

UNISDR Scientific and Technical Advisory Group Case Studies - 2015

Evidence Based Medicine in the Treatment of Post Traumatic Stress Disorder

The problem

Post-traumatic stress disorder (PTSD) is a well-known phenomenon that takes place after exposure to a particularly disturbing incident, commonly seen in war veterans and after natural disasters. A large review of adult survivors of disasters (both natural and man-made) showed that the incidence of PTSD could range from 30-60%, and in rescuers themselves where at risk albeit lower, at 5-20%.¹ Clearly an effective treatment to PTSD must be considered as part of the response to a disaster, as part of the development of psychological resilience and the reduction in the risk of subsequent mental illness.

PTSD is characterised by repeated disturbing flashbacks, hypervigilance and avoidance of situations that bear a resemblance to the initial traumatic experience. These symptoms can have a dramatic effect on the day to day lives of the victims and can last for many years. In the 1980s, the concept of debriefing after a traumatic event became popular, with an intervention taking place soon after the event. The aim was to reduce the progression to PTSD, and, in a military situation, to return the patient to combat as soon as possible. The debriefing session would involve a counselling session, with the event being discussed and relived with the victims, who are then encouraged to discuss and express their feelings, whilst being given reassurance that these are normal emotions to be experiencing. There was little scientific evidence to support the implementation of this intervention but it was used in various settings on the theoretical basis that it should work. The consequences of a scientifically untested treatment being introduced for reasons other than sound scientific evidence of benefit are discussed in this case study.

The science

The Cochrane Collaboration, since its founding in 1993, has been dedicated to supporting evidence based medicine and conducting systematic reviews on a variety of topics. Two reviews have examined the efficacy of debriefing in PTSD, investigating the efficacy of a single session intervention, and the other at multiple sessions.



The first review examined single session individual debriefing² that took place within 4 weeks of the event, and concluded that this neither prevented the onset of PTSD nor reduced psychological distress, compared to controls. Those receiving the intervention reported no reduction in PTSD severity at 1 and 4 months of follow-up. There was also no evidence that debriefing reduced general psychological morbidity, depression or anxiety, or that it was superior to an educational intervention. In fact, one study reported the opposite effect with a

significantly increased risk of PTSD in those receiving the debriefing. The results of the review of multiple interventions,³ (two or more sessions within 3 months of the incident) were similar to those of the first review. No difference in outcomes was found between controls and those who received the intervention. Alarmingly, there was again an indication that, among those who received the intervention, there was increased self-reporting of PTSD symptoms up to 6 months after the intervention, although this could be due to greater knowledge of PTSD. While these reviews do have limitations, as the authors themselves acknowledged, in particular the heterogeneity of the initial interventions and the reliance on subjective measures of PTSD symptoms, the outcomes were striking. A commonly used therapy appeared to offer no benefit and, in fact, could potentially cause harm.

The application to policy and practice

Psychiatry as a scientific topic is relatively new in the field of medicine, and our understanding of the complex workings of the human brain and mind is still in its infancy. The use of well conducted RCTs and, meta-analyses, is vital to providing robust evidence of effectiveness, and meta-analyses are particularly important where study sample sizes are small and the results of different studies differ. A systematic, empirical approach is essential to providing a foundation of evidence to an area or policy and practice in medicine or related clinical fields that can be weakened by “intuitive” and “well-meaning” interventions that are in fact ineffective or could cause harm.

Did it make a difference?

Debriefing is no longer recommended by either NICE,⁴ and, instead, two other therapeutic options have been suggested as first line treatments, Trauma Focussed Cognitive Behaviour Therapy (TFCBT), and Eye Movement Desensitisation and Reprocessing (EMDR). TFCBT attempts to change the way a patient feels and acts in response to memories of the traumatic event and attempting make positive association or cognitions to replace them with less distressing thoughts. There is often an element of graduated exposure to pictures or real-life situation which are associated with the event. EMDR involves the patient undergoing several stages of therapy, where the traumatic event is associated with a bilateral sensory stimulus (classically eye movements), then a positive cognition (similar to those formed in CBT) is also associated with the same sensory stimulus. The theory by associating the memories of the event with the positive cognition and sensory stimulus, the memory can be processed more effectively, thereby reducing anxiety and unwanted reliving of the event. Where these interventions differ from debriefing is that while all involve directly tackling the memory of the event, debriefing only involves discussing the feelings of the patients, and doesn't look at how this might affect behaviour or whether the patient has adequate coping mechanisms, while the others accept that these event are rightfully distressing and instead work on the processing and coping mechanisms. CBT and EDMR focus on producing positive (or less distressing) cognitive associations, and building psychological resilience with controlled exposure to the event.

These interventions have been shown to have reduced the symptoms of PTSD compared to usual care when examined in another Cochrane review.⁵ EMDR can reduce symptoms by 50% and TFCBT by 40%. Small studies have shown that TFCBT can be implemented effectively to reduce symptoms of PTSD in low income countries, including Zambia⁶ and the Democratic Republic of the Congo⁷ when carried out by lay counsellors trained in CBT. Recent studies have shown that eye movement suppression may be an unneeded part of the EMDR therapy, and that the benefits of EMDR may primarily be due to the stages similar to CBT.^{8,9} This underlines the importance of evidence based medicine in psychological interventions; that science must constantly iterate and improve on current knowledge to ensure good practice is implemented to benefit population health.

References

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