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The therapeutic value of trauma stabilisation in the treatment of post-traumatic stress disorder – A Southeast Asian Study

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ABSTRACT

Objective: Southeast Asia suffers from various forms of natural disasters and interpersonal violence. This creates a large trauma population, while at the same time mental health services in this area are limited. The humanitarian organisation Trauma Aid Germany established trauma capacity building by training 37 local therapists in psycho-traumatology, including trauma stabilisation, in Cambodia, Indonesia and Thailand. This analysis examines the impact of trauma stabilisation as a sole treatment for traumatized clients.

Method: Clients were screened for PTSD using the Harvard Trauma Questionnaire pre- and post-treatment. Analysis only included clients who had received trauma stabilisation, including psychoeducation, but no confrontation with the traumatic event.

Results: Trauma stabilisation was highly effective in reducing PTSD symptoms, with high remission from PTSD post-treatment. Trauma stabilisation affected all subscales of PTSD and was effective in clinical as well as subclinical traumatized clients.

Conclusion: The research supports the notion that trauma stabilisation is a treatment effect for PTSD. It was highly effective in its own in reducing PTSD symptoms. Based on the analysis, trauma stabilisation was a safe, language independent treatment for PTSD sufficiently flexible to be sensitive to the client's context. Therapists can adapt the techniques to the individual client and his cultural, spiritual, developmental, cognitive and situational background. Trauma stabilisation is suitable for implementation in crisis areas. The research has also implications to the potential utilisation of para-professionals.

1. Introduction

According to the Centre for Research on the Epidemiology of Disasters (CRED), (2015) Asia is a continent that experiences the highest frequency of natural disasters creating the largest number of victims. Furthermore Asia also encounters high prevalence of human disasters including interpersonal violence and child abuse creating voluminous trauma populations suffering from various mental health problems (Souza et al., 2007; Van Schaack et al., 2011). A compound factor relates to the paucity of mental health provision in many countries within South East Asia. For example according to the World Health Organization (WHO), 2011a and 2011b mental health provision rates are as follows: Cambodia 0.42 per 100,000 and Thailand 0.14 per 100,000 people. The need for trauma capacity building in South East Asia is, therefore, essential. Trauma Aid Germany – a Humanitarian Trauma Capacity Building Organisation, operated a trauma capacity building initiative [Mekong I Project: 2010 – 2014] for Thailand, Cambodia and Indonesia in response to the Indian Ocean Tsunami (2004) (Mattheö and Sodemann, 2014). Consequently, some thirty-seven mental health practitioners (Psychiatrists or Psychologists) participated in an extensive training programme that included psycho-traumatology and Trauma Treatment Interventions.

The World Health Organization (WHO), (2013) recommends Cognitive Behavioural Therapy (Trauma Focused) and Eye Movement Desensitization and Reprocessing (EMDR) Therapy as the most empirically supported psychological treatment interventions for Post-Traumatic

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Stress Disorder (PTSD). Both paradigms are experiential interventions driven by robust protocols (Foa, 2011; Resick and Schnicke, 1993; Shapiro, 2001, 2018; Shapiro and Solomon, 1995). Pierre Janet, 1919, 1923) was the first psychologist to formulate a systematic phase-orientated approach to post-traumatic pathology – these involved three stages:

1 Stabilisation, symptom orientated treatment and preparation for liquidation of trauma memories – Trauma Stabilisation
2 Identification, exploration and modification of traumatic memories – Trauma Confrontation
3 Relapse prevention, relief of residual symptoms, personality integration and rehabilitation – Post-traumatic Growth and Resilience

Contrary to Janet's argument De Jongh et al. (2016) question the therapeutic value of trauma stabilisation suggesting paucity of supportive research, indicating instead that trauma confrontation is underpinned by more empirical data justifying its superior effectiveness. In exploring De Jongh et al.ßs (2016) assertions this research wished to consider the therapeutic value of trauma stabilisation as a 'stand-alone' treatment intervention for clients with PTSD treated by therapists trained within the Mekong I Trauma Capacity Building Project.

