

Evaluating interventions for posttraumatic stress disorder in low and middle income countries: Narrative Exposure Therapy

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This article provides a framework for evaluating randomised controlled efficacy trials for the treatment of posttraumatic stress disorder, in low and middle income countries, applied to Narrative Exposure Therapy. A list of methodological and conceptual indicators to evaluate trial data was developed and utilised to assess six trials. The efficacy of this therapy to reduce symptoms is mainly deduced from effects that were measured at long term follow-up points, and that had not been seen at relatively early follow-up points. Focused interventions, such as the Narrative Exposure Therapy, may be too short in duration to comprehensively address posttraumatic stress disorder developed as a consequence of serial, long term exposure to trauma with the consequent disruption of social contexts. The Narrative Exposure Therapy approach also does not consider the cultural and political context, nor the effect of traumatic events on communities and appears to be disconnected from more comprehensive care systems. As a result, data for the efficacy of this therapy in post disaster settings are not yet conclusive. Conceptual problems should be addressed in further effectiveness trials.

Keywords: efficacy trial, Narrative Exposure Therapy, posttraumatic stress disorder, review

Introduction: development of Narrative Exposure Therapy

Over the past two decades, an increasing number of trauma experts from relatively high income countries have offered relief interventions in low and middle income

countries (LMICs) in the aftermath of natural disasters, wars or armed conflict. The perception of the efficacy of these imported interventions, by the beneficiaries and local aid workers, varies widely (Lee, 2008). Sometimes, they create further insecurity (Mundt et al., 2011; Pross, 2008) and/or appear to lack coordination (van der Veen & Somasundaram, 2006). In cases where the concepts applied to LMIC settings show context insensitivity, they may even do harm (Wessells, 2009). Regardless of the difficulty of evaluating the efficacy of these interventions, potential consequences mean they deserve further scrutiny and testing for effectiveness before being used globally. Of these trauma relief interventions increasingly used in LMICs, one of the most rigorously tested is Narrative Exposure Therapy (NET), a standardised, short term, trauma focused psychotherapy. Historically, NET evolved from Testimony Therapy first described in Chile (Cienfuegos & Monelli, 1983). Testimony Therapy was used to publicly accuse those who had committed torture and violated human rights under the Pinochet dictatorship. At the same time, it was supposed to give relief to the victims. Neuner, Schauer & Elbert (2001) were the first to report the use of Testimony Therapy in Germany for survivors of torture from Kosovo. Testimony Therapy was merged with a psychotherapeutic element of cognitive behavioural therapy, which implies exposure to a feared situation, originally developed to overcome phobic avoidance.

In 2002, this fusion was named '*Narrative Exposure Treatment*' and used for two cases of traumatised Kosovar refugees in a Macedonian refugee camp (Neuner et al., 2002). Shortly thereafter, the first randomised controlled trial tested the intervention method, now called, '*Narrative Exposure Therapy*' on victims of war in South Sudan (Neuner et al., 2004). The rationale was to correct the fragmented (and therefore intrusive) memory around the trauma into a coherent narrative and then to repeatedly re-expose the victims to this coherent narrative, and the associated emotions, until they are enured. It has been postulated that NET is culturally sensitive, and that it could be applied across all cultures, as all cultures have an oral tradition of shared experience (Onyut et al., 2004). There has been one comprehensive review of all NET trials, including those from LMICs, Western, high income countries, and those conducted with children (Robjant & Fazel, 2010). Some of the caveats of this review included the fact that the same group conducted almost all of the trials and the method had not yet been tested against other evidence based treatments. Nonetheless, this review does come to the conclusion that there is very promising evidence emerging for this treatment method. In the meantime, use of this psychotherapeutic method is increasing worldwide in conflict and natural disaster settings, especially in LMICs. This paper shows the development of a framework for further evaluating the claims of efficacy of post-traumatic stress disorder (PTSD) interventions in LMICs. Additionally, the authors critically review the randomised controlled efficacy trials (RCTs) of NET in low and middle income countries and discuss their strengths and weaknesses. In the first section, the methodology and possible methodological problems of each one of the six RCTs with NET in LMICs is presented. In the second section, more general conceptual issues are presented, which are

relevant when NET is used across different cultural and socio-economic contexts.

Methods

Based on the authors experience with the United Nations Subcommittee for the Prevention of Torture, with research in LMICs and with several aid projects (Heinz, Bromand & Missmahl, 2011; Mundt, Heinz & Ströhle, 2009; Mundt et al., 2011; Pross, 2006), a list of basic criteria to scrutinise trauma focused psychotherapeutic interventions in LMICs, for which efficacy was tested in randomised controlled trials, was developed. The consideration of these criteria may strengthen the efficacy claims and the applicability across cultures for effectiveness studies. In this paper, efficacy refers to the capacity of an intervention to produce an effect under the ideal circumstances of a trial, whereas effectiveness relates to the capacity of an intervention to produce this same effect in '*real world*' practice.

