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Post Traumatic Stress Disorder

Post Traumatic Stress Disorder

Aims and Objectives

- To develop an understanding of PTSD (aetiology, epidemiology, natural history, neurobiology, genetics, diagnostic criteria, classification, psychopathology, clinical presentation, assessment, risks) and its management (pharmacological, psychological, social).
- To develop an understanding of Meta-analyses and Systematic Reviews and develop skills for critically appraising them.

Post Traumatic Stress Disorder

To achieve this

- Case Presentation
- Journal Club
- 555 Presentation
- Expert-Led Session
- MCQs

- Please sign the register and complete the feedback

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PTSD – A brief history

- American Civil War – Irritable heart
- WW1 – Shell shock / Effort syndrome
  - 13000 ‘Cases’ of shell shock.
  - Increased to 200000 by 1918
  - 307 soldiers executed for cowardice
- Vietnam War – brought in concept of PTSD
- Gulf War – Gulf war syndrome
- 1980 - the American Psychiatric Association added PTSD to DSM-III

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PTSD - Definition

- An anxiety disorder precipitated by an experience of intense fear or horror while exposed to a traumatic (especially life-threatening) event.

- The disorder is characterised by intrusive recurring thoughts or images of the traumatic event; avoidance of anything associated with the event; a state of hyperarousal and diminished emotional responsiveness.

- These symptoms are present for at least one month

PTSD – Diagnostic Criteria

Criterion A: stressor	Exposure to a stressor	
Criterion B: re-experiencing	Persistent remembering of the stressor in **one** of:	Intrusive flashbacks Vivid memories or recurring dreams Experiencing distress when reminded of the stressor
Criterion C: avoidance	Actual or preferred avoidance of circumstances resembling or associated with the stressor (not present before the stressor).	
Criterion D: hyperarousal (either D1 or D2)	D1: Inability to recall	
	D2: Two or more of:	Sleep problems Irritability Concentration problems Hypervigilance Exaggerated startle response
Criterion E: time	Onset of symptoms within six months of the stressor.	

PTSD – Differences between ICD and DSM diagnosing criteria

Criterion	DSM V	Detail
Criterion A: stressor	DSM V includes subjective stress	
Criterion C: avoidance	DSM V includes emotional numbing and avoidance symptoms	Avoidance - avoid thoughts, feelings, or conversations about the traumatic event. Avoid places or people that remind of the traumatic event. Numbing - Loss of interest in once pleasurable activities, feeling distant from others, experiencing difficulties having positive feelings
Criterion D: hyperarousal	DSM V – any two symptoms from D1 and D2	
Criterion E: time	DSM V – specifies symptoms to be presemt for over a month.	

PTSD – Formal Assessment Tools

- **IES - R**
- Clinician Administered PTSD Scale (CAPS)
  - developed by National Center for PTSD
  - requests information about the frequency and intensity of the core PTSD symptoms and common associated symptoms.
- Treatment Outcome PTSD scale (TOP – 8)
  - It is shorter, is easier to use, and is highly correlated with the CAPS.
- Structured Interview for PTSD (SI-PTSD)
- PTSD Symptom Scale Interview (PSS-I)

PTSD - Epidemiology

Prevalence –

- Military - 4.8%[1]
- General population –
  - 25–30% of people experiencing a traumatic event may go on to develop PTSD.
  - 2.6% in men
  - 3.3% in women[2]

1 in 5 firefighters.
1 in 3 teenage survivors of car crashes.
1 in 2 female rape victims.
2 in 3 prisoners of war.

