PTSD and Psychological Trauma:

Professor Walter Busuttil MBChB MPhil MRCGP FRCPsych RAF Retd
Consultant Psychiatrist and Director of Research and Training Combat Stress
Kings Centre for Military Health Research (KCL)
Institute of Psychiatry, Psychology and Neurosciences
Expert in Mind panel member

The World in the 2000s

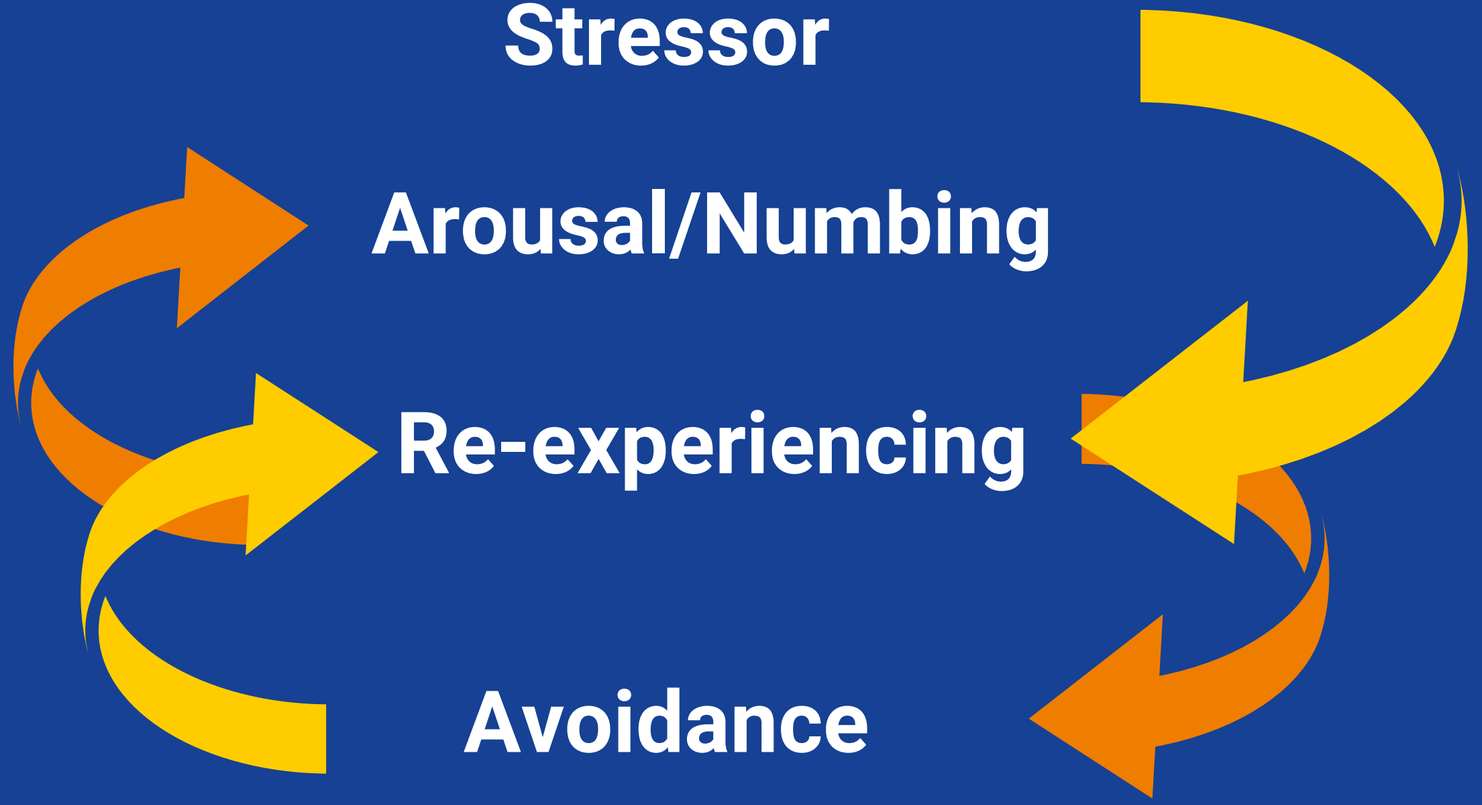
- Experiences of Military Mental Health - Iraq and Afghanistan 2004-2014 and beyond
- ISIS and the West 2015
- COVID-19 2020
- War in Ukraine 2022
- Earthquakes in Turkey and Syria 2023
- Floods and fires in Australia and Europe 2020s
- UN; Humanitarian work in Africa ... forever
- Refugees ... forever

Medico-legal practice

- RTAs
- Accidents at Work
- Clinical Negligence
- Fires
- Floods
- Disasters
- Assaults
- Military related trauma

A dynamic model for the interaction of the symptom clusters in Acute Stress Disorder and Post Traumatic Stress Disorder

Modified by Busuttil (1995) from Horowitz (1976) Information Processing Model



Aetiological Models of PTSD

- **Information Processing Model** - Prime model on which others are based *(Horowitz)*
- **Psychosocial Model** - Support before, during and after exposure *(Green, Brewin)*
- **Behavioural Model** - Triggers & stimulus generalisation *(Foa; Keane)*
- **Cognitive Model** - Cognitive distortions & 'hot spots' *(Ehlers & Clark)*
- **Cognitive Appraisal Model** - Meaning of stressor & its effects on the future: man-made vs acts of God. *(JanoffBulmann)*
- **Dual Representation Theory** - Situationally accessible memory versus verbally accessible memory *(Brewin)*
- **Biological Models -** Unproven & various FMRI studies – *Amygdala and Hippocampal volumes*
- **Attachment Theory Models** *(De Zulueta)* – attachments and therapy
- **Genetic Models** – damage by trauma to telomeres – *trans-generational transmission of vulnerability*

General themes for today...