Methodological issues and data interpretation

It appears to be important that research subjects allocated to control conditions in standardised psychotherapeutic intervention trials are submitted to a control intervention, of a comparable duration, with a similar number of sessions. Intervention and control groups should be comprised of comparable ethnic groups. The immediate post treatment assessments should be used as the primary outcome. Assessments at follow-up points should be used to show the sustainability, or lack thereof, of possible treatment effects as secondary outcomes.

Conceptual issues

Standardised psychotherapeutic intervention trials in post disaster settings should acknowledge the political background, the safety of the research subjects at the time of the intervention and possible confounds, with an effect on their mental health status.

These confounds include: food security, resettlement issues, land conflicts, daily stressors and on-going exposure to violence. The duration of the therapy should correspond to the complexity of the disorder, and acknowledge and respond to the extra time required to establish a therapeutic relationship across interpreters and cultural barriers. The setting of the psychotherapy should also acknowledge and respond to the research subjects' need for security and privacy. To aim for cultural adequacy, the interventions should consider local idioms of distress, local mechanisms of coping and recovery, traditional rituals and belief systems. Social adequacy may imply the consideration of collective mechanisms, family issues, community functioning, connectedness with other psychosocial and clinical care systems, as well as connectedness with government programmes and nongovernmental organisations (NGO) activities. Therapists delivering interventions need adequate training, supervision and knowledge of the cultural context where the psychotherapy will be conducted. Long term engagement of the therapists is desirable. Other important psychopathological dimensions, other than PTSD, such as depression, anxiety, addiction and suicidal ideation may also be considered. Possible risks and harm should be discussed and possible exclusion criteria for standardised confrontational psychotherapeutic interventions should be acknowledged. Severe mental disorders, complex forms of PTSD, suicidal ideation or behaviours, extreme feelings of rage, shame or guilt may also be considered as possible exclusion criteria. Cultural inadequacy (e.g. due to taboos surrounding the topic of the trauma) should also be considered as exclusion criterion.

The above described framework largely reflects the opinions and the experiences of the authors. It was used to evaluate each of the efficacy trials of NET in LMICs. Databases, including Medline, PsychInfo and PILOTS, were searched to identify NET

trials. The reference lists of the identified papers were also searched to identify further publications.

Evaluation of the NET RCTs in LMICs

Six RCTs with NET were conducted in LMICs under conditions that were extremely difficult, however, researchers attempted to standardise their protocols and ensure fidelity of treatment (Ertl et al., 2011). The NET efficacy studies provide some evidence for post treatment benefit. However, the results of the efficacy trials have to be interpreted against several methodological and conceptual issues: these include a variable definition of primary outcome points and the question of control conditions. The conceptual issues include: duration of treatment, treatment setting, consideration of political and cultural contexts, potential disconnectedness of existing care systems and a more or less narrow focus on PTSD.

Study one: NET with Sudanese refugees in Uganda

Description: The first RCT, comparing NET with two treatment conditions, was conducted with Sudanese refugees in a refugee settlement in Northern Uganda (Neuner et al., 2004). Seventeen refugees ($n = 17$) were treated with NET, $n = 14$ with supportive counselling, $n = 12$ with psycho-education. For this RCT, four sessions were conducted in the NET and in the supportive counselling groups, but with only one session in the psycho-education group. Western PhD students delivered the treatments, with the assistance of interpreters. The instruments assessing the outcome were translated in Juba-Arabic spoken by the Imvepi. There was no difference between any of the outcome measures at the post treatment assessment, and at the 4 months follow-up between all groups. The trauma scores deteriorated in all groups between the post treatment assessment and the 4 months follow-up. In the one-year

follow-up, the NET treatment group showed improved trauma scores as compared to the other treatment groups that did not show any improvement.

Comments: There were ongoing, repeated violent insurgencies of different rebel armies and food shortages at the time of the study. Significantly more subjects of the NET group (62% vs. 7% and 17%, in the other groups) had migrated before the one year follow-up to a different place with better living conditions. Therefore, they had experienced less traumatic events in that follow-up year than subjects in the other groups (2.5 vs. 4.0). We agree with the authors who suggest that the ability to migrate may have been positively affected by the four sessions of NET treatment. However, migration out of a refugee camp may primarily be based on administrative decisions, or on family support from outside the camp, and may not be a good indicator of individual psychological health (Kaiser, 2006). An important alternative explanation is not discussed: that the improved living conditions after resettlement (better food, security and safety) may have caused improved trauma scores, not vice versa. Confounding by reverse causality (confounding cause and consequence) can be the result of using the last point of observation, the one year follow-up, as the primary outcome to test efficacy of a short intervention. Temporality, the fact that the resettlement during the observation period occurred before an improvement of the trauma scores, was measured for the first time and supports the notion that the resettlement was the cause, not the consequence, of the improved trauma scores. A Cochrane review on psychological treatment of PTSD points to a possible bias in that trial due to inadequate concealment of the allocation during the randomisation procedure (Bisson & Andrew, 2007). This means that subjects were allocated to a treatment group before they formally consented to participate in the study. There were two dropouts in the group with supportive counselling, and none

