#### **REVIEW ARTICLE**

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# The feasibility of prolonged exposure therapy for PTSD in low- and middle-income countries: a review

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#### ABSTRACT

There is a need in the global south to evaluate and implement empirically supported psychological interventions to ameliorate symptoms of posttraumatic stress disorder (PTSD). Empirically supported treatments (ESTs) have increasingly been developed and implemented, yet the majority people in the global south do not have access to these treatments for mental disorders such as PTSD. Prolonged exposure therapy has accrued substantial empirical evidence to show it as an effective treatment for PTSD. Research on the effectiveness and acceptability of prolonged exposure in a low- and middle-income countries (LMICs) are sparse. This brief report presents a review of prolonged exposure (PE) therapy and its feasibility as a trauma therapy for PTSD in LMICs. First, we present a brief overview of PE as a first-line treatment for PTSD. Second, using South Africa as a case example, we present a brief overview of traumatic stress in South Africa and how mental healthcare has developed since the abolishment of apartheid in 1994. Lastly, we discuss the challenges pertaining to the dissemination and implementation of PE in LMICs.

## La viabilidad de la terapia de exposición prolongada para el trastorno de estrés postraumático en países de ingresos medios y bajos: una revisión

Existe una necesidad, en el hemisferio sur, de evaluar e implementar intervenciones psicológicas basadas en la evidencia para mitigar los síntomas del trastorno de estrés postraumático (TEPT). Los tratamientos basados en investigación empírica (TBIEs) se han desarrollado e implementado de manera creciente; no obstante, la mayoría de las personas en el hemisferio sur no tienen acceso a este tipo de tratamientos para enfermedades mentales, tales como el TEPT. La terapia de exposición prolongada ha acumulado evidencia empírica substancial para demostrar que es un tratamiento efectivo para el TEPT. La investigación sobre la efectividad y aceptabilidad de la exposición prolongada en países de ingresos medios y bajos (PIMBs) es escasa. Este reporte breve presenta una revisión de la terapia de exposición prolongada (EP) y su viabilidad como un tratamiento enfocado en trauma para el TEPT en PIMBs. Primero, presentamos un breve panorama de la EP como primera línea de tratamiento para el TEPT. Segundo, usando a Sudáfrica como ejemplo, presentamos una breve perspectiva del estrés traumático en este país y cómo los servicios de salud mental se han desarrollado desde la abolición del Apertheid en 1994. Finalmente, discutimos los desafíos relacionados a la diseminación e implementación de la EP en PIMBs y proponemos perspectivas futuras en relación a la implementación de TBIEs, como la EP, en PIMBs. "The implementation of prolonged exposure therapy for PTSD is a necessary consideration given the prevalence of trauma and limited use of empirically supported treatments for PTSD in low- and middle-income countries."

#### 在中低收入国家中延长暴露治疗PTSD的可行性:一个综述

南半球有必要评估和实施已经得到实证支持的心理干预措施以减轻创伤后应激障碍 (PTSD)的症状。越来越多实证支持治疗(ESTs)的开发和实施,但南半球的大多数人 仍无法获得针对PTSD等精神障碍的治疗。延长暴露疗法已经积累了大量的经验证据,表 明它是治疗PTSD的有效方法。在低收入和中等收入国家(LMIC),关于延长暴露的有效 性和可接受性的研究很少。

这份简短的报告对延长暴露(PE)治疗及其在LMIC中作为PTSD的创伤治疗的可行性进行了综述。首先,我们简要概述PE作为PTSD的一线治疗方法。第二,以南非为例,我们简要概述了南非的创伤应激以及自1994年种族隔离制度废除以来精神保健的发展情况。 最后,我们讨论了在LMIC中PE传播和实施方面的挑战,并提出有关在LMIC中实施ESTs (如PE)的未来展望。

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#### PALABRAS CLAVE

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#### 关键词

创伤后应激障碍;延长暴 露;实施;中低收入国家

#### HIGHLIGHTS

• The implementation of prolonged exposure therapy for PTSD is a necessary consideration given the prevalence of trauma and limited use of empirically supported treatments for PTSD in low- and middleincome countries.

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Considerable effort has been made to develop effective psychological treatments to ameliorate the psychological sequalae of posttraumatic stress disorder (PTSD). Yet the dissemination and implementation of empirically supported treatments (ESTs) are still limited in low- and middle-income countries (LMICs) (Patel, Chowdhary, Rahman, & Verdeli, 2011). Trauma exposure and the prevalence of PTSD among LMICs are increasing concerns and are exacerbated by the limited uptake inadequate implementation of ESTs for PTSD (Koenen et al. 2017).

