Introduction to Traumatic Stress

Neil Kitchiner & Neil Roberts
Veterans’ NHS Wales

www.veteranswales.co.uk
Post-traumatic Stress Disorder (PTSD)

The management of PTSD in adults and children in primary and secondary care

Clinical Guideline
Published: March 2005

www.nice.org.uk
Where is the guideline available?

- Quick reference guide: summary of recommendations for health professionals:
  - www.nice.org.uk/cg026quickrefguide

- NICE guideline
  - www.nice.org.uk/cg026niceguideline

- Full guideline: all of the evidence and rationale behind the recommendations:
  - www.rcpsych.ac.uk/publications

- Information for the public: plain English version for sufferers, carers and the public
  - www.nice.org.uk/cg026publicinfoenglish
ESTSS Learning Outcomes

• Describe the range of normal reactions following traumatic events and their natural course
• Describe problematic reactions following traumatic events including PTSD and other common disorders according to the DSM-5 and ICD-10
• Describe the basic epidemiology of traumatic stress disorders
• Explain the principles of the theoretical basis of PTSD from neurobiological, psychological and social standpoints
• Explain the principles of an evidence based approach to the prevention and treatment of post traumatic disorders
• Describe an accurate overview of the current evidence base for the prevention and treatment of PTSD
Nature of the day

- Use of traumatic material
- Looking after yourself
- It’s okay to leave the room/ opt out if uncomfortable
- Treat case material with confidentiality
- Please be interactive and try and stay awake if possible!
In Pairs Spend 2 min

- Discuss what type of events could lead to individuals developing PTSD based on current DSMV criteria
- And what events would not meet DSMV criteria?
Traumatic experiences

- RTA / transport
- Industrial accident
- Household accident
- Prison violence
- Criminal victimisation
- Medical trauma
- Natural disaster

- Sexual assault
- Physical assault
- Military conflict
- Political violence
- Rape
- Torture

- Type II Trauma - Childhood abuse
Where & when was this?
And this?
Italy’s precision flying team swoops out of control during a stunt and creates an inferno, killing at least 49 and injuring 366; in the tragedy’s wake, NATO allies face a transatlantic controversy.
Definition:

A psychological trauma or critical incident can be any event to which a person is connected, that is unexpected, outside their usual range of human experience, and that involves some form of loss, injury or threat of injury, whether actual or perceived…
Definition:
A psychological trauma or critical incident can be any event to which a person is **connected**, that is unexpected, outside their usual range of human experience, and that involves some **form of loss, injury or threat of injury**, whether actual or perceived…
Nature of Traumatic Events

- Sudden
- Unexpected
- Overwhelming
- Induce feelings of helplessness
- Involve significant threat to self / others
- Highly anxiety provoking
- Challenge core beliefs
## Psychologically Traumatic Events are Common

<table>
<thead>
<tr>
<th>Type of trauma</th>
<th>Lifetime Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any trauma</td>
<td>90%</td>
</tr>
<tr>
<td>Learning about traumas to others</td>
<td>62%</td>
</tr>
<tr>
<td>Sudden, unexpected death of close friend or relative</td>
<td>60%</td>
</tr>
<tr>
<td>Other shocking experience</td>
<td>43%</td>
</tr>
<tr>
<td>Assault</td>
<td>38%</td>
</tr>
<tr>
<td>Serious car or motor vehicle crash</td>
<td>28%</td>
</tr>
<tr>
<td>Natural disaster</td>
<td>17%</td>
</tr>
<tr>
<td>Other serious accident or injury</td>
<td>14%</td>
</tr>
<tr>
<td>Diagnosed with a life threatening illness</td>
<td>5%</td>
</tr>
</tbody>
</table>
In your pairs discuss:

how might someone react / behave in the early stage after exposure to a trauma?
Normal reactions to traumatic events (include)

- Fear
- Sadness
- Anger
- Disappointment
- Physical sensations eg of anxiety
- re-experiencing hyper arousal
- avoidance
- work and social difficulties
- helplessness
- Guilt
- Shame
- Hope
Natural Course of Traumatic Stress

Foa & Rothbaum (1990)
9 / 11 / 2001 New York
Natural Course Of Traumatic Stress

1 month 4 months 6 months
9/11 PTSD prev
**Natural Course Of Traumatic Stress**

Distress

Creamer et al, 2007
Natural Course Of Traumatic Stress

Distress

Creamer et al, 2007
The trauma trajectory - the story of Jack and Jill
A response to trauma is normal

Two junior doctors, Jack and Jill, are assaulted by a drunk man wielding a knife whilst working in A&E. They feared for their lives.

The drunk man is overpowered by nursing staff.

The doctors are physically uninjured.

But........
A response to trauma is normal

Three days after the event Jack tells you he is having distressing nightmares and can’t sleep.

He is unable to return to the AED, says ‘nothing feels real’ and his friends say he is irritable and jumpy.

He cannot stop thinking about the incident and says ‘I cannot get the movie out of my head’.
Jill, on the other hand says she is ‘fine with no problems’ and just appears a little detached.

She says ‘its all in a day’s work’ and states she would like to ‘get stuck back in as soon as possible’.

Which of these doctors have PTSD?
One month later...

Jack says he still is not sleeping very well but his nightmares have stopped.

He is still finding it difficult to enter AED at night-time but he has managed a few daytime shifts.

He still thinks about the incident a lot but is beginning to resume previous hobbies.
Jill is drinking heavily at night because she cannot sleep. Her colleagues say she has become ‘impossible to work with’ as she is ‘so on edge’.

Her seniors have noticed that she is spending most of her shift in the coffee room and complain she has become aloof and non-empathic since the assault.

Who is most at risk of developing PTSD?
Six months later...

Jack has successfully completed his first year as a doctor.

His sleep pattern has returned to normal and his nightmares have gone. He reports he is ‘back to my old self again’.

