traumatization, has been adapted for children and adolescents³⁹ and traumatized offenders (NET for forensic offender rehabilitation; FORNET)⁴⁰, and has been shown to successfully reduce appetitive aggression and current violent behavior^{33,41}. In all variants of NET, the patient, supported by the therapist, establishes a chronological narrative of their life, concentrating mainly on traumatic experiences, but also incorporating the most important positive events. This enables the person to contextualize the network of 'hot' sensory, cognitive, emotional and interoceptive memories of the past, thereby treating the pathological memory structure that causes the symptoms⁴². NET enables the patient to reflect on their entire life, cultivating a feeling of personal identity and agency in the 'here and now'. The NET approach is distinct from other trauma-focused treatments in its explicit focus on recognizing and creating a narrative of the personal life story, restoring the individual's sense of autobiography, self-identify and self-esteem, together with the acknowledgement of the human rights abuses that have occurred. In this study, NET was applied according to the manual^{24,25}. As the diagnostic interview was conducted by an independent interviewer, the first session consisted of psychoeducation and the 'lifeline exercise'. The lifeline displays the emotional highlights/peaks of the individual's life in a chronological order. To this end, the patient places major positive and negative events along a rope that symbolizes the course of life from birth until the current day, with the end coiled up to represent the future. Flowers designate major positive events, stones represent major negative

events, especially traumatizing experiences, and sticks may be used for ambivalent experiences in which the patient was actively involved in the perpetration of violence. Varying sizes of the symbol indicate the subjective severity or impact of the event. In the following steps, the traumatic experiences are processed via exposure *in sensu*, following a treatment plan based on the most severe events in a chronological order; the latter is given particular importance in theory as the individual defense cascade is malleable by learned experience. In other words, the response to traumatizing cues evolves with (potentially traumatic) experiences. During the exposure sessions, the patient is encouraged to verbalize sensory information, resulting cognitions, emotional and interoceptive responses, and to reflect on the meaning of these sequences. Particular attention is provided to context and the therapist continually emphasizes time and space. The therapist sets moments to contrast past and present, to experience responses that prevail in the safe environment and to acknowledge interaction in the present. The therapist subsequently writes down the narration in the first person using the words of the patient. In the subsequent sessions, the therapist reads the narrative elaborated in the previous session and continues with the subsequent event. In the last session, the therapist invites the patient to build the lifeline again, including flowers for the future.

Statistical analysis

We report individual percentage changes for PTSD symptom severity (PSSI sum score at follow-up minus sum score at baseline divided by the sum score at baseline) to compare the magnitude of symptom change across clients.

Results

Trauma histories

All eight patients had experienced sexual abuse. Six of them had suffered their first sexual abuse during childhood by a family member or someone close to the family. The majority ($n = 6$) had also experienced sexual abuse during adulthood by an intimate partner. Other forms of intimate partner violence were reported: physical abuse and aggression ($n = 7$), including suffocation ($n = 3$), and being kept in captivity ($n = 1$), emotional abuse ($n = 7$), including death threats

($n = 3$). Bullying/humiliation ($n = 6$) and witnessing domestic violence ($n = 4$) were experienced during childhood. All participants were exposed to community violence, such as hearing or seeing gun shots in the neighborhood ($n = 6$), witnessing someone receiving death threats ($n = 3$), or witnessing someone dying due to a firearm ($n = 2$). An overview of lifetime exposure to traumatic events is provided in Table 1. In Figure 2 we provide a detailed description of case P03 (Available at: <https://doi.org/10.48331/scielodata.PPS85X>).

Traumatic experiences during and after NET

Six out of the eight patients experienced another traumatic event during NET or within the six months after NET (Table 1). During NET, P01, P02 and P05 felt threatened by gunshots in the neighborhood. P03 received death threats from her former intimate partner (despite having a restraining order preventing the former partner from approaching her). In the follow-up interview, six patients reported the occurrence

Table 1. Lifetime and current traumatic events reported per participant in the lifeline sessions, and in the follow-up interviews.

Traumatic events	Patients							
	P1	P2	P3	P4	P5	P6	P7	P8
Childhood adversities								
Sexual abuse during childhood								
Witnessing domestic violence								
Humiliation/bullying								
Severe physical aggression by a caregiver								
Separation from parents, placement in a shelter								
Shot with a firearm at home								
Witnessing sexual abuse								
Suffocation by someone in the family								
Witnessing homicide (firearm)								
Armed violence								
Intimate partner violence								
Sexual abuse by an intimate partner								
Physical aggression								
Death threat								
Suffocation								
Being kept in captivity								
Emotional abuse								
Community violence								
Hearing or seeing gunshots								
Witnessing homicide								
Witnessing death threat								
Sudden death of a loved one by homicide								
Others Humiliation/assault at work in adulthood								
Sexual abuse by someone unknown								
Severe physical aggression								
Accident								
Diagnosis of a life-threatening disease								
Suicide attempt of a loved one								
Witnessing a heart attack of a loved one								
Traumatic events during or after Narrative Exposure Therapy (NET)								
Violence experienced at the time of NET								
Violence experienced after NET (6 months)								

