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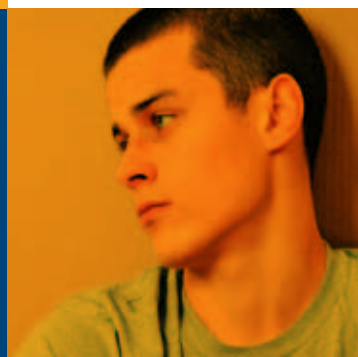
Centre for Posttraumatic Mental Health

Promoting recovery after trauma

Australian Guidelines for the Treatment of

Acute Stress Disorder & Posttraumatic Stress Disorder



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Legal disclaimer

This document is a general guide to appropriate practice, to be followed only subject to the practitioner's judgement in each individual case.

The guidelines are designed to provide information to assist decision making and are based on the best information available at the date of publication.

In recognition of the pace of advances in the field, it is recommended that the guidelines be reviewed and updated in five years' time.

Publication Approval

Australian Government

National Health and Medical Research Council

These guidelines were approved by the Chief Executive Officer of the National Health and Medical Research Council (NHMRC) on 4 July 2013, under Section 14A of the *National Health and Medical Research Council Act 1992*. In approving these guidelines the NHMRC considers that they meet the NHMRC standard for clinical practice guidelines. This approval is valid for a period of 5 years.

NHMRC is satisfied that they are based on the systematic identification and synthesis of the best available scientific evidence and make clear recommendations for health professionals practising in an Australian health care setting. The NHMRC expects that all guidelines will be reviewed no less than once every five years.

This publication reflects the views of the authors and not necessarily the views of the Australian Government.

PHOENIX
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Australian Guidelines for the Treatment of

Acute Stress Disorder & Posttraumatic Stress Disorder

Endorsed by
The Australian Psychological Society
The Royal Australian College of General Practitioners
The Royal Australian and New Zealand College of Psychiatrists

APS Australian Psychological Society

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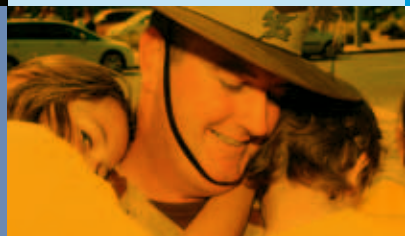


Contents

Acknowledgements ii
List of abbreviations xiv
Plain language statement 1
Executive summary 2
Complete list of Guideline recommendations 6

1 **Introduction** 16
Comparison with the 2007 Guidelines 16
Guideline aims 16
Scope of the Guidelines 17
Development of the Guidelines 18
Additional notes 19
Implementation of the Guidelines 20
Disclaimer 20
References 20

2 **Trauma and trauma reactions** 22
Trauma, traumatic event and potentially traumatic event 22
Potentially traumatic events 22
Common responses to potentially traumatic events 22
Traumatic stress syndromes 23
Acute stress disorder 23
Posttraumatic stress disorder 25
Re-experiencing symptoms 25
Avoidance and numbing symptoms 25
Arousal symptoms 25
Features commonly associated with PTSD 27
Prevalence and incidence of PTSD 27
Comorbid conditions 28
The course of PTSD 28
Resilience in the face of potentially traumatic events 28

Posttraumatic mental health disorders: Key differences between ASD and PTSD **29**
Screening, assessment and diagnosis **29**
Comprehensive assessment of PTSD 30
Diagnosis 32
Differential diagnosis 32
'Recovered memories' 33
Symptom exaggeration and malingering 33
Assessment instruments 33
Structured clinical interviews 34
Self-report measures 34
Intervention planning **37**
Factors influencing treatment outcome 37
Chronicity and delay in treatment 37
Comorbidity 37
Compensation 39
Therapeutic alliance and treatment expectations 39
Motivation for change 39
Demographics 39
Treatment setting 40
Potential mechanisms of change 40
Treatment goals 41
Cultural and linguistic diversity (CALD) 42
The impact of PTSD on family 42
General professional issues 43
Self-care 44
References **45**

3 **General considerations when working with children and adolescents** **52**
Trauma and trauma reactions **53**
Trauma, traumatic event and potentially traumatic event 53
Clinical presentations in children and adolescents following potentially traumatic events 53
Traumatic stress syndromes **54**
Acute stress disorder 54
Posttraumatic stress disorder 54
Moving to DSM-5 **55**
Prevalence **55**
Comorbid conditions **55**
The course and prognosis of PTSD in children and adolescents **56**
Risk factors **56**
Relational PTSD patterns: The importance of parents **57**
Assessment **57**
Who to talk to? The low rate of agreement between parents and children 58
When to assess for trauma exposure and symptoms 58
How to assess for trauma exposure and symptoms 58

Intervention planning **61**
Access to psychological care 61
What's different about working with children and adolescents? 62
The role of parents/caregivers in treatment 62
Does it matter where treatment occurs? 63
References **64**

4

Interventions 68

Pre-incident preparedness **68**
Pre-incident preparedness training 68
Post-incident interventions for all **68**
Psychological debriefing 68
Psychological first aid 69
Stepped care 69
Psychological interventions for ASD and PTSD **69**
Brief psychodynamic psychotherapy 69
Eye movement desensitisation and reprocessing 69
Group therapy 70
Hypnosis 70
Imagery rehearsal 70
Interapy 70
Interpersonal therapy 70
Mindfulness-based therapies 70
Narrative exposure therapy 71
Stress management 71
Supportive counselling and present centred therapy 71
Trauma-focussed cognitive behavioural therapy 71
Exposure therapy 71
Cognitive therapy 72
Cognitive processing therapy 72
Alternative approaches 72
Pharmacological interventions for PTSD **72**
Antidepressants 72
Atypical antipsychotics 73
Hypnosedative agents 73
Other medications 73
Psychosocial rehabilitation interventions for PTSD **73**
Social emotional rehabilitation 74
Vocational rehabilitation 74
Physical therapies for PTSD **74**
Acupuncture 74
Repeated transcranial magnetic stimulation 74
Interventions for children and adolescents **74**
Cognitive behavioural intervention for trauma in schools 74
Psychodynamic trauma-focussed psychotherapies 74
Trauma-focussed cognitive behavioural therapy 75
Summary 75
References **76**