in the NET treatment group. The authors state that the high acceptance of the NET treatment could be related to the opportunity to speak with white researchers and to get a written biography in the English language. Discussing this work, the NET authors reflect that it is questionable to use interventions developed for the Western concept of PTSD in refugee populations living in completely different contexts. Additionally, they question whether psychological interventions directed at trauma can be successful while food, security and safety issues remain unresolved. Daily stress factors may well prevail over memories of past traumatic events within this context.

Study two: NET with senior citizens in Romania

Description: A second RCT compared five sessions of NET (n=9) to a single session of psycho-education (n=9) with senior citizens in Romania (Bichescu et al., 2007). It found a superiority of NET as a result.

Comments: The study had a small sample size and a methodological problem in that the active control group received less attention (single session). The control condition started like the NET treatment, with psycho-education, and then stopped after one session, which might have been perceived as disappointing for those allocated to this treatment group. On the positive side, this study did not have two methodological problems that most of the other studies on NET had: 1) the therapist who delivered the treatment was a PhD student originally from Romania, trained at the University of Konstanz. Therefore, the cultural barrier between the two settings was rather small. In all other studies the therapies were delivered by Western professionals, with the assistance of interpreters or locally trained lay counsellors, implying a greater cultural barrier as a possible source for bias and inadequacy. 2) It was conducted in a politically stable setting that is more controlled

regarding possible confounding, especially in the long term follow-ups.

Study three: NET with Rwandan and Somali refugees in Uganda

Description: The largest of the NET RCTs was conducted in a Ugandan refugee camp after the genocide in Rwanda (Neuner et al., 2008). The study introduced a task shifting paradigm for local lay counsellors (Onyut et al., 2004). It included 111 subjects in a NET condition with six treatment sessions, 111 subjects in a second condition with six sessions (in which the local lay counsellors were trained in NET, but free to use any treatment method), and 55 in a monitoring condition not receiving any treatment. A majority in all conditions, 68 subjects in the NET condition, 65 subjects in the active control condition and 36 in the monitoring condition, did not complete the study. Nine lay counsellors (of whom two had current, and three had lifetime, PTSD) delivered the treatment. The treatment conditions did not differ from each other regarding the outcome and both were superior to the monitoring condition.

Comments: There are concerns about the appropriateness of the monitoring condition as a control condition for NET: subjects in the monitoring condition (that was not a 'waiting list') may have been disappointed to be allocated to the monitoring condition. The study did not provide evidence for superiority of NET, compared to other types of counselling. The authors referred to another paper for details of the methods, such as the psychometric properties and the validation process of two different language versions (Af-Somali and Kinyawanda), which were used in the study (Onyut et al., 2004). This article includes more details on the methods, and therefore reveals that an immediate post treatment assessment, as well as three month, six month and one year follow-ups, had been planned for the active conditions in the study (Onyut et al., 2004).

Data recorded directly after the treatment, and three months later, were omitted in the paper presenting the efficacy (Neuner et al., 2008). The one year follow-up was not completed because by nine months a majority, in all groups, had been lost to follow-up. So the nine months follow-up was later chosen as the primary outcome. Ethnicity differed significantly between the groups after random allocation and the relatively small Somali minority in the camp (5.6%) was a majority in the NET-treatment group (67.7%), but a minority in the control conditions, which could point to problems with the randomisation procedure. The study population was comprised of two different national groups from Somalia and Rwanda, which both were in the same refugee camp in Uganda. They were assessed with two different language versions of the standardised instruments, and treated in those languages. The study did not provide conceptual information on how the cultural and ethnic background of the subjects, such as Somali, Hutu or Tutsi may have influenced the diagnosis, the treatment results, or the patient-therapist relationship. Gender issues were also not addressed. Performing the treatment sessions at the homes of the subjects did not allow the participants to decide to skip treatment sessions, but may also have increased the pressure to continue. After six sessions of standardised, intense work on the trauma, participants were left wherever they were in the therapeutic process. Nor was there any information on how the lay counsellors (themselves coping with trauma) emotionally dealt with having to treat the trauma of others. The lay counsellors were primarily chosen based on their English language proficiency, in order to enable communication with the Western NET trainers (Onyut et al., 2004). The NET study personnel were affiliated with either the research institution or with Vivo e. V., a humanitarian NGO founded by the NET research group or with both. For the study subjects, it may have also been

confusing not to know whether they were subjects of a research trial, recipients of humanitarian aid, or a mixture of both. This confusion may have extended to the lay counsellors. On the positive side, shifting tasks to lay counsellors is a promising concept for scaling up treatment in low resourced settings (Rajaraman et al., 2012). However, it requires connectedness with a psychosocial care system and long term engagement of the counsellors to be successful. Murray et al. (2011) propose an apprenticeship model for the implementation of shifting task paradigms.

