

Impact case study (REF3b)

<p>Institution: University College London</p>
<p>Unit of Assessment: 4 - Psychology, Psychiatry and Neuroscience</p>
<p>Title of case study: Improving the management of the psychological consequences of disasters and terrorism</p>
<p>1. Summary of the impact</p> <p>Research at UCL developed a ‘screen and treat’ model for dealing with mental health problems in the aftermath of disasters. This was successfully implemented after the London bombings in 2005. The strategy was shown to be very effective in detecting individuals in severe psychological need, and those screened and referred within the programme benefited substantially from evidence-based treatment. Since then, the model has been adopted in planning for major incidents in the UK and abroad. The screening instrument developed at UCL is in widespread use around the world.</p>
<p>2. Underpinning research</p> <p>In July 1999 Professor Brewin moved to UCL to take up a post as Professor of Clinical Psychology, jointly funded by HEFCE and the NHS, and formulated a new ‘screen and treat’ strategy for mental health problems arising from major disasters. Prior to this survivors were usually offered psychological debriefing, but evidence had accumulated that this was ineffective. At the same time international research conducted after the Oklahoma City bombing in 1995 and World Trade Center attack in 2001 showed that there was a substantial minority who developed serious mental health problems such as posttraumatic stress disorder and that their needs were likely to go unrecognised and untreated [1]. Already by 2000 there was a clear lack of any agreement in the scientific literature on effective and cost-efficient methods of ensuring good mental health outcomes for survivors.</p> <p>The new strategy was based on an entirely different approach, and recommended not intervening in the short-term to reduce psychological symptoms unless the person’s coping resources were clearly inadequate. Instead, resources should be devoted to active outreach and screening to detect the minority of individuals who were failing to make a good recovery, and to providing them with effective, evidence-based interventions [2].</p> <p>An essential prerequisite for implementing the strategy was to develop a simple and effective screening instrument for detecting posttraumatic stress disorder following a wide variety of major incidents. A grant was awarded by the NHS Executive in November 1999 after the Ladbroke Grove rail crash to Professor Brewin as Principal Investigator together with colleagues from Royal Holloway and Imperial College London. This led to the discovery that a simple set of 10 Yes/No questions provided excellent screening performance, based on which the Trauma Screening Questionnaire (TSQ) was developed and validated [3]. A subsequent systematic review of screening measures for PTSD showed that its psychometric properties were as good as and generally better than existing measures [4].</p> <p>On 5 July 2005, the London bombings seriously affected areas in the immediate vicinity of UCL. UCL students and staff members were among the injured and killed. Two weeks later a Psychosocial Steering Group, which included Professor Brewin among its membership, was convened by the Camden & Islington Mental Health and Social Care Trust and the London Development Centre for Mental Health. The Steering Group approved proposals based on the screen and treat model previously described. This was the first example internationally of such a response being planned from the very beginning of the post-disaster period, and funding was obtained from the Department of Health. As originally envisaged in the article by Brewin (2001), most Londoners were resilient [5, 6] but a minority were seriously affected. The screening team undertook active outreach, identifying survivors and screening them some months after the bombing with the Trauma Screening Questionnaire. Those screening positive were referred for</p>

evidence-based psychological therapy [1].

3. References to the research

Peer-reviewed publications

- [1] Whalley MG, Brewin CR. Mental health following terrorist attacks. *British Journal of Psychiatry*. 2007 Feb;190:94-6. <http://dx.doi.org/10.1192/bjp.bp.106.026427>
- [2] Brewin CR. Cognitive and emotional reactions to traumatic events: Implications for short-term intervention. *Advances in Mind-Body Medicine*. 2001 Summer;17(3):163-8. <http://www.ncbi.nlm.nih.gov/pubmed/11572842>
- [3] Brewin CR, Rose S, Andrews B, Green J, Tata P, McEvedy C, Turner SW, Foa EB. A brief screening instrument for posttraumatic stress disorder. *British Journal of Psychiatry*. 2002 Aug;181:158-62. <http://bjp.rcpsych.org/content/181/2/158.long>
- [4] Brewin CR. Systematic review of screening instruments for the detection of posttraumatic stress disorder in adults. *Journal of Traumatic Stress*. 2005;18:53-62. Available on request.
- [5] Rubin GJ, Brewin CR, Greenberg N, Simpson J, Wessely S. Psychological and behavioural reactions to the 7 July London bombings: A cross-sectional survey of a representative sample of Londoners. *British Medical Journal*. 2005 Sep 17;331(7517):606. <http://dx.doi.org/10.1136/bmj.38583.728484.3A>
- [6] Rubin GJ, Brewin CR, Greenberg N, Hacker Hughes J, Simpson J, Wessely S. Predictors of persistent distress following terrorism: A seven month follow-up survey of reactions to the bombings in London on 7 July 2005. *British Journal of Psychiatry*. 2007 Apr;190:350-6. <http://dx.doi.org/10.1192/bjp.bp.106.029785>

