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On the efficacy of Narrative Exposure Therapy: a reply to Mundt et al.

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In their review article, Mundt et al. (2014), 'Evaluating interventions for posttraumatic stress disorder in low and middle income countries: Narrative Exposure Therapy', (Intervention, this issue) evaluated Narrative Exposure Therapy (NET) as an example of a short term treatment for posttraumatic stress disorder that is applied in low and middle income, post conflict settings. They concluded that it is premature to recommend NET as a treatment approach. In this response, the clinicians and researchers who developed NET argue that the paper by Mundt et al. does not correctly represent the rationale of NET and that the methodological critique of the NET trials in the article is biased. Compared to other types of psychotherapy and psychosocial interventions in post conflict settings, the evidence base of NET is strong, and the application of NET within a sustainable mental health care system can be recommended.

Keywords: evidence, Narrative Exposure Therapy, post conflict settings, posttraumatic stress disorder

In this issue of *Intervention*, Mundt et al. (2014) address important questions involving the treatment of posttraumatic stress disorder (PTSD) in low and middle income countries (LMICs); provide a critical review of Narrative Exposure Therapy (NET), which is a concise psychological treatment method for PTSD that has been developed and researched by the authors of this paper. Although the topics that Mundt et al. discuss are of great interest to mental health providers, as well as to conflict affected individuals and communities, we believe that their paper misrepresents what NET really is, that the arguments about the presumed weak evidence base of NET are flawed, and that some of the conceptual standards proposed by Mundt et al. remain a matter of debate.

Rectification of the rationale of Narrative Exposure Therapy

The role of exposure

The presentation of NET in the paper of Mundt et al. is incomplete and partially incorrect. Contrary to the authors' assumption, NET is not merely a '*fusion*' of testimony therapy and cognitive behavioural therapy for phobia. A phobia (for example agoraphobia or spider phobia) is treated with *in vivo* exposure, which requires the patient to face the fear elicited by the phobic object. The classical rationale of this type of exposure therapy is that processes of habituation and extinction, which occur through exposure, lead to a decrease of fear and phobic disorder. For the treatment of PTSD, the international treatment guidelines recommend *trauma focused* therapies (National Institute for Clinical Excellence, 2004; Forbes et al., 2007), such as NET. However, while the common factor for all variants of trauma focused treatments is that the patient is confronted with memories of the past traumatising experiences, none of the theories behind these approaches are based merely on a habituation and extinction rationale. Much more advanced memory theories (for a recent formulation, see Brewin, 2014) have been presented and are the basis of trauma focused therapies. For example, the rationale of NET is that PTSD results from an excessive and uncontrolled sensory perceptual memory representation of the traumatic event that is accompanied by fragmented, verbal autobiographic, contextual information. Narrative exposure reorganises this memory distortion

by constructing a life story that includes a coherent autobiographic memory of the traumatic events (see Schauer, Neuner, & Elbert, 2011). Next to this, NET also allows a reflection on the person's entire life as a whole and fosters a sense of personal identity. Working through the biography highlights the recognition and meaning of interrelated emotional networks from experiences and facilitates the integration and understanding of schemas and behavioural patterns that evolved during development. The exhaustive reprocessing and meaning making thus extends far beyond overcoming simple '*phobic avoidance*'. The aim of NET, from its outset, was to conceptualise a form of trauma treatment, based on scientific knowledge of psychology and neuroscience, which can be efficacious in a variety of countries and cultures, whether they be resource poor or high income. Especially, but not limited to, resource poor countries with weak or absent healthcare access and/or infrastructure, NET is designed, by its very nature, to be taught to local personnel or even local lay people, as demonstrated in its simplicity and short duration.

