PTSD: The Concept and Challenges in the Medico legal settings

Prof A.C. McFarlane
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The University of Adelaide.
1983 Ash Wednesday Bushfires

- 808 Primary school children
- 2600 registered disaster victims
- 459 CFS firefighters
- 320 patients
- Interviewed the departmental relief co-coordinators
- Surveyed disaster relief teams
- Post disaster litigation
Traumatic Events

- Melbourne/Voyager  82 men killed 1964
- Ash Wednesday Bushfire Disaster
- Yunnan Earthquake in China - 800 deaths
- Iraqi invasion of Kuwait  1993-2003
- Kobe Earthquake  30,000 deaths
- Bali Bombing  82 deaths
- Port Arthur Massacre in Tasmania - most killings by a single gunman
- Australian Defence Force
- Mine accident, roof collapse in golf club, school bus accident, shooting of doctor, murder of director of mental health services, ship wrecks, collapse of amusement ride into crowd, seige with gunman, railway accident
Musée des Beaux Arts  W.H. Auden ( 1938 )

About suffering they were never wrong, the Old Masters: how well they understood its human position; how it takes place while someone else is eating or opening a window or just walking dully along.
The Ash Wednesday Fires, February 16 1983
Ash Wednesday Disaster

- 75 people killed
- 2676 injured
- Over 3700 buildings destroyed
- 1,032,000 acres burnt
1983 Ash Wednesday Bushfires

- 808 Primary school children
- 2600 registered disaster victims
- 459 CFS firefighters
- 320 patients
- Interviewed the departmental relief co-coordinators
- Surveyed disaster relief teams
- Post disaster litigation
Black Saturday

7th February 2009
Similarity of Weather Systems

- Ash Wednesday
- Black Saturday
Black Saturday

- 48 hours before the Premier highlighted the extraordinary fire risk
- Headline on day of the disaster-before the fires- “Worst day in History”
- 173 People killed
- 2,600 buildings destroyed
- Area 1.1 million acres – Japan is 93 mil
- Injured 600 +
The story of the CFA’s bumbling, chaotic response to the Kilmore East fire is a tragic echo of the failures of emergency services and disaster response efforts in other countries. During 9/11 in New York and Hurricane Katrina in New Orleans, US authorities suffered the same sorts of breakdowns in communications and failures of command and control. Indeed, Rees’s disengaged and bumbling performance on the day resembles most closely the performance of the notorious Michael Brown, the incompetent boss of the Federal Emergency Management Agency during Hurricane Katrina.
Lessons Learnt

- Academic Study of mental health outcomes does not record critical issues for survival behaviour
- Warnings are not expressed in language or forms that change behaviour
- Journalists do not record or report critical facts
- Failure to learn from past lessons
Issues Emerging after Black Saturday

- Failure of people to grasp reality of messages
- Failure to predict fire behaviour despite previous knowledge
- Verbal information does not prepare people for reality
- Media did not grasp the reality
Uses and Abuses

- The role of the law of tort
- The impingement of social and political agendas on medicine
“Railroad spine” - Erichsen saw an organic cause (1866)
Page (1885) suggested psychological origins
  “many errors in diagnosis have been made because fright has not been considered of itself sufficient”
Oppenheim(1889) - coined term traumatic neurosis
  Functional problems are produced by subtle molecular changes in the CNS
Compensation law

Patent → Clinician → Science → Society

Models of Psychopathology

Experimental Paradigms
Patient → Clinician → Science → Society
Uses and Abuses

- The struggle between the individual and government
- The battle between corporations and workers
- An individual’s beliefs are at the foundation of political ideology
....the ‘potential explosive impact’ of stress related diagnoses on ‘societal approaches to responsibility and accountability. xxii

Ben Shephard. War of Nerves. 2000
Death of Private Kovco

- NSW coronial hearing
- Gun shot wound to the head
- In the presence of 2 other soldiers
- Had been joking with each other in the minutes before
- Individual who applied first aid misidentified the body
Context and meaning

Dorsolateral Prefrontal cortex

Hippocampus

Affect and fear

Medial Prefrontal cortex

Amygdala
Facial Affect Recognition

- Critical capacity of arousal to switch information processing systems
- Need to define context as well as emotion
- Central vehicle of attachment skills and affect regulation
Childhood Sexual Abuse

- Recall of previous abuse forgotten.
- Is this possible?
Table 1: Recollection of Bushfire Exposure at 20 Year Follow-up