1. Iversen et al. The prevalence of common mental disorders and PTSD in the UK military: using data from a clinical interview-based study *BMC Psychiatry* 2009, 9:68
2. McManus et al. Adult Psychiatric Morbidity in England, 2007 - Results of a household survey, The NHS Information Centre for health and social care

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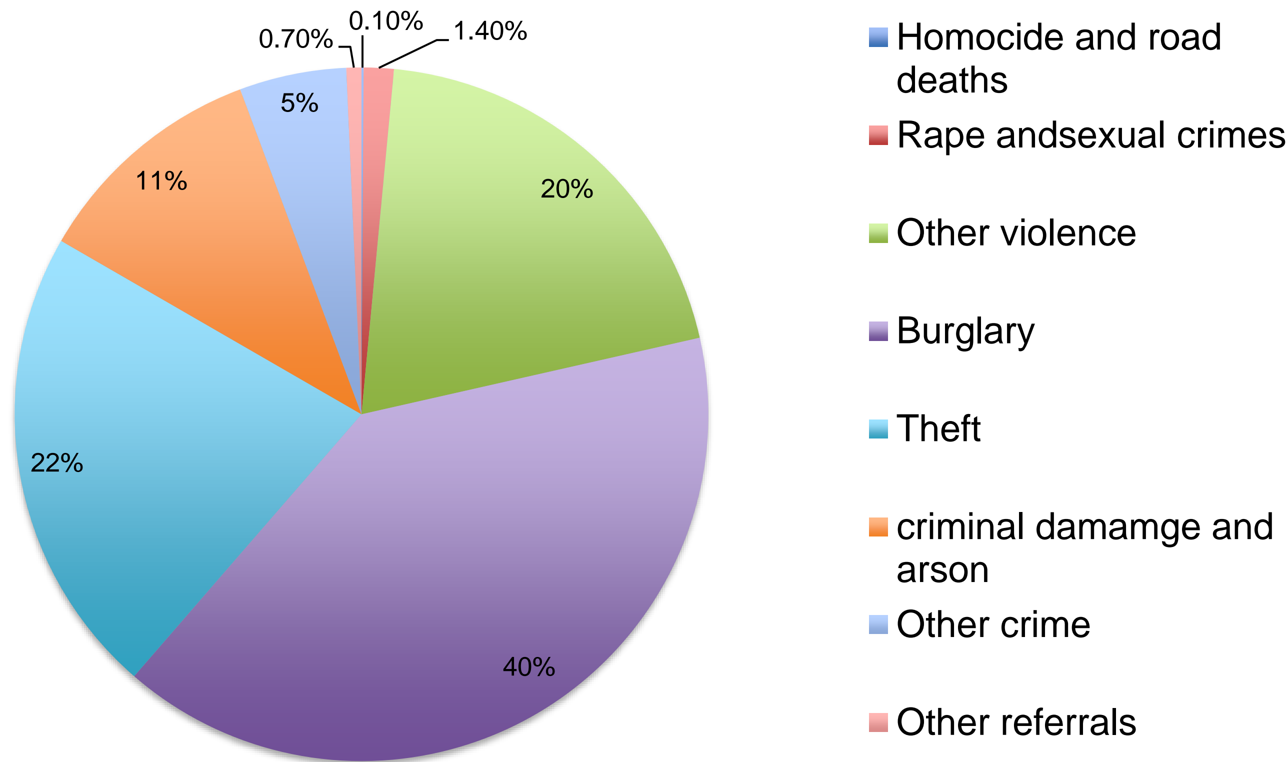
Modern day PTSD

Referrals to victim support in UK



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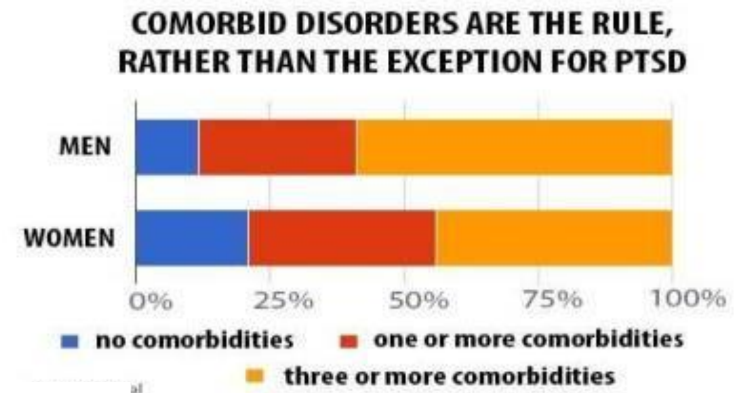
PTSD – Risk Factors