- Early interventions - Ukraine War Civilians, COVID-19, Earthquake and Disaster Victims, Military Combatants
- Classification - Complex PTSD, Trauma related Grief
- Differential Diagnoses - Trauma and Attachment
- Emerging concepts - Moral Injury
- Physical illness and PTSD
- Use of medications
- CPTSD Treatment - STAIR
- Psychedelic assisted therapies
- General points about medicolegal expert witness practice
- Online vs in person assessments
- Interactive discussion

Early Interventions: Disaster Management

- Military Psychiatry Principles - Military Field Psychiatric Teams
- Psychological First Aid (PFA) (WHO)
- Skills for Life Adjustment and Resilience (SOLAR) (Phoenix Australia)
- Problem Management Plus (PM +) (WHO)

Military Psychiatry

Field Psychiatric Teams (PIE-B Principles) : Local Interventions

Forward Psychiatry Principles (PIE-B) Salmon 1919

Proximity
Immediacy
Expectancy
Brevity

Field Psychiatric Teams - Field Hospitals and Forward Operating Bases (2020s)

- Community Psychiatric Nurses, Psychiatrists, Psychologists
- Work with Primary Care and Commanders
- Operate using principles of PIE-B
- In theatre interventions
- Avoid aeromedical evacuation and repatriation if possible

Psychological First Aid (WHO)

PFA aims to mobilise survivors' own resources –

refugees, civilians in war zones, disaster victims

Five elements of PFA

(drawn from research on risk and resilience, field experience and expert agreement)

PFA promotes:

1. Safety
2. Calm
3. Connectedness
4. Self-efficacy and group efficacy
5. Hope

Problem Management Plus (PM +) (WHO)

- Structured psycho-educational intervention
- Not Trauma Focussed – more general –Trans diagnostic
- Good evidence base

Skills for Life Adjustment and Resilience SOLAR

(Disaster victims short and long term; Refugees)

Developed through expert USA, UK, Canadian, Australian International Roundtable Sydney 2015

- Trauma is the focus
- Short intervention for people who experience ongoing mild to moderate distress after trauma
- Flexible – group or individual programmes
- Brief – delivered over five sessions daily or weekly
- Can be delivered by non-mental health specialists
- Participants learn skills to help them manage distress and support their emotional recovery
- Aim is to improve quality of life and day-to-day functioning, and prevent the development of mental health disorders

O'Donnell Phoenix Australia

Emphasis on Wellbeing; Programme Sessions:

1. Healthy Living
2. Managing Strong Emotions
3. Maintaining Healthy Relationships
4. Coming to Terms with Disaster
5. Managing Worry and Rumination
6. Traumatic Grief Module

Psychological interventions promoting wellbeing within organisations

e.g., Humanitarian civilian organisations; Blue Light Services

Early interventions (Most are derived from Military Psychiatry)

- Culture, Communication and Relationships
- Buddy-buddy care & Peer support
- Psychological First Aid Principles
- Time to rest – harmony guidelines
- Trauma Risk Management – psychoeducation and help seeking pathways percolated down to lowest tier in organisation
- Early detection of mental ill health signs and symptoms – psychoeducation of all staff
- Actions available to engage those who need help with their mental health.
- Services available to help
- Engagement and treatment completion

COVID-19 Emergency Advice

Mental Health First Aid Principles

Senior Executive set the culture of the organisation

- **Sign up and acceptance by the Hierarchy -** reduce barriers to care and stigma
- **Education**; policies - staff, patient health and safety; organisational operations
- **Promote** wellbeing and good mental health

Middle Management

- **Leadership -** promote teamwork, buddy-buddy care, team working / discussion / support related to difficult situations and group responsibility, not individual decisions and responsibility; harmony guidelines - facilitate annual leave and rest; shift patterns and rotas; amenities - food, hydration, coffee room support; shifts, annual and sick leave
- **Support -** TRIM; coffee room support; EAP and HR, Occ Health; access to psychoeducation materials, promote wellbeing

Individuals

- **Mobilise self-help and personal responsibility** - exercise, sleep, nutrition and hydration, meditation, relaxation, annual leave and time off, medications, no excess alcohol, no illicit drugs, talking to friends and family; accessing self help and psychoeducational materials
- **Discuss feelings** – don't bottle things up

Ukrainian Families in the UK
Anticipatory Grief
Learning from Military Families

Psychological effects on families subjected to enforced and prolonged separations enforced under life threatening situations: a spectrum of disturbance

Separation type I:
cyclical
separation and reunion:
frequent cycles of
partings and reunion

Separation type II:
separations enforced
under
threat of death

Separation type III:
indefinitely prolonged
separations
enforced under life
threatening situations

Detachments/
Exercises

Deploying
to war

POW
MIA

PTSD Classification

ICD-10 (1992)

- ***Acute Stress Reaction***
- ***PTSD***

- Re-experiencing
- Avoidance
- Hyperarousal

- Multiple Trauma Exposure

- Enduring Personality Change Following Catastrophic Stress

DSM-IV (1994)

- ***Acute Stress Disorder***
- ***Acute PTSD***
- ***Chronic PTSD***
- ***Delayed PTSD***