<table>
<thead>
<tr>
<th></th>
<th>Accurate Recall</th>
<th>Overestimate</th>
<th>Underestimate</th>
<th>No Recollection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N (%)</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>Nily Members Injured/Killed</strong></td>
<td></td>
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<tr>
<td>Ther</td>
<td>277 (92 %)</td>
<td>16 (5.3 %)</td>
<td>2 (0.7 %)</td>
<td>6 (2 %)</td>
</tr>
<tr>
<td>Ling s</td>
<td>299 (99 %)</td>
<td>0</td>
<td>3 (1 %)</td>
<td>2 (0.7 %)</td>
</tr>
<tr>
<td>Ndparents</td>
<td>294 (97.4 %)</td>
<td>1 (0.3 %)</td>
<td>3 (1 %)</td>
<td>4 (1.3 %)</td>
</tr>
<tr>
<td>Er Relatives</td>
<td>274 (90.7 %)</td>
<td>10 (3.3 %)</td>
<td>6 (0.7 %)</td>
<td>12 (1.5 %)</td>
</tr>
<tr>
<td><strong>Neds Injured/Killed</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neds’ Friends</td>
<td>198 (65.6 %)</td>
<td>46 (15.2 %)</td>
<td>21 (7 %)</td>
<td>37 (12.3 %)</td>
</tr>
<tr>
<td>Neds</td>
<td>261 (86.4 %)</td>
<td>19 (6.3 %)</td>
<td>5 (1.7 %)</td>
<td>17 (5.6 %)</td>
</tr>
<tr>
<td><strong>Damage / Destruction to Property</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>266 (88.1 %)</td>
<td>27 (8.9 %)</td>
<td>8 (2.6 %)</td>
<td>1 (0.3 %)</td>
</tr>
<tr>
<td>Mit &amp; Farm Machinery</td>
<td>229 (75.8 %)</td>
<td>59 (19.5 %)</td>
<td>4 (1.3 %)</td>
<td>10 (3.3 %)</td>
</tr>
<tr>
<td>Ds</td>
<td>279 (92.4 %)</td>
<td>12 (4 %)</td>
<td>3 (1 %)</td>
<td>8 (2.6 %)</td>
</tr>
<tr>
<td>Property for Making Income</td>
<td>215 (71.2 %)</td>
<td>56 (18.5 %)</td>
<td>18 (6 %)</td>
<td>13 (4.3 %)</td>
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<tr>
<td>Animals for Stock</td>
<td>252 (83.4 %)</td>
<td>33 (10.9 %)</td>
<td>5 (1.7 %)</td>
<td>12 (4 %)</td>
</tr>
<tr>
<td>Animals for Pets</td>
<td>259 (85.8 %)</td>
<td>25 (8.3 %)</td>
<td>8 (2.6 %)</td>
<td>10 (3.3 %)</td>
</tr>
</tbody>
</table>

Total N=302 Bushfire Survivors
Recollection of Injuries/Death in Family

- No Recollection
- Underestimated
- Overestimated

Accurately Reported
Impact of current disorder on Recall

- No recall 37.5% had a current disorder vs. 13% of controls (p=0.005)
- No recall 25% had a current depression disorder vs. 3% of controls (p<0.000)
- No recall 25% had a current anxiety disorder vs. 10% of controls (p=0.04)
The Role of an Expert Witness
Experience as an expert witness

- Hard to predict how experience will prepare
- Always be consistent
- Ultimate test of knowledge and accountability
- Public critique
- Conflict with colleagues
- Important that psychiatric and psychological knowledge impacts in the public domain
What is an expert?

- Provide knowledge that can not be presumed from the average citizen
- Standards of expert evidence determined by professions
- Challenge of the self appointed expert witness –risks of overconfidence
- Duty to inform the court and not be an advocate
Qualifications

» Current licence
» Recognized qualification in the specialty or subspecialty
» Familiar with and involved in the area of practice in 3 of last 5 years
Guidelines of the American College of Physicians

- Testify with honesty, fully and impartially as to qualifications
- Impartiality about the information in the case
- Review prevailing standards of practice at the time
- Qualify whether an opinion is based on personal experience, specific clinical experience or generally accepted opinion
Guidelines of the American College of Physicians

- Compensation is reasonable and commensurate with time and effort
- Unethical to base fees on the outcome of the case
- Be aware that the evidence and depositions are on the public record and subject to peer review
Expert Role

- Answer questions with reasonable accuracy
- Help the court to reach a more accurate conclusion than would be possible
- Reliability and validity of clinical judgment
- Challenge of empathy versus objectivity
- Patients subjectivity versus reality
Factors limiting clinical judgement

- Limits of classification systems and knowledge generally
- Tendency to over weight supporting evidence and under weight negative facts
- Risks of overconfidence
  - Dealing with criticism of colleagues
  - Dealing with negative outcomes
EXPERT OPINION

- Claims of expertise must stand test of scrutiny
- Issue of expertise is answered in each case
- Expert opinions must be within domain of expertise
- Claim of expertise should be presented within context of each specific case
Daubert versus Merrell Dow
Validity of expert testimony

- Is the proposition or technique testable?
- Has it been put to the test?
- Has the proposition been subject to peer review?
- Is there a known error rate?
- Are there standards for using the methodology in place and been tested?
- Is the technique generally accepted in the relevant scientific community?
Daubert restated in 2000

- The testimony based on sufficient facts and data
- The testimony is the product of reliable principles and methods
- The witness has applied the principles and methods reliably to the facts of the case
GOAL OF REPORT

- Educate the reader/court
- Provide your consultant with expert opinion
- Separate facts from inferences
- Answer required questions objectively
- Translate technical information into user-friendly language
- Do not be an advocate
REPORT PREPARATION