Study four: NET with children tsunami survivors in Sri Lanka

Description: A fourth RCT was conducted after the devastating tsunami on 26 December 2004, with 31 children in Sri Lanka (Catani et al., 2009). The children living in a refugee camp with 'preliminary' PTSD diagnoses were allocated to two treatment conditions: 16 subjects ($n = 16$) were treated with six sessions of the narrative exposure therapy for children called KIDNET (Schauer et al., 2004) and $n = 15$ were treated with six sessions of a meditation-relaxation therapy. There was no difference between the two treatment conditions regarding the results. *Comments:* In this study, the control condition that was locally developed (Catani et al., 2009), was adequate, but the diagnostic construct appears to have been problematic: the authors stated that, according to the DSM-IV, three to four weeks after the disaster, PTSD could not be diagnosed, and that they had 'ignored the time criterion' for PTSD, which is having experienced symptoms for more than one month. Therefore, they called it 'preliminary' tsunami related PTSD, which could be a 'predictor' of PTSD. The authors concluded that the improvement in both treatment groups exceeded the expected natural improvement. However, data on the natural improvement were not shown. The time

criterion for PTSD had been introduced because the rates of natural improvement immediately after a disaster are extremely high and because symptoms immediately after a disaster are a poor predictor of PTSD. The immediate response to a trauma with intense fear, helplessness or horror has been dropped in the new classification DSM-5 as diagnostic criterion because it proved to have no utility for predicting PTSD. The instruments used to quantify PTSD symptoms in the study had been validated for people who fulfilled the time criterion.

Study five: NET with Rwandan orphans

Description: A more recently published NET RCT was conducted in Rwandan orphanages (Schaal, Elbert & Neuner, 2009). Twelve adolescents were allocated to four sessions of NET and 14 adolescents to four sessions of interpersonal group therapy (IPT). There was no difference between the groups at the three months follow-up, and lower PTSD scores in the NET group at the six month follow-up.

Comments: What is referred to as 'three month follow-up' in Figure 1 of the publication is later in the text called 'post treatment'; an immediate post treatment assessment, however, should be distinguished from the three month follow-up, and was not shown. On the positive side, one of the four sessions in the NET condition was used for assisted mourning, a concept that was borrowed from the IPT concept. In that trial, NET transcended the standardised concept of exposure and added another method that was felt to be useful in the local context. On the other hand, it is also unclear which reported improvements could be attributed to either method (Table 1).

Study six: NET with former child soldiers in Northern Uganda

Description: The most recently published RCT tested NET as a short term intervention

Table 1. Randomised controlled efficacy trials of Narrative Exposure Therapy in low and middle income countries

Publication	Country	Population and setting	Design	N = treated with NET		Counsellors	PTSD-Outcome	Methodological comment
				Number of sessions				
Neuner et al. (2004)	Northern Uganda	Sudanese refugees; Adults; Ongoing internal conflict; Refugee camp	3 conditions: NET; Supportive counselling; Psycho-education	4 NET; 4 supportive counselling; 1 Psycho-education	17	Western PhD students at the University of Konstanz and interpreters	No difference after 4 months, NET group superior in the 1 year follow-up	Control condition with one session (first session like NET, then no treatment)
Bichescu et al. (2007)	Romania	Victims of torture; Post-communism; Older adults; Association of Former Political Detainees and University	2 conditions: NET; Psycho-education	5 NET; 1 Psycho-education	9	Romanian PhD student at the University of Konstanz	NET group superior to control condition at 6 months follow-up	Control condition with one session (first session like NET, then no treatment), Interviewers at follow-up not blinded; Post treatment result not shown
Neuner et al. (2008)	Southern Uganda	Somali, Rwandan (Hutu and Tutsi) refugees; Post genocide; Adult; Refugee settlement	3 conditions: NET; Free to use any treatment; Monitoring	6	111	Traumatised and NET treated local lay counsellors trained to use NET	No difference between the two intervention groups at the 3 month and 6 months follow-ups, superiority of both intervention conditions to monitoring	High attrition rate: 68 out of 111 in the NET group lost during the course of the study; NET group mainly Somali, control groups mainly Rwandan; Post treatment result not shown
Catani et al. (2009)	Sri Lanka	Post tsunami; Children; Ongoing internal conflict	2 conditions: kidNET vs. meditation-relaxation	6	16	Local lay counsellors: school teachers	No difference between the two treatment conditions at 1 and 6 months follow-ups	NET was combined with guided mourning; Posttreatment result not shown
Schaal, Elbert and Neuner (2009)	Rwanda	Post genocide; Orphans; Adolescents	2 conditions: NET/grief; Interpersonal Therapy	4 (3 NET and 1 grief); 4 Interpersonal therapy	12	Western counsellors and interpreters	No difference between the two treatment conditions at the 3 month follow-up, NET/grief superior at the 6 month follow-up	NET was combined with guided mourning; Posttreatment result not shown
Ertl et al. (2011)	Northern Uganda	Post internal conflict Former child soldiers	3 conditions: NET; Academic catch-up with elements of counselling; Waiting	8	29	Local lay counsellors, not further specified	No difference between any arm at 3 and 6 month follow-ups, superiority of NET vs. both other conditions at 1 year follow-up	The 1 year follow-up was used as primary outcome; Posttreatment result not shown