- Re-experiencing
- Avoidance
- Hyperarousal

- Multiple Trauma Exposure

- Disorders of Extreme Stress: not classified but defined. (DESNOS)

DSM-V (2013)

- ***(Reactive Attachment Disorder)***
- ***(Disinhibited Social Engagement Disorder)***
- ***Acute Stress Disorder***
- ***PTSD***
- No distinction between acute and chronic: duration only
- ***Delayed PTSD***
  - Re-experiencing
  - Avoidance
  - ***Negative alterations in cognitions & mood***
  - Hyperarousal

- Multiple Trauma Exposure
- ***Dissociative or Non-dissociative sub-types***
- ***Adjustment Disorders***
- ***Other specified Trauma and stressor related disorders***
- ***Unspecified Trauma and stressor related disorders***
- ***Persistent Complex Bereavement Disorder***

Classification:
DSM-V Posttraumatic Stress Disorder (PTSD) changes:

- First criterion more explicit in what constitutes a traumatic event. “Sexual assault is specifically included, for example, as is a recurring exposure that could apply to police officers or first responders; APA."
- Language stipulating an individual’s response to the event — intense fear, helplessness or horror, according to DSM-IV — **has been deleted because that criterion proved to have no utility in predicting the onset of PTSD.”** No Criterion A2 from the DSM-IV.
- Instead of three major symptom clusters for PTSD, the DSM-Vnow lists **four** clusters:

1. **Re-experiencing** the event — For example, spontaneous memories of the traumatic event, recurrent dreams related to it, flashbacks or other intense or prolonged psychological distress.
2. **Heightened arousal** — For example, aggressive, reckless or self-destructive behavior, sleep disturbances, hyper-vigilance or related problems.
3. **Avoidance** — For example, distressing memories, thoughts, feelings or external reminders of the event.
4. **Negative thoughts and mood or feelings** — For example, feelings may vary from a persistent and distorted sense of blame of self or others, to estrangement from others or markedly diminished interest in activities, to an inability to remember key aspects of the event.

PTSD Classification ICD-11 & DSM-V

DSM-V (2013)

- (***Reactive Attachment Disorder***) *children*
- ***(Disinhibited Social Engagement Disorder)*** *children*
- ***Acute Stress Disorder***
- ***PTSD***
- No distinction between acute and chronic: duration only
- ***Delayed PTSD***
  - Re-experiencing
  - Avoidance
  - **Negative alterations in cognitions & mood**
  - Hyperarousal

- Multiple Trauma exposure implied
- ***Dissociative or Non-dissociative sub-types***
- ***Adjustment Disorders***
- ***Other specified Trauma and stressor related disorders***
- ***Unspecified Trauma and stressor related disorders***
- ***Persistent Complex Bereavement Disorder***

ICD-11

- ***Acute Stress Disorder***
- ***PTSD***
- No distinction between acute and chronic: duration only

- ***??Delayed onset PTSD***
- Re-experiencing
- Avoidance
- Hyperarousal

- Multiple Trauma exposure implicit
- ***CPTSD***
- ***Adjustment Disorders***
- ***Prolonged Grief Disorder***

Traumatic Grief

- Persistent Grief Disorder (PGD): ICD -11
- Persistent complex bereavement disorder (PCBD): DSM-V

ICD-11

Post traumatic stress disorder
Description

PTSD may develop following exposure to an extremely threatening or horrific event or series of events. It is characterized by all of the following:

1) **Re-experiencing** the traumatic event or events in the present in the form of vivid intrusive memories, flashbacks, or nightmares. These are typically accompanied by strong or overwhelming emotions, particularly fear or horror, and strong physical sensations;
2) **Avoidance** of thoughts and memories of the event or events, or avoidance of activities, situations, or people reminiscent of the event or events; and
3) **Persistent perceptions of heightened current threat**, for example as indicated by hypervigilance or an enhanced startle reaction to stimuli such as unexpected noises.

The symptoms persist for at least several weeks and cause significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

Developmental History of CPTSD in ICD-11

KZ Syndrome Konzentrations Lager Syndrome: Concentration Camp Syndrome (Herman & Thygersen, 1953)

Characterized by 12 severe chronic psychiatric and non-specific somatic symptoms comprising:

1. Fatigue
2. Impaired memory
3. Dysphoria
4. Emotional instability
5. Sleep impairment
6. Feelings of insufficiency
7. Loss of initiative
8. Nervousness
9. Restlessness & irritability
10. Vertigo
11. Vegetative lability

Concentration Camp Syndrome
(Herman & Thygersen, 1953)

Associated symptoms (Eitinger 1961)

- Anxiety
- Nightmares
- Depression
- Alcohol abuse
- Reduced alcohol tolerance

Associated symptoms (Friedman 1961)

- Re-experiencing symptoms
- Emotional numbing
- Apathy
- Survivor guilt
- Psychosomatic symptoms
- Anxiety hyperarousal

Associated symptoms (Chodoff 1963)

- Avoidance symptoms

KZ Syndrome evolved into:

Enduring Personality Change after Catastrophic Stress (ICD-10, F62.0 1992)

- Prolonged exposure to life threat/s
- PTSD may precede the disorder

Features seen after exposure to threat:

- A hostile mistrustful attitude towards the world
- Social withdrawal
- Feelings of emptiness or hopelessness
- Chronic feelings of being on edge or threatened
- Estrangement