Documenting human rights abuses

In addition, the principle behind NET is also to account for human rights abuses, while having a sociopolitical, as well as a therapeutic, dimension for treating traumatic stress related conditions. With the intention of ameliorating psychological trauma, NET is also intended to contribute to the fight against torture, persecution, and the vicious cycle of victimisation and perpetration. While standard practices of psychotherapy, irrespective of the practical issues of applicability, are concerned mostly with the recovery of the individual, survivors of organised violence often do not want to separate their personal suffering and recovery from the suffering and assistance needed for their people. NET responds to this concern, because, during the course of treatment, it documents organised or state sponsored violence and war, sociopolitical and economic dimensions that drive conflict, individual human rights abuses, crimes against humanity, genocide, victimisation and the witnessing, as well as the perpetration, of violence.

Aiding collective recovery

Beyond individual treatment, the task at hand in large population based, disaster and war settings includes the healing of the community. The collective reconstruction of the past, based on diverse individual autobiographical narratives and their translation into education, information, and communication might help to reduce trauma symptoms within the larger group. The documentation of history through diverse individual accounts with NET has the potential to contribute to a comprehensive view of events and a coherent belief system, embedded in a respective collective identity based on a mutual understanding of the processes and experiences in the different groups (Schauer & Schauer, 2010).

The efficacy of NET: the randomised trials reconsidered

Mundt et al. intend to evaluate *interventions* for PTSD in LMICs by using NET as an example. However, in the paper, the focus shifts between evaluating NET as an *intervention* to evaluating *randomised controlled efficacy trials* (RCTs) with NET. However, a specific RCT is not the same as an intervention, but is just one isolated experiment that has been carried out to answer a research question (e.g. the efficacy of a treatment in a specific context) related to an intervention. Typically, RCTs are part of a multistage evaluation process to determine the utility of a treatment (Foa et al., 2008; Nickerson et al., 2011). RCTs are indispensable as they are the only way to provide causal conclusions about the benefits and risks of a treatment. However, RCTs themselves are not equal to the interventions, as RCTs are not necessarily planned to be sustainable

and comprehensive outside of a research context.

The methodological criteria suggested by Mundt et al.

Surprisingly, rather than referring to established criteria for the evaluation of randomised trials (see, for example, Foa & Meadows, 1997), Mundt et al. (2014) decided to conceive their own standard of evaluation. However, their list of '*basic criteria to scrutinise trauma focused psychotherapeutic interventions*' is based on their own subjective anecdotal experience and impressions, and did not derive from scientific knowledge nor standards in psychotherapy research. Without providing arguments, they selected just three methodological criteria for their evaluation: (1) the control group should have a comparable duration to the experimental group; (2) the intervention and the control group should be comprised of comparable ethnic groups; and (3) the primary outcome should be measured immediately following treatment. Unfortunately, through this arbitrary choice of criteria, the authors miss the opportunity to mention the positive methodological aspects of our methods that had been appreciated by previous reviewers of high ranking journals, as well as in a number of papers referring to our work. These methodological achievements include clearly defined target symptoms, the use of valid and reliable instruments, mostly directly validated in, and developed for, the target population, assessments that were carried out by blinded and trained assessors, treatment programmes that were manualised, unbiased assignment to treatment, mostly the same therapists for both conditions, follow up examinations up to one year following treatment, and treatment dropout rates lower than in other treatment studies. Alongside these unquestionable strengths of the NET trials, we believe that the studies are doing much better than suggested by Mundt et al., even with regard to their choice of criteria.

Difference between NET and control conditions

Mundt et al. claim that the superiority of NET in comparison to control conditions could not be shown as there were baseline differences between the treatment groups. However, four of the cited RCTs demonstrated that NET was superior to a control condition of similar duration, thus proving a specific effect of NET.[1] In five of the six trials, there was no single baseline group difference, neither in the ethnic composition nor in any other measure. There was a small, statistically significant group difference in the ratio of nationalities in one study (Neuner et al., 2008). Mundt et al.'s assumption that this difference indicates a problem with randomisation does not consider the likely alternative explanation of false positive findings through multiple comparisons. Statistically, the comparison of five to ten baseline characteristics in six trials will result, very likely, in one or more identifications of seemingly significant differences that arise by chance. The most likely conclusion of the NET studies is that the superiority of NET in comparison to other conditions is based on the treatment and not on other group differences.