- All – Past psychiatric history, neuroticism
- Military:
  - Duration of combat exposure / trauma experienced up close.
  - Poor social support.
  - Bullying
  - Lower rank
  - Low educational attainment.
  - History of childhood adversity.
- Females
  - Twice as likely to develop PTSD as men.
  - Women were more vulnerable to PTSD after disasters and accidents, followed by loss and non-malignant diseases.
  - 1-2% of women suffer from PTSD postnatally[3].

3. Anderson et al. Risk factors for developing post-traumatic stress disorder following childbirth: a systematic review. Acta Obstet Gynecol Scand. 2012

PTSD – Comorbidity

- Depressive disorder
- Substance misuse and dependence
- Anxiety disorder
- Bi-polar disorder



- Note: patients with PTSD are known to have poor compliance with medication[4].

4. Kronish et al. Post-traumatic stress disorder and medication adherence: results from the Mind Your Heart Study. J Psychiatr Res. 2012 Dec;46(12):1595-9.
5. Chart - Kessler & Sonnega, et al. Arch Gen Psychiatry. 1995;52(12):1048-1060.

PTSD – Aetiology : Theories

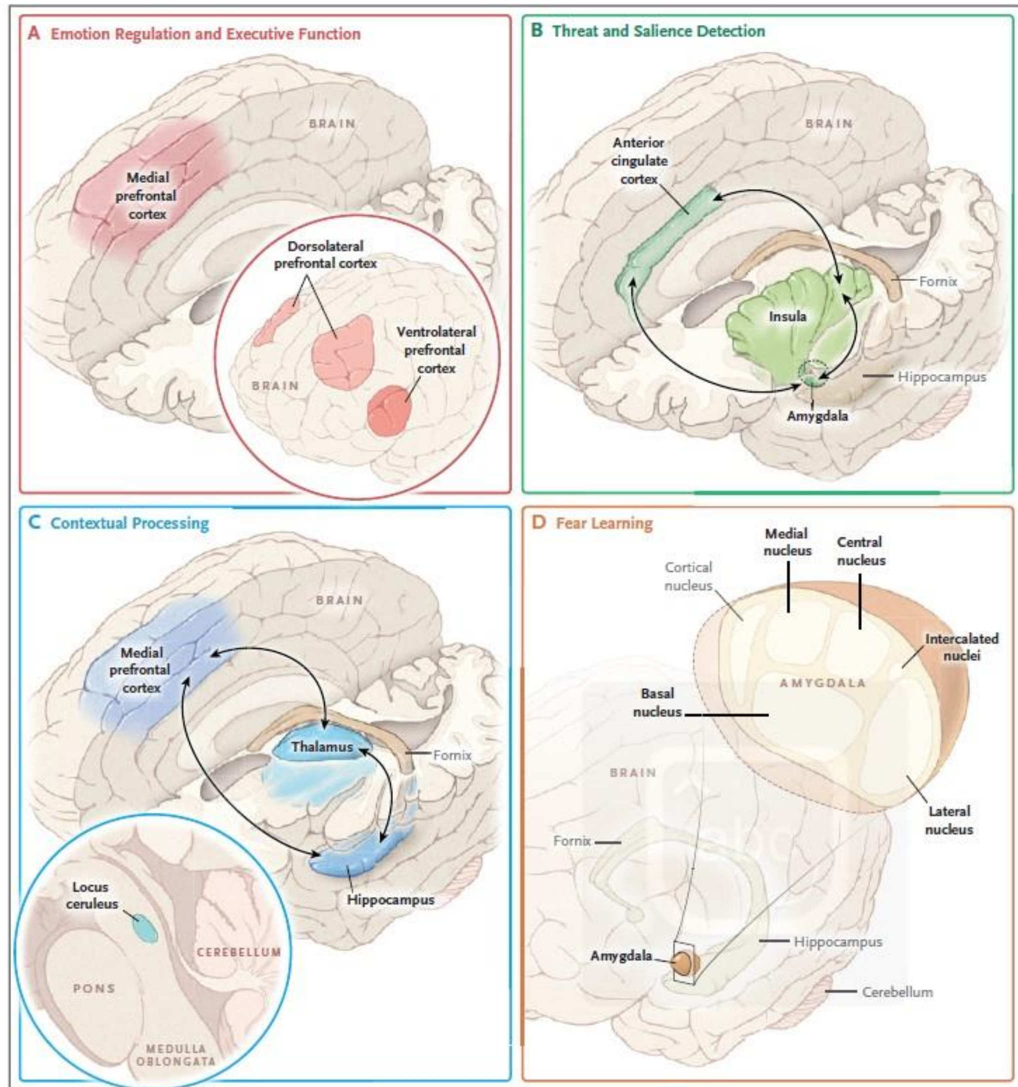
Neurobiology –	Structural brain imaging - reduced volume of the hippocampus, prefrontal lobe and anterior cingulate.
	Functional brain imaging suggests excessive amygdala activity and reduced activation of the prefrontal cortex and hippocampus
Neurochemical	Increased dopamine,
	Increased NA,
	Decreased 5HT in dorsal and median raphe.
Genetic	polymorphism in the DA transporter gene excess of the SLC6A39 repeat allele
Neuroendocrine	hypocortisolism
	Sustained raised CRH
	Increased T3:T4