This brief report presents a review of prolonged exposure (PE) therapy and its feasibility as a trauma therapy for PTSD in LMICs (Foa, Hembree, & Rothbaum, 2007). First, we present a brief overview of PE as a first-line treatment for PTSD. Second, we discuss the challenges pertaining to the dissemination and implementation of PE in LMICs.

Lastly, using South Africa as an example, we present a brief overview of traumatic stress in South Africa and how mental healthcare has developed since the abolishment of apartheid in 1994, and describe initial evidence of the implementation of PE in a LMIC. We conclude by reflecting on future perspectives regarding the implementation of ESTs such as PE in LMICs

#### 1. Prolonged exposure therapy for PTSD

PE for PTSD has produced a substantial number of replication studies demonstrating its effectiveness in treating PTSD, making it a leading treatment for PTSD in the USA and elsewhere (cf. Rothbaum, Meadows, Resick, & Foy, 2000). A search of the Clinical Trials registry (clinicaltrials.gov), using the key words: 'PTSD'; 'prolonged exposure', showed 103 clinical trials in various stages of progress such as recruiting, not yet recruiting, active, not recruiting, and completed studies for PE across the global north. The use of robust methodological studies for the investigation of PE for PTSD has led to a proliferation in clinical trial studies. The majority of these studies are located in the global north, which supports the need for the evaluation and implementation of PE in the global south in LMICs.

Meta-analytic studies and critical comparative reviews have synthesised the results of randomised clinical trials (RCTs) to further demonstrate the efficacy and effectiveness of PE for PTSD (e.g., Kline, Cooper, Rytwinksi, & Feeny, 2018). For example, in a meta-analysis conducted by Powers, Halpern, Ferenschak, Gillihan, and Foa (2010), the study reported that more than 80% of participants in PE had better outcomes compared to the controlled conditions. To this end, the current clinical practice guidelines of the American Psychological Association (APA) and International Society of Traumatic Stress Studies (ISTSS) recommend the use of PE as a treatment of choice for PTSD in adults (Courtois et al., 2017).

Based on the guidance of the ISTSS, the first international guidelines for the treatment of PTSD was published (Foa, Friedman, & Keane, 2000), with a second edition several years later, and the third edition to be available in 2020 (Foa, Keane, Friedman, & Cohen, 2008). PE was also chosen as the treatment of choice in all VA heathcare centres across the US, and required nationwide training of health profesionnals in PE (Eftekhari et al., 2013).

A review of the clinical trials over the last three decades show that PE has been extensively tested to treat PTSD in various populations (Foa et al., 2005), real-world contexts (Rossouw, Yadin, Alexander, & Seedat, 2018), and with various comorbid conditions (Van Den Berg et al., 2015) and treatment augmentations (Foa et al., 1999). Given the evidence-base of PE for PTSD, and considering the burgeoning adverse effects of PTSD in the majority world, the implementiton of PE in countries such as South Africa is necessary.

#### 2. Dissemination of PE: beyond the USA

In a review article by Schnyder et al. (2015), Edna B. Foa reported that a crucial aspect for the future of PE and the effective treatment of PTSD is to develop '... ways to disseminate and implement our evidence-based treatments into community clinics around the world' (p. 5). Although there have been reports of successful dissemination of PE and other treatments such as cognitive processing therapy (CPT; Resick, Monson, & Chard, 2017) in primary care facilities in the USA (Hundt, Harik, Thompson, Barrera, & Miles, 2018), the process and progress of disseminating ESTs such as PE, especially in non-western contexts, encounter several challenges (Becker, Zayfert, & Anderson, 2004). However, attempts have been made to evaluate and implement PE in non-western contexts.

For example, one of the first intervention studies on PE for PTSD in East Asia found that PE effectively reduced symptoms of PTSD in a small sample of adult males and females with mixed traumatic experiences in Japan (Asukai, Saito, Tsuruta, Kishimoto, & Nishikawa, 2010). In addition, studies conducted in Israel (e.g., Aderka, Foa, Applebaum, Shafran, & Gilboa-Schechtman, 2011) and in the Netherlands (Van Den Berg et al., 2015), among others, have added to the evidence-base of PE beyond the borders of the USA, but research conducted in LMICs remains sparse.

#### 3. Implementation of PE in LMICs

The implementation of PE in LMICs faces several challenges aside from limited to no research conducted in Foa, Gillihan, and Bryant (2013) identified factors such as professional culture that may be antagonistic towards ESTs and limited resources to enable dissemination, among others. In addition, clinician training opportunities may also prevent the dissemination and use of first-line treatments (Foa et al., 2013). For example, resource constrained countries may not have the expertise to provide the required training and continuous development of health professionals.

Kagee and Lund (2012) found that graduate training programmes in clinical psychology and counselling psychology had differing positions towards ESTs in clinical and counselling psychology. Kaminer and Eagle (2017) found that there are several EST's available to use by clinicians from LMICs. Yet the use of ESTs would be devoid of contextual considerations in the absence of locally conducted research. Patel et al. (2011) conclude that limited resources and acceptability of ESTs in LMICs are a persistent challenge to implementing effective treatments.