- Only accept brief if you have time & resources
- Establish your level of expertise
- Familiarise yourself with pleadings/claim statements/etc
- Insist on written letter of instruction
- Learn what the major debate or theory of the case is AND its contrary view
- Prepare adequate tests
- Review appropriate material/literature
Ethics of Assessment/Report Writing

- Clarify your role
- Inform client of purpose of report/assessment
- Explain limits of confidentiality
- If retained by council, we are representatives of the council and attorney-client privilege can apply (may need to seek advice)
- Client has right to refuse assessment unless it is court-mandated...if client reluctant, do not push the issue before they discuss it with council
The different roles of an expert

- To provide a diagnosis and assess disability in personal injury matters
- To consider the role of causation in a personal injury case
- To provide an opinion about issues of negligence
- To provide evidence about the adequacy of treatment
Criminal Matters

- Does the individual have a psychiatric disorder that at the time of the crime?
- Does this provide some understanding of the accused’s behaviour?
- Is there a disorder or issues that the court should take into account at the time of sentencing?
Board’s Enquiry

- Are there issues of human behaviour that assist in understanding the incident?
- Is a death suicide?
- Are there errors that we made and are these predictable?
Extension of time hearings

- How ought a plaintiff behave
- The issue of delayed onset disorders
- The difference between being ill and seeking treatment
- The issue of diagnostic practice and illness beliefs
Role with counsel

- To provide an opinion
- To assist in defining the points of liability and negligence – foreseeability
- To critique the opinion of colleagues
- To provide information that may assist in cross examination
Independent Witness?

- What is the role of the treating practitioner as an expert witness?
- The problem of dealing with the patient after writing a report
- The hired gun
- Codes of ethics and conduct directed by the court
Bodies of Knowledge

- The ability to make a diagnosis
  - Impact on behaviour
- The literature about aetiology
  - Comes from many sources
- The history of that literature
  - Issues of liability
- The literature about treatment
- The prediction of prognosis and disability
You as an expert

- Do you have a special body of knowledge?
- When should you defer to a colleague?
- What are the boundaries of your knowledge?
- Do you have experience that differentiates you from your colleagues?
- How do you behave when questioned and criticized?
Diagnostic Assessments and Report Writing
Format of the history

- The letter of instruction is critical
- Different jurisdictions have different questions
- Importance of explaining role to patient
- Explain the structure of the interview
How a medico legal history different from clinical practice

- Depends upon the questions being asked
- The timing of the onset of a disorder
- Need to properly apply diagnostic criteria
- Accurate assessment of comorbidities
- Record is meaningful to the court
Comments on reports

- Lack of exploration of phenomenology
- Need to separate cause from symptoms
- Stress is not a diagnosis
- Value of knowledge of diagnostic criteria
- Thresholds for symptoms
- Impact of treatment on symptoms
- Importance of medical comorbidities
Expressing opinion

- A history is not enough
- Need to summarize and synthesize
- Use ICD 10 or DSM IV criteria and discuss the points of uncertainty
- Address the issues of aetiology
- Disability assessment often determined by the jurisdiction
No one size fits all

- Deal with the specifics of the case
- Ensure that the facts of the case are tied to the questions asked
- To use inserts or not explaining particular issues of theoretical associations from the literature
- Acknowledge uncertainties and matters that require clarification
Language of report

- Do not be emotive
- Do not be prejudicial
- **YOU ARE NOT AN ADVOCATE**
- Define technical terms and concepts for the court
- Focus on the point
- Check facts against primary documents
Structure of report

- Source of referral
- Profile of Patient
- History of presenting illness
- Salient events related to presentation
- Systems review
- Past Psychiatric History including current treatment
Structure of reports

- Past medical history
- Medication
- Drug and alcohol history
- Family History
- Family Psychiatric History
- Family Medical History
- Premorbid personality
Structure of reports

- Personal history
  - Developmental psychosocial history
  - Educational history
  - Occupational history
  - Relationship history
  - Forensic history
  - Major life time traumatic events
Structure of reports

- Functional assessment
- Mental State Examination
- Diagnostic Tests
- Diagnosis and case formulation
- Documents provided and reviewed
- Addressing the assumptions as indicated by the solicitor
- Answer the questions posed
Fact versus Opinion
Facts

- Established in the history
- Describe the mental state and the quality of the history
- State the assumptions stated by the instructing solicitor
- Summarize the documents provided by the instructing solicitor
- State the limitations of the information
Opinion

- Opinion is what is required from an expert
- State when the issue is an opinion
- Diagnosis needs to be explained
- Critique documents and reports provided
  » What is their relevance to the matter at hand?
Opinion

- Summarize your views about the course of a disorder
- Summarize your views about aetiology and relate this to the history
- Highlight the points of agreement and disagreement between you and your colleagues
- Summarize the opinion at the end to restate the critical issues
The use of PTSD in forensic cases
M’Naugthen’s Rules

- Attempted assassination of British Prime Minister Robert Peel in 1843
- Pistol shot to his secretary Edward Drummond who died 5 days later
- Not guilty by reason of insanity
M’Naghten’s Rules