ICD-11 Complex - PTSD

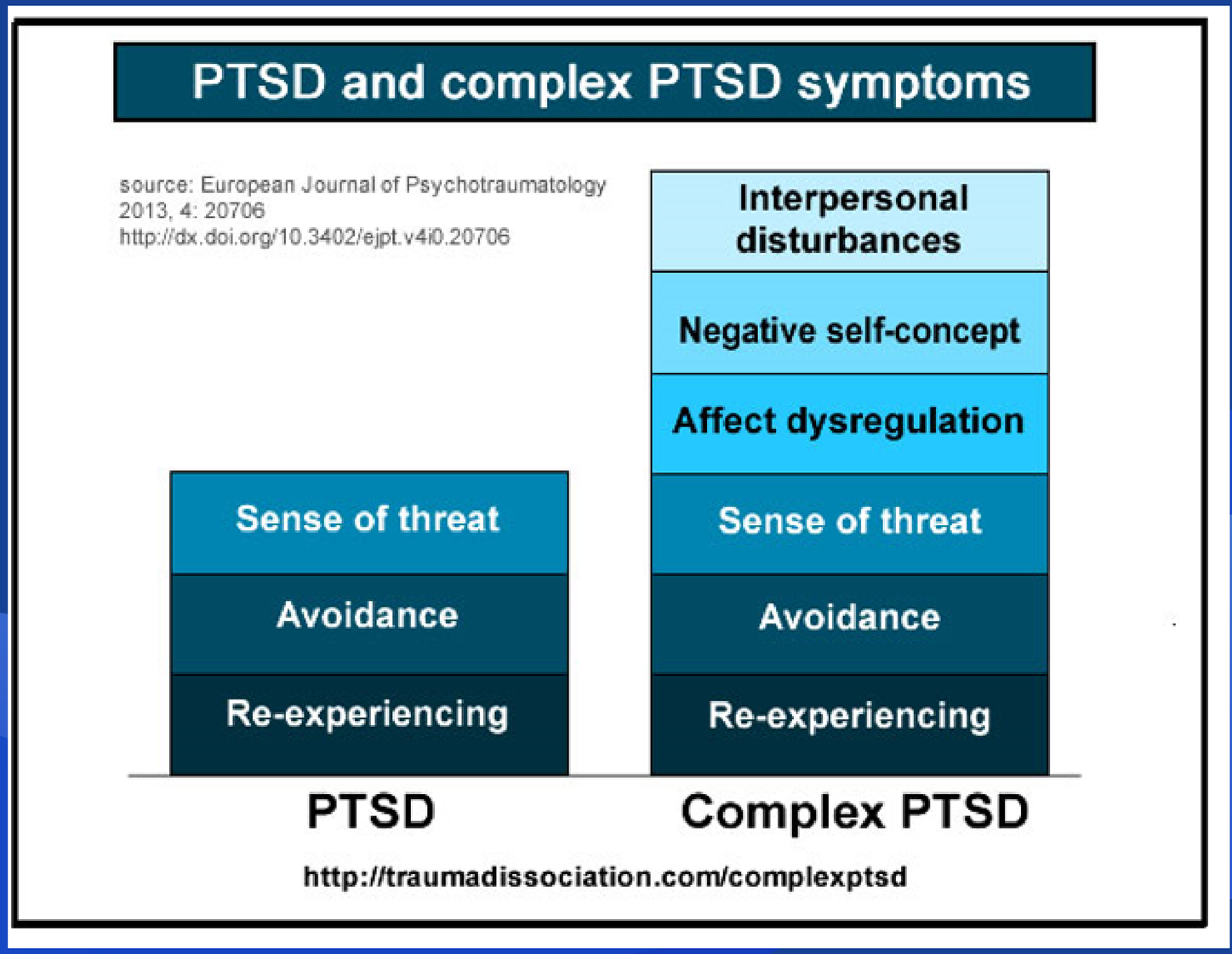
- Exposure to an event or series of events of an extremely threatening or horrific nature, most commonly prolonged or repetitive events from which escape is difficult or impossible (e.g., torture, slavery, genocide campaigns, prolonged domestic violence, repeated childhood sexual or physical abuse).

- Characterized by the **core symptoms of** PTSD; i.e., all diagnostic requirements for PTSD have been met at some point during the course of the disorder.

- In addition, CPTSD characterized by

    1. Severe and pervasive problems in **affect regulation**;
    2. Persistent **beliefs about oneself** as diminished, defeated or worthless, accompanied by deep and pervasive feelings of shame, guilt or failure related to the traumatic event; and
    3. Persistent **difficulties in sustaining relationships** and in feeling close to others. The disturbance causes significant impairment in personal, family, social, educational, occupational or other important areas of functioning.

ICD-11


PTSD and complex PTSD symptoms
source: European Journal of Psychotraumatology
2013, 4: 20706
http://dx.doi.org/10.3402/ejpt.v4i0.20706
Interpersonal disturbances
Negative self-concept
Affect dysregulation
Sense of threat
Avoidance
Re-experiencing
Sense of threat
Avoidance
Re-experiencing
PTSD
Complex PTSD
http://traumadissociation.com/complexptsd

Traumatisation in childhood

- Age
- Context - act of God/act of Man?
- Multiple vs Single
- Dose response?
- Meaning
- Developmental Stage
- Brain development
- Attachments
- Open vs Secret
- Individual vs Group

ABUSE:

- Physical vs Sexual vs Emotional vs Mixed
- Perpetrator/Power, Control, Choice
- Drug induced state
- Systematic vs Non-Systematic: Organized? e.g., Pornographic ring?
- Within an institution?