In addition, access to training of health professionals in treatments such as PE are limited, and infrastructure and resources at primary health care level may require multi-level upscale initiatives to adequately implement PE as an adopted trauma treatment in LMICs. In addition, ESTs have increasingly been developed and implemented, yet not enough people in the public sector have access to these treatments for mental disorders (Van de Water, Rossouw, Yadin, & Seedat, 2018). That is, persons in LMICs might receive psychological treatments that do not necessarily have any or sufficient empirical evidence to assert its effectiveness (Van de Water et al., 2018). Moreover, issues such as setting insecurity and increased levels of violence and trauma have also raised concerns regarding whether persons would benefit from the implementation of ESTs in LMICs (Kaysen et al., 2020; Wangelin & Tuerk, 2014).

Furthermore, given the cultural diversity in many LMIC's, mental healthcare clinicians and scholars need to consider the contextual relevance of mental healthcare. The relevance and applicability of mental disorders such as PTSD in the majority world is still a contested issue (Summerfield, 2001). Calls for indigenous epistemologies and a critical approach to psychology have prompted a response to practices of empirical psychology in LMICs (Kagee, 2014; Makhubela, 2017; Nwoye, 2015). For example, the promulgation of empirical and so-called mainstream

psychology in post-colonial countries are considered regressive and contrary to a relevant psychology of socio-political issues in LMICs (Macleod, 2004; Macleod & Howell, 2013).

However, even with the advent of critical psychology focusing on broader socio-political issues of racism and gender, developing countries are still faced with social and mental health issues that require effective treatment (Kagee, 2014). As a result, the dissemination of PE, which might be considered a mainstream psychological treatment, may also need to overcome concerns of its relevance and applicability in LMICs. The ensuing section uses South Africa as a case example of where the dissemination and implementation of PE for PTSD are necessary.

# 4. Brief overview of traumatic stress in South Africa

South Africa has a history of political violence and traumatisation. The former apartheid government implemented widespread practices of systemic violence and psychological denigration of persons by means of political violence (Hamber, 2009). It is estimated that 200 000 South Africans were physically assaulted, tortured and detained from 1960 to 1992 (Chapman & van der Merwe, 2007). During the mid-1970 s political violence escalated to an average of 44 killings a month, with an increase of 86 fatalities in the mid-1980 s, and by the early 1990 s up to 250 South Africans were dying per month from physical attacks (Hamber, 2009). To this end, the aftermath of political violence in South Africa was described as a 'complicated traumatic cocktail' (South African Truth and Reconciliation Commission, 1998, Volume 1, p. 365, as cited in Hamber, 2009).

Twenty-five years on, the need to ameliorate present-day traumatisation in South Africa is an ongoing concern. The South African Stress and Health Study (SASH) found that trauma exposure in contemporary South Africa among the general population is estimated at 78.3% in a total sample (n = 4351). Men were more vulnerable to experiencing criminal-related traumas (e.g., assault or torture) and women reported more traumas related to intimate partner violence (e.g., sexual assault) (Williams et al., 2007). The lifetime prevalence of PTSD at the time of the study was 2.3% in the general South African population, with the majority of the sample (55.6%) reporting to have witnessed and or experienced multiple traumas (Williams et al., 2007). To this end, PTSD is considered a public health concern in South Africa (Williams et al., 2007).

# 5. Development of mental healthcare in South Africa

Since the end of apartheid in 1994, the South African healthcare system has made laudable efforts to

develop and implement an equitable and accessible healthcare system. Mental healthcare was transformed from a fragmented and poorly coordinated system, which favoured a racial minority, to a system that is now attempting to be more relevant to the needs of all in South Africa (Rock & Hamber, 1994).

To this end, several policy and legislative landmarks have been developed to improve the state of mental health in South Africa. The White Paper for the Transformation of the Health System was published shortly before the dawn of the 20<sup>th</sup> century and was followed by the Mental Health Care Act (No. 17 of 2002) in 2004. These initial policy and legislative achievements delineated and emphasised a healthcare system that promotes equal access to services at a primary care level and the upliftment of human rights in mental healthcare.