Key research grant

Grant of £399,928 from the Department of Health National Forensic Mental Health R & D Programme to Professor C. Brewin for an evaluation of the NHS Trauma Response (London bombings) programme (June 2006–November 2008).

4. Details of the impact

The research described above has had a direct impact on the way disasters and emergencies are planned for and responded to, both in the UK and overseas. The trauma screening questionnaire (TSQ) is used widely around the world. The model developed at UCL was first implemented after the London bombings in 2005. A later evaluation conducted in the period in question (2008-13) showed that it had been very successful, and it has since been incorporated into government guidance, including planning for the Olympics.

The evaluation of the London Bombings programme funded by the Department of Health found that 30% of those screened were referred for treatment and, of those referred within the programme, over 75% completed treatment. The clinical outcomes of this group were excellent, with more than 80% achieving a clinically significant improvement, and were well maintained among those followed up after one year [a]. The evaluation also identified a number of impediments to assisting survivors. These included: data protection legislation preventing identification of those affected; the failure of referral mechanisms in general practice; the need to plan for the administration and funding of the mental health response to disasters; the need for a register of those affected.

Impacts on policy and planning

Partly as a result of the concerns raised by the programme, the Cabinet Office issued special

guidance on the use of data protection legislation in emergency situations in 2007 [b]. The UCL model used in the London bombings has subsequently been explicitly recognised in two major reports, the first issued by the NATO Joint Medical Committee in 2008 [c] and the second by the Department of Health Emergency Preparedness Division in 2009 [d]. These reports endorse the UCL screen and treat model, proposing that: (a) immediate intervention is restricted to providing information, psychosocial support, psychological first aid, and education rather than crisis counselling; and (b) people who are involved should be followed up to detect those who have persistent symptoms who can be treated with empirically supported interventions.

The recommendations concerning planning for mental health consequences of a major incident were incorporated into NHS London major incident plans, including those for the 2012 Olympics [e]. Another key recommendation, for a central register of affected persons after disasters, led to the setting up of an implementation committee by the Health Protection Agency (HPA) of which Professor Brewin was a member. Provisions for the HPA to set up and manage a register are now in place for future disasters, which will make a very significant difference to providing health care and conducting epidemiological research [f].

Use in outreach and screening programmes

Programmes based on the UCL model have now been successfully implemented around the world, for example in a US school after a suicide and in the Netherlands [g]. During the period 2008-13, Brewin received 217 direct requests for use of the TSQ from 24 countries. The three most frequent sources of request were: large scale health organisations such as hospitals, community and school counselling centres (22%); research psychologists and psychiatrists (21%); individual mental health professionals and private clinics (19%) [h]. Brewin has also provided telephone or in-person consultations concerning meeting mental health needs after large-scale disasters, for example following the 2011 Norway summer camp shootings [i] and the 2010 Christchurch earthquake [j].

Twenty-eight governmental and nongovernmental organisations (in various countries) concerned with mental health issues and/or high risk populations have had the TSQ on their websites as a mental health education material and self-screening tool. For example, Suffolk Mental Health Partnership provide a copy of the TSQ and the Cumbria Partnership NHS Foundation Trust recommended use of the TSQ after the West Cumbria shootings in 2010 [k]. In the US, the Department for Veterans Affairs recommend the TSQ on the website of their National Center for PTSD [l].

Use of the TSQ is now part of a standard recommended protocol developed for firefighters in the US. Firefighter Life Safety Initiative 13 was one of 16 such initiatives jointly developed by representatives of the major fire service constituencies in 2004. It aimed to ensure that "Firefighters and their families must have access to counseling and psychological support". This was developed and promulgated by the National Fallen Firefighters Foundation (NFFF) and has since informed the emerging safety culture in the US fire service [m]. The initiative developed a Protocol for Exposure to Occupational Stress which "*recommends the use of the Trauma Screen Questionnaire as a widely accessible tool for individuals to understand if they are in need of behavioral assistance.*" An article in Fire Fighter Nation describes a typical example of how one service used the TSQ in action to assist a firefighter after a traumatic event [n].