He has participated in giving a lecture to the incoming doctors about ‘Violence in the AED’. He is applying for his next job in orthopaedics.
Six months later...

Jill has taken a period of sick leave.

She has cut down her drinking but has nightmares nearly every night and relives the assault during the day.

She suffers frequent panic attacks. Relationships with colleagues are at an ‘all time low’.

She cannot contemplate working in medicine again.
What are the features of PTSD?

DSM-IV & DSM5
### A. Criterion

<table>
<thead>
<tr>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to a traumatic event</td>
<td>Exposure to a traumatic event or learning of</td>
</tr>
<tr>
<td>Experience of fear, horror or helplessness</td>
<td></td>
</tr>
</tbody>
</table>
• Criterion A: Exposure to actual or threatened death, serious injury, or sexual violence in one (or more) of the following ways:
  
  • Directly experiencing the traumatic event(s).
  
  • Witnessing, in person, the event(s) as it occurred to others.
  
  • Learning that the traumatic event(s) occurred to a close family member or close friend. In cases of actual or threatened death of a family member or friend, the event(s) must have been violent or accidental.
  
  • Experiencing repeated or extreme exposure to aversive details of the traumatic event(s) (e.g., first responders collecting human remains; police officers repeatedly exposed to details of child abuse). Note: Criterion A4 does not apply to exposure through electronic media, television, movies, or pictures, unless this exposure is work related.
<table>
<thead>
<tr>
<th>Intrusion symptoms</th>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Upsetting memories</td>
<td>Upsetting memories</td>
</tr>
<tr>
<td></td>
<td>Nightmares <em>(reliving)</em></td>
<td>Nightmares <em>(thematically related)</em></td>
</tr>
<tr>
<td></td>
<td>Flashbacks</td>
<td>Flashbacks</td>
</tr>
<tr>
<td></td>
<td>Emotional distress to reminders</td>
<td>Emotional distress to reminders</td>
</tr>
<tr>
<td></td>
<td>Physiological reaction to reminders</td>
<td>Physiological reaction to reminders</td>
</tr>
</tbody>
</table>
C. Avoidance & numbing

**DSM-IV**
- Avoidance of thoughts, memories, discussion
- Avoidance of reminders
- NUMBING SYMPTOMS

**DSM-5**
- Avoidance of thoughts, memories, discussion
- Avoidance of reminders
## D. Negative alterations in cognitions and mood

<table>
<thead>
<tr>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dissociative amnesia</td>
<td>• Dissociative amnesia</td>
</tr>
<tr>
<td>• Markedly diminished interest</td>
<td>• Markedly diminished interest</td>
</tr>
<tr>
<td>• Detachment from others</td>
<td>• Detachment from others</td>
</tr>
<tr>
<td>• Restricted range of affect</td>
<td>• Restricted range of affect</td>
</tr>
<tr>
<td>• Sense of a foreshortened future</td>
<td>• +ve feelings</td>
</tr>
<tr>
<td></td>
<td>• Exaggerated negative beliefs</td>
</tr>
<tr>
<td></td>
<td>• “the world is unsafe”</td>
</tr>
<tr>
<td></td>
<td>• Distorted blame of self or others</td>
</tr>
<tr>
<td></td>
<td>• Strong negative feelings</td>
</tr>
</tbody>
</table>
### E. Alterations in arousal and reactivity

<table>
<thead>
<tr>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep difficulty</td>
<td>Sleep difficulty</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>Difficulty concentrating</td>
</tr>
<tr>
<td>Hypervigilance</td>
<td>Hypervigilance</td>
</tr>
<tr>
<td>Exaggerated startle</td>
<td>Exaggerated startle</td>
</tr>
<tr>
<td>Irritability or outbursts of anger</td>
<td>Outbursts of anger</td>
</tr>
<tr>
<td></td>
<td>Reckless or destructive behaviour</td>
</tr>
</tbody>
</table>
F. Functional Impairment

<table>
<thead>
<tr>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Distress</td>
<td>• Distress</td>
</tr>
<tr>
<td>• Impairment in family or social functioning</td>
<td>• Impairment in family or social functioning</td>
</tr>
<tr>
<td>• Impairment in occupational functioning</td>
<td>• Impairment in occupational functioning</td>
</tr>
</tbody>
</table>
F. **Duration**

**DSM-IV**
- 1-3 months: acute PTSD
- 3 months+: chronic PTSD

**DSM-5**
- 1 month+: PTSD
<table>
<thead>
<tr>
<th>DSM-IV</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Depersonalisation</td>
</tr>
<tr>
<td></td>
<td>Derealisation</td>
</tr>
</tbody>
</table>
PTSD: ICD10 criteria

• Exposure to a stressful event or situation (either short or long lasting) of exceptionally threatening or catastrophic nature, which is likely to cause pervasive distress in almost anyone.
  • repeated intrusive memories or dreams
  • against a **background** of “numbness” and detachment
  • commonly, fear and avoidance of cues
  • **usually**, a state of physiological hyperarousal
  • only intrusive phenomena are essential for the diagnosis
Adult Psychiatric Morbidity 2007 England

- 42.2% of adults reported a major trauma in their life (44% men vs. 40% women)
- 33% reported a traumatic event since 16
- Adult trauma > in men (33%) vs. (32%)
- 3% of adults screened positive for current PTSD (3% men vs. 3% women) NS
- PTSD declined with age 5% of 16-24 – 0.6% adults 75+
- Black men 46% vs. 36% White men & 29% Asian men
- 28% positive for PTSD in Rx for MH prob vs. 7% without PTSD
Prevalence & epidemiology