Immediate post treatment assessment

Mundt et al. emphasise that the '*immediate post treatment assessments should be used as the primary outcome*' without providing a justification for this suggestion (other than referring to the trial of a psychosomatic breast cancer study). However, the primary outcome measure and time point depends on nothing but the hypothesis of a specific trial. For several reasons, it is often not appropriate to select '*immediate post test*' as the primary time point. First of all, there is usually no such *'immediate'* post test in psychotherapy research, because many psychological instruments require a retrospective observation period, very often four weeks. Patients

need to be out of treatment during this observation period. Second, immediate measurements are more sensitive to unspecific effects that may wane across the period of a few months. Third, the notions that treatment effects are measured by a post test and that the follow ups determine the mere sustainability of the effect, are incorrect for malistic transfers of assumptions of medical intervention research to psychotherapy. The idea that the change processes caused by psychotherapy are terminated at the last active session and that the best that can happen afterwards is the maintenance of this effect is not supported by evidence. Conversely, it is actually highly unlikely that the healing effect of any psychotherapy happens only within the limited time of the active treatment sessions. It is far more likely that short treatments stimulate changes in experiences and behaviour that, in turn, mediate the effects on symptoms. Post tests immediately following treatment would often occur too early to detect differences and are probably contaminated by biases such as social desirability towards the therapist. For this reason, in most trials, we have deliberately chosen not to have a measurement before three months after treatment.[2]

Nevertheless, we consider a first assessment after three months as an early estimation of the short term effects of a treatment, and for very brief treatments such as NET, such a time point occurs before the last session of many other short treatment approaches. In most of the studies, we could show that NET produces an early effect, often not different from other active treatments. However, while this effect continues to increase for NET, comparison conditions usually fall back in their effect. A treatment with a short term effect on symptoms (which can be detected in a post test, or after three months) and without a long term effect (which can be detected in later follow up assessments) seems of little help. In all of our trials, we have postulated that NET produces more than a short term effect, and, as a consequence, the last follow up measurement has usually been the time point for the primary hypothesis. The memory restoration and reorganisation of brain structures (Elbert et al., 2006) as well as behavioural and interpersonal changes due to the narrative reprocessing in NET continue to have an ongoing curative effect for many months and years, even in complex trauma survivors.

Confounding variables

Mundt et al. assume that confounding variables such as living conditions or the activities of nongovernmental organisations (NGOs) may explain the observed long term treatment effects. However, it is a highly implausible assumption that, just by chance, in a series of trials, favourable living conditions and NGO programmes happened to fall exactly on those subjects that had been randomised into one condition, whereas less favourable living conditions systematically fell on those randomised to the other group. It is far more likely that the difference between the groups (the intervention) causes the subjects to choose a different living arrangement or to change their conditions in a way that emotional processing is either fostered or not. The variability of living situations argues in favour of, rather than against, the efficacy of NET. Independent of potential mediators of the effect, the studies have proven that NET causes a long term reduction of PTSD and other outcomes in comparison to no treatment or active control conditions, and this effect is robust enough to hold out even against the large variance of changes in living conditions found in the context of post war societies.

The concept of NET in the context of interventions

As well as the criticism related to the methods of the trials, Mundt et al. also raise a list of conceptual criteria that focus on the context of the intervention.

Unfortunately, they keep referring to the information provided in the randomised trials to draw conclusions about the concep tual quality of NET, rather than doing a comprehensive literature research about our work and the conceptual publications. This leads to several misunderstandings, which could have been easily avoided. In addition, they repeatedly postulate their own subjectively selected criteria; some of which are not consensus in the field.