Source: Authors.

of a new traumatic event after NET that was a factor impairing their sense of safety. P01 reported two events: witnessing someone being shot and learning that her child was sexually abused. P02 had two events: she received death threats from someone whom she didn't know and she witnessed someone being beaten severely in her neighborhood. P03 was threatened by her former intimate partner. P05 learned that her brother was beaten and had received death threats in her neighborhood. P06 and P07 felt threatened by gunshots in their neighborhoods.

Course of treatment and symptom change

All patients completed 9-20 sessions of NET. The variation in the number of sessions is linked to the number of traumatic events, and to the number of sessions needed to complete the exposure of each stone. At baseline, all patients showed PTSD diagnostic according to PTSD measures ($M = 47.50$, range 27-64). At follow-up symptoms score were ($M = 21.37$, range 3 - 36). There was a substantial reduction of PTSD symptoms from baseline to the follow-up interview (between 26%-89%) (Table 2). As can be observed in Figure 1 and Table 2, the patients P06, P04, P02 and P03 had the higher reduction rate in PTSD symptoms ($\geq 70\%$). All six patients (P01, P02, P03, P05, P06 and P07) who experienced new traumatic events during NET presented a reduction in PTSD symptoms (26%-78%) (Table 2). Two patients who both experienced new traumatic events (P05 and P07) still fulfilled the diagnostic criteria of PTSD at follow-up, despite the reduction of symptoms.

Discussion

This pilot study describes the clinical application of Narrative Exposure Therapy (NET)^{24,25} in an *ad hoc* sample of eight women treated by health professionals who completed a two-week NET training course. The treatment was implemented in two public health centers in Rio de Janeiro, Brazil, and provides a model of how evidence-based trauma care can be integrated into the Brazilian public health system. In all patients, PTSD symptom severity declined 6 months after NET – despite some of them suffering new potentially traumatic experiences during or after the treatment. We did not encounter any adverse events related to the treatment.

The study was conducted with trained health professionals from public centers who successfully integrated NET treatment into their routines, suggesting that NET is suitable within the local context. A study addressing the feasibility of NET for patients in public health centers in Rio de Janeiro has been conducted by Catarino⁴³ demonstrating that NET is feasible in this context, is well received by the staff, and has high potential for dissemination through training and supervision. Major obstacles to the implementation of NET in Brazilian public health services were the instability of the political context, poor infrastructure (e.g., lack of rooms), and limited human resources.

The majority of patients identified by the trained health professionals, and all patients who successfully finished NET, were female. This is a reflection of the population that seek medical care in public health centers⁴⁴. This should be

Table 2. PTSD symptom severity before and after narrative exposure therapy, age, health center unit and PTSD symptom change from baseline to six-month follow-up.

Participant	Age	Health center	No. of sessions	PSS-I-5 symptom severity ^a		Percentage change ^b
				Baseline	Follow-up	
P01	41	HC1	9	49	32	-35%
P02	23	HC1	12	57	13	-77%
P03	31	HC2	12	64	19	-70%
P04	64	HC2	10	36	8	-78%
P05	28	HC1	20	57	36	-37%
P06	33	HC2	12	27	3	-89%
P07	55	HC2	13	47	35	-26%
P08	77	HC2	12	43	25	-42%

Note: a) PSS-I-5, PTSD Symptom Scale – Interview – DSM-5(36); b) Negative values indicate a decrease of symptom severity. For a detailed description of case P03 see Figure 2.

taken into account to prevent gender biases in clinical studies and for initiatives dismantling the barriers to care for men who suffer from trauma-related disorders.

Patients referred to this study experienced multiple traumatic events as a result of family and community violence (Table 1). This is in line with the building block effect, where cumulative exposure to traumatic experiences increases the risk of developing PTSD¹⁵. Sexual abuse was present in all cases and most of them reported the occurrence of the first abuse during childhood. In line with the literature on sexual violence, the perpetrator was someone that they knew and trusted⁴⁵. In fact, child sexual abuse is a worldwide problem affecting the lives of millions of children. A meta-analysis reported a global prevalence of child sexual abuse estimated to be 11,8% (18% for girls and 7.6% for boys)⁴⁶. For the majority of the patients, it was the first time they disclosed the experience of sexual abuse. During NET it was possible to create a safe environment for the patients to address their fear, guilt and shame. The heightened risk of revictimization when the trauma remains untreated was also observed in this sample. Almost all women who experienced abuse in childhood reported being sexually abused by an intimate partner, often accompanied by physical and psychological aggression. Links between exposure to violence during childhood and increased risk of further violence have been widely reported⁴⁷ especially when suffering from PTSD⁴⁸. It is important to highlight that violence suffered by women and children is underreported⁴⁹. One reason may be the lack of sensitization and training of health professionals to identify events of violence and to notify the health network to promote further follow-up of such cases⁵⁰. Another problem is the lack of knowledge about PTSD and trauma-related disorders which often remain undiagnosed in the current health system²⁸. Therefore, there is an urgent need to train professionals to identify survivors of violence and start a care routine in order to support the families, to treat individuals with trauma-related disorders, and to contribute to breaking the cycle of violence. NET is specifically designed for those who experience complex and multiple traumas. The rationale for NET stems from the understanding of the harm of cumulative traumas. The current case series does not use a specific instrument to evaluate complex trauma as described in ICD-11. Individuals with complex trauma histories have to cope with different forms of interpersonal traumatic experiences, in-