5 Evidence review and treatment recommendations 78

Approach to the systematic review **78**

Research questions 78

Overview of methodology 80

Inclusion criteria 80

Literature sources 80

Search strategies 81

Validity assessment 81

Data extraction and analysis 82

Assessing the body of evidence and generating recommendations 83

Limitations of the review 84

Research questions, evidence summaries and treatment recommendations **84**

Early psychological interventions for adults exposed to a potentially traumatic event 84

Pre-incident preparedness training 85

Early psychological interventions for all 86

Psychological treatment for adults with ASD or acute PTSD 88

Psychological interventions for adults with PTSD 89

Early pharmacological interventions for adults exposed to a potentially traumatic event 95

Early pharmacological interventions for all 95

Pharmacological treatment for adults with ASD or acute PTSD 96

Pharmacological interventions for adults with PTSD 97

Psychosocial rehabilitation interventions 101

Exercise and physical therapies 102

Single vs multiple interventions 104

Psychological interventions for adults with PTSD 104

Pharmacological interventions for adults with PTSD 105

Psychosocial rehabilitation interventions for adults with PTSD 106

Pharmacological and psychological interventions for adults with PTSD 106

Psychological vs pharmacological vs psychosocial interventions 107

Sequencing comorbidities 108

Early psychological interventions for children and adolescents exposed to a potentially traumatic event 109

Early psychological interventions for all 109

Early psychological interventions for children and adolescents with ASD or acute PTSD 111

Psychological interventions for children and adolescents with PTSD 112

Early pharmacological interventions for children and adolescents exposed to a potentially traumatic event 115

Early pharmacological interventions for all 115

Pharmacological treatment for those with ASD or acute PTSD 115

Pharmacological interventions for children and adolescents with PTSD 116

School-based interventions 117

In those exposed to trauma or with ASD/acute PTSD 117

Interventions that include parents 118

References **119**

6 Economic considerations 128

Summary of literature collected **128**
- The cost burden of PTSD 128
- The effect of treatment 129
- Summary 129

Commentary on economic burden **130**

Current funding of ASD and PTSD treatment **130**

Potential implications **130**

References **131**

7 Specific populations and trauma types: Issues for consideration in the application of the guidelines 134

Aboriginal and Torres Strait Islander peoples **135**
- Background issues 135
- Presentation 136
- Assessment 136
- Treatment 137
- Working with children 137
- Recommended reading 138

Refugees and asylum seekers **139**
- Background issues 139
- Use of interpreters 140
- Presentation 140
- Assessment 141
- Treatment 143
- Additional issues specific to asylum seekers subject to mandatory detention and temporary protection 144
- Working with children 145
- Recommended reading 145

Military and ex-military personnel **146**
- Background issues 146
- Presentation 146
- Assessment 147
- Treatment 148
- Recommended reading 148

Emergency services personnel **149**
- Background issues 149
- Presentation 149
- Assessment 150
- Treatment 150

PTSD in older people **152**
- Background issues 152
- Presentation 152
- Assessment 153
- Treatment 153
- Directions for future research 154

Motor vehicle accident and other traumatic injury survivors **155**
Background issues 155
Presentation 155
Assessment 155
Treatment 156
Working with children 156
Victims of crime **157**
Background issues 157
Presentation 157
Assessment 158
Treatment 158
Working with children 158
Sexual assault **159**
Background issues 159
Presentation 159
Assessment 160
Treatment 161
Working with children 161
Directions for future research 162
Recommended reading 162
Natural disasters **163**
Background issues 163
Issues for service planners 163
Issues for service providers 164
Presentation 164
Assessment 164
Treatment 165
Working with children 165
Recommended reading 165
Terrorism **167**
Background 167
Issues for service planners 167
Preparing for the threat of terrorism 167
Responding to an attack 167
Issues for service providers 169
Presentation 169
Assessment 169
Treatment 169
Working with children 169
Recommended reading 169
References **170**

Glossary of terms 175

Appendices

Appendix 1	Adelaide Health Technology Assessment (AHTA) reviewers
Appendix 2	Terms of reference
Appendix 3	AHTA systematic review of the evidence
Appendix 4	Public consultation
Appendix 5	DSM-5 criteria for PTSD