Nemeroff CB. Post-traumatic stress disorder: the neurobiological impact of psychological trauma. *Dialogues in Clinical Neuroscience* 2011;13(3):263-278.

- **Brain Regions Implicated in the Pathophysiology of Post-Traumatic Stress Disorder (PTSD).**

Shown are the known connectivity paths within four dysfunctional circuits that play a part in the psychopathology of PTSD:

- Emotion regulation and executive function,
- Threat detection,
- Contextual processing,
- Fear learning.

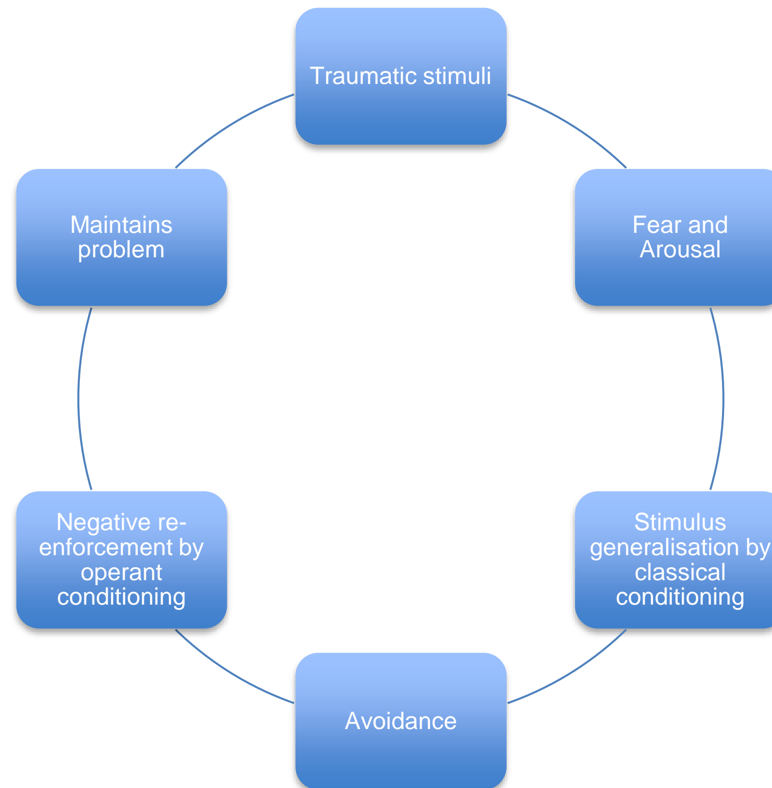


PTSD – Psychodynamic Theory

- Subjective meaning of a stressor may determine its traumatogenicity
- Traumatic events may resonate childhood traumas
- Common defenses
  - Denial
  - Minimisation
  - Splitting
  - Projective identification
  - Dissociation
  - Guilt
- Object relatedness – projection and interojection