against an active control condition called *'academic catch-up with elements of supportive counselling'* and against *'waiting'* for one year with former child soldiers in Northern Uganda (Ertl et al., 2011). The study included eight sessions of NET and the active control condition in 2.5 weeks (three per week). There was no difference between NET, the active control condition, and waiting at the three and six month follow-ups. NET was superior to both other control conditions at the one year follow-up in terms of therapeutic positive results.

Comments: The paper announces community implementation in the title, but is, in reality, an efficacy trial. Depressive symptoms, functioning, suicidal ideation, feelings of guilt and stigma were all taken into account as secondary outcomes (Ertl et al., 2011). It should also be noted that those symptoms may be even more relevant than PTSD symptoms in post disaster populations. The NET condition did not show any superiority in any of the secondary outcome measures, as compared to the active control condition, at any of the follow-up points of time. Depressive symptoms increased at the three and six month follow-ups, before they fell below the pre treatment level at the one year follow-up. For this secondary outcome, only at the one year follow-up, the NET condition was superior to only the waiting condition. The waiting (control) condition, i.e. waiting for one year for a therapy of 2.5 weeks, includes a rather long waiting period. The concept of guilt was not further elaborated and is especially complicated in this setting: many of the former child soldiers are not only traumatised victims of violence, but also perpetrators. Confrontational NET in suicidal patients is controversial and may not be practiced in Western settings. The reported mean household population of the included subjects was 7.31 in the NET group; the trauma focused psychotherapy was done at the rather crowded homes of the study subjects, which can be problematic for privacy reasons. This problem

(also applying to study three) is illustrated by a photograph published in Onyut et al. (2004), Figure 2, that shows about 10 persons, adults and children, within listening distance of a NET session conducted on the outside wall of a hut with a single room. The photograph does not show whether more people are inside the hut, or the angle where the photographer was standing, or whether people at neighbouring huts were listening. Such problematic privacy issues can cause public discussions of war events and trauma, and as a result affect the treatment outcome to a certain degree.

Duration of treatment

Early case reports on NET had suggested that three sessions could be enough to bring relief, without complete remission, to severely traumatised refugees (Neuner et al., 2002). The development of NET RCTs shows an increase from four treatment sessions in the first RCT to eight in the most recent, without a description of what duration of treatment is adequate for which type of trauma. For severely and serially traumatised child soldiers, with profound disruptions of normal development during early childhood and adolescence, eight sessions of psychotherapy still seem rather short (Cohen et al., 2012).

The role of post treatment assessments, intermediate and long term follow-ups

None of the six studies showed an immediate post treatment assessment. One study also did not show three month follow-up assessments. The other five studies all had negative results at the three months follow-ups (with one study at the four month follow-up); two studies show negative results at six month follow-ups. Negative results at the three and six month follow-ups are not discussed in the papers, and are not used to question the efficacy of the intervention. At the one year follow-up, for the first time, there was

a statistically significant difference regarding the reduction of PTSD symptoms in the NET group, compared to the other active conditions in studies one and six. Usually, the effect of psychotherapy is measured and some impact expected during the therapy and measured at the post treatment assessment at its end (primary outcome). The follow-ups are also done to see whether the effect is sustained or not (secondary outcome) (Zwerenz et al., 2012). The one year follow-up serves to evaluate long term sustainability of treatment effects. The onset of efficacy of very short term interventions, with a one year delay, needs explanation. One of the NET trials conducted in Germany describes in the methods section, that the blinding of the assessors could not always be maintained for all the follow-up points, because some of the clients revealed which group they belonged to during the course of the assessments (Hensel-Dittmann et al., 2011). The probability of revealing the treatment group increases with repeated assessments and should therefore be higher in the long term follow-ups.