The TSQ has been translated into 8 languages, and has been adapted for use in children [o]. It has been included in 56 studies, with 32 of them applying it as an assessment tool of PTSD symptoms, and another 18 using it as a screening instrument of the risk of PTSD development. Fifteen studies took place in the UK, 11 in the USA, 9 in Australia, 6 in the Netherlands, and one each in Canada, France, Iceland, India, Republic of Congo, and Republic of Georgia.

5. Sources to corroborate the impact

[a] The following two articles describe the evaluation that took place for the Department of Health:

- Brewin CR, Fuchkan N, Huntley Z, Robertson M, Thompson M, Scragg P, d'Ardenne P,

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Ehlers A. Outreach and screening following the 2005 London bombings: usage and outcomes. *Psychol Med.* 2010 Dec;40(12):2049-57.
<http://dx.doi.org/10.1017/S0033291710000206>.

- Brewin CR, Scragg P, Robertson M, Thompson M, d'Ardenne P, Ehlers A; Psychosocial Steering Group, London Bombings Trauma Response Programme. Promoting mental health following the London bombings: a screen and treat approach. *J Trauma Stress.* 2008 Feb;21(1):3-8. <http://dx.doi.org/10.1002/jts.20310>.
- [b] Cabinet Office (2007). *Data Protection and Sharing – Guidance for Emergency Planners and Responders*. Downloadable from:
<http://www.cabinetoffice.gov.uk/sites/default/files/resources/dataprotection.pdf>
- [c] NATO Joint Medical Committee (2008). *Psychosocial Care For People Affected by Disasters and Major Incidents: A model for designing, delivering, and managing psychosocial services for people involved in major incidents, conflict, disasters, and terrorism*. Downloadable from:
http://www.healthplanning.co.uk/nato/NATO_Guidance_Psychosocial_Care_for_People_Affected_by_Disasters_and_Major_Incidents.pdf
- [d] Department of Health Emergency Preparedness Division (2009). *NHS Emergency Planning Guidance: Planning for the psychosocial and mental health care of people affected by major incidents and disasters: Interim national strategic guidance*. Downloadable from:
http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_103563.pdf
- [e] Supporting letter available from Head of Emergency Preparedness, NHS London.
- [f] Supporting letter available from Deputy Director, Health Protection Agency.
- [g] Examples of programmes using our screen and treat model:
- Charuvastra A, Goldfarb E, Petkova E, Cloitre M. Implementation of a screen and treat program for child posttraumatic stress disorder in a school setting after a school suicide. *J Trauma Stress.* 2010 Aug;23(4):500-3. <http://dx.doi.org/10.1002/jts.20546>.
 - Dekkers AM, Olff M, Näring GW. Identifying persons at risk for PTSD after trauma with TSQ in the Netherlands. *Community Ment Health J.* 2010 Feb;46(1):20-5.
<http://dx.doi.org/10.1007/s10597-009-9195-6>.
- [h] Copy of data available on request.
- [i] Contact: Norwegian Centre for Violence and Traumatic Stress Studies, Oslo, Norway. Contact details provided.
- [j] Contact: Anxiety Disorders Unit, Christchurch. Contact details provided.
- [k] Examples of NHS trusts using the TSQ:
- TSQ adapted for use by Suffolk Mental Health Partnership:
<http://www.smhp.nhs.uk/LinkClick.aspx?fileticket=bht4-3eGMTc%3D&tabid=2750&mid=5600>
 - Adapted TSQ available here:
<http://www.cumbriapartnership.nhs.uk/uploads/W%20Cumbria%20Trauma%20Screening%20Questionnaire.pdf> Link to referring page (with recommendation to use the TSQ) is broken, but cached copy available on request.
- [l] US Department of Veterans Affairs: National Center for PTSD:
<http://www.ptsd.va.gov/professional/pages/assessments/tsq.asp>
- [m] History of Initiative 13: <http://flsi13.everyonegoeshome.com/history.html> Flow chart and recommendation for use of the TSQ: <http://flsi13.everyonegoeshome.com/>
- [n] <http://www.firefighternation.com/article/firefighter-fitness-and-health/leave-baggage-behind>
- [o] TSQ adapted for use in children: <http://www.som.uq.edu.au/childtrauma/ctsqa.asp>