- Every man is presumed to be sane
- Sufficient reason to be responsible for his crimes until proven to the contrary
- Accused was labouring under a defect of reason due to a disease of the mind
- Did not know the nature and quality of the act of what he was doing
- Or if he did know it, he did not know it, that he did not know it was wrong
Criminal Issues And PTSD

- Insanity defence
  - In USA 0.3% of felonies (0.93%)
  - 29% acquittal rate

- M’Naughten’s Rules
  - Full blown flashback
  - Dissociative episode

- Undermined by
  - evidence of concealment
  - Other rational behaviour
Diminished Capacity

- Factor impacting on mental state necessary for the commitment of the crime
- PTSD and diminished capacity
- Addiction to the trauma
- Need for punishment because of guilt
- Substance abuse to treat PTSD symptoms
Lack Of Consciousness/automatism

- Individuals who have committed sanctioned acts of violence
- Being awoken in a violent rage
- Excessive violence in self defence
Automatism

- Guilt requires the guilty act (*actus reus*) and the guilty mind (*mens rea*).
- The defense needs to prove that the defendant made only the physical movements and did not intend to commit the act must prove the *mens rea*.
- Liability is excused because the consequences of an act were not within the defendant’s control.
Self Defence

- Feminists and victims’ advocates see PTSD as more acceptable defence than insanity
- Special sensitivity to feeling threatened
- Experts role to explain the ongoing relationship with the abuser
Evidence Supporting PTSD as a Defence

- Unpremeditated behaviour uncharacteristic of the individual
- Lack of coherent dialogue
- Choice of the victim is fortuitous or accidental
- Response is disproportionate to the provocation
Evidence Supporting PTSD as a Defence

- Defendant is unaware of the way that he is re-enacting the traumatic experience
- Precipitants trigger the traumatic memory by symbolic or realistic similarities
- Amnesia for the episode
PTSD In Criminal Prosecution

- Mixed legal reception
- Used in determining damages
- Used as evidence where the defendant admits to intercourse but says consensual
- The defence can use it a method of cross examining about other aspects of the victim’s life
McGee

- Prior PTSD
- Had a period of amnesia for 2 hours and then patchy amnesia
- Remembers the instant of the accident
McGee and Amnesia

- Is this
  - Retrograde (inability to remember memories prior to an event)
  - anterograde amnesia (inability to produce new memories after an event)?

- How does amnesia arise in the context of PTSD?

- Is purposeful behaviour possible when in an amnesic state?
Automatism

- Guilt requires the guilty act (*actus reus*) and the guilty mind (*mens rea*).
- The defense needs to prove that the defendant made only the physical movements and did not intend to commit the act must prove the *mens rea*.
- Liability is excused because the consequences of an act were not within the defendant’s control.
Mens Rea?

- Ability to behave in a purposeful manner
- Ability to ask for help
- Is this an all or none phenomena?
DSM IV definitions

- **Dissociative amnesia** (formerly Psychogenic Amnesia) - noticeable impairment of recall resulting from emotional trauma

- **Dissociative fugue** - physical desertion of familiar surroundings and experience of impaired recall of the past. This may lead to confusion about actual identity and the assumption of a new identity.
Dissociative fugue

- DSM-IV defines as:
  - sudden, unexpected travel away from home or one's customary place of work, with inability to recall one's past,
  - confusion about personal identity, or the assumption of a new identity,
  - significant distress or impairment.
Psychogenic amnesia, also known as functional or dissociative amnesia, is a disorder characterized by abnormal memory functioning in the absence of structural brain damage or a known neurobiological cause.
Psychogenic Amnesia

- It is defined by the presence of retrograde amnesia or the inability to retrieve stored memories and events leading up to the onset of amnesia and an absence of anterograde amnesia or the inability to form new long term memories.
PTSD in Civil Litigation
Phenomenological Tradition

- Avoids aetiological presumption
- The basis of observational investigation
- Foundation of evidence based medicine
- Peer reviewed published research
- The core of current knowledge
- Problematic categorization
- Discourse (the law) requires some consensus
Syndromal classification of disease introduces subjectivity to diagnosis and vulnerability to misuse and misunderstanding. The same issues exist for schizophrenia, migraine, chronic fatigue and whiplash.
Foreseeability

- Negligence
- Judged at a point in time
- Reasonableness
- Prevention and treatment
Limitations of time

- Know that you are ill
- Information that you are ill
- Doctor’s ability to diagnose
a. The obligations to debrief and screen following high levels of exposure.

b. The consequences and costs to an individual for failing to provide treatment.

c. The role of traumatic events in the onset of disorders such as schizophrenia and bipolar disorder.

d. The relationship between exposure to traumatic events and alcohol abuse.

e. Determining the relative contribution of isolated incidents of sexual abuse as a determinant of adult psychopathology in the context of an individual who has previously experienced multiple episodes of physical abuse and neglect, as well as emotional abuse.

f. The foreseeability of psychological trauma at different historical periods reflecting on the continuity between the literature between PTSD and traumatic neurosis.

g. What obligation does an individual patient have to seek treatment once their condition has been identified.