Community studies

Rates of lifetime exposure to trauma – 50%-90%

Lifetime prevalence of PTSD – 5%-10%

USA lifetime prevalence of PTSD 8-12% (Kessler, 2000)
Prevalence & epidemiology

12 month prevalence

- Australia 1.3%
- USA 3.6%

Conditional probability of PTSD given exposure to a trauma similar across countries

Lower rates in 1980’s - widening of diagnostic concept with broader range of traumatic events
Prevalence & epidemiology

Twice as common in women

Rates rise with age in men but not women

Rates higher in low income and low educational attainment groups
Other Possible Presentations

- Normal reaction
- Acute stress disorder
- Pre-existing difficulties
- Anxiety
- Depression
- Adjustment reactions
- Substance misuse
- Psychosis
- Somatoform disorders
- Malingering
Co-morbidity

- Present in > 50% cases
- Commonest co-diagnoses
  - Major depressive disorder
  - Panic disorder
  - Other anxiety disorder
  - Substance abuse/dependence
- NVVRS (Kulka et al, 1990) = 99% lifetime
Risk Factors?
Risk Factors for PTSD

Brewin et al, 2000
Emilia Romagna, Italy 2012 – magnitude 6.0
L’ARTE NON TREMA

fino a lunedì 10 giugno 2013
Assessment Issues

• Jane 36, is referred to you by a practice GP, after a road traffic accident. The GP thinks that she has PTSD.

• What would you want to know?
• What issues might make you decide how might you proceed?
Assessment

- Timing of Presentation
  - natural history of illness
  - at what point in course of illness anniversary?
  - trigger?
  - why now?

- Is presenting problem the problem?

- Relieving/Exacerbating factors
Thorough, not just core criteria for PTSD

do not think exclusively PTSD

sensitive, reassure only need snapshot at first interview

do not push too fast

can write it down if can’t talk

be careful of statements “he didn’t seem at all upset as he spoke about the accident”
Standard Clinical Interview

- This should cover the traumatic event in terms of:
  - when, how & where it happened
  - who was involved
  - how did the patient react
  - how did others react

- **Meaning of the trauma** (e.g., core beliefs)

- **Meaning of the symptoms** (e.g., indicate personal failure)
Assessment

• **Purpose of Assessment**
  - Diagnostic
  - Forensic
  - humanitarian
  - research/epidemiology

• **Therapeutic Alliance**
  - trust, safety, confidentiality

• **1st Interview — critical in developing alliance**
  - usual good interview practice
  - non-judgemental
  - allow ventilation
  - do not overcontrol
Assessment

• **Objectivity**
  • identification with the patient
  • recognition of own feelings
  • fear of being overwhelmed
  • own past history of trauma/loss

• **Use of diagnostic interviews and standardised self-report measures**
  • may increase accuracy of formulation
  • increase accuracy of treatment efficacy reviews
Structured Interviews

- Structured Clinical Interview for DSM IV (SCID Spitzer et al, 1990)
- Clinician Administered PTSD Scale 5 (CAPS-5; Weathers et al, 2013)
- PTSD Symptom Scale Interview (PSS-I; Foa et al, 1993)
- Structured Interview for PTSD (SI-PTSD; Davidson et al, 1989)
- MINI (Mini International Neuropsychiatric Interview; Sheehan et al, 1998)
Self-report Measures

• The Impact of Event Scale-Revised (IES-R; Marmer et al, 1997)
• Impact of Event Scale (Horowitz, 1979)
• Davidson Trauma Scale (DTS; Davidson et al, 1996)
• The Penn Inventory (Hammerberg, 1992)
• PTSD-Symptom Scale (PSS-SR; Foa et al, 1993)
• PTSD checklist 5 (Weathers et al, 2-13)
• Mississippi Scale for Combat related PTSD (Keane et al, 1988)
Assessment tools

http://www.ptsd.va.gov/professional/assessment/overview/index.asp

http://www.psychologytools.org/download-therapy-worksheets.html
Patient Recall

- “tunnel vision”
- patients may misrepresent unintentionally
- retrospective creation of memory
- evolving nature of memory
- patients commonly get wrong the timing and order of events
- gaps in memory? (especially if even minor head injury)
Nature of recall

• ask how the memory progresses...is it like a video, or a freeze frame moving forward or a series of still photos, or just one.
  • this may give hints as to any memory loss, if memory sequential or any retrospective elaboration.

• ask about all sensory modalities

• check what they remember and what others have told them.

• ask what they don’t know but might like to.
**Neurobiology of PTSD**

In PTSD ‘Fright/flight/freeze’ reaction prolonged

- Reduced right hippocampal volume
- Cortisol levels lower
- Adrenaline/noradrenaline levels higher
- Amygdala remains activated - “state of threat”
Intelligence, judgment, and behavior (frontal lobe)

Memory (temporal lobe)

Language (parietal lobe)
**CROSS SECTION**

- **Corpus callosum**
  A large bundle of nerve fibers through which information flows back and forth between the left and the right hemispheres of the brain.

- **Basal ganglia**
  A control system for movement and cognitive functions.

- **Thalamus**
  The relay station for most information going into the brain.

- **Hypothalamus**
  Regulates sex hormones, blood pressure, and body temperature.

- **Cerebellum**
  Essential for coordination of movement.

- **Pituitary gland**
  The master gland of the body produces its own hormones and also influences the hormonal production of the other glands in the body.

- **Amygdala**
  Regulates the heartbeat and other visceral functions and processes the emotion fear.

- **Hippocampus**
  Helps establish long-term memory in regions of the cerebral cortex.

- **Pons**
  Control of breathing, circulation, heartbeat, and digestion.