2. Material and Methods

The Mekong I training curriculum incorporated three teaching and learning components: psycho-traumatology, trauma stabilisation techniques and interventions (including psychoeducation), and trauma confrontation. The major psychotherapeutic paradigm underpinning the training was that of EMDR Therapy, an empirically supported psychological treatment intervention for PTSD. Table 1 highlights the professional backgrounds of the thirty-seven participants who undertook the training. As this was a pro-bono humanitarian training programme participants were requested to document their clinical activity for the period of the Mekong I project (2010–2014) which included treatment interventions. During the four-year period data was collected on 4799 clients in Indonesia, Cambodia and Thailand. Ethical approval for the study was granted by University of Worcester (UK) and was adopted in each of the three countries. The primary focus was on PTSD and the utilisation of trauma stabilisation interventions only.

PTSD was measured pre- and post-treatment via the Harvard Trauma Questionnaire (HTQ) (Mollica et al., 2004). Yatham et al. (2017) discuss in their review that the high variance in the prevalence of PTSD between studies in low- and middle-income countries (LMICs) might also be based on the assessment tools. They emphasise the importance that instruments from Western countries are psychometrically, linguistically and culturally adapted for use in special LMICs. The HTQ was deliberately chosen as it is internationally applied and validated and was subsequently available in language versions in Indonesian, Khmer and Thai. From the HTQ results DSM-V and the forthcoming ICD-11 PTSD criteria was calculated utilising 'item mapping' as suggested by Hyland et al. (2016). There is some distinction, and overlap, between the two classifications for PTSD this often results in some clients meeting one classification – but not another (OßDonnell et al., 2014). Thus, within the research literature different study populations are defined depending on the classification system used. To facilitate comparison between studies, in this article both DSM-V and ICD-11 PTSD are reported.

Table 1
Characteristics of the therapists trained during the Mekong I Project.

Characteristics of therapists		
Country	Cambodia	9 (24.3%)
	Indonesia	12 (32.4%)
	Thailand	16 (43.2%)
Professional background	Psychologist	32 (86.5%)
	Psychiatrist	5 (13.5%)
Gender	Female	21 (56.8%)
	Male	16 (43.2%)
Ag	Mean	39.48 years
	Range	29 to 62 years

Table 2
Stabilisation techniques taught in the trainings (for further information please view the ROTATE manual (Wöller and Mattheß, 2016)).

Trauma Stabilisation Techniques
Psychoeducation
Distancing techniques
Flashback management
Improvement of emotion regulation
Resource activation
Enhancement of control
Strengthening of coping skills
Increasing feeling of safety

For the analysis of trauma stabilisation as a sole treatment for PTSD several post-hoc inclusion criteria were defined. The analysis only included adult clients who had received as least one trauma stabilisation technique (including psychoeducation) and no trauma confrontation during treatment. Trauma stabilisation interventions as defined within this study are outlined in Table 2. Additionally, the analysis of client data included those with pre- and post-measures of the HTQ psychometric. In total 365 clients fulfilled these inclusion criteria. A further refinement included an analysis of those clients that fulfilled the criteria for DSM-V or ICD-11 PTSD pre-treatment respectively.