Appendices are available to download from **www.phoenixaustralia.org**

List of Abbreviations

A, B, C, D	Grades of evidence forming the basis for a guideline statement for NICE guidelines: A: The body of evidence can be trusted to guide practice B: The body of evidence can be trusted to guide practice in most situations C: The body of evidence provides some support for recommendation(s) but care should be taken in its application D: The body of evidence is weak and recommendation(s) must be applied with caution
AACAP	American Academy of Child and Adolescent Psychiatry
ACT	Acceptance and commitment therapy
ADF	Australian Defence Force
ADHD	Attention deficit hyperactivity disorder
ADIS-IV-C/P	Anxiety Disorders Interview Schedule for Children – Child and Parent Versions
AHTA	Adelaide Health Technology Assessment
ASD	Acute stress disorder
BPTSD-6	Brief DSMPTSD-IV scale (six item version)
CALD	Cultural and linguistic diversity
CAPS	Clinician Administered PTSD Scale
CAPS-CA	Clinician Administered PTSD Scale for Children and Adolescents
CBCL	Child Behaviour Checklist
CBITS	Cognitive behavioural intervention for trauma in schools
CBT	Cognitive behavioural therapy
CD-RISC	Connor-Davidson Resilience Scale
CI	Confidence interval
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CISD	Critical incident stress debriefing
CISM	Critical incident stress management
CNS	Central nervous system
CP	Consensus point
CPP	Child–parent psychotherapy
CPSS	Child PTSD Symptom Scale
CPT	Cognitive processing therapy
CPTSDI	Children's PTSD Inventory
CPTSD-RI	Child PTSD Reaction Index
CSA	Childhood sexual abuse
CT	Cognitive therapy
CTSQ	Child Trauma Screening Questionnaire
DALY	Disability-adjusted life year
DAPS	Detailed Assessment of Posttraumatic Stress
DESNOS	Disorders of Extreme Stress Not Otherwise Specified

DIPA	Diagnostic Infant Preschool Assessment
DRPST	Disaster-Related Psychological Screening Test
DSM	Diagnostic and Statistical Manual
DSM-5	Diagnostic and Statistical Manual of Mental Disorders – Fifth edition
DSM-III-R	Diagnostic and Statistical Manual of Mental Disorders – Third edition – Revised
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders – Fourth edition
DSM-IV-TR	Diagnostic and Statistical Manual of Mental Disorders – Fourth edition – Text revision
DTS	Davidson Trauma Scale
ECT	Electroconvulsive therapy
EFT	Emotion freedom techniques
EMBASE	Excerpta Medica Database
EMDR	Eye movement desensitisation and reprocessing
GAD	Generalised anxiety disorder
GPCOG	General Practitioner Assessment of Cognition
GPP	Good practice point
HTQ	Harvard Trauma Questionnaire
ICU	Intensive care unit
IES-R	Impact of Event Scale – Revised
IPT	Interpersonal therapy
IRT	Imagery rehearsal therapy
ITT	Intent to treat
K-SADS-PL	Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Parent and Lifetime Version
LOS	Length of stay
MAOI	Monoamine oxidase inhibitor
MCBT	Mindfulness-based cognitive behavioural therapy
MDD	Major depressive disorder
MDMA	Methylenedioxymethamphetamine
MMSE	Mini Mental State Examination
mTBI	Mild traumatic brain injury
MVA	Motor vehicle accident
NaSSA	Noradrenergic and specific serotonergic antidepressants
NDRI	Noradrenaline-dopamine reuptake inhibitors
NET	Narrative exposure therapy
NHMRC	National Health and Medical Research Council
NICE	National Institute for Clinical Excellence
NRI	Selective noradrenaline reuptake inhibitors
OCD	Obsessive compulsive disorder
ODD	Oppositional defiant disorder
PAP	Preschool Age Psychiatric Assessment
PCL	PTSD Checklist
PC-PTSD	Primary Care PTSD Screen

PDS	Posttraumatic Diagnostic Scale
PE	Prolonged exposure
PFA	Psychological first aid
PICO	Specifies the studies to be included in the systematic review by: Population, Intervention, Comparator, Outcome
PILOTS	Published International Literature on Traumatic Stress
PRACTICE	Trauma-focussed intervention for parents and children comprising eight components: psychoeducation, relaxation, affective modulation skills, cognitive coping and processing, trauma narrative development and processing, *in vivo* exposure, conjoint parent/child sessions, and enhancing safety/future development
PSS-I	PTSD Symptom Scale – Interview
PSS-SR	PTSD Symptom Scale – Self Report
PTE	Potentially traumatic event
PTSD	Posttraumatic stress disorder
PTSD-AA	PTSD – alternative algorithm
QALY	Quality-adjusted life year
RCT	Randomised controlled trial
RIMA	Reversible inhibitor of monoamine oxidase
RR	Research recommendation
rTMS	Repeated transcranial magnetic stimulation
RUDAS	Rowland Universal Dementia Assessment Scale
SAD	Separation anxiety disorder
SER	Social emotional rehabilitation
SIP	Structured Interview for PTSD
SMART	Specific, measurable, attainable, relevant, and time-bound (goals)
SMARTER	Specific, measurable, attainable, relevant, time-bound, evaluate, and re-evaluate (goals)
SMD	Standardised mean difference
SNRI	Serotonin-noradrenaline reuptake inhibitors
SPAN	Brief PTSD screening measure named for its four items: Startle, Physiological arousal, Anger, and Numbness
SSRI	Selective serotonin reuptake inhibitor
SSSP	Short Screening Scale for DSM-IV PTSD
TAU	Treatment as usual
TBI	Traumatic brain injury
TCA	Tricyclic antidepressant
TESI-PRR	Trauma Exposure Symptom Inventory – Parent Report Revised
TF-CBT	Trauma-focussed cognitive behavioural therapy
TFT	Thought field therapy
TIR	Traumatic incident reduction
TSCC	Trauma Symptom Checklist for Children
TSCYC	Trauma Symptom Checklist for Young Children
TSI	Trauma Symptom Inventory
TSI-PR	The Trauma Exposure Symptom Inventory – Parent Report

UCLA PTSD-RI	University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index
UPID	UCLA PTSD Index for DSM-IV
VA	Veterans Affairs (US)
VA/DoD	Veterans Affairs/Department of Defense
VKD	Visual-kinaesthetic dissociation
WHOQOL	World Health Organisation Quality of Life instrument
WLC	Waitlist control
YLD	Years of life lost due to disability