- **Medulla oblongata**
The Amygdala in PTSD

- Receives information about external stimuli
- Determines significance of external stimuli
- Significance triggers emotional responses including “fight, flight or freezing”
PTSD represents a failure of medial prefrontal/anterior cingulate networks to regulate amygdala activity resulting in hyperreactivity to threat.
Hypothalamic- Pituitary-Adrenal Axis

- Enhanced negative feedback
- Low cortisol levels
- Disinhib’n traumatic memory retrieval
- Failure to contain sympathetic response
Positive Feedback Cycle
(Pitman, 1989)

Too much significance leads to too much remembrance
Consolidation and Reconsolidation

- Short term memory unstable until consolidated
  - A few hour window of intervention opportunity following traumatic events
  - Animal and some human support
- Memory retrieval leads to unstable memory
  - A few hour window for reconsolidation blockade
  - Animal and some human support
In your pairs

- What are the psychological and social theories of PTSD?
Classical Conditioning

<table>
<thead>
<tr>
<th>Before conditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FOOD</strong> (UCS)</td>
</tr>
<tr>
<td><strong>SALIVATION</strong> (UCR)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>During conditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BELL</strong></td>
</tr>
<tr>
<td><strong>NO RESPONSE</strong></td>
</tr>
<tr>
<td><em>ding, ding!</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>After conditioning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BELL</strong> (CS)</td>
</tr>
<tr>
<td><strong>SALIVATION</strong> (CR)</td>
</tr>
<tr>
<td><em>ding, ding!</em></td>
</tr>
</tbody>
</table>
One of earliest paradigms applied was learning theory i.e., classical conditioning

- An attack seen as a unconditioned stimulus (UCS)
- This evokes an unconditioned response (UCR; fear or pain)
- Association learned (classically conditioned) between UCS and innocuous stimuli (CS; weather, hat, hair colour)
- Once learned each CS evokes conditioned response (CR = fear)
- So, learn safety behaviours (avoidance) to minimise fear
Just World Hypothesis

- belief that we get what we deserve and deserve what we get. (Lerner, 1975, 1980; Lerner & Miller, 1978)
- 3 core beliefs (for most people):
  - World as benevolent,
  - world as meaningful,
  - the self as worthy
- Underlying assumption is of justice and fairness
- SHATTERED
- NOT EVERY PERSON HAS THESE ASSUMPTIONS
• However, some individuals hold negative pre-trauma views of themselves
• —TE confirms dysfunctional beliefs
• —Indeed, having such pre-trauma beliefs is a risk factor for PTSD development
• Conversely, strongly optimistic pre-trauma beliefs can act as a buffer to developing PTSD
• —Assumptions are not shattered
Resick & Schnicke (1993) introduced the idea that post-trauma psychopathology may result not just from a failure to accommodate trauma-relevant information but also from over-accommodation or assimilation of T-relevant information.
**We can think of PTSD as a disorder of memory**

Dual representational theory (Brewin et.al., 1996; 2010)

- Trauma memories stored in **two** parallel forms:
  1. **VAM**: autobiographical, deliberately recalled, accessed & edited (hippocampus). Easily verbally recalled and give rise to emotions related to the trauma.
  2. **SAM**: encoded during trauma, fragmented, sensory, involuntary recall (amygdala). Cannot be deliberately accessed and give rise to symptoms such as dreams and flashbacks.

- Successful EP - sufficient VAMs formed & accommodated into belief system, will inhibit reactivation of SAMs.
What we know: PTSD & Memory

(Brewin et al., 1996; Brewin et al., 2010)
During traumatic events, peri-traumatic dissociation, distress and physiological reactivity alter the encoding of memory so that the storage of sensory-perceptual details are prioritised over contextual information).

Coherent autobiographical memory is dependent on information being organised within a context. Therefore, the disruption to memory encoding during traumatic events results in fragmented yet vivid sensory-perceptual memories (or “flashbacks”) being formed.

For example, traumatised clients might experience visual imagery, sensations of pain, feelings of shame and fear but have difficulty recalling an organised, coherent narrative of the event.
A cognitive model

- PTSD is primarily viewed as an anxiety disorder
- Anxiety is usually associated with appraisals relating to impending threat
- Why is PTSD associated with a “current sense of threat” when a traumatic memory is for something that has already happened?
Memory processes leading to reexperiencing: Cognitive model

- Nature of the trauma memory:
  - intentional recall consists of: disorganised sensory fragments containing original emotions and perceptions, poorly organised - have no time frame
  - can’t recall in a coherent way - lack of elaboration of memory
  - often frequently triggered by low level sensory cues (e.g. smell) in an involuntary way – poorly inhibited
What we know: PTSD & Memory

**Normal autobiographical memory**
- Based in Hippocampus
- Organised
- Controlled retrieval
- Verbally accessible memory
- Time tagged
- Updated by new information

**Traumatic Memory / Sensory driven memory**
- Based in Amygdala
- Not organised
- Fragmented
- No time tag
- Frozen in time
- Spews out involuntarily
- Situationally accessible
Change in appraisal

- Problematic pre-trauma beliefs
  - shattering of positive beliefs
  - confirmation of negative beliefs
- Subsequent interpretations of the event or its sequelae
  - Increased perception of danger
  - persons behaviour during the trauma
  - others behaviour
  - initial symptoms and appraisal of these
  - perceived responses of others
  - Other consequences of the trauma
Cognitive model (cont’d)

- response employed are linked to perceived threat and intended to control this
  - e.g. “if I think about the trauma I’ll go mad”
  - “if I don’t take extra precautions it’ll happen again”
  - “If I see my friends they’ll ask me about it and they’ll think I’m pathetic because I’m still upset”

- Control strategies
  - thought suppression
  - avoidance of reminders
  - avoidance of thinking about in an emotional way
  - Safety behaviours
Persistent PTSD
(Ehlers & Clark, 2000)

Nature of Trauma Memory

Negative Appraisals of Trauma and/or its Sequelae

Matching Triggers

Current Threat Intrusions
Arousal Symptoms
Strong Emotions

Strategies Intended to Control Threat/Symptoms
Treatment Goals
Ehlers & Clark (2000)

Trauma memory
elaborate

Appraisals of trauma and/or sequelae
identify and modify

Triggers
discriminate

Current threat
intrusions
arousal
Strong emotions
reduce

Dysfunctional behaviours/ cognitive strategies
give up
Social Factors

• The existence of PTSD continues to attract some debate
  • ? culturally determined, understandable emotions to traumatic events are being pathologised

• Social factors moderate response
  • Family, material loss, financial inc litigation, loss of role
In your pairs

• What approaches are used to treat PTSD?