3. Results

With specific regard to the study's inclusion/ exclusion criteria 197 clients fulfilled the DSM-V criteria for PTSD pre-treatment, which results in a prevalence rate of 54.0%, and remission rate was 91.4%. Utilising ICD-11 criteria 164 clients fulfilled a clinical diagnosis for PTSD pre-treatment, with a prevalence rate is 44.9%, and remission rate of 93.3%. McNemar tests determined a significant difference between the proportion of clients fulfilling the PTSD diagnoses pre- and post-treatment ($p < 0.00001$ for both DSM-V and ICD-11 PTSD). The remission from the respective PTSD diagnosis is also highlighted in Fig. 1. On average, clients fulfilled less DSM-V PTSD criteria after the trauma stabilisation treatment ($M = 1.97$, $SD = 1.39$) than before treatment ($M = 5.0$, $SD = 0.00$). This difference, 3.03, BCa 95% CI [2.83, 3.22] was significant $t(196) = 30.62$, $p < 0.001$, and represented a large-sized effect, $r = 0.91$ and Hedges's $g_{av} = 3.08$, BCa 95% CI [2.88, 3.27]. On average, clients fulfilled less ICD-11 PTSD criteria after treatment ($M = 1.54$, $SD = 0.92$) than before treatment ($M = 4.0$, $SE = 0.00$). This difference, 2.46, BCa 95% CI [2.32, 2.60]

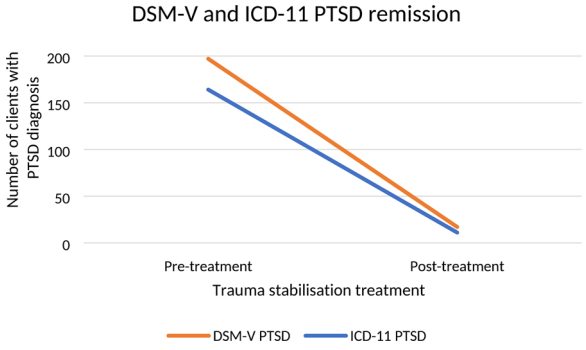

Fig. 1. Remission from PTSD after trauma stabilisation treatment. Number of clients fulfilling DSM-V/ICD-11 PTSD pre-treatment and Number of clients still fulfilling the PTSD diagnosis post-treatment (adapted from a previous paper of the authors,)) Eichfeld et al., 2018).

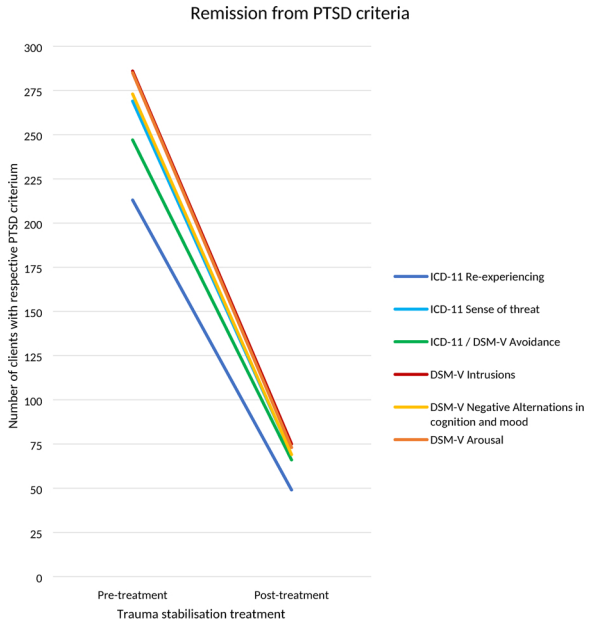

Fig. 2. Remission from PTSD criteria after trauma stabilisation treatment: Number of clients fulfilling the respective DSM-V/ICD-11 criteria pre-treatment and number of clients still fulfilling the respective criteria post-treatment.

was significant $t(163) = 34.36$, $p < 0.001$, and represented a large-sized effect, $r = 0.937$ and Hedges's $g_{av} = 3.78$, BCa 95% CI [3.60, 3.99].

Remission rates for DSM-V and ICD-11 PTSD criteria regardless of the PTSD diagnosis pre-treatment ranged between 73.3% and 77.0%, the prevalence and remission of the criteria is highlighted in Fig. 2. On average, clients fulfilled less symptoms of the respective criteria after treatment than before treatment. These differences were significant for all criteria ($p < 0.001$), the Hedges's g_{av} ranged between 1.08 and 1.56 and r ranged between 0.62 and 0.79. For further details please view Table 3.