h. At what point does an individual have insight into the nature of their disorder and to make an informed decision about seeking care.
Guidelines for Assessment

1. Commence with open-ended questioning...if symptoms not provided, suspect malingering
Guidelines for Assessment

2. Proceed to directive questioning…. If symptoms reported ONLY then, suspect malingering
Guidelines for Assessment

3. Provide client with questions that cue inconsistent responses
4. Elicit subjective descriptions… not dichotomous response
Guidelines for Assessment

5. Consider objective history of the client as PRIMARY.
Guidelines for Assessment

6. Consider previous family history/psychiatric disorders, previous traumas, etc.
Guidelines for Assessment

7. Base your decision on the literature
Detecting Malingering

**Exaggerated clinical presentation:**
- Emphasizing severity of symptoms
- Global endorsement of symptoms
- Overestimation of impairment.
Detecting Malingering

Deliberateness:

- Careful consideration of all answers
- Extensive use of qualifiers,
- Excessive caution in committing to definitive responses.
Detecting Malingering

Inconsistency of diagnostic presentation

- Reports of rapidly oscillating symptoms
- Amnesia of the entire traumatic event
- Avoidance of benign stimuli
- Intrusive thoughts of positive experiences.
Detecting Malingering

**Inconsistency of self-report.**

- Divergent reports at different assessments
- Varying content that depends on the examiner's cues
- Discrepancies between reported and observed symptoms.
Detecting Malingering

*Endorsement of obvious symptoms.*

- Reports of obvious or positive symptoms and less attention to subtle or negative symptoms.
- More emphasis on symptoms characterized by content rather than process.
Faking in Check Lists

- 52% can fake PTSD in MMPI (Lees-Haley 1989)
- MS-PTSD scale was a poor discriminator (Dalton et al., 1989)
- All diagnosis can be mimicked by naïve undergraduates (Lees-Haley and Dunn, 1994)
The issue of compensation is one on which neither the soldier nor the government got a fair deal. I have seen many cases in which government money was squandered in maintaining subjects who could be rehabilitated and I have seen the government abandon totally disabled veterans simply because they could appear in court with their hair neatly combed. They could convince no one of their disability, except the physician who treated them, and even he was helpless before the court of uninformed and misguided opinion.

Kardiner: Traumatic Neuroses of War  p. 257
Avoidance may lead to under-reporting of symptoms

Direct enquiry may be seen as leading questions

Balance between naïve disregard and cynical preoccupation
History Taking In A Medico-Legal Setting

- Begin with non-directive interviewing
  - No mention in a 15-30 minute history must provoke suspicion
- Insist on detailed illustration
  - Assess the quality of personal autobiography
- Be able to justify the presence or absence of each of the diagnostic criteria
- The patient is or is not a malingering
- Logic - can have a disorder and exaggerate
Use Of Structured Diagnostic Interview

- Accepted practice in the USA
- Cover other potential diagnoses
- Demanded in research for purposes of reliability
  - the forensic situation is no different
- CAPS, CIDI, SCID
Ancillary Testing

- Psychometric
  - PTSD scales
  - WAIS etc

- Psychophysiological provocation

  “Has the potential to redeem the PTSD diagnosis from its current subjectivity and to help separate the wheat from the chaff in the forensic evaluation of PTSD claims.”

  Pitman and Orr 1993
Errors Leading To Over Diagnosis

- Failure to separate disorder from distress
- Insufficient of the diagnostic criteria
- Failure to assess the role of earlier unrelated traumatic events
- Failure to diagnose prior disorder
- Under-estimate the role of FH.
Errors Leading to Under-diagnosis

- PTSD seen as understandable
- Use of superficial open ended questions
- Idiosyncratic thresholds for diagnosis
- PTSD may exist despite a major vulnerability factor
- False attribution to other life events
- Narrow out dated theories of aetiology
- Failure to consider relevant PTSD literature
Medico-legal Controversies About PTSD

- Problem of history and psychometric tests
- Apportioning causality to multiple events
- Relationship of PTSD and alcohol abuse
- Somatic symptoms and PTSD
- The course of PTSD
- The appropriate acute treatment for PTSD
Conceptual Issues

- Renaming disorder that would come to pass anyway with time
- Separation from adjustment disorder
Conceptual Issues

- Distinct psychophysiology
  - Pre-existed
  - Due to exposure
  - Due to PTSD
  - Unique to PTSD
PTSD: The Life-Time Risk

PTSD

Psychiatric Disorder

Traumatic Event
Pitman’s Monozygotic Twins

Vietnam Exposure | Not in Vietnam

PTSD | No PTSD

Rates of disorder in the absence of combat
P250

Controls

210 - 300 msec

PTSD

200 - 330 msec

+ 6.0

uV/m²

- 8.0

240 - 350 msec

260 - 350 msec
Conceptual Issues

DSM IV Diagnostic Criteria

- Distress or disease?
- Thresholds of severity of symptoms
- Severity of exposure
- Comparison with ICD 10
ABS National Epidemiology Survey