• Are any treatment approaches effective?
Treatment of Chronic PTSD - Existing Practice

• Majority treated with medication
  • 77% with PTSD alone
  • 89% if co-morbid with depression
• Many psychotherapeutic modalities in use
• Often delays and gatekeepers before treatment can commence
Intervention Issues
General Principles

- Herman (1992) 3 stage model
- 1. Developing a trusting relationship
  - Knowledge
  - Time
  - Safety
  - Affirmation
- 2. Treatment including addressing the trauma
- 3. Reintegration
Therapy Context and Relationship

• Safe environment
• Obvious empathy
• Information
• Normalisation and Validation
• Sharing anger/disgust
• Collaborative rather than directive
• Giving a clear rationale for treatment
• Acknowledging concerns, fears and ambivalence about treatment
• Therapist comfortable with detail
Stages of Treatment

1. engagement
2. normalisation/crisis stabilisation (if necessary)
3. strategies to manage symptoms
4. trauma-focused CBT, including,
   5. cognitive restructuring
6. ongoing support
PTSD treatments
TFCBT Approaches

• Prolonged Imaginal Exposure (PE)
  • The therapist helps the PTSD sufferer to confront their traumatic memories (written or verbal narrative, detailed recounting of the traumatic experience, repetition).
  • In vivo repeated exposure to avoided and fear-evoking situations that are now safe but which are associated with the trauma.
  • Both aim to lead to Habituation.
Distress too high to allow processing of material

Distress too low to enable processing of material

Therapeutic Window

Level of Distress
Prolonged exposure

- Theory (Foa and Kozak 1986)
  - Anxiety disorders result from pathological fear structures which are activated when info in the structures is encountered
  - Trauma memories are represented as a fear structure
  - Structures include info about:
    - feared stimuli,
    - verbal physiological and behavioural responses
    - associated meanings.
  - Successful treatment modifies these elements of the fear structure, so that info that used to evoke anxiety no longer does so.
Emotional Experience

- Encoded – organised, semantic networks
  - Stimulus (sights, sounds)
  - Response (heart pounding)
  - Meaning (vulnerability, death)

- “Trauma network” - coherent, stable, generalisable
  - very accessible, resistant to change
  - alters information processing
  - easily aroused, anxious - avoidance behaviour
Implications for treatment - to promote emotional change

• Activate network in entirety
  • principle of going through in great detail
  • To introduce new corrective info - to change the underlying meaning / conclusion

• What the event and emotional reactions mean eg direct confrontation of inaccurate beliefs and perceptions (cognitive restructuring)
How to do reliving

• Recount story 1st person present tense
• Eyes closed (if possible)
• Set scene (shortly before)
• Story
  • sensory cues, see, hear, touch, smell, taste
  • What is running through your mind?
  • What are you doing, thinking, feeling?
  • Rationale for decisions - what makes you do that?
Doing reliving (contd)

• Safe end point
• Rate vividness and emotional intensity
  • SUDs 0-10
• Tape or script session
• Homework
  • listening to tape daily until SUDs ↓ 50%
  • Record on homework diary supplied
Following sessions

- Continued reliving - often additional info recalled (add new information)
- Identify “hot spots” and stuck points
- Understanding the meanings of these
- Staying with these - restructuring
- Introduce in-vivo (real life) exposure - setting graded goals
Indications and Contra-indications?

- **Indications**
  - Individuals with PTSD & related psychopathology
  - Individuals with sufficient memory of the traumatic event(s) that they have a narrative

- **Contra-indications**
  - Current psychosis
  - Imminent threat of suicide or homicidal behaviour
  - Serious self-injurious behaviour
  - Current high risk of being assaulted
  - Lack of clear memory or insufficient memory of event
Too long since the trauma?

- Time since the trauma is not a predictor of treatment outcome

Gillespie et al, 2002
Resick, 2002
Ehlers, 2005
Co-morbidity?

- Co-morbidity is not associated with outcome, but patients with co-morbid disorders need more treatment sessions

(Gillespie et al., 2002)
Video clips of PE
Cognitive Therapy

- Focus on the identification and modification of misinterpretations that lead the PTSD sufferer to overestimate current threat (fear).
- Also focus on modification of beliefs related to other aspects of the experience and how the individual interprets their behaviour during the trauma (e.g., issues concerning guilt and shame).
Non-TF CBT Approaches

• Stress Management
  • Relaxation training.
  • Breathing retraining.
  • Positive thinking and self-talk.
  • Assertiveness training.
  • Thought stopping.
  • Stress inoculation training.
EMDR

• Standardised, trauma-focused, procedure with several elements, always involving the use of bilateral physical stimulation (eye movements, taps or tones), hypothesised to stimulate the individual’s own information processing in order to help integrate the targeted event as an adaptive contextualised memory.
“Okay, now follow my finger with your eyes.”
Introduction

• “doses” of exposure
• may be highly effective after only a few sessions
• large number of controlled studies supporting the use of EMDR in PTSD.
What is EMDR & what is its theoretical basis?

- a **package** of therapeutic elements
- unclear whether eye movements are needed
- other forms of lateral stimulation, e.g. **finger taps**, may be equally effective
- **rapid left-right sensory stimulation** in some modality does seem to facilitate information processing
Role of eye movements?

Possibilities ......