4. Discussion

What this research study indicates is that Trauma stabilisation is a treatment effect for PTSD. Furthermore, the research supports that the treatment intervention was well tolerated, effective and efficient. In addition to a treatment effect of trauma stabilisation the remission from PTSD was also very high. Trauma stabilisation – as a stand-alone intervention, also reduced PTSD sub-scales regardless of the diagnostic classification utilised. Additionally, trauma stabilisation appeared to be effective with a range of traumatized clients, with results demonstrating a treatment effect with both PTSD clinical and sub-clinical trauma populations. Furthermore, results confirm Janet (1919,1923) assertions relating to a phasic intervention towards psychological trauma treatment, and that trauma stabilisation is sufficient to alleviate PTSD symptomatology.

Ferguson (2009) offers an indication as to how to interpret effect sizes. The group differences of PTSD pre- and post-trauma stabilisation treatment represent a strong effect size Hedges $g_{av} = 3.08$ [DSM-V PTSD] and $g_{av} = 3.78$ [ICD-11 PTSD] (cut-off for strong effect: Hedges $g = 2.70$). The group differences pre- and post-treatment of the different PTSD criteria regardless the PTSD diagnosis represent moderate effects Hedges $g = 1.08 – 1.63$ (cut-off for moderate effect: Hedges $g = 1.15$).

Nonetheless there are some limitations to this study and its subsequent findings. The analysis can be criticised for its lack of a blind rater, of a control group and of a follow up. These limitations in the study design are due to the fact that the Mekong I project was set up as a trauma capacity building project and the resources were focused on this aim rather than the study design. Nevertheless, a follow-up measurement could have analysed the sustainability of the treatment effect over time. The limitations of blind rating and control group can be minimized by comparison to a RCT study (Steinert et al., 2017, 2016) carried out during the Mekong Project. The overlap between the Mekong data and the data of the study (therapists, diagnostic tools) allow a direct comparison as argued in a previous paper of the authors (Eichfeld et al., 2018). The remission rate of the RCT study where assessments were performed by a blind rater (96% PTSD remission) is very close to the remission rate of this analysis, so the lack of a blind rater seems to be of little consequence in this analysis. A control group is important for the interpretation of effect sizes, as effects in within-subject designs are often much higher than in control group designs (Durlak, 2009). A comparison to the control group of the RCT study via general linear models revealed a large effect for the trauma stabilisation treatment (DSM-V PTSD ($r = 0.56$, $\eta_p^2 = 0.31$) and ICD-11 PTSD ($r = 0.57$, $\eta_p^2 = 0.32$), see Eichfeld et al. (2018)).

A distinct advantage of this study relates to the uniform training of local therapists, able to then treat traumatized clients, being from the same cultural background and able to use primary language rather than through either second language or translation. A core aspect of the Mekong I project was that there were no exclusion criteria for clients – any individual seeking assistance was offered trauma therapy. This increases the generalisability of the finding to real world settings.

Another distinct advantage of Trauma stabilisation interventions is

Table 3
Remission of PTSD symptoms after trauma stabilisation treatment: Pairwise comparisons of the mean number of fulfilled symptoms of the respective criterium for DSM-V/ICD-11 PTSD before and after trauma stabilisation treatment for all 365 clients (adapted from a previous paper of the authors, Eichfeld et al., 2018).