DSM Research into CPTSD over the Years

Multiple Trauma Adults

Complex PTSD DSM-IV Field Trials Adult Survivors of CSA

(van der Kolk et al, 1994)

Alterations in 7 dimensions:

- **Affect & impulses**: affect lability, anger/aggression, self mutilation, suicidal preoccupation.
- **Attention & concentration**: dissociation, amnesia, depersonalization
- **Self-Perception**: helplessness, guilt, shame
- **Perception of perpetrator**: idealization of the perpetrator or feelings of vengeance
- **Relationships with others**: isolation, mistrust, victim role, victimization of others
- **Somatisation**: GIT; CVS; Chronic pain, conversion etc
- **Systems of meaning**: despair, hopelessness, major changes to previously well held beliefs

Disorders of Extreme Stress Not Otherwise Specified (DSM-4) (DESNOS) (Herman, 1992)

- Defined in Adult Survivors of Childhood Sexual Abuse
- DESNOS + PTSD = Complex PTSD (1995/6)

Complex PTSD: A diagnostic framework - disturbance on three dimensions *(Bloom, 1997)*

- Symptoms
- Characterological/personality changes
- Repetition of Harm

Complex PTSD: Disturbance on three dimensions
(after Bloom, 1997)

- **Symptoms of** : PTSD
  Somatic
  Affective
  Dissociation

- **Characterological changes of**:
  - Control:
    Traumatic Bonding
    Lens of Fear
    Relationships: Lens of extremity-attachment versus withdrawl
  - Identity Changes
    Self structures
    Internalized images of stress
    Malignant sense of self
    Fragmentation of the self

- **Repetition of Harm**:
  To the self - faulty boundary setting
  By others - battery, abuse
  Of others - become abusers
  Deliberate self harm

Multiple Trauma in Children
Developmental Trauma Disorder (2009)

van der Kolk et al 2009; Roth 1990s

- In 2009, professionals researching and treating Complex Trauma in children proposed a new diagnosis of Developmental Trauma Disorder be included in DSM-V to capture the dysfunctions experienced by children and adolescents exposed to chronic traumatic stress.
- Some of these children did not meet the criteria for DSM-IV PTSD (the disorder most closely related).
- Others had been diagnosed with a laundry list of unrelated disorders because their symptoms and behaviours met the criteria for everything from Oppositional Defiance Disorder to Autism Spectrum Disorders.
- Yet these children's problems developed in the context of trauma and developmental disruptions.
- Because no other diagnostic options are available, the symptoms professionals see often lead them to diagnosing unrelated disorders such as bipolar disorder, ADHD, conduct disorder, RAD, autism, and a host of anxiety disorders.

Developmental Trauma Disorder in children & adolescents:

- Trauma Exposure – nature – *multiple physical, sexual, emotional – poor attachments*
- Triggered dysregulation in response to trauma cues
- Persistently altered attributions and expectations
- Functional Impairment

Clinical Presentation: Developmental Trauma Disorder

Complex Trauma Task Force of the National Child Traumatic Stress Network is still active

See: complex Trauma | The National Child Traumatic Stress Network (nctsn.org)

Is DTD the key to understanding Attachment Disorders and CPTSD

See: Ford et al 2022

DTD:

- Arguments put forward by the Task Force to take up the DSM-IV CPTSD Working Party criteria – still relevant

- Are we looking at a spectrum of disorders? Or co-morbidities?

- Co-morbidity: studies of abused children include in order of frequency:
  1. Separation anxiety disorder
  2. Oppositional Defiant Disorder
  3. Phobic Disorders
  4. PTSD
  5. ADHD

- ??? Developmental Trauma Disorder is a useful diagnostic framework

DSM V Disinhibited Social Engagement Disorder

Closely resembles ADHD: *"It may occur in children who do not necessarily lack attachments and may have established or even secure attachments." APA*

Campbell K. A. (2022) The neurobiology of childhood trauma, from early physical pain onwards: as relevant as ever in today's fractured world, European Journal of Psychotraumatology, 13:2, 2131969, DOI: 10.1080/20008066.2022.2131969

ABSTRACT Background: The situation in the world today, encompassing multiple armed conflicts, notably in Ukraine, the Coronavirus pandemic and the effects of climate change, increases the likelihood of childhood exposure to physical injury and pain. Other effects of these worldwide hardships include poverty, malnutrition and starvation, also bringing with them other forms of trauma, including emotional harm, neglect and deliberate maltreatment.

Objective: To review the neurobiology of the systems in the developing brain that are most affected by physical and emotional trauma and neglect.

Method: The review begins with those that mature first, such as the somatosensory system, progressing to structures that have a more protracted development, including those involved in cognition and emotional regulation. Explored next are developing stress response systems, especially the hypothalamic–pituitary–adrenal axis and its central regulator, corticotropin-releasing hormone. Also examined are reward and anti-reward systems and genetic versus environmental influences. The behavioural consequences of interpersonal childhood trauma, focusing on self-harm and suicide, are also surveyed briefly. Finally, pointers to effective treatment are proffered.

Results: The low-threshold nature of circuitry in the developing brain and lack of inhibitory connections therein result in heightened excitability, making the consequences of both physical and emotional trauma more intense. Sensitive and critical periods in the development of structures such as the amygdala render the nervous system more vulnerable to insults occurring at those points, increasing the likelihood of psychiatric disorders, culminating in self-harm and even suicide.