• **distraction** from anxiety might produce change given right expectations

• **Exposure** technique (s)
  - research has **not** supported other distraction techniques as beneficial
  - experience of EMDR is not being distracted from it, experiencing it more
Shapiro’s Accelerated Information Processing (AIP) model

- traumatic experiences are held **dysfunctionally** in the nervous system where they are **blocked from being processed** due to the way in which traumatic experiences are encoded in the brain

- removing the blockage through EMDR results in **healthy adaptation**
Shapiro's Accelerated Information Processing (AIP) model

- neurological model is a construct to help others to understand.

- uses neuro-physiological language but it is a metaphor which makes allusions to the physiological mechanisms in the brain.
Components of EMDR

**Exposure**

- focus is on a picture epitomising the trauma
- emotions & physical sensations linked to the trauma are identified and rated
- subjective evaluation of physiological reactions (SUDS)
- information processing is facilitated in dosed, short exposures
Components of EMDR

Cognitive restructuring

• a negative cognition is elicited
• an alternative positive cognition is identified and rated for validity (VoC)
• Cognitive interweave during EMDR
EMDR

- If EMDR preferred by patients and clinicians then it is likely to be used more than IE
- Non-directive (patient in control and creating own healing atmosphere) i.e., therapist stays out of the way.
- EMDR as a process is both experience (i.e., non-reflective “doing”) and reflection (i.e., intending and reflecting upon the “doing”). This is done in small doses
- Emphasis on movement of information, working on past, present & future
  - This is the standard EMDR protocol
EMDR

- **Guilt** is prominent in PTSD - EMDR helpfully incorporates exposure and cognitive therapy elements
- "**unspeakable**" nature of some phases of PTSD suggests the use of exposure techniques such as EMDR
- importantly, the **reactivation of memory** does not require it to be put into communicable language
Summary (i)

- a package of therapeutic elements
- unclear whether eye movements are needed
- other forms of lateral stimulation, e.g. finger taps, may be equally effective
- rapid left-right sensory stimulation in some modality does seem to facilitate information processing
- Cognitive components stressed as important (i.e., PC & NC, and cognitive interweave)
- Performed in the here and now using affect and sensations
Summary (ii)

- EMDR is more than pure exposure.
- Gains in EMDR treatment are achieved more quickly than in controlled exposure studies.
- Exposure in EMDR comes in short doses and includes a cognitive component not evident in flooding.
- EMDR and traditional exposure therapies appear roughly equal in effectiveness.
STAIR-MPE

• A Phase-Based Treatment for the Multiply Traumatized
• Phase I: Skills Training in Affective and Interpersonal Regulation (STAIR)
• Phase II: Modified Prolonged Exposure (MPE)
• 8 x one hour of each
• Designed for women with PTSD related to childhood sexual abuse

Cloitre et al, 2002
Skills Training in Affective and Interpersonal Regulation

- Derived from generic CBT and DBT
- Labelling and identifying feelings
- Emotion management
- Distress tolerance
- Acceptance of feelings
- Identification of trauma-based interpersonal schemas
- Role plays of power, control and flexibility

Cloitre et al, 2002
Drug Treatments for PTSD

- SSRI antidepressants
  (of which two – paroxetine and sertraline are licensed in the UK)
- Other antidepressants
- Atypical antipsychotics
- Other drugs are used but no good RCTs eg Prazosin
Explaining treatment

• Linen cupboard model
• Factory model
• Others?
In your pairs

• Role play in small group selling trauma focused psychological therapy using one of the metaphors e.g. Filing cabinet, factory model.
Current Evidence
The evidence pyramid

- Systematic Reviews and Meta-analyses
- Randomized Controlled Double Blind Studies
- Cohort Studies
- Case Control Studies
- Case Series
- Case Reports
- Ideas, Editorials, Opinions
- Animal research
- In vitro ('test tube') research
Interventions for all

• No certain clinical effects for any intervention tested in 15 RCTs
• Single session debriefing may cause harm to some individually debriefed individuals
• No convincing evidence emerging for group debriefing
• Little convincing evidence for preventative interventions (Roberts, Kitchiner et al 2009a; 2009b)
• Rothbaum et al 2013 modified PE
Self-help Information - PDS

Turpin et al, 2005
### CBT V waitlist acute distress from 2 weeks

**Review:** Multiple Session Early Psychological Intervention to Prevent and Treat Post-Traumatic stress Disorder  
**Comparison:** 12 TF CBT vs Waitlist to treat symptoms of acute distress/acute PTSD from 2 weeks: Initial outcomes  
**Outcome:** 01 Severity of PTSD symptoms

<table>
<thead>
<tr>
<th>Study or sub-category</th>
<th>Treatment</th>
<th>Control</th>
<th>SMD (random)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td>01 Clinician administered</td>
<td>6</td>
<td>23.17 (16.80)</td>
<td>6</td>
</tr>
<tr>
<td>Ehlers 2003b</td>
<td>21</td>
<td>20.90 (15.20)</td>
<td>20</td>
</tr>
<tr>
<td>Ost (unpublished)</td>
<td>61</td>
<td>22.10 (11.80)</td>
<td>52</td>
</tr>
<tr>
<td>Sijbrandij 2007</td>
<td>76</td>
<td>31.41 (21.63)</td>
<td>76</td>
</tr>
<tr>
<td>Foa 2006</td>
<td>195</td>
<td>1.26 (1.18)</td>
<td>184</td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td></td>
<td><strong>195</strong></td>
<td><strong>184</strong></td>
</tr>
<tr>
<td><strong>Test for heterogeneity:</strong> Chi² = 17.15, df = 4 (P = 0.002), I² = 76.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test for overall effect:</strong> Z = 2.47 (P = 0.01)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>02 Self Report</th>
<th>N</th>
<th>Mean (SD)</th>
<th>N</th>
<th>Mean (SD)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ehlers 2003b</td>
<td>6</td>
<td>5.50 (4.29)</td>
<td>6</td>
<td>28.92 (6.71)</td>
<td></td>
</tr>
<tr>
<td>Ost (unpublished)</td>
<td>21</td>
<td>6.50 (4.40)</td>
<td>20</td>
<td>19.90 (12.10)</td>
<td></td>
</tr>
<tr>
<td>Bisson 2004</td>
<td>76</td>
<td>36.96 (20.39)</td>
<td>76</td>
<td>39.54 (20.23)</td>
<td></td>
</tr>
<tr>
<td>Foa 2006</td>
<td>31</td>
<td>19.28 (13.39)</td>
<td>30</td>
<td>18.66 (13.99)</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal (95% CI)</strong></td>
<td>134</td>
<td><strong>132</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test for heterogeneity:</strong> Chi² = 23.61, df = 3 (P &lt; 0.0001), I² = 87.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Test for overall effect:</strong> Z = 1.88 (P = 0.06)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Clinician administered SMD = -0.61 [-1.10, -.13]  
- Self report SMD = -0.84 [-1.72, 0.04]  