NET is not meant as stand alone intervention

Contrary to what Mundt et al. suggest, NET is not meant as a stand alone, heal the world programme and is not presented as such. NET is intended to treat trauma related mental disorders and to increase function ing, and it should be evaluated according to this goal and not the fulfilment of all potential needs of a community. Of course trauma treatment alone may not be enough to prepare a former child soldier for his return to his home village and, of course, trauma treatment does not provide food, shelter, nor protection from violence or snakes, nor does any other psychosocial intervention. NET was successfully intro duced in large scale, cascade format, aid models connected with the existing local public mental health sector (see, for example, Schauer & Schauer, 2010; Ruf & Schauer, 2012). As such, it may play an important role in the recovery of post con flict or post disaster societies, ideally embedded in a comprehensive system of care and interconnected with other systems of assistance.[3]

NET is not narrowly focused on war and disasters

We certainly agree with the authors that PTSD is not the only psychopathological consequence of traumatic stress. In each single trial, we have considered several comorbid diseases and conditions such as physical complaints, depression, guilt, physical symptoms, perceived stigmatis ation, and functioning. In general, the authors seem to be unaware of our studies of war related outcomes other than PTSD.[4] We also agree with Somasundaram's (2007) observation that the war in Sri Lanka possibly had more of a detrimental effect on children and families than the tsunami. This observation is not in contrast to our own work in Sri Lanka's North Eastern pro vinces. Our workgroup had been active in Sri Lanka years before the tsunami, and our research in Sri Lanka documented the effects of war on children (Elbert et al., 2009) and families (Catani, Schauer, & Neuner, 2008) also before the disaster. Furthermore, NETdoes not necessarily focus on war or disaster events, but rather on the most serious individual traumatic stressors that a person had been exposed to.

Complex trauma does not require long treatment

Mundt et al. insist that the treatment of PTSD resulting from multiple traumatic events requires long term therapy, including a stabilisation phase. However, this opinion is supported neither by our findings nor by other treatment studies. The *National Institute for Health and Care Excellence* (NICE) guide lines do not prescribe a stabilisation phase for either simple, or complex, PTSD; rather, they recommend that healthcare pro fessionals '*should consider*' carrying out some sessions before exposure in cases of those who find it difficult to disclose their trau matic events. This issue has been previously discussed at length (Neuner, 2008; Neuner, 2012). It is also incorrect that suicidal ideation or feelings of guilt and shame are contraindications for confrontational short term psychotherapy. Current trauma focused treatments, including NET, deliber ately include suicidal and self injuring patients (van Minnen et al., 2012; Pabst et al., 2012; Pabst et al., 2014, in press).

Moreover, if the authors were correct in their assumptions, we would expect to see many individuals deteriorate and a significant number of treatment drop outs in response to NET. However, the opposite is the case. In all trials, the number of symptom deteriorations has been much lower in the NET conditions than in the control con ditions, and the number of drop outs in NET is lower than in most other psychother apy approaches. The authors are invited to rethink their opinion and to consider the possible drawbacks of long term treatments that are expensive, require extensive edu cation, may foster dependencies on the therapist, and have not been tested in randomised trials; further, those treatments show less than promising preliminary evi dence in case series with survivors of war and torture, and they prolong the suffering of the survivors (Birck, 2004; Carlsson et al., 2005).

Evidence around NET is not inconclusive

Mundt et al. deduce that the current studies of NET in low income countries are '*interest ing, but inconclusive*'. This statement differs from the conclusions of other evaluations of NET and trauma focused therapy with victims of war (Crumlish & O'Rourke, 2010; Robjant & Fazel, 2010; McPherson, 2012) that, in general, praised the methodo logical rigour of our studies, rated the current evidence for NET as promising, and identified NET as the intervention for war related PTSD, with the best evidence base thus far.[5] The main limitation raised by independent evaluators of NET was that NET, at the time of the writing of the articles, had been tested only by a single research group. However, since the publication of these reviews, independent successful stud ies of NET have been published, including a randomised trial from China (Zang, Hunt & Cox, 2013). Other NET studies have been conducted in LMICs, completely independently of the NET developers (Gwozdziewycz & Mehl Madrona, 2013).