Not only NET RCTs, but also other RCTs using short term trauma focused treatment techniques, such as the Testimony Therapy (Igreja et al., 2004) or longer and more comprehensive school based group interventions (including trauma processing activities, cooperative play, and creative/expressive elements) (Tol et al., 2008), have shown modest results so far in post disaster settings.

The role of RCTs in post disaster research

RCTs are of great importance in generating evidence for new clinical interventions. However, questionable interpretation of the data is not the only risk they bear. RCTs are based on the principle that only the treatment differs between the different groups. The randomisation process is supposed to assure that the groups do not differ regarding any other characteristics. This type of

efficacy research requires highly controlled conditions to exclude possible bias, otherwise, it can be misleading. If a time lag of one year is chosen between the intervention and the primary outcome in unstable settings, the possibility that changes of livelihoods, daily stressors, recurrent traumatisation, social and family factors have a confounding influence on the outcome affecting one group more than the other, is increased as compared to shorter intervals between intervention and outcome measure. Extremely complex and chaotic post disaster situations may imply interaction across cultural barriers, language barriers, as well as dealing with unknown variables. As a result, RCTs may not meet the high level of standardisation and controlled conditions required, especially if long term follow-ups are chosen as primary outcomes. Therefore future studies may have to focus more on immediate, as well as intermediate effects, and use the long term outcomes to evaluate whether the effects are sustained in spite of the instability of the setting. RCTs may be complemented by qualitative research methods. The authors do not suggest withholding from RCTs in unstable situations, but the findings of RCTs in those settings may deserve more critical scrutiny and careful interpretation of the data than in highly controlled Western settings.

Discussion: conceptual issues of NET in LMICs

Connectedness with care systems

Limitations regarding the feasibility of implementation and sustainability of NET arise from it being a stand alone intervention, which is not necessarily embedded into more comprehensive psychosocial care systems (Jordans et al., 2010b). Hence, it was discussed whether NET may not be sufficient as a stand alone intervention and should be used within multi-layered systems of care [Inter-Agency Standing Committee (IASC, 2007)]. Also, NET does not consider the

impact of traumatic events, such as the impact of war on the family and/or community dynamics which, in turn, fundamentally influences the collective psychosocial support mechanisms, especially in communal societies (Wind & Komproe, 2012).

In Northern Uganda, as in other post conflict areas, NGOs usually pursue psychosocially connected approaches, rather than PTSD focused stand-alone approaches. World Vision and Caritas run reception camps for adolescent returnees of war and former child soldiers. Many of the returnees cannot directly return to the villages where they come from due to crimes they have committed against relatives and villagers. Frequently, they stay for a year or longer in the camps to physically and mentally recover. During their stay, they undergo phases of stabilisation and re-socialisation, before returning to their homes. Aid workers frequently moderate the contact with home villages and traditional cleansing rituals (Amone-P'Olak, 2006). A boarding school, outside of Gulu, co-financed by the Belgian and Ugandan governments, accepts severely traumatised war returnees, orphans and children born in abduction as a consequence of sexual violence. Many of those children have no families or villages where it is possible for them to return. Teachers and therapists work together in this setting. The therapeutic groups include dance and art projects. The children are educated to interact within a community and learn to respect social norms. The complex interactions of severe traumatisation and problems with psychosocial reintegration have been described in several studies (Bayer, Klasen & Adam, 2007; Corbin, 2008). Yet, the NET trials do not acknowledge the role of NGOs in providing psychosocial support to these war affected youths. The question then arises whether the long term mitigation of PTSD reported in the trials is a result of the NET trials per se, or the psychosocial support provided by NGOs. These issues are potentially complicated as follow-up

conditions varied between the intervention and the control groups, as reported for NET study number one; given that assessments at treatment end are comparable, it is at best unclear which later effects are due to the intervention or the new social settings. On the other hand, psychosocial interventions rigorously tested in RCTs have so far also shown only modest effects for the treatment of traumatised children in conflict settings of LMICs (Jordans et al., 2010a). Miller and Rasmussen (2010b) presented a theoretical framework, on how daily psychosocial stressors mediate war related trauma and suggested a sequenced approach: to first address the ongoing sources of daily distress and restore the psychosocial environment, and then to provide specialised care for individuals whose distress does not abate with the repair of the social ecology. A scientific debate trying to bridge the divide between trauma focused and psychosocial interventions has evolved (Miller & Rasmussen, 2010a; Neuner, 2010).

Cultural adequacy

Although all cultures may have an oral tradition, as alluded to in Onyut et al. (2004), presentations differ. In many African situations, stories are told with animal symbols to portray certain human conditions, including suffering and trauma (Summerfield, 2000).