*Roberts, Kitchiner et al, 2010*
Clinician administered SMD = -1.22 [-1.65, -0.78]
Self report SMD = -1.68 [-2.34, -1.01]
**Early Pharmacological Interventions**

- **No convincing evidence**
  - Propranolol versus placebo (two studies)
  - Gabapentin versus placebo (one study)
  - Temazepam versus placebo (one study)
  - Escitalopram versus placebo (one study)

- **Limited evidence of benefit**
  - Hydrocortisone versus placebo (one study)
NICE Guidelines for Early Intervention

• Offer immediate practical, social and emotional support
• Don’t debrief individuals
• Consider symptomatic pharmacotherapy
• Watchful waiting
• Trauma focused CBT for acute PTSD
Psychological therapies for chronic PTSD in adults
TFCBT vs Wait List

Review: Psychological treatment of post-traumatic stress disorder (PTSD)
Comparison: 01 Trauma Focused CBT/Exposure Therapy vs Waitlist/Usual Care
Outcome: 01 Severity of PTSD symptoms

<table>
<thead>
<tr>
<th>Study or sub-category</th>
<th>N</th>
<th>Trauma Focused CBT Mean (SD)</th>
<th>Waitlist/Usual Care Mean (SD)</th>
<th>SMD (random)</th>
<th>Weight %</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>O1 Clinician</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bron 1989</td>
<td>27</td>
<td>56.20 (24.10)</td>
<td>23</td>
<td>66.40 (24.30)</td>
<td>8.25</td>
<td>-0.42 [-0.98, 0.15]</td>
</tr>
<tr>
<td>Keane 1999</td>
<td>11</td>
<td>28.80 (15.00)</td>
<td>13</td>
<td>31.90 (12.00)</td>
<td>7.49</td>
<td>-0.22 [-1.03, 0.58]</td>
</tr>
<tr>
<td>Foa 1991</td>
<td>10</td>
<td>15.40 (11.09)</td>
<td>10</td>
<td>19.50 (7.18 )</td>
<td>7.20</td>
<td>-0.42 [-1.31, 0.47]</td>
</tr>
<tr>
<td>Vaughan 1994</td>
<td>13</td>
<td>23.00 (10.20)</td>
<td>17</td>
<td>28.50 (8.90 )</td>
<td>7.71</td>
<td>-0.56 [-1.30, 0.17]</td>
</tr>
<tr>
<td>Fecteau 1999</td>
<td>10</td>
<td>37.50 (30.40)</td>
<td>10</td>
<td>74.60 (24.70)</td>
<td>6.88</td>
<td>-1.28 [-2.27, -0.30]</td>
</tr>
<tr>
<td>Foa 1989</td>
<td>45</td>
<td>12.60 (8.37)</td>
<td>15</td>
<td>26.93 (8.47 )</td>
<td>7.95</td>
<td>-1.68 [-2.33, -1.02]</td>
</tr>
<tr>
<td>Gerson 2000</td>
<td>22</td>
<td>3.00 (10.00)</td>
<td>20</td>
<td>9.00 (10.00)</td>
<td>8.09</td>
<td>-0.51 [-1.19, 0.11]</td>
</tr>
<tr>
<td>Cloitre 2002</td>
<td>22</td>
<td>31.00 (25.20)</td>
<td>24</td>
<td>62.00 (22.70)</td>
<td>8.02</td>
<td>-1.27 [-1.91, -0.63]</td>
</tr>
<tr>
<td>Resick 2002</td>
<td>81</td>
<td>23.00 (19.92)</td>
<td>40</td>
<td>69.73 (19.19)</td>
<td>8.46</td>
<td>-2.36 [-2.84, -1.87]</td>
</tr>
<tr>
<td>Blanchard 2003</td>
<td>27</td>
<td>23.70 (26.20)</td>
<td>24</td>
<td>54.00 (25.90)</td>
<td>8.15</td>
<td>-1.14 [-1.74, -0.55]</td>
</tr>
<tr>
<td>Kubanyi 2003</td>
<td>18</td>
<td>10.10 (19.30)</td>
<td>14</td>
<td>76.10 (25.20)</td>
<td>6.70</td>
<td>-2.92 [-3.95, -1.88]</td>
</tr>
<tr>
<td>Kubanyi 2004</td>
<td>45</td>
<td>15.80 (14.40)</td>
<td>40</td>
<td>71.90 (23.80)</td>
<td>8.10</td>
<td>-2.87 [-3.48, -2.25]</td>
</tr>
<tr>
<td>Subtotal (O1 Clinician)</td>
<td>345</td>
<td></td>
<td>264</td>
<td></td>
<td>100.00</td>
<td>-1.36 [-1.88, -0.84]</td>
</tr>
</tbody>
</table>