Conclusion: In view of the greater excitability of the developing nervous system, and its vulnerability to physical and psychological injuries, the review ends with an exhortation to consider the long-term consequences of childhood trauma, often underestimated or missed altogether when faced with adults suffering mental health problems

Part Two

Differential Diagnosis:
Disorders Related to Trauma Theory

- Dissociative disorders
- Borderline personality disorder
- Post traumatic stress disorders
- Somatoform (& Conversion) disorders - medically unexplained symptoms
- (Others incl. Psychosis)

Differential Diagnosis - Multiple Traumatisation

- Complex PTSD (ICD 11; DSM research)
- Enduring Personality Change After Catastrophic Stress (ICD-10)
- Dissociative Disorders
- Borderline Personality Disorder
- Psychotic Illnesses: Schizophrenia / Bip Aff Dis
- ADHD
- Head Injury – mTBI/moderate TBI

Dissociation and PTSD:

Easy practical classification *(Marmar)*

- Primary: dissociation at time of trauma – peri-traumatic
- Secondary: dissociation as part of a flashback – re-enactments
- Tertiary: ‘flight to safety’- ‘blanking it off’

Three types of dissociative disorders:

- Depersonalization/derealization disorder
- Dissociative amnesia
- Dissociative identity disorder

Relationship between PTSD and Psychosis

1. Psychotic symptoms among patients with primary PTSD (PTSD symptoms that are psychotic). – high dose stressor; chronic disorder; multiple childhood trauma

2. PTSD in the context of dual diagnosis – e.g., co-morbid drug induced psychosis, co-morbid schizophreniform functional disorder, co-morbid psychotic affective disorder

3. Misdiagnosis – either misinterpretation of primary PTSD symptoms or of co-morbid symptoms or both (common?)

Misdiagnosis – either misinterpretation of primary PTSD symptoms or of co-morbid symptoms or both (common in clincial settings?)

Phenomenology: Single event or Simple PTSD

Re-experiencing

1 - Nightmares

2 - Recurrent intrusive images, thoughts, perceptions

3 - Recurrent Feelings as if it were recurring (incl. reliving, illusions, hallucinations, dissociative flashbacks incl. those occurring on wakening)

4 - Psychol distress on exposure to reminders of trauma

5 - Physiological reactivity

Psychosis

1 - Was this screened for in history taking

2 - Perceptual hallucinations; thought disorder

3 - Flashbacks can occur in any sensory modality and can be misinterpreted as psychotic hallucinations/delusions

4 - Behavioural disturbance. Disinhibition

5 - Agitation

Borderline Personality Disorder DSM-V criteria

1. Frantic efforts to avoid real/imagined abandonment
2. Intense unstable interpersonal relationships
3. Identity disturbance
4. Impulsivity - self damaging: driving, sexual, binge eating
5. Suicidal gestures/self mutilation
6. Affective instability
7. Chronic feelings of emptiness
8. Anger: intense/inappropriate/difficulty controlling
9. Transient Paranoid Ideation/Dissociation (stress related)

Distinguishing Features between BPD and CPTSD

(Gunderson, AmJPsych 1993)

- Absence of core cluster features of PTSD in BPD
- Fear of aloneness is a core feature of BPD, absent in PTSD

Trauma History CPTSD & BPD

CPTSD	BPD
+ Extreme Multiple Childhood Trauma	- Extreme Multiple Childhood Trauma
± Attachment difficulties - deprivation	+ Attachment difficulties - deprivation

Many research studies investigating differences and similarities between CPTSD and BPD

Owczarek M, Karatzias T McElroy E et al. (2023) Borderline Personality Disorder (BPD) and Complex Posttraumatic Stress Disorder (CPTSD): A Network Analysis in a Highly Traumatized Clinical Sample Published Online:1 Feb 2023 https://doi.org/10.1521/pedi.2023.37.1.112

Abstract:

Whether complex posttraumatic stress disorder (CPTSD) and borderline personality disorder (BPD) diagnoses differ substantially enough to warrant separate diagnostic classifications has been a subject of controversy for years.

To contribute to the nomological network of cumulative evidence, the main goal of the present study was to explore, using network analysis, how the symptoms of ICD-11 PTSD and disturbances in self-organization (DSO) are interconnected with BPD in a clinical sample of polytraumatized individuals (N = 330).

Participants completed measures of life events, CPTSD, and BPD. Overall, our study suggests that BPD and CPTSD are largely separated. The bridges between BPD and CPTSD symptom clusters were scarce, with “Affective Dysregulation” items being the only items related to BPD.

The present study contributes to the growing literature on discriminant validity of CPTSD and supports its distinctiveness from BPD. Implications for treatment are discussed.

Some fine points for discussion about Co-Morbid Presentation and Symptom Overlap

- Overlaps Brain Injury and PTSD, especially mTBI and PCS (Mild neurocognitive disorder (ICD-11)
- ADHD and PTSD – overlaps as we have discussed
- PTSD and dementia – dementia may bring on PTSD symptoms; but does PTSD make dementia more likely?