- 10,600 people
- Over 18 years
- Sample in 1997
- Most common anxiety disorder
  - PTSD 3.3% ICD criteria
  - PTSD 1.34% DSM IV criteria
- 12 month prevalence and PD - not life time
- Confidentiality provisions prevented dating of trauma
Comorbidity of PTSD with affective disorders in an Australian Population

% with an affective disorder and PTSD

- MDE
- Dysthymia
- Bipolar

Males with PTSD
Females with PTSD
Comorbidity of PTSD with anxiety disorders in an Australian Population

![Bar chart showing the percentage of individuals with anxiety disorders and PTSD, differentiated by gender (males and females).]
Comorbidity in Population Samples

- The rule rather than the exception
- The prevalence is similar in a range of studies
- This is not unique to PTSD
- Comorbidity is a measure of severity
- Anxiety and depression are strongly correlated in epidemiological samples
## Comorbidity of PTSD and other Disorders in an Australian community sample

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<th>ICD-10 Only</th>
<th>DSM-IV Only</th>
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<td></td>
<td>%</td>
<td>%</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>Any Disorder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No other diagnosis</td>
<td>86.3</td>
<td>52.1</td>
<td>0.0</td>
</tr>
<tr>
<td>1 other diagnosis</td>
<td>10.0</td>
<td>26.5</td>
<td>3.2</td>
</tr>
<tr>
<td>2 other diagnoses</td>
<td>2.6</td>
<td>13.7</td>
<td>5.3</td>
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<tr>
<td>3 or more other diagnoses</td>
<td>1.0</td>
<td>7.8</td>
<td>9.8</td>
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<tr>
<td>Mean number of additional Axis 1 disorders</td>
<td>0.18</td>
<td>0.79</td>
<td>1.83</td>
</tr>
<tr>
<td></td>
<td>(0.52)</td>
<td>(1.02)</td>
<td>(1.38)</td>
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</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>OR</td>
</tr>
<tr>
<td>MDD</td>
<td>5.2</td>
<td>27.8</td>
<td>7.7</td>
</tr>
<tr>
<td>Alcohol abuse/dependence</td>
<td>5.6</td>
<td>12.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Drug abuse/dependence</td>
<td>2.4</td>
<td>10.2</td>
<td>4.6</td>
</tr>
</tbody>
</table>
SF-12 Disability scores in an Australian Community sample

<table>
<thead>
<tr>
<th></th>
<th>No PTSD</th>
<th>ICD-10 only</th>
<th>DSM-IV only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>SF-12 Physical</td>
<td>4922</td>
<td>978</td>
<td>4445</td>
</tr>
<tr>
<td>SF-12 Mental</td>
<td>5235</td>
<td>885</td>
<td>4137</td>
</tr>
</tbody>
</table>
Mean SF-12 days out of role in an Australian Community sample

<table>
<thead>
<tr>
<th></th>
<th>No PTSD</th>
<th>ICD-10 only</th>
<th>DSM-IV only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Total days out of role, previous 4 weeks</td>
<td>0.67</td>
<td>1.91</td>
<td>2.17</td>
</tr>
<tr>
<td>Partial days out of role, previous 4 weeks</td>
<td>1.15</td>
<td>2.60</td>
<td>2.95</td>
</tr>
</tbody>
</table>
### SUDOR scores in an Australian Community sample

<table>
<thead>
<tr>
<th></th>
<th>No PTSD</th>
<th>ICD-10 only</th>
<th>DSM-IV only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Visits to GP</td>
<td>NA</td>
<td>0.31</td>
<td>0.81</td>
</tr>
<tr>
<td>Days out of role due to PTSD</td>
<td>NA</td>
<td>0.61</td>
<td>2.11</td>
</tr>
<tr>
<td>Partial days out of role due to PTSD</td>
<td>NA</td>
<td>0.55</td>
<td>1.90</td>
</tr>
</tbody>
</table>
## Health Service Usage in an Australian Community sample

<table>
<thead>
<tr>
<th></th>
<th>No PTSD</th>
<th>ICD-10 Only</th>
<th>DSM-IV Only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>OR (95% CI)</td>
<td>%</td>
</tr>
<tr>
<td>GP</td>
<td>80.5</td>
<td>1.5 (1.0-2.2)</td>
<td>88.8</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>1.6</td>
<td>4.5 (2.8-7.4)</td>
<td>19.1</td>
</tr>
<tr>
<td>Psychologist</td>
<td>1.5</td>
<td>4.3 (2.6-7.2)</td>
<td>18.5</td>
</tr>
<tr>
<td>Any mental health professional</td>
<td>12.3</td>
<td>5.1 (3.9-6.6)</td>
<td>70.9</td>
</tr>
</tbody>
</table>
"You either have science, or you don't, and if you have it you are obliged to accept the surprising and disturbing pieces of information, even the overwhelming and upheaving ones, along with the neat and prompt the useful bits. It is like that"

Lewis Thomas
Conceptual Issues

- The ability of doctors not to see
- The impact of societal structures and attitudes
On Psychical Mechanism of Hysterical Phenomena

Trauma does not simply act as a releasing agent for symptoms. Rather, psychic trauma or “more precisely the memory of the trauma acts like a foreign body which long after entry must continue to be regarded as the agent that still is at work”

Freud and Breuer 1896
Post- World War I

The limited ability to cope with combat was deemed the result of faulty personality development and thus conformed to the psychoanalytic model of the psychoneuroses and was so generally diagnosed.”

