

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/313281900>

# Effects of a neuroscientifically-based intervention on acute stress and PTSD: report of four studies: Yori Gidron

Article in *The European Journal of Public Health* · November 2016

DOI: 10.1093/eurpub/ckw173.046

CITATIONS

0

READS

51

2 authors, including:



Moshe Farchi

Tel-Hai Academic College

16 PUBLICATIONS 63 CITATIONS

[SEE PROFILE](#)

Some of the authors of this publication are also working on these related projects:



International research group on rapid peer-based intervention for Acute Stress in high-risk occupation [View project](#)



Association between exposure to atrocities in the humanitarian context to stress symptoms [View project](#)

## Effects of a neuroscientifically-based intervention on acute stress and PTSD: report of four studies

Yori Gidron

*Y Gidron, M Farchi*

Department of the Stress and Trauma Studies, Tel Hai Academic College, Tel Hai, Israel

Contact: yori.gidron@vub.ac.be

### Background

Neuropsychology of trauma informs us that people who develop PTSD process the event in a fragmented manner, in mostly limbic and less frontal regions, which explains the thought intrusions, avoidance and excessive arousal. We developed the memory structuring intervention (MSI) that aims to shift the trauma processing to a more frontal, verbal and cognitive manner, later supplemented by vagal nerve breathing (VB).

### Methods

We present findings from 4 randomized-controlled trials. In study (ST) 1, we randomized 17 Israelis after traffic accidents to the MSI or supportive listening (control). In ST2, we randomly assigned 34 Israelis after traffic accidents to the MSI or supportive listening. In both ST1 and 2, PTSD symptoms were blindly assessed 3 months later. In ST3, we added VB to the MSI and examined anxiety, heart-rate (HR) and pain in an emergency room in Israel. Finally, in ST4, we included 25 Belgians at risk for PTSD and also assessed the perceived traumatic experience (PTE) and verbal fluency, a marker of frontal activation, in the emergency room.

### Results

In ST1, people assigned to the MSI had significantly lower PTSD symptoms than controls. In ST2, women benefited from the MSI while men from supportive listening. In ST3, the MSI + VB, but not the control group, led to reductions in anxiety, pain and HR. Finally, in ST4, the MSI + VB led to reduced PTE and prevented increases in HR, the latter seen in controls. Importantly, beyond groups, increases in verbal fluency positively correlated with reductions in PTE. We will provide examples of application to people exposed to terrorism and war in Israel.

### Conclusions

These studies together support the effectiveness of a new emerging intervention, which has short-term effects on acute stress reactions and possible long-term effects on PTSD prevention. It is neuroscientifically based and easy to implement in emergency settings after terrorist attacks, during war and after disasters.