Witholding evidence based interventions from LMICs is unethical

Mundt et al. started their paper with a moral accusation against *'trauma experts'* offering relief interventions. Their disapproval is directed especially against trauma experts from high income countries. Mundt et al., themselves originating from high income countries, feel that (obviously unlike medical or humanitarian aid delivered by high income countries) mental health programmes appear to be *'less coordinated'*, *'more variable'*, *'insecure'*, and *'culturally insensitive'*. This accusation relat ing to field workers and researchers in the area of mental health and psychosocial support is reckless and unsubstantiated. Ethically, we cannot accept the suggestion that the latest, state of the art developments in research should be intentionally withheld from LMICs. Is this protective attitude not, in itself, a kind of modern colonialism? While it may be true that some psychosocial actions are inef fective and possibly disruptive, it is not helpful to condemn trauma focused, public mental health interventions at large. On the contrary, a paradigm shift in humanitarian assistance and aid work regarding mental health is indicated (Schauer & Schauer, 2010). Until recently, evidence for the efficacy of the non specific psychosocial interventions in post disaster settings has been overwhelmingly lacking (Barenbaum, Ruchkin, & Schwab Stone, 2004). Most often, the interventions provided by humanitarian workers and health professionals were developed ad hoc, without a solid theoretical background, and the efficacy of many of these methods is doubtful or, once systematically tested, even absent (Bolton et al., 2007). Despite this lack of scientific foundation, it is common that non specific interventions are lobbied for and receive resources, instead of more applicable and promising mental health services.

Furthermore, much of currently extended humanitarian assistance is offered as *'social'*, *'academic'*,*'economic'*, or all of these at once (*'holis tic'*), but does not include evidence based, psychological rehabilitation programmes with specific aims. In general, the field of mental health and psychotherapy in post war communities and conflict regions needs sound research, rather than mere opinions (Neuner & Elbert, 2007). We are not aware of any randomised trial investigating the mental health benefits and risks of holistic, psychoso cial assistance. We have suggested empirically valid, trauma focused guiding principles for public mental health interventions after war, violence and disaster, in which NET is embedded within a cascade model of care (Schauer & Schauer, 2010). (See Annex 1.)

Conclusion

We have evidence for NET as being an effec tive and efficient module for the treatment of trauma spectrum disorders in survivors of multiple and complex trauma in high, low and middle income countries, or in resource poor settings. NET is a proven intervention, to be carried out by lay thera pists, as it is robust, comparably easy to dis seminate, safe, and one of the best studied interventions thus far. As such, it can satisfy the demand for sustainability and impact. Furthermore, most importantly, the NET approach is grounded on deep humanitarian respect for the biography of the survivor, his/her community, and their helpers.

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[1] It is untrue that the effect in the Schaal, Elbert, & Neuner, (2009) study cannot be attributed to NET, since both conditions included a session of grief intervention, and NET was the only difference between the conditions.

[2] We want to counter the suggestion that we would have decided not to publish nor to omit any data from the publications of our trials. We never did this.

[3] There is a growing consensus that mental health care *interventions* in post conflict settings need to be integrated into existing systems (Pérez-Sales et al., 2011) and that the treatment of mental disorders within the health care systems needs to be accompanied by a community based approach that focuses on psychosocial problems (De Jong & Kleber, 2007; Ventevogel et al., 2012).

[4] Our group did research on the general adaptation of children (Catani et al., 2010), family violence and child maltreatment (Catani et al., 2008; Catani, 2009; Catani et al., 2010), inter-partner violence (Saile et al., 2013), and drug-induced psychosis (Odenwald et al., 2005; Odenwald et al., 2007; Odenwald et al., 2009).