AJ Glass, 1974, p. 802
“Curiously, during the early postwar years, as following Word War I, military psychiatry, like civil psychiatry, ignored the lessons of wartime experiences. Instead, attention was focused in the then prevalent psychoanalytic concepts and practice.”

AJ Glass, 1974, p. 804
Clinician Issues

- Clinicians often miss PTSD
- Research audits demonstrate traumatic stress and PTSD in a range of clinical populations
- At the same time clinicians diagnose other disorders
- Clinicians tend to minimise comorbidity in most disorders
Associated clinical features

Other important issues about the patterns of comorbidity from prospective and clinical samples

- Somatization
- Substance abuse
Saw doctor about physical health complaint

<table>
<thead>
<tr>
<th>Category</th>
<th>PTSD (n = 77)</th>
<th>No PTSD (n = 70)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory</td>
<td>19%</td>
<td>4%</td>
<td>6.69 *</td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>39%</td>
<td>22%</td>
<td>4.00 **</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>14%</td>
<td>9%</td>
<td>0.52</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>13%</td>
<td>6%</td>
<td>1.06</td>
</tr>
<tr>
<td>Dermatological</td>
<td>17%</td>
<td>9%</td>
<td>1.46</td>
</tr>
<tr>
<td>Urological</td>
<td>1%</td>
<td>4%</td>
<td>0.16</td>
</tr>
<tr>
<td>Headaches &amp; funny turns</td>
<td>17%</td>
<td>9%</td>
<td>1.45</td>
</tr>
</tbody>
</table>

* P<0.05  **P<0.01
Somatization and PTSD

- 5 year follow up of 1007 adults aged 21 to 30 years
- Relation of baseline PTSD and subsequent somatization
- PTSD associated with greatest somatization in contrast to other psychiatric disorders
- Prospectively PTSD increased risk of pain (OR=2.1) and conversion symptoms (OR=2.3)

(Andreski et al, Psychiatry Res, 1998)
Relation between substance abuse and trauma
Trauma → PTSD → other disorder

alcohol abuse
% high-risk drinking for no GHQ case: trauma vs no trauma
% high-risk drinking for no GHQ case/GHQ case: trauma vs no trauma
Comorbidity of PTSD with substance abuse disorders in an Australian Population

![Bar chart showing the percentage of males and females with PTSD and substance abuse disorders. The chart compares alcohol abuse/dependence and drug abuse/dependence.]
Conclusions from longitudinal studies

- Acute distress is not universal
- Life time history studies
- Longitudinal studies of community, disaster and combat exposed populations
- PTSD is the incident disorder
- Comorbid disorders have a different course
- As the traumatic memories become less apparent, the mood disorders and anxiety symptoms come dominate the phenomenology
The evidence suggested that associated with PTSD (other than depression and anxiety disorders):
  » Suicidal behaviour
  » Somatization
  » Substance abuse

PTSD is a major determinant and not just a proxy marker

Driven by traumatic memory
Direct Cost of PTSD

- Increased cost of health care of $79 per fortnight in Vietnam Veterans (Marshall, 1999)
- Increased cost of undiagnosed PTSD in MVA victims of 50%
  - $8,100 per claim (Chan et al, in press)
Burden of Disease

In terms of impact, prevalence and financial burden on society, major depression and PTSD head the list of mental disorders.
The Victoria Cross awarded for “placing himself invariably in the forefront of battle”. - the only person to win it for, not a single act of bravery but for his behaviour over years.

Grounded after his 100th mission because Air Marshall Cochrane “had noticed a tell-tale sign of prolonged strain - his right eye flickered as though he had a nervous tick.” P 294
He had the heart of a lion and the incisive brain of the practical planner, so that risks appeared to him as impersonal obstacles made to be overcome”

Symonds later said that Cheshire was 90% fearless and only 10% courageous.
Leonard Cheshire

Cheshire, it came to be believed as ‘a man different from the rest of us in ways that can not be fathomed.’ Fearless or not, Cheshire paid a terrible price for his deeds. In 1945 he was treated at an RAF hospital for bouts of deep depression and a year later discharged with a disability pension for psychoneurosis. His post-war career was punctuated by long episodes of nervous collapse. The war had taken something out of Cheshire that was never restored. P 294
Legal Action Against the Ministry of Defence

Shift from the physical to the psychological

The cause of the psychological disorders is that traumatic stress is an environmental toxin that has the capacity for a delayed effect.
Comparative Rates of Acute Stress Reactions

- Rate of psychiatric casualties in the Falklands was 2% of all (777) casualties
- 5% early in Vietnam
- 6% in Korea
- 23% in the Second World War.
“As a result of forward divisional mental health services, so few psychiatric disorders had been evacuated to rear medical facilities as to create the impression that psychiatric casualties were rarely produced by the unique nature of combat in Vietnam.”