Other research groups aim for cultural adequacy and adaptation, rather than for universal approaches. Fernando, Miller and Berger (2010) studied the mental health of 427 children in Sri Lanka, 1.5 years after the tsunami, with qualitative and quantitative measures. They used locally developed instruments that take into consideration the local culture, the history and the socio-political situation in Sri Lanka, using psychometric instruments such as the War- and Tsunami-Related Stressor Scale, the Children's Daily Stressor Scale and the Sri Lankan Index of Psychosocial Status. They found that the tsunami and civil war were

not the only, nor the primary source of traumatic stress. Equally, if not more important, were daily stressors such as poverty, domestic violence, child abuse and sexual abuse. They doubt that PTSD is the most relevant expression of posttraumatic stress in Sri Lankan youths. The authors ask for more holistic psychosocial approaches, including poverty reduction, access to housing, education and water. They report that for children in a refugee camp near a swamp area, the presence of poisonous snakes was one of the greatest sources of daily stress and anxiety impeding access to water at night, or the toilet. It was argued that the presence of this immediate stress and danger constitutes a higher burden than the memory of the tsunami 18 months before. Fernando et al. criticise that Western researchers often depart from problematic premises such as: 1) PTSD is a valid diagnostic construct for all children without considering the local cultural context; 2) PTSD, rather than other forms of distress, is the most sensitive indicator of children's mental health after war and disaster; and 3) that the distress of children in post conflict or post disaster situations is primarily linked to the losses of war or disaster (Fernando, 2005; Fernando, Miller & Berger, 2010). A qualitative study by Somasundaram (2007) presents a deeper understanding of the effects of trauma in Sri Lanka using participatory observation, key informant interviews and focus group discussions. It was concluded that the war in Sri Lanka had a more prominent effect on family functioning, psychosocial health of children and collective trauma than the tsunami. This appears to be in contrast to the NET study number four, in which the war had been considered as a confounding variable with respect to the treatment of tsunami related stress.

PTSD construct and PTSD focus

One strength of the NET RCTs in LMICs is that most of the trials assessed outcomes, in

addition to PTSD scales, with respect to other, more general aspects of psychopathology. For example, spirit possessions are common phenomena associated with traumatic events in many cultures (Neuner et al., 2012; van Duijl et al., 2010). There has been a critical discussion on how valid Western trauma concepts are in other cultures (Almedom & Summerfield, 2004; Summerfield, 2008). Commenting on NET trials in Africa, Igreja (2004) pointed to the importance of not only considering the PTSD symptoms, but also their differing historical, practical (institutional) and philosophical meaning. Focusing too much on PTSD after disaster has been criticised before (Silove & Bryant, 2006), because the PTSD diagnosis may favour a culture of victimhood and inhibit communities from adopting an active approach to recovery (Silove & Steel, 2006). Indeed, there is interagency consensus that most people consulting for mental health problems in post conflict areas present with other problems than PTSD (IASC, 2007). Not only PTSD, but also anxiety disorders and depression most commonly occur after trauma (Ovuga, Oyok & Moro, 2008; Roberts et al., 2008). Substance use disorders are associated with trauma (Khoury et al., 2010) and seem to be a dysfunctional self-help pattern, especially in men (Boyce, Willis & Beatty, 2012). Moreover, PTSD is associated not only with borderline, but with several types of personality disorders (Grant et al., 2008; Pulay et al., 2009; Stinson et al., 2008). PTSD ranks, after mood disorders and somatoform disorders such as somatisation, pain or conversion disorders as one common mental health problem in post conflict settings (de Jong, Komproe & van Ommeren, 2003). It has been argued that, chronic health conditions are frequently missed in the aftermath of disasters (Chan & Sondorp, 2007). This may especially be true for mental health conditions. People with persistent severe mental disorders, such as psychoses, affective disorders and substance use disorders are most vulnerable to

the chaos, lack of social cohesion and loss of support following a disaster, within poorly resourced settings. Hence, it is positive, in our eyes, that NET interventions increasingly acknowledge other idioms of distress than PTSD.

Complex PTSD

Herman (1992) proposed that the PTSD concept is not sufficient for severely and sequentially traumatised persons, suggesting a new diagnostic category of ‘*Complex PTSD*’. This concept acknowledges that there may be severe alterations of the affectivity, consciousness and personality as a consequence of traumatisation, including difficulties in regulating emotions, shame and helplessness distorting perception of the self, distorted perception of the perpetrators, interpersonal problems accompanied by difficulties in relating to others, mistrust and distorted value systems. Many of the civil war victims and former child soldiers in Sudan and Uganda fall into this category. This raises the concern that any psychotherapy of 4–8 sessions may be far too short to adequately address the complexity of such disorders.