Plain Language Statement

These Guidelines provide recommendations on the best interventions for children, adolescents and adults who have been exposed to potentially traumatic events as well as those who have developed acute stress disorder (ASD) or posttraumatic stress disorder (PTSD). The Guidelines have been designed to be used by: a) the range of general and mental health practitioners planning and providing treatment across clinical settings; b) people affected by trauma making decisions about their treatment; and c) funding bodies making service purchasing decisions. The intended outcome of the Guidelines is increased recognition of ASD and PTSD, increased uptake of evidence-based care, and ultimately, better outcomes for people affected by trauma. Importantly, the Guidelines are intended to guide practice rather than be used prescriptively. Each person's unique circumstances and their overall mental healthcare needs must be considered.

The Guidelines were developed by a team of Australia's leading trauma experts, in collaboration with representatives of the professional associations for psychiatrists, psychologists, general practitioners, social workers, occupational therapists, mental health nurses, school counsellors, and service users. Recommendations were based on best practice evidence found through a systematic review of the Australian and international trauma literature.

Some of the key recommendations are that:

- Following a potentially traumatic event, routine psychological debriefing is no longer recommended. The best approach to helping people following a potentially traumatic experience is to offer practical and emotional support and encourage the use of helpful coping strategies and social supports.
- For adults who develop PTSD, the best approach to treatment is trauma-focussed cognitive behavioural therapy (TF-CBT) or eye movement desensitisation reprocessing (EMDR). These psychological treatments involve confronting the memory of the traumatic event and coming to terms with the experience.
- Medication should not be used in preference to trauma-focussed therapy but may be considered when the person is not ready or willing to engage in, or has no access to, trauma-focussed therapy, they have additional mental health problems such as depression, or they have not benefited from trauma-focussed therapy. When medication is considered, the first choice would be selective serotonin reuptake inhibitors (SSRIs).
- For school age children and adolescents, the best approach to treatment is trauma-focussed cognitive behavioural therapy. However this should be appropriately tailored to the developmental stage of the individual child or adolescent.
- Engaging parents and/or caregivers is very important when working with children and adolescents as they typically bring them for assessment and treatment. Furthermore, children are part of a system (typically a family) so assessment and treatment needs to take the whole system into consideration.

The final chapter provides advice to health practitioners about issues to consider in applying the Guidelines to particular groups or types of trauma. The groups include Aboriginal and Torres Strait Islander peoples, refugees and asylum seekers, military and ex-military personnel, emergency service personnel and older people and the types of traumatic events include motor vehicle accidents, crime, sexual assault, natural disasters and terrorism.

Executive Summary

In 2007, the National Health and Medical Research Council (NHMRC) approved the first Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder. The current Australian Guidelines for the Treatment of Acute Stress Disorder and Posttraumatic Stress Disorder represent an update, revision and expansion of the original Guidelines. The most significant change has been an expansion of the Guidelines to cover treatment recommendations for children and adolescents, as well as adults.

Chapter 1 Introduction provides an overview of the Guideline development process and details their objectives and scope. The Guideline Development Group was made up of a core working party comprising clinical and research experts in the field of traumatic stress and a broad multidisciplinary panel, comprising mental health practitioners, representatives of professional associations, and people affected by trauma. The work of the Guideline Development Group was overseen by a steering committee and supported by an independent methodologist, an independent systematic review of the literature and a project team from Phoenix Australia - Centre for Posttraumatic Mental Health.

Guideline recommendations arising from the systematic review are graded according to the NHMRC grading system (NHMRC, 2005):

- **Grade A:** Body of evidence can be trusted to guide practice
- **Grade B:** Body of evidence can be trusted to guide practice in most situations
- **Grade C:** Body of evidence provides some support for recommendation(s) but care should be taken in its application
- **Grade D:** Body of evidence is weak and recommendation(s) must be applied with caution

In situations where there is no research evidence available, practitioners are guided by **Consensus Points** (CP; consensus opinion of the working party, used when a research question was asked of the data, but no evidence was forthcoming) and **Good Practice Points** (GPP; used when the research question was not asked because the working party was confident that no evidence existed). Areas identified as in need of further research are noted as **Research Recommendations** (RR).

Importantly, the Guideline recommendations are not intended to be prescriptive. Practitioners should use their experience and expertise in applying Guideline recommendations in routine clinical practice and all clinical interventions should be provided with compassion and sensitivity.

Chapter 2 Trauma and Trauma Reactions provides background information on trauma and trauma reactions. While the focus of the Guidelines is acute stress disorder (ASD) and posttraumatic stress disorder (PTSD), the range of possible reactions is noted including resilience as the usual outcome following traumatic exposure.

ASD and PTSD are characterised by four types of symptoms: re-experiencing symptoms such as intrusive memories or dreams; avoidance symptoms such as avoiding thoughts, feelings, and places associated with the traumatic event; numbing symptoms such as feeling detached from others; and increased arousal symptoms such as poor sleep, irritability and hypervigilance. There are two key differences between ASD and PTSD. First, unlike PTSD, ASD places a heavy emphasis on dissociation, requiring symptoms such as feeling detached or dazed, depersonalisation, and derealisation. The second difference is the duration of symptoms; ASD is diagnosed between two days and one month following the traumatic event while PTSD is diagnosed at least one month following the traumatic event.