cluding sexual abuse, neglect, relational betrayal, rejection, physical violence, usually from childhood but also in adulthood. Future studies might assess symptoms of emotional regulation, interpersonal difficulties, and negative self-concept.

As many survivors of violence suffering from PTSD have difficulties in performing essential daily activities (such as creating viable economic and social living conditions for themselves and their families), creating or moving to a safer environment is more likely to be the *result* of a successful therapeutic intervention and should not be *precondition* to receiving evidence-based treatment. Healing of trauma-related disorders empowers survivors to live a self-determined life and to step out of the cycles of violence. This study, together with previous publications, contributes to evidence that indicated the broad applicability of NET including contexts of diverse challenges^{33,34,38}. For instance, a previous study has shown that Iranian women currently living in an abusive relationship benefit from NET therapy³¹. Implementing, disseminating and improving the efficiency of evidence-based PTSD interventions for vulnerable populations should be viewed as a priority in the health sector and a human rights imperative.

Six patients experienced a new potentially traumatic event during and/or after NET and all showed a reduction of PTSD symptoms at the follow-up interview. This suggests the long-term treatment effects. Three out of four patients who showed the greatest reduction of PTSD symptoms experienced a potentially traumatic event during and/or after NET. Therefore, even in settings of ongoing armed violence and death threats, patients substantially improved. This is in accordance with the literature demonstrating symptom improvement after trauma-focused treatment despite ongoing threat to violence^{31,33,38,51}. Two patients (who experienced a new traumatic event after NET) still fulfilled PTSD diagnostic criteria. This is a common finding in trauma-focused treatment studies⁵² and importantly, substantial clinical improvement may occur even though PTSD diagnostic criteria remain applicable. Siehl *et al.* (2021) found in their meta-analysis that treatment effects increased in follow-ups collected 6 months or later after NET. In sum, the results suggest that the occurrence of a new traumatic event was not determinant for the treatment outcome in our study and patients substantially benefitted from the treatment. We have shown that a brief intervention with NET can reduce PTSD symptoms. The

results cannot be generalized due the reduced sample size. We have also not included a control group; therefore, the results do not allow any conclusions about comparisons to spontaneous improvement or other treatments. The efficacy of NET with populations under ongoing threat is being investigated elsewhere in a randomized control trial⁵⁵.

New developments of NET include the provision of NET online^{53,54} and NETfacts, an integrated approach at the individual and community level to facilitate and develop resilient and trauma-informed communities^{22,54}.

Conclusion

This case series shows the potential of Narrative Exposure Therapy (NET)^{24,25} as a treatment for survivors of violence who suffer from PTSD and continue to live under the ongoing threat of violence. Furthermore, the study shows that an implementation and dissemination of NET in Brazil's advanced public health structures is feasible. More rigorous research is needed to corroborate the existing evidence of NET with PTSD patients exposed to ongoing threat of violence. To this end, we are currently conducting a randomized controlled trial in Rio de Janeiro⁵⁵.

Collaborations

F Serpeloni and A Koebach designed, implemented the study, conducted the analysis, and prepared the manuscript. F Serpeloni is the leading field coordinator, co-investigator and provided continuous supervision to the local NET counsellors. JA Narrog contributed as a clinical supervisor and in the manuscript preparation. B Pickler as therapist and manuscript preparation. SG Assis and JQ Avanci are scientific and local supervisors. A Koebach is the principal investigator. The authors read and approved the final manuscript.

Aknowledgments

We are grateful to our patients, the NET therapists of the Health Centers in Rio de Janeiro and our supervisors of the NET institute Prof Thomas Elbert, Dr. Elisabeth Schauer, Dr Katy Robjant and PD Maggie Schauer. We further appreciate the contribution of Faperj, NGO Vivo International, Inova Fiocruz, and the University of Konstanz.

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Article submitted 09/12/2021

Approved 15/11/2022

Final version submitted 17/11/2022

Chief editors: Romeu Gomes, Antônio Augusto Moura da Silva