Possible harm of re-exposure

The Testimony Therapy proposes that being silent about a trauma limits recovery and that talking about, and working on the traumatic memory, is a key factor for healing. However, this basic assumption is controversial: many experts warn against early confrontation in the treatment of sequential trauma and complex PTSD. They recommend first ensuring the personal safety of the client and creating a safe environment to first work on a stable therapeutic relationship, and on the regulation of emotions, before going into re-exposure of the traumatic experience (Fischer & Riedesser, 2009; Lampe et al., 2008). The National Institute of Clinical Excellence in the UK warns, in its guidelines (National Institute for Clinical Excellence, 2005), that

stabilisation is preferred while the traumatised subjects are still living in danger, still experiencing violence, or are still exposed to political dangers. It is further stated, that for PTSD sufferers who find it difficult or overwhelming to disclose details of their traumatic experience, several sessions should be devoted to establish a trusting therapeutic relationship and emotional stabilisation before re-exposure to the traumatic event.

Re-exposing therapies carry a special risk in terms of survivors of sexual violence. In many cultures, at least part of the guilt associated with rape is assigned to the survivors. Remaining silent may, therefore, be the primary adequate coping strategy in this circumstance, and prevents the survivors and their children from being expelled from their communities (Tankink, 2004). Intense feelings of guilt, shame, rage or suicidal ideation may constitute other exclusion criteria for confrontational therapies (Pérez-Sales, 2004). These considerations, again, show that certain settings, e.g. rather public discussions in non-private settings (such as huts), can be inadequate. It may, therefore, be difficult for lay counsellors to detect those criteria (Pérez-Sales, 2004). Special precaution is indicated in settings where no secondary and tertiary treatment levels are available if exacerbation occurs during confrontational psychotherapy. The theoretical framework of NET postulates that its therapeutic effect is caused by habituation to the trauma; yet the traumatic experience of child soldiers include: having been forced to eat human flesh, having been forced by the LRA (Lord’s Resistance Army) to kill parents, relatives or other persons, and having experienced serial sexual violence at a very young age over an extended period of time (Ertl et al., 2011).

However, short term trauma focused psychotherapy was designed for, and will likely work best with, single traumatic events that occur in otherwise stable situations. The concept of habituation is more plausible in this

scenario (e.g. a gun pointed at a cashier at work and, as a result, avoiding returning to work due to intrusive memories). Subjects with severe, early and multiple traumatisation may need long term, therapeutic engagement, stable therapeutic relationships and additional psychosocial interventions. The authors feel that the content of the trauma, the age of onset, and the duration of exposure are all important considerations for selection of the psychotherapy best suited to the subject.

Mechanism of action

The production of a *coherent* narrative of the most traumatic memory is proposed as a possible mechanism of action in NET. Yet, the NET research does not consider that narrative coherence is not only a function of age (with differences expected for children), but also a function of culture (Reese et al., 2011). For instance, non-Western cultures may not share similar conceptions of time and chronology (Reese et al., 2011). Another important aspect of the data generated by the NET trials has not been systematically presented yet, i.e. the content of the narratives. This could generate a deeper understanding of how extreme and unknown forms of traumatic experiences relate to psychopathological symptoms in a specific cultural context, and what type of coping is possible and even preferred. This would, in the tradition of Testimony Therapy, give a voice to the survivors and send out a political message. Addressing the meaning of the narratives may help to explore whether the proposed mechanism of action (to create a coherent autobiographic memory) is actually working. From there, it could be explored further, and together with the survivors decided how best to assist in coping, healing or simply living.

Conclusions

The randomized controlled NET trials so far conducted in LMICs targeted a vast range of different populations, settings and needs, indicating efficacy of the intervention.

However, the studies have various unresolved methodological questions. The most serious of these being that the efficacy of short term therapeutic engagement was concluded from statistically significant effects found at long term follow-ups only, whereas those differences did not show up post treatment or at earlier follow-up points. There are also several conceptual issues of the intervention that deserve further evaluation. To date, such standardised interventions do not usually consider the effect of disasters on the fundamental psychosocial support of families and communities. In addition, they also do not consider culturally bound idioms of distress, traditional rituals and/or belief systems. Considerations of ongoing, post disaster hardships, such as food shortage, land conflicts, resettlement and violence have been shown to be essential factors and mediators of PTSD symptoms, and could also be helpful in evaluating the efficacy of NET. Therefore, the authors conclude that the evidence for the efficacy of NET for the reduction of PTSD symptoms in post disaster settings in LMICs is inconclusive. Standardised short term, trauma focused, psychotherapies should be further tested in 'real world' effectiveness trials in existing clinical care systems before use on a large scale can be proposed.

Acknowledgements

The authors would like to acknowledge Stefan Priebe for a critical revision of the manuscript. Adrian P. Mundt is funded by a European Union Marie Curie International Outgoing Fellowship PIOF-GA-2011-302346.

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