Test for heterogeneity: $\chi^2 = 86.62$, df = 12 (P < 0.00001), $P = 86.1\%$
Test for overall effect: $Z = 5.14$ (P < 0.00001)

Bisson, Roberts, Andrew, Cooper, Lewis (2013)
Psychological therapies for chronic PTSD in adults
Bisson, Roberts, Andrew, Cooper, Lewis (2013)

• 70 studies - 4761 participants
• TFCBT more effective than waitlist/usual care (SMD) -1.62;
  95% CI -2.03 to -1.21; 28 studies; n = 1256
• EMDR more effective than waitlist/usual care (SMD -1.17; 95%
  CI -2.04 to -0.30; 6 studies; n = 183
• Stress management more effective than waitlist/usual care
  (SMD -1.22; 95% CI -1.76 to -0.69; 4 studies; n= 106).
• Group TFCBT more effective than waitlist/usual care (SMD -
  1.28; 95% CI -2.25 to -0.31; 3 studies n=105).
• Other therapies more effective than waitlist/usual care (SMD -
  0.58; 95% CI -0.96 to -0.20; 3 studies n=112).
Complexity
Specific vs non-specific interventions
18 studies – 1274 participants
Specific > non-specific
Complex vs non-complex presentation
<table>
<thead>
<tr>
<th>First author (publication year)</th>
<th>ES (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-complex clinical problems</strong></td>
<td></td>
</tr>
<tr>
<td>Blanchard (2003)</td>
<td>-0.88 (-1.44, -0.32)</td>
</tr>
<tr>
<td>Bryant (2003)</td>
<td>-0.88 (-1.25, -0.11)</td>
</tr>
<tr>
<td>Lytle (2002)</td>
<td>-0.45 (-1.07, 0.18)</td>
</tr>
<tr>
<td>Reed (2006)</td>
<td>-2.23 (-3.40, -1.06)</td>
</tr>
<tr>
<td>Taylor (2003)</td>
<td>-0.85 (-1.50, -0.20)</td>
</tr>
<tr>
<td>Vaughan (1994)</td>
<td>-0.99 (-1.74, -0.24)</td>
</tr>
<tr>
<td><strong>Subtotal</strong> (I-squared = 33.0%, p = 0.188)</td>
<td>-0.87 (-1.20, -0.53)</td>
</tr>
<tr>
<td><strong>Complex clinical problems</strong></td>
<td></td>
</tr>
<tr>
<td>Carlson (1998)</td>
<td>-0.46 (-1.31, 0.40)</td>
</tr>
<tr>
<td>Coffey (2006)</td>
<td>-1.38 (-2.47, -0.29)</td>
</tr>
<tr>
<td>Echeburua (1997)</td>
<td>-0.12 (-1.00, 0.76)</td>
</tr>
<tr>
<td>Echeburua (1996)</td>
<td>-0.05 (-0.93, 0.83)</td>
</tr>
<tr>
<td>Foa (1991)</td>
<td>-0.19 (-0.91, 0.52)</td>
</tr>
<tr>
<td>Marks (1998)</td>
<td>0.00 (-0.56, 0.56)</td>
</tr>
<tr>
<td>McDonagh (2005)</td>
<td>0.22 (-0.33, 0.78)</td>
</tr>
<tr>
<td>Neuner (2004)</td>
<td>-0.05 (-0.80, 0.68)</td>
</tr>
<tr>
<td>Neuner (2008)</td>
<td>0.02 (-0.25, 0.28)</td>
</tr>
<tr>
<td>Scheck (1998)</td>
<td>-0.75 (-1.29, -0.21)</td>
</tr>
<tr>
<td>Schnurr (2007)</td>
<td>-0.38 (-0.61, -0.14)</td>
</tr>
<tr>
<td>Vitriol (2009)</td>
<td>-0.29 (-0.71, 0.13)</td>
</tr>
<tr>
<td><strong>Subtotal</strong> (I-squared = 34.3%, p = 0.116)</td>
<td>-0.23 (-0.42, -0.04)</td>
</tr>
<tr>
<td><strong>Overall</strong> (I-squared = 57.6%, p = 0.001)</td>
<td>-0.43 (-0.64, -0.23)</td>
</tr>
</tbody>
</table>
Gerder et al conclusions

• For complex clinical problems
  • “we found no superiority of specific psychological interventions over supportive therapies and relaxation treatments, which are typically used as control for nonspecific intervention effects. The benefit of specific psychological interventions appeared reduced in the studies with complex clinical problems. …”

• However, both specific and nonspecific interventions showed large intervention effects (ESs above 0.80)
  • 1. There is need for better specific interventions for patients with complex clinical problems
  • 2. The so-called nonspecific psychological interventions may be used in clinical practice if superior specific psychological interventions are not available.
What isn’t recommended…
• Debriefing
• Ineffective psychological treatments
• Drug treatments NOT a first line treatment

What is recommended…
• Watchful waiting
• Trauma-focussed treatments (CBT and EMDR) for adults and children
NICE Guidelines PTSD 2005

• Offer brief treatments and longer term treatments appropriately
• Manage sleep disturbance
• Drug treatments:
  - general use: paroxetine or mirtazapine
  - specialist use: amitriptyline or phenelzine
• Develop shared management approaches between primary and secondary care
NICE Guidelines PTSD 2005

What else needs considering:

• Co-morbid problems – including drugs & alcohol
• Barriers to treatment for refugees & asylum seekers
• Managing people with PTSD as a result of a disaster
YOUR COUNTRY NEEDS
YOU
Contact details

• Dr Neil J. Kitchiner
  • Neil.Kitchiner@wales.nhs.uk

• Dr Neil Roberts
  • Neil.Roberts4@wales.nhs.uk