Estimates of lifetime prevalence of PTSD range from 5–10%. The likelihood of developing PTSD varies according to the nature of the event. In general terms, the highest incidence of PTSD is associated with rape and other sexual assault; the lowest rate is associated with natural disasters and witnessing harm to others. Naturally, this varies depending on the nature of the particular incident that the individual is exposed to. In chronic cases of PTSD (more than three months), about 85% have comorbid mental health disorders.

Information about screening, assessment (including individual strengths), diagnosis and treatment planning is presented in Chapter 2 with a number of GPPs to guide clinical practice. Amongst the key GPPs:

- For people presenting to primary care services with repeated non-specific physical health problems, it is recommended that the primary care practitioner consider screening for psychological causes, including asking whether the person has experienced a traumatic event and describing some examples of such events.
- A thorough assessment is required, covering relevant history (including trauma history), PTSD and related diagnoses, general psychiatric status (noting extent of comorbidity), physical health, substance use, marital and family situation, social and occupational functional capacity, and quality of life.
- The development of a robust therapeutic alliance should be regarded as the necessary basis for undertaking specific psychological interventions and may require extra time for people who have experienced prolonged and/or repeated traumatic exposure.
- Appropriate goals of treatment should be tailored to the unique circumstances and overall mental healthcare needs of the individual and established in collaboration with the person.

Chapter 3 General Considerations when Working with Children and Adolescents outlines key issues for younger people with PTSD including that: children and adolescents are typically dependent upon an adult to bring them for treatment, highlighting the importance of engagement with the relevant adult; children are part of a system (typically a family) so that assessment and treatment needs to take the whole system into consideration; and there is a need to be constantly mindful of psychosocial development, and the impact of trauma and appropriateness of treatment, in that context.

Typical clinical presentations in children and adolescents, as well as issues of screening, assessment and treatment in this group are detailed in Chapter 3. Amongst the key GPPs:

- Questions about exposure to commonly experienced potentially traumatic events should be included as standard during any psychiatric assessment of children and adolescents. If such exposure is endorsed, the child should be screened for the presence of PTSD symptoms.
- For children and adolescents, a structured clinical interview is regarded as a better assessment measure than a questionnaire for making a diagnosis.
- Parent/caregiver involvement in assessment and treatment is desirable for children and adolescents with ASD or PTSD.
- For children and adolescents, treatment needs to be tailored to meet the developmental needs of the individual. Protocols that have been designed specifically for children and adolescents should be used in preference to attempting to modify an adult treatment protocol.

Chapter 4 Interventions presents descriptions of all of the interventions that are referenced in the systematic review of the literature, including those that are supported by the evidence as well as those that are not. The chapter includes descriptions of pre-incident psychological preparedness training, post-incident interventions for all, psychological interventions for ASD and PTSD, pharmacological interventions for PTSD, psychosocial rehabilitation interventions for PTSD, physical therapies for ASD and PTSD and psychological interventions for children and adolescents.

Chapter 5 Evidence Review and Treatment Recommendations provides a summary of the evidence derived from the systematic review of the Australian and international literature and the recommendations arising. The key Guideline recommendations are:

Psychological interventions for adults

Grade B	For adults exposed to a potentially traumatic event, a one-session, structured, psychological intervention in the acute phase, such as psychological debriefing, should not be offered on a routine basis for the prevention of PTSD.
Grade C	For adults displaying symptoms consistent with ASD or PTSD in the initial four weeks after a potentially traumatic event, individual trauma-focussed cognitive behavioural therapy, including exposure and/or cognitive therapy, should be considered if indicated by a thorough clinical assessment.
Grade A	Adults with PTSD should be offered trauma-focussed cognitive behavioural interventions or eye movement desensitisation and reprocessing.

Pharmacological interventions for adults

Grade D	For adults exposed to a potentially traumatic event, drug treatments should not be used for all those exposed as a preventive intervention.
Grade C	The routine use of pharmacotherapy to treat ASD or early PTSD (i.e., within four weeks of symptom onset) in adults is not recommended.
Grade B	Drug treatments for PTSD should not be preferentially used as a routine first treatment for adults, over trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing.
Grade C	Where medication is considered for the treatment of PTSD in adults, selective serotonin reuptake inhibitor antidepressants should be considered the first choice.

GPP Selective serotonin reuptake inhibitor antidepressant medication should be considered for the treatment of PTSD in adults when:

a) the person is unwilling or not in a position to engage in or access trauma-focussed psychological treatment

b) the person has a comorbid condition or associated symptoms (e.g., severe depression and high levels of dissociation) where selective serotonin reuptake inhibitors are indicated

c) the person's circumstances are not sufficiently stable to commence trauma-focussed psychological treatment (as a result, for example, of severe ongoing life stress such as domestic violence)

d) the person has not gained significant benefit from trauma-focussed psychological treatment.

Psychological interventions for children and adolescents

Grade B	For children exposed to a potentially traumatic event, psychological debriefing should not be offered.
Grade C	For children of school age and above with PTSD, developmentally appropriate trauma-focussed cognitive behavioural therapy should be considered.
Grade C	For children exposed to trauma with symptoms of PTSD, where they were exposed to the same event, a school-based trauma-focussed cognitive-behavioural intervention aimed at reducing symptoms of PTSD should be considered.

Pharmacological interventions for children and adolescents

Grade D	For children exposed to a potentially traumatic event, pharmacotherapy should not be used as a preventive intervention for all those exposed.
Grade D	For children and adolescents with PTSD, pharmacotherapy should not be used as a routine first treatment over trauma-focussed cognitive behavioural therapy.
Grade D	For children and adolescents with PTSD, pharmacotherapy should not be used routinely as an adjunct to trauma-focussed cognitive behavioural therapy.