[5] Mundt et al. (2014) state that there is only one review of NET. This is not correct. NET has been included in various other reviews (Dyregrov & Yule, 2006; Ehntholt & Yule, 2006; Crumlish & O'Rourke, 2010; Nickerson et al., 2011). In their review on NET, Nickerson et al. (2011) state: '*The evaluation of the capacity of an intervention to both reduce psychopathology under controlled conditions (efficacy) and be successful when implemented in routine treatment settings (effectiveness) should be the ultimate aim, a prerequisite to reaching conclusions regarding the utility of any treatment. . .Therefore, it is vital that the capacity of treatments designed to address the psychological effects of trauma is evaluated in ecologically valid settings. Two of the efficacious studies undertaken by Neuner and colleagues were conducted in such settings; specifically in refugee camps in Uganda (Neuner et al., 2008; Neuner et al., 2004). The success of trauma-focused therapy in these contexts is important for several reasons. First, the resources required to implement treatments delivered by highly educated Western clinical and research staff are often beyond the capacity of services operating in such settings. Second, the knowledge of local workers regarding the experiences and psychological sequelae of the communities is key when attempting to alleviate psychological distress in any setting. Third, local staff may be able to integrate treatment programs with local methods of healing, which is likely to increase the culturally-appropriateness of the intervention and its capacity to meet local needs.*'

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ANNEX 1: Trauma focused guiding principles for research

1. Begin project planning with sound epidemiologic data collection and community wide screening to understand the particularities of local circumstances, e.g. drug types abused, types of traumatic and other stressors, and adversities before and during the current crisis, as well as to identify populations at risk. Include individuals' experiences, socio demographic indicators, trauma and loss exposure (also pre dis aster), and social stressors. Beyond current levels of traumatic stress related symptoms (e.g. PTSD, depression, grief, suicidality), be aware of conflict related and local adver sity factors, such as forced migration, severe human suffering, poverty related sexual exploitation, child labour, female genital mutilation, family violence, and substance abuse. In planning disaster and war relief efforts, population based mental health assessment and research procedures should be introduced as an integrated com ponent of recovery efforts.
2. If the numbers of persons in need are high, aim for a community based, multi tiered, public mental health approach to service delivery (hierarchical, cascade model struc tures). This means layered training for lower level experts (screening, psychosocial and psycho educational activities, counselling, community linking, awareness rais ing, and referral) and higher level experts (psycho diagnostics, psychotherapy, super vision, and training facilitation) within a referral system (also for other mental health disorders, such as schizophrenia and epilepsy), as well as engaging complementary psychosocial domains.
3. If PTSD turns out to be a large scale problem, include a trauma focused treatment module that is focused on helping individuals and groups to deal with traumatic stress related symptoms (i.e. PTSD, depression, suicidality, substance abuse, bereavement), which can be applied by locally trained paraprofessionals.
4. Ensure that training develops the capacities of local service providers and builds local support structures, so that people within the communities served ultimately can sus tain an intervention programme. For this, it seems beneficial to acknowledge trainees' personal experiences and local knowledge but, at the same time, introduce scientific global mental health standards. This includes the partnering of local expert prac titioners (from academia, mental health, medicine, education, counselling, and law) and collaborating with international expert practitioners of the same ranks, thereby ensuring that scientific based knowledge and skills are available to the trainees, and are accessible to the beneficiaries.
5. Base the implementation structure on '*natural communities*', such as the school system for children or self help associations. These communities are often also a vehicle to sup port victims' social environments, such as peers, parents, teachers, and partners who themselves might have been affected by the violent events.
6. Design appropriate '*mental health and psycho educational*' resources, screening, and training packages for the various tiers, as well as public awareness raising strategies, so as to psycho educate the population (especially caregivers, officials, and decision makers) on mental health issues. Such education should increase the understanding of the long term effects of trauma exposure and loss, introduce skills for coping at various levels, and give information on support and therapeutic/rehabilitative activities.

7. Base counselling and therapy on a human/child/woman's rights based, testimonial approach, acknowledging past injustice and favouring social change toward the implementation of those rights.
8. Ensure a stringent form of evidence based project evaluation, which is best in the form of RCTs with variation protocols and longer term follow up of beneficiaries.
9. Finally, challenge the nihilism of global health planners regarding the role of mental health, especially as it relates to a global commitment to the provision of adequate funds for mental health implementation research.