AJ Glass, 1974, p. 808
Phases of PTSD

- Trauma
- Transitional Phase
- Acute Stress Response
- Acute PTSD
- Chronic PTSD
“She simply did not know, and I am sure that tens of thousands of returning soldiers walked bewildered into the same incomprehension. It was as though we were now speaking a different language to our own people. The hurt silenced me as effectively as a gag. It was hard to talk, but my wife made it easy not to.” (p 209)
C6. As service personnel are the prime resource in battle, so too is it of the first priority to maintain them fit for their combat role during the battle itself and future battles. In time of peace, the management and welfare of service personnel is of paramount importance.
E1. The Claimants contend that in certain of their cases Post Traumatic Disorder has arisen in the absence of a prior, or an observed prior Acute Stress Reaction suffered at the time of the relevant combat.
Falkland Veterans

- serving veterans five years post conflict
- 22% PTSD on questionnaire.
- Individuals were apparently functioning effectively did not seek treatment or show signs of maladjustment.

Grinker (1945) on World War I Veterans

“To our astonishment the majority of the neuroses that are hospitalised today in the convalescent hospitals are people who have developed either the first signs of their neurosis on return to this country or have become worse after landing on these shores”
Delayed PTSD

Delayed/Late onset PTSD is defined in the DSM-IV (APA, 1994), as a disorder meeting the diagnostic criteria for PTSD which is present after a post trauma adjustment period of at least 6 months during which diagnostic criteria were absent or sub-threshold. (Buckley et al, 1996.)
Delayed/Late onset PTSD in Combat Veterans

- Solomon et al, (1989) 150 veterans who were treated 6mths to 5 years following the Lebanon war.
  - 10% had delayed onset PTSD
  - latency periods ranging from several weeks to several years

- Watson et al (1988) 63 veterans with PTSD
  - 49% of participants reported a delay of at least 6mths before PTSD symptoms first appeared.
Relationship of PTSD and ASD

- Individuals who develop an acute stress disorder have a much greater risk of chronic PTSD
- ASD is not a necessary antecedent for PTSD
- Successful treatment of ASD does not prevent later PTSD
Solomon et al, (1989) 150 veterans who were treated 6mths to 5 years following the Lebanon war.
- 10% had delayed onset PTSD
- latency periods ranging from several weeks to several years

Benyamini and Solomon (2005) 20 year follow up of CSR cohort and controls
- 23% delayed onset PTSD
Delayed Onset/Gulf War

- A prospective study of Gulf War veterans examined rates of PTSD
- Sample of 2,949 army personnel
- Doubling of rates of PTSD in the two year period post combat
- Supports the existence of delayed onset PTSD and the increasing severity of symptoms with time.
  (Wolfe et al, 1999).
The trajectory of PTSD symptom clusters over a 12-month period for those with and without PTSD at 12 months.

- Reexperiencing (PTSD)
- Avoidance (PTSD)
- Arousal (PTSD)
- Reexperiencing (No PTSD)
- Avoidance (No PTSD)
- Arousal (No PTSD)
Kuwaiti Injured Combat Veterans Assessed
In 1998 And 2003, Al Hammadi

CURRENT & HISTORY of LIFETIME PTSD 2003
Enhanced coding of memories in high adrenergic state

Increased brain plasticity in the immediate aftermath of trauma exposure
  » Exaggerated startle takes up to 6 months to develop

Reduced extinction to conditioned responses
Impact of Duty In Iraq and Afghanistan

- Anonymous survey - self administered
- 2530 Iraq and 3617 Afghanistan veterans
- 15.6 to 17.1% of Iraq veterans had PTSD, MDD or GAD
  - compared with Afghanistan 11.2%
  - Prior to deployment 9.3%
- Biggest difference was in the rates of PTSD
- Only 23-40% sought mental health care
  - Hoges et al NEJM, 2004
a. The obligations to debrief and screen following high levels of exposure.

b. The consequences and costs to an individual for failing to provide treatment.

c. The role of traumatic events in the onset of disorders such as schizophrenia and bipolar disorder.

d. The relationship between exposure to traumatic events and alcohol abuse.

e. Determining the relative contribution of isolated incidents of sexual abuse as a determinant of adult psychopathology in the context of an individual who has previously experienced multiple episodes of physical abuse and neglect, as well as emotional abuse.

f. The foreseeability of psychological trauma at different historical periods reflecting on the continuity between the literature between PTSD and traumatic neurosis.

g. What obligation does an individual patient have to seek treatment once their condition has been identified.

h. At what point does an individual have insight into the nature of their disorder and to make an informed decision about seeking care.
"... the legal system is poorly designed to cope with disaster aftermath ... The victims frequently feel that in the legal process their interests come well down in the list of considerations ... The result is that the medical trauma of the disaster is worsened by further trauma to the victims as they battle with a confusing system that is often slow and ineffective in providing the answers that they and the public reasonably seek" (p. 158)

Napier 1991
PTSD is a cumbersome phrase devised by a cumbersome committee. It embodies certain new assumptions about how trauma affects its victims, but does not rest on any specific scientific breakthrough nor offers any great step forward in treatment. Xx