Resilience and Post Traumatic Growth

Hardiness (Kobasa, 1970s) – change, personal control, commitment

Resilience (Rutter, 1985) – *'Resilience in the Face of Adversity'*

Post Traumatic Growth (Tedeschi, 1996)

- PTG Inventory, assesses positive outcomes following traumatic events
- **21-item scale includes factors of New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Life**
- Women tend to report more benefits than do men.
- Persons who have experienced traumatic events report more positive change than do persons who have not experienced extraordinary events
- The PTG Inventory is modestly related to optimism and extraversion
- The scale determines how successful individuals, coping with the aftermath of trauma, are in reconstructing or strengthening their perceptions of self, others, and the meaning of events

Moral Injury

- Combat soldiers exposed to ethical, moral, and religious challenges and dilemmas as part of their role causing violations to deeply held beliefs (*Litz et al, 2009)*
- Military operations and training emphasize mission aims with suppression of individual needs and beliefs
- Moral Injury usually arises from cumulative events
- This does not lead to or amount to diagnosable mental illness, although in some moral injury may form part of a mental illness presentation including PTSD
- (Moral Injury and Covid)

PTSD VS Moral Injury

(Phelps 2019)

PTSD

- Two factor model of fear acquisition and maintenance
- Emotional processing model – habituation and emotional processing

Moral Injury

- Shame, guilt and betrayal, transgression

PTSD CO-MORBIDITY: BIO/PSYCHO/SOCIAL

(US NVVRS and UK Stds Veterans and Adult Survivors of Abuse)

Bio

- Stroke, Heart Attack, High Blood Pressure, Obesity, Diabetes and death ten years prematurely
- Chronic Pain - 50% most PTSD populations

Psycho

- Depressive illness 50-75%
- Anxiety disorder 20 -40%
- Phobias 15 - 30%
- Panic disorder 5 -37%
- Alcohol abuse/dependence 69%
- Drug abuse/dependence 25%

Social

- Suicide: high rates
- Violence (includes domestic)
- Criminality
- Un-employment & social slide
- Homelessness
- Divorce
- Accidents: Road Traffic Accident rates 49% higher in Vietnam vets than non-vets

Chronic Pain & PTSD

- Pain as a Flashback – not phantom limb
- Pain as a trigger
- Pain as maintaining factor for PTSD & co-morbid Depression & alcohol misuse
- Re-experiencing symptoms as a trigger for Pain
- Hyperarousal and increased muscle tension and Pain

Co-morbid Pain and PTSD

(Dobscha SK, 2013; Morasco, et al 2013).

- 50% of most populations with PTSD suffer chronic pain
- More intense pain perception
- More distress
- Greater disability
- Higher healthcare utilisation
- Higher prescribing of antidepressants, opioid and non-opioid analgesics, benzodiazepines
- More Alcohol Misuse

Pain and PTSD theories

(Dobscha SK, Origan Health and Science Univ April 2013)

- **Fear Avoidance Model:** Pain/Trauma – short term avoidance – short term relief of anxiety – maladaptive appraisals – attentional biases and attentional sensitivity - chronic avoidance – more pain and trauma re-experiences (Foa et al 2013).

- **Mutual Maintenance**: Physiological, affective and behavioural components of PTSD maintain or exacerbate pain symptoms and Cognitive, affective and behavioural components of chronic pain maintain or exacerbate PTSD symptoms (Sharp & Harvey Clinical psychology review 2001)

- **Shared vulnerability:** ANS and muscular responsivity feed avoidance, linked to cognitions and hypervigilance which exacerbate disability and trigger negative emotional responses which can be exacerbated by negative cognitions, life events and low fear threshold - sympathetic dysregulation - (includes hypervigilance) - hyperalgesia. (Asmundson & Katz, 2009)

- **Depression and coping as mediators between pain and PTSD**: Co-Morbid Depression enhances disability and pain perception (Roth et al 2007)

- **Biological:** Autonomic Nervous System (ANS), endogenous opioids, serotonergic systems dysregulation in both PTSD and chronic pain. Contributions of state/trait anxiety to hyperalgesia documented.

- **Neuropeptide Y and neuroactive steroids allpregnanolone and pregnanolone regulate pain and are low in chronic pain patients; and are inversely correlated with PTSD severity.**

Treatment Guidelines

- National Institute of Clinical Excellence (NICE) Guidelines 2005 updated 2018
- Australian Trauma Guidelines (Phoenix Australia)
- International Society for Traumatic Stress Studies (ISTSS) Guidelines (Foa et al, 2000; 2009 & Forbes et al 2022)
- Veterans Association Guidelines (USA)
- UKPTS Guideline statements (2017)
- Best Practice – Delphi Studies
- Literature

Current Rationale for the use of Medications in the Management of PTSD

- Second line interventions (NICE Guidelines)
- Medications: used to stabilize patient, allowing psychotherapy to be conducted primarily
- Medications to treat co-morbidity – especially depression
- After psychotherapy is finished, attempts should be made to reduce or stop medications
- BUT: Evidence that need for some long-term medication is inevitable even after successful therapy

Medications: Evidence base for the reduction of PTSD symptoms

(ISTSS Treatment Guidelines 2021)

- Antidepressants RCT evidence for:
  - Sertraline, Venlafaxine, Paroxetine, Fluoxetine
  - Quetiapine
- Evidence for greater efficacy with combination of above antidepressants with Neuroleptics
- Impulsivity – Nightmares
  - Prazocin
- Emotional dysregulation - Mood Stabilizers – less evidence
  - More evidence for Topiramate but anecdotally probable better response using Carbamazepine or Valproate

Stabilization: Medication: symptomatic/comorbidity:

Medication	Indication
• Antidepressant • (SSRIs; Venlafaxine, Mirtazepine)	• PTSD & Depressive symptoms • *(hyperarousal, re experiencing; *sleep)* • Pseudo-psychotic presentations; Dissociation; Tranquilization; co-morbid psychotic depression
• Neuroleptics • (major tranquillizers)	• PTSD Symptoms, dissociation & Mood stabilizing properties/anger *(nightmares, flashbacks, hyperarousal)*
• Mood Stabilizers/Antiepileptic • (Carbamazepine; Valproate, Topiramate) • Anxiolytic (Pregabalin) • Anti-impulse • (Clonidine/Prazocin/Propranolol)	• Severe anxiety/hyperarousal/anger • *(Mood stabilizer, hyperarousal, re-experiencing)* • Impulse control - self-harm
• Melatonin • Nabilone • Trazodone	• (Prazocin – nightmares too) • *Sleep* • *also nightmares;*

Efficacy of Conventional Treatment for PTSD and Co-Morbid Depression

TF-Therapies – Individual Interventions

- Engagement issues incl. stigma
- High dropout
- Low completion rates
- Low Efficacy 40-60%

Intensive Group and Residential Therapies

- Combat Stress ITP – high efficacy – time cost
- STAIR Program (Skills Training In Affective and Interpersonal Regulation). (spin off of DBT) Ongoing RCT for CPTSD

Medications

- Compliance
- Low Efficacy
- Off licence prescribing
- Combinations of medications uncertain outcomes - polypharmacy

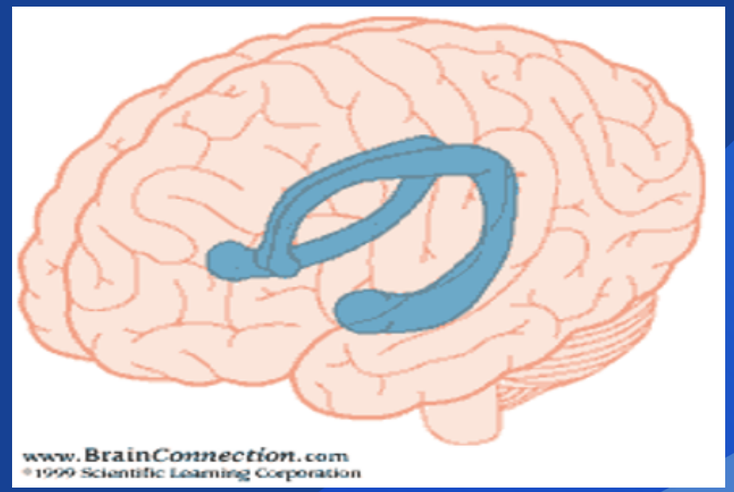
STAIR Narrative Therapy: Skills Training In Affective and Interpersonal Regulation *(Cloitre)*

- Identifying and expressing feeling states (sessions 1-2)
- Negative Mood Regulation (sessions 3-4)
- Expanding the social and emotional repertoire (sessions 5-8)
- Narrative Work (sessions 9-16) – TF therapy incl. imaginal exposure, narrative beginning, middle and end – telling story out loud – (timeline – trauma in whole life context)

Neurobiology of PTSD – Revised - Psychedelics

Conventional Wisdom:

- Serotonergic systems in Limbic System mainly involved.
- ? PTSD *represents a failure of medial prefrontal (cortical) /anterior cingulate networks to regulate amygdala activity resulting in hyper-reactivity to threat*
- *HPA Axis affected*



Psychedelics – ? Game Changer

- Work on serotonergic systems Behavioural and neuroimaging data show that psychedelics modulate neural circuits that have been implicated in mood and affective disorders including PTSD and can reduce the clinical symptoms of these disorders
- Neurogenesis and adhenolysis – Pre-Frontal Cortex
- Promote Structural and Functional Neural Plasticity in Pre-Frontal Cortex – which is seen to be atrophied in PTSD and Depression
- Like ketamine, serotonergic psychedelics are capable of robustly increasing neuritogenesis and/or spinogenesis both in vitro and in vivo These changes in neuronal structure are accompanied by increased synapse number and function

Psychedelic Assisted Therapy

(Bastiaans, 1983; Bird et al 2021)

Historically used to treat 'concentration camp syndrome' with intervention aimed at allowing re-experiencing of traumatic material to be confronted within a supportive environment.

Mode of action – evidence for effects on cortex rather than limbic system

- **LSD, MDMA** and those derived from plants e.g., **Psilocybin** — act on serotonin receptors, which alter mood and happiness (super-boosting of 5HT levels)
- **Ketamine** affects a different class of brain receptors in pre-frontal cortex that are important for learning and memory
- The PFC is a critical region which communicates with brain regions that regulate mood, emotion, fear, reward
- Therapeutic Window
- **Research** very promising – depression, OCD, PTSD, alcohol, smoking, addictions, other
- Two dosing sessions – preparation and therapy – overall number of sessions needed significantly reduced

Psychedelic Assisted Therapy (Bird et al 2021)

Main Effects

- Change Processing of Affective Information.
- Enhance positive mood
- Enhance the processing of negative memories/experiences acutely, allowing patients to ‘reconnect’ with their emotions post drug effect
- Promotes fear extinction in mice
- In PTSD, psilocybin may inhibit fear responses allowing revisiting of traumatic material
- Psilocybin augments positive mood states in PTSD with co-morbid depression
- Depression: addresses negative cognitive set.
- Improves positive mood state and trust within therapeutic rapport

Medico-Legal Practice

- Advances in Literature
- Classifications and Diagnoses
- ICD vs DSM
- Guidelines NICE, ISTSS, Phoenix Australia, Veterans Association – USA;
- Evidence Based Interventions – Literature
- Covid-19
- Online vs In Person assessments

Discussion

end

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