During the last decade, further policy development aimed to accelerate mental healthcare in South Africa by 2020. The adoption of the National Mental Health Policy Framework (MHPF) and Strategic Plan 2013–2020 served as an exemplary guide to further develop mental healthcare in South Africa by 2020. However, the implementation of the MHPF has been met with some successes and tragedy. Fortunately, De Kock and Pillay (2017) found that the human resource for clinical psychology has increased over the last fifteen years, but that clinical psychology services are still centred in urban areas whereas a substantial part of the population resides in rural areas. Tragically, in 2018 more than 90 mentally ill patients died due to poorly administered mental health services in the Gauteng Province (Makgoba, 2019). Therefore, even in the face of exemplary policy development regarding mental healthcare in South Africa, considerable challenges remain. In the case of South Africa, the MHPF Strategic plan for 2013 to 2020 has provided a road map for the improvement of mental health care for all in South Africa. One of the objectives is the need for evidence-based mental health care and thus the need to develop and implement new and existing ESTs are equally important compared to accessible and equitable mental healthcare.

# 6. Initial evidence of implementation of PE in LMICs

The recent completion of two randomised controlled trials (RCTs) in two LMICs, one in South Africa (Rossouw et al., 2018) and one in Zambia (Murray et al., 2015), provides initial confidence and empirical evidence on the implementation and effective treatment of PTSD in LMICs such as South Africa and Zambia.

For example, the use of PE therapy for adolescents (PE-A) (Foa, Chrestman, & Gilboa-Schechtman, 2009) versus supportive counselling (SC) (Rogers, 1951) for

PTSD was tested in a group of school learners aged 13 to 18 year (n = 63) in the Western Cape, South Africa (Rossouw et al., 2018). Rossouw et al. (2018) found that PTSD symptom severity, as measured by the Child PTSD Symptom Scale-Interview (CPSS; Foa, Johnson, Feeny, & Treadwell, 2001) significantly improved in both the PE-A and SC arms from baseline to post-treatment assessment (difference in mean scores in the PE-A group: 28.50, 95% CI 23.11–34.1, p < 0.001, d = 3.81; difference in mean scores in the supportive counselling group 17.77, 95% CI 12.41–23.1, p < 0.001, d = 1.76).

As hypothesised by the authors, an observed improvement in PTSD symptom severity in the PE-A group was significantly greater than in the SC group (difference in mean scores in the PE-A group versus SC group 12.37, 95% CI 6.82–18.17, P < 0.001, d = 1.220.). For example, improvement in the PE-A group was observed from pre-treatment assessment to post-treatment assessment (p < 0.05), as well as at the 12-month follow-up (p < 0.05). At the 12-month follow-up, CPSS-I scores were significantly lower in the PE-A group than in the SC group (Rossouw et al., 2018).

These initial RCT's in LMICs demonstrate that the use of trauma therapies in resource-constrained contexts can reduce symptoms of PTSD in children and adolescents. As such, the use of ESTs in LMIC should receive continuous support from the global mental health community (Murray et al., 2015), and mental health practitioners should be willing to use ESTs (Padmanabhanunni & Sui, 2017). An added benefit of the study conducted by Rossouw et al. (2018) is that the authors adopted a task-shifting approach to non-specialists to deliver PE-A training in a multicultural community setting, which adds further promise to the feasibility of PE a treatment for PTSD in LMICs.

### 7. Future directions

The successful dissemination and implementation of PE in LMICs may appear to have more challenges than positives. For example, there are unavoidable socio-economic and human resource challenges in LMICs. Yet the evaluation and implementation of ESTs such as PE for PTSD are necessary in treating PTSD and providing effective mental healthcare in LMICs. In order to stimulate and adopt an approach towards implementation in LMICs, clinicians and researchers would benefit from conducting dissemination and implementation research that accrue the required evidence to ascertain the feasibility and acceptability of PE in LMICs.

A common rebuttal against intervention research in LMICs might be that it requires a great deal of resources and funding. Yet, with the growth of smallscale single-case experimental designs and implementation science research, it is more likely to conduct intervention studies in LMICs. As a result, if the necessary empirical evidence is obtained, the implementation of EST's could be expedited to improve mental healthcare services LMICs.

Another perspective is that the development of effective treatments must be tested in various contexts and countries as it could benefit persons across the world. Therefore, it is important to continue building international collaboration between the various regions in the world. For example, scholars from the global north should deem it necessary to evaluate the effectiveness of western developed ESTs in LMICs as this will enable the enhancement of global mental health.

### 8. Conclusion

Given the prevalence of trauma exposure and PTSD in LMICs, trauma therapies such as PE need to be explored by all relevant stakeholders. Academic training departments, mental health professionals and mental healthcare facilities need to actively engage in exploring and implementing effective psychological treatments. Furthermore, government agencies and research institutions need to support intervention research that would evaluate the implementation of ESTs.

As illustrated by the above review, the implementation of PE for PTSD is a necessary consideration given the prevalence of trauma and limited use of ESTs for PTSD in LMICs. Yet this recommendation is made in consideration of the contextual and systemic challenges of treating traumatic stress in resource-constrained contexts. Therefore, the use of ESTs such as PE should be part of a collective approach to treating to traumatic stress in LMICs.

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