The complete list of Guideline recommendations is provided at the end of this executive summary.

Chapter 6 Economic Considerations highlights the economic impact of PTSD. PTSD has been found to be associated with greater individual disability than other mental or physical disorders, and have higher healthcare costs than depression and anxiety. A comprehensive economic evaluation of the implications of key Guideline recommendations has been undertaken and is available in a separate companion document to the main Guidelines. The economic evaluation found that a shift from current practice to recommended psychological and pharmacological treatment for PTSD would be cost effective.

Chapter 7 Specific Populations and Trauma Types: Issues for Consideration in the Application of the Guidelines provides guidance on issues to be considered when applying the Guidelines to particular populations who develop PTSD following trauma, and to particular trauma types. An experience common to many of these trauma populations is exposure to sustained and/or repeated traumatic experience and, in some cases, ongoing threat of further exposure. In addition to the core symptoms of PTSD, associated difficulties with impulsivity, problems with emotional regulation, identity disturbance, dissociative symptoms, self-destructive behaviour, abnormalities in sexual expression, and somatic symptoms are more likely.

The special populations covered in this chapter are:

- Aboriginal and Torres Strait Islander peoples
- Refugees and asylum seekers
- Military and ex-military personnel
- Emergency service personnel
- Older people.

The categories of traumatic event covered in the chapter are:

- Motor vehicle accidents
- Crime
- Sexual assault
- Natural disasters
- Terrorism.

These Guidelines are valid for a period of five years and will require updating in 2017.

Complete List of Guideline Recommendations

The research evidence and/or expert opinion underpinning these recommendations is presented in the full text of the document. The relevant sections of the document are cited for each recommendation. The grading system for each recommendation is fully explained later in the document (see Chapter 5).

As a quick guide to the process, the first step was to rate the strength of the research evidence (based, for example, on amount of evidence, consistency, generalisability, and so on). The working party then generated the recommendations and gave each a grade to indicate the strength of the recommendation in order to assist users in making clinical judgments. The grade is based on, but not necessarily a direct translation of, the strength of evidence. The recommendations (R) are graded from A to D, with A being the highest. Grade A recommendations indicate that the body of evidence can be trusted to guide practice. Grade B indicates that the body of evidence can be trusted to guide practice in most situations. Grade C indicates that the body of evidence provides some support for the recommendation but care should be taken in its application. Grade D indicates that the body of evidence is weak and the recommendation must be applied with caution. In areas for which there was insufficient research evidence to generate a recommendation, expert clinical consensus is indicated by the designation Consensus Point (CP; used when a research question was asked, but no evidence found) or Good Practice Point (GPP; used where a research question was not asked). Areas identified as in need of further research are noted as Research Recommendations (RR). Please note the use of abbreviated forms of posttraumatic stress disorder (PTSD) and acute stress disorder (ASD) in this summary.

As explained in Chapter 1, the recommendations are not intended to be used prescriptively, but as a guide to appropriate interventions in the context of each person's unique circumstances and their overall mental healthcare needs. Practitioners should use their experience and expertise in applying these Guidelines in routine clinical practice and all clinical interventions should be provided with compassion and sensitivity.

Trauma and trauma reactions

Screening, assessment and diagnosis

GPP1 For people presenting to primary care services with repeated non-specific physical health problems, it is recommended that the primary care practitioner consider screening for psychological causes, including asking whether the person has experienced a traumatic event and describe some examples of such events. (p.30)

GPP2 Service planning should consider the application of screening (case finding) of individuals at high risk for PTSD after major disasters or incidents, as well as those in high risk occupations. (p.30)

GPP3 The choice of screening tool should be determined by the best available evidence, with a view to selecting the best performing screen for the population of interest. Application of an inappropriate screening tool may result in over- or under-identification of problems. (p.30)

GPP4 Different populations may require different screening procedures. Programs responsible for the management of refugees should consider the application of culturally appropriate screening for refugees and asylum seekers at high risk of developing PTSD. Similarly, screening of children will require the use of developmentally sensitive tools designed for the purpose. (p.30)

GPP5 Screening should be undertaken in the context of a service system that includes adequate provision of services for those who require care. (p.30)

GPP6 Any individual who screens positive should receive a thorough diagnostic assessment. (p.30)

Comprehensive assessment of PTSD

GPP7 A thorough assessment is required, covering relevant history (including trauma history), PTSD and related diagnoses, general psychiatric status (noting extent of comorbidity), physical health, substance use, marital and family situation, social and occupational functional capacity, and quality of life. (p.31)

GPP8 Assessment should include assessment of strengths and resilience, as well as responses to previous treatment. (p.31)

GPP9 Assessment and intervention must be considered in the context of the time that has elapsed since the traumatic event occurred. Assessment needs to recognise that whereas the majority of people will display distress in the initial weeks after trauma exposure, most of these reactions will remit within the following three months. (p.31)

GPP10 As part of good clinical practice, assessment needs to occur at multiple time points following trauma exposure, particularly if the person displays signs of ongoing difficulties or psychological deterioration. (p.31)

GPP11 Assessment and monitoring should be undertaken throughout treatment. When adequate progress in treatment is not being made, the practitioner should revisit the case formulation, reassess potential treatment obstacles, and implement appropriate strategies, or refer to another practitioner. Effective inter-professional collaboration and communication is essential at such times. (p.31)

Diagnosis

GPP12 Assessment should cover the broad range of potential posttraumatic mental health problems beyond PTSD, including other anxiety disorders, depression and substance abuse. (p.32)

Assessment instruments

GPP13 It is recommended that practitioners be guided in their assessment of PTSD, comorbidity and quality of life, by the available validated self-report and structured clinical interview measures. (p.34)