PTSD – Cognitive Theory

Mowrer's two factor conditioning theory



PTSD – Differential Diagnoses

- Acute stress disorder
  - In general, the symptoms of acute stress disorder must occur within four weeks of a traumatic event and come to an end within that four-week time period.
  - If symptoms last longer than one month and follow other patterns common to PTSD, the diagnosis may change from acute stress disorder to PTSD.
- OCD
  - Both have recurrent, intrusive thoughts as a symptom
  - Thoughts present in obsessive-compulsive disorder do not usually relate to a past traumatic event.
- Adjustment disorder
  - Similar to adjustment disorder because both are linked with anxiety that develops after exposure to a stressor.
  - With PTSD, this stressor is a traumatic event.
  - With adjustment disorder, the stressor does not have to be severe or outside the “normal” human experience.
- Other comorbid conditions are also differentials

PTSD - Treatment

- If co-morbid depression – treat PTSD first
- Substance misuse addressed before PTSD

- Education – patient and carers
  - Symptoms of PTSD
  - Common reactions to trauma
  - Giving up behaviours that continue avoidance

- First line - psychological

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PTSD - Treatment

- Evidence for treatment
- Produced by the National Center for PTSD, U.S. Department of Veterans Affairs | February 2011

Treatment	Effect size (effect size of 0.8 is considered large. Everyone would notice it.)	Confidence interval
Prolonged exposure	1.91	1.52 – 2.3
EMDR	1.89	1.07 – 2.71
Cognitive processing Therapy	1.81	1.41 – 2.21
SSRI	1.64	1.13 – 2.16

http://www.ptsd.va.gov/Public/understanding_TX/CourseList/Course_NCPTSD_Treatment_1435/assets/00015006.PDF

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PTSD – Treatment Psychological

- Debriefing
- Self help

- Trauma focused CBT
  - Exposure therapy
    - Imaginal exposure - flooding
    - In vivo exposure – visiting trauma site
  - Cognitive restructuring
    - make sense of the bad memories - people remember the event differently than how it happened.
    - May feel guilt or shame about what is not their fault
  - Stress inoculation training
    - Relaxation methods

PTSD – Treatment EMDR

- Even the most enthusiastic supporters of EMDR have not agreed on how the therapy works!
- Incorporates many different interventions,
  - imaginal exposure (under conditions of divided attention)
  - free association,
- The main intervention requires the patient to recall trauma-related memories while focusing on external oscillatory stimulation.
  - Stimulation is induced by the therapist moving a finger from side to side across the patient's field of vision, which induces eye movements.
  - 24 eye moments = 1 set
  - Sets of eye movements are induced until distress is reduced.

EMDR

A few years ago I underwent EMDR. I was sceptical, of course. At this point in time, however, I see that it saved my marriage, my sanity and my relationship with my children. I was suffering from PTSD after experiencing much loss and never even realized that's what stood in the way of a healthy life. It's a wonderful treatment and more people should be informed about it. I was lucky to run across it by accident.

Thank you,

J.M.

I was a member of the Canadian Army for over 20 years. I suffered from OSI (operational stress injury), depression, and the loss of my daughter and wife killed by a drunk driver. For over a year of treatment and work on my part I have finally found some peace of mind, My anger and depression had lowered to a manageable level. Today, I see the light at the end of the tunnel.... I know that this treatment EMDR is by far the best I ever received in the mental health field, and the great thing is no meds.

Thank you, G.C.