HTQ	Raw mean (standard deviation)		*t*	bootstrap *p*	Hedges's g_{av}[a] [BCa 95% CI]	*r*
Nr. Of symptoms	Pre-treatment	Post-treatment				
DSM-V PTSD Intrusions[b]	2.12 (1.512)	0.41 (0.932)	19.203	< 0.001	1.56 [1.40, 1.73]	0.709
Neg.Alt. cogn.&mood[c]	3.59 (2.411)	0.73 (1.414)	20.873	< 0.001	1.44 [1.30, 1.60]	0.738
Arousal[d]	3.145 (1.763)	0.72 (1.153)	24.489	< 0.001	1.63 [1.50, 1.76]	0.789
Avoidance[e]	1.16 (0.885)	0.24 (0.552)	17.356	< 0.001	1.25 [1.09, 1.39]	0.672
ICD-11 PTSD Re-experiencing[f]	0.89 (0.843)	0.16 (0.445)	14.900	< 0.001	1.08 [0.93, 1.20]	0.615
Sense of threat[f]	1.17 (0.831)	0.24 (0.543)	18.723	< 0.001	1.32 [1.18, 1.45]	0.700
Avoidance[e]	1.16 (0.885)	0.24 (0.552)	17.356	< 0.001	1.24 [1.10, 1.38]	0.672

[a] Hedges's g_{av} is a corrected effect size to the biased Cohen's d_{av}.
[b] 0-4 symptoms of DSM-V PTSD Intrusions possible.
[c] 0-8 symptoms of DSM-V PTSD Negative Alternation of Cognition and Mood possible.
[d] 0-5 symptoms of DSM-V PTSD Arousal possible.
[e] 0-2 symptoms of DSM-V/ICD-11 PTSD Avoidance possible.
[f] 0-2 symptoms of ICD-11 PTSD Re-experiencing/Sense of threat possible.

that they can be adapted culturally, offer flexibility in their utilisation and are able to be adapted to the individual needs of the client with regards to cultural heritage, spirituality, intelligence, development stage and environment. As Trauma stabilisation doesn't include a trauma confrontation, or exposure to the traumatic event, this then minimizes the potential for of re-traumatisation and destabilisation. Its focus on resources and coping strategies also prepares the client for potential future stressful or traumatic events.

Ganasen et al. (2008) emphasise in their review about mental health literacy in LMICs that besides the scarcity of mental health services poor mental health literacy can be an obstacle to recieve treatment to a mental illness. Improving mental health literacy can reduce stigma and promote help-seeking. The suggestion to collaboratively work between HICs and LMICs to provide clinical training to the local healthcare community and thereby strengthen the local expertise base (Yatham et al., 2017), was met by the Mekong I Project. The improvement in literacy of PTSD was achieved during this Trauma Capacity Building Project as feedback obtained from local providers shows. A Thai psychotherapist trained during the project emphasises:

"The Mekong I Project has made mental health professionals in Thailand become more aware of trauma and its effects on both their clients and on themselves (as secondary trauma)."

He separates the direct benefit for the population in Thailand via the trauma treatments and the indirect benefit as mental health professionals became more trauma-informed. The Mekong I Project has made existing mental health professionals in Thailand, Indonesia and Cambodia more aware of trauma, its impact on local populations, and in addition, raised the importance of psychological trauma psychoeducation as a global mental health issue within each of these countries. Furthermore, Post Mekong I, Indonesia and Cambodia have integrated psychological trauma into their university curriculum involving the training of doctors, psychologists, social workers and nurses. To date, there is now a task for several dozen trauma therapists in each of the three countries.

As trauma stabilisation is easy to learn and to teach, safe, flexible and efficient, it is a suitable approach for trauma therapy, especially in crisis areas with limited mental health capacity. Traumatic events in LMICs increase the risk of mental health diseases, while at the same time the availability and access to mental health services is limited (Yatham et al., 2017). In these areas with a lack of therapists, psychologists or psychiatrists the safe use of trauma stabilisation creates the possibility to train para-professionals like nurses, teachers or clergy.

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This is the second paper about the Mekong I data, focussing upon the impact of trauma stabilisation, which analyses clinical data from 4799 clients consisting of over 2000 variables, therefore the paper represents partial analysis of the larger dataset.

6. Declarations of interest

None.

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