GPP14 It is recommended that practitioners also use validated, user-friendly self-report measures to support their assessments of treatment outcomes over time. (p.34)

Intervention planning

GPP15 Mental health practitioners are advised to note the presence and severity of comorbidities in their assessments, with a view to considering their implications for treatment planning. *(Please note also recommendations regarding PTSD and comorbidity)* (p.40)

GPP16 Residual symptomatology should be addressed after the symptoms of PTSD have been treated. (p.40)

GPP17 The development of a robust therapeutic alliance should be regarded as the necessary basis for undertaking specific psychological interventions and may require extra time for people who have experienced prolonged and/or repeated traumatic exposure. (p.40)

GPP18 Mental health practitioners should provide a clear rationale for treatment and promote realistic and hopeful outcome expectancy. (p.40)

GPP19 Mental health practitioners and rehabilitation practitioners should work together to promote optimal psychological and functional outcomes. (p.40)

GPP20 In most circumstances, establishing a safe environment is an important precursor to commencement of trauma-focussed therapy or, indeed, any therapeutic intervention. However, where this cannot be achieved (for example, the person is seeking treatment for their PTSD whilst maintaining a work role or domestic situation that may expose them to further trauma), some benefit may still be derived from trauma-focussed therapy. This should follow careful assessment of the person's coping resources and available support. (p.40)

Treatment goals

GPP21 The practitioner should assess immediate needs for practical and social support and provide education and referrals accordingly. (p.42)

GPP22 Appropriate goals of treatment should be tailored to the unique circumstances and overall mental health care needs of the individual and established in collaboration with the person. (p.42)

GPP23 From the outset, there should be a collaborative focus on recovery and rehabilitation between the person and practitioner, and where appropriate, family members. (p.42)

Cultural and linguistic diversity

GPP24 Recommended treatments for PTSD should be available to all Australians, recognising their different cultural and linguistic backgrounds. (p.42)

RR1 The conceptualisation of psychological trauma in different and diverse cultural contexts needs to be further researched so that this can inform processes of assessment and management of such trauma syndromes for people of culturally and linguistically diverse backgrounds. (p.42)

The impact of PTSD on family

GPP25 Wherever possible family members should be included in education and treatment planning, and their own needs for care considered alongside the needs of the person with PTSD. (p.43)

General professional issues

GPP26 Practitioners who provide mental health care to children, adolescents or adults with ASD and PTSD, regardless of professional background, must be appropriately trained to ensure adequate knowledge and competencies to deliver recommended treatments. This requires specialist training, over and above basic mental health or counselling qualifications. (p.43)

GPP27 Primary care practitioners, especially in rural and remote areas, who assume responsibility for the care of people with ASD and PTSD in the absence of specialist providers, should be supported with accessible education and training, as well as access to specialist advice and supervision where possible. (p.43)

GPP28 In their self-care, practitioners should pay particular attention to skill and competency development and maintenance including regular supervision, establishing and maintaining appropriate emotional boundaries with people with PTSD, and effective self-care. This includes maintaining a balanced and healthy lifestyle and responding early to signs of stress. (p.44)

GPP29 For those practitioners who work in an organisational context, broader policies and practices should support individual practitioners in these self-care measures. (p.44)

RR2 In recognition of the developing science around dissemination and implementation of evidence-based treatment, future research should explore the most effective ways of generating reliable and sustainable change in policies and practice for areas covered in these Guidelines. (p.44)

General considerations when working with children and adolescents

Assessment

GPP30 Questions about exposure to commonly experienced potentially traumatic events should be included as standard during any psychiatric assessment of children and adolescents. If such exposure is endorsed, the child should be screened for the presence of PTSD symptoms. (p.61)

GPP31 Children and adolescents are typically dependent upon an adult to present them for assistance. This means that it is equally important to engage with and maintain the relevant adults' motivation to pursue assistance, as it is the child or adolescent's. (p.61)

GPP32 Assessment of children and adolescents should include assessment of the system (typically the family) in which they live, as their symptoms will both influence and be influenced by what else is happening within the system. (p.61)

GPP33 The rate of agreement between parents/caregivers and children in relation to internalising symptoms of posttraumatic mental health problems may be very low. Practitioners should not rely solely on an adult's report of a child's internalising symptoms – even if the child is preschool-aged. Where assessment involves very young children (aged 0-3) this should include an evaluation of the behaviour of the child with particular reference to developmental stage, and attachment status. Some symptoms of PTSD such as sense of foreshortened future and inability to recall some aspects of the trauma are unlikely to be usefully assessed in this age group. (p.61)

GPP34 In children, the range of potential posttraumatic mental health problems includes behavioural and attentional problems (such as oppositional defiant disorder and attention deficit hyperactivity disorder) as well as anxiety disorders (such as separation anxiety disorder) and affective disorders. (p.61)

GPP35 For children and adolescents, a structured clinical interview is regarded as a better assessment measure than a questionnaire for making a diagnosis. (p.61)

Intervention planning

GPP36 As noted in reference to assessment, children and adolescents are typically dependent upon an adult to present them for treatment and ensure that they attend subsequent appointments. This means that it is equally important to engage with and maintain the relevant adults' motivation to pursue treatment, as it is the child or adolescent's. (p.63)

GPP37 For children and adolescents, treatment needs to be tailored to meet the developmental needs of the individual. Protocols that have been designed specifically for children and adolescents should be used in preference to attempting to modify an adult treatment protocol. (p.63)