PTSD – Treatment Medication

First line

SSRI : Sertraline

Paroxetine (not commonly used)

Second line:

Venelafaxine

Mirtazepine

Trazodone

TCA

- chlomipramine

MAOIs

- Phenelzine

Propanolol

- For somatic symptoms

Third line – minimal evidence

Antipsychotics

- Minimal evidence for Risperidone

Topiramate

Carbamezapine

Lamotrigine

Alpha1 receptor antaonist

- Prazosin

NICE guidelines outline

- Symptoms present for more than 3 months after trauma:
- 1st line- EMDR or trauma-focused CBT.
- Drug treatment : not routine 1st line

Paroxetine or Mirtazapine (general use)

Amitriptyline or Phenelzine (under specialist care)

PTSD - Prognosis

- Untreated – 30% of patients recover completely
- With treatment
  - After 1 year
    - 50% of patients recover completely (66%)
    - 30% have mild symptoms
    - 10% have moderate symptoms
    - 10% have same symptoms or become worse

PTSD - Prognosis

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Positive prognostic factors	Negative prognostic factors
Robust premorbid personality	Children
Above average cognitive ability	Very old
Good social skills	Past psychiatric history personality disorder anxiety disorder
Strong social support	Female
Absence of past psychiatric/medical history	
Absence of alcohol / substance misuse/dependency	
Optimism	
Environmental stability	
Less severe trauma Early intervention Minimal duration of trauma Trauma not experienced up close	

Post Traumatic Stress Disorder

MCQs

1. Which of the following psychological interventions can be effective for the treatment of post-traumatic stress symptoms in children and young people who have been sexually abused?

- A. Psychodynamic psychotherapy
- B. CAT
- C. Trauma focused CBT
- D. IPT
- E. Single episode debrief

Post Traumatic Stress Disorder

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Post Traumatic Stress Disorder

MCQs

2. Which antidepressant is licensed for the treatment of PTSD?

- A. Sertraline
- B. Mirtazapine
- C. Venlafaxine
- D. Amitriptyline
- E. Moclobemide

Post Traumatic Stress Disorder

MCQs

2. Which antidepressant is licensed for the treatment of PTSD?

- A. **Sertraline**
- B. Mirtazapine
- C. Venlafaxine
- D. Amitriptyline
- E. Moclobemide

- **And paroxetine**

Post Traumatic Stress Disorder

MCQs

3. Which of the following is NOT a DSM V symptom of PTSD?

- A. Persistent negative beliefs about oneself
- B. Persistent pain
- C. Self-destructive or reckless behaviour
- D. Constricted affect
- E. Marked diminished interest in (pre-traumatic) significant activities

Post Traumatic Stress Disorder

MCQs

3. Which of the following is NOT a DSM V symptom of PTSD?

- A. Persistent negative beliefs about oneself
- **B. Persistent pain**
- C. Self-destructive or reckless behaviour
- D. Constricted affect
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Post Traumatic Stress Disorder

MCQs

4. Which of these statements is true regarding acute stress reaction and PTSD?

- A. Acute stress disorder only occurs in the elderly population and children
- B. Acute stress disorder describes symptoms in someone who was not present at an incident, while PTSD takes place only in those who were present
- C. PTSD is not diagnosed until after 4 weeks following the traumatic event
- D. Acute stress disorder and PTSD can be diagnosed at any time after the stressful event
- E. All acute stress disorder patients develop PTSD

Post Traumatic Stress Disorder

MCQs

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Post Traumatic Stress Disorder

MCQs

5. Which of the following is recommended as first line treatment for PTSD in adults?

- A. Mirtazapine
- B. EMDR
- C. Phenelzine
- D. Psychodynamic psychotherapy
- E. Sertraline

Post Traumatic Stress Disorder

MCQs

5. Which of the following is recommended as first line treatment for PTSD in adults?

- A. Mirtazapine
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References

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5. Chart - Kessler & Sonnega, et al. Arch Gen Psychiatry. 1995;52(12):1048-1060.
6. Shalev et al. N Engl J Med 2017;376:2459-69.

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Any Questions?

Thank you.