GPP38 When the adult caregiver of a child with PTSD is also experiencing posttraumatic mental health problems, their symptoms may exacerbate each other's. For this reason, it may be preferable to treat the caregiver first or in parallel. (p.63)

GPP39 In the treatment of children and adolescents, parents/caregivers need to be involved to some degree, not only because of their gatekeeper role in terms of access to and continued engagement in therapy, but also because of their role in helping to generalise and maintain treatment gains, direct participation in homework tasks (e.g., reward systems), and providing important information that the child may have forgotten, be unaware of, or not recognise the importance of. (p.63)

GPP40 The delivery of services in schools may be an effective strategy for engaging and keeping children, adolescents and families in treatment. (p.63)

GPP41 Parent/caregiver involvement in assessment and treatment is desirable for children and adolescents with ASD or PTSD. (p.63)

GPP42 Practitioners who provide mental health care to children, adolescents or adults with ASD and PTSD, regardless of professional background, must be appropriately trained to ensure adequate knowledge and competencies to deliver recommended treatments. This requires specialist training, over and above basic mental health or counselling qualifications. (p.63)

Evidence review and treatment recommendations

GPP43 Best practice procedures should be adopted when using psychological, psychosocial or pharmacological treatments, including provision of information prior to commencement, monitoring and management of side effects, monitoring of suicide risk, and in the case of pharmacological intervention, appropriate discontinuation and withdrawal practices. (p.84)

Early psychological interventions for adults

Pre-incident preparedness training

CP1 For adults likely to be exposed to a potentially traumatic event, pre-incident preparedness training may facilitate psychological adaptation following the event. (p.85)

RR3 There is an urgent need for carefully controlled research to study the content and possible benefits of preparedness training prior to trauma exposure. (p.85)

Early psychological interventions for all		Grade
R1	For adults exposed to a potentially traumatic event, a one-session, structured, psychological intervention in the acute phase, such as psychological debriefing, should not be offered on a routine basis for the prevention of PTSD. (p.87)	**B**

GPP44 For adults exposed to a potentially traumatic event, if required, provide practical and emotional support, facilitate ways to manage distress and access social supports, and promote positive expectations. (p.87)

GPP45 Adults exposed to a potentially traumatic event who wish to discuss the experience, and demonstrate a capacity to tolerate associated distress, should be supported in doing so. In doing this the practitioner should keep in mind the potential adverse effects of excessive ventilation in those who are very distressed. (p.87)

GPP46 For adults exposed to a potentially traumatic event, a stepped care approach tailored to individual need is advised. This would involve ongoing monitoring of people who are more distressed and/or at heightened risk of adverse mental health impact, with targeted assessment and intervention when indicated. (p.87)

GPP47	For adults who develop an extreme level of distress or are at risk of harm to self or others, thorough diagnostic assessment and appropriate interventions should be provided. (p.87)
RR4	In view of the importance of providing a best practice response for adults exposed to a potentially traumatic event for high risk industries and for the general community, future research should examine the most effective strategy to adopt for all those exposed to a traumatic event. (p.88)

Psychological treatment for adults with ASD or acute PTSD		**Grade**
R2	For adults displaying symptoms consistent with ASD or PTSD in the initial four weeks after a potentially traumatic event, individual trauma-focussed cognitive behavioural therapy including exposure and/or cognitive therapy, should be considered if indicated by a thorough clinical assessment. (p.88)	**C**

Psychological interventions for adults with PTSD

		Grade
R3	Adults with PTSD should be offered trauma-focussed cognitive behavioural interventions or eye movement desensitisation and reprocessing. (p.91)	**A**
R4	Where symptoms have not responded to a range of trauma-focussed interventions, evidence-based non-trauma-focussed psychological interventions (such as stress inoculation training) should be considered. (p.91)	**D**

CP2	On the basis of some evidence that *in vivo* exposure (graded exposure to feared/avoided situations) contributes to treatment gains, it is recommended that *in vivo* exposure be included in treatment. (p.91)
GPP48	Where symptoms have not responded to one form of first line trauma-focussed intervention (trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing), health practitioners may consider the alternative form of trauma-focussed intervention. (p.92)
GPP49	For adults with PTSD with several problems arising from multiple traumatic events, traumatic bereavement, or where PTSD is chronic and associated with significant disability and comorbidity, sessions using specific treatments to address those problems may be required. (p.92)
GPP50	Where adults have developed PTSD and associated features following exposure to prolonged and/or repeated traumatic events, more time to establish a trusting therapeutic alliance and more attention to teaching emotional regulation skills may be required. (p.92)
GPP51	Prescribed medication can continue while people are undertaking psychological treatments and any changes should only occur in close consultation with the treating physician. However, some medications, such as benzodiazepines, may interfere with some effective psychological treatments. (p.92)
GPP52	Sessions that involve imaginal exposure may require up to 90 minutes to avoid premature termination of therapy while anxiety is still high, and to ensure appropriate management of distress. (p.92)
RR5	Mechanisms underpinning effective treatments should be subject to systematic research. (p.92)
RR6	There should be large and well-controlled trials of new and emerging interventions for PTSD. (p.92)
RR7	Further research is required that evaluates the extent to which treatments with demonstrated efficacy are effective when delivered by non-specialist practitioners in real-world settings. The focus of research should not be restricted to outcomes only, but should also include factors such as cost-effectiveness, acceptability for practitioners and clients, treatment fidelity, and success of practitioner training. (p.92)

Individual vs group therapy		**Grade**
R5	Group cognitive behavioural therapy (trauma-focussed or non-trauma-focussed) may be provided as adjunctive to, but not be considered an alternative to, individual trauma-focussed therapy. (p.93)	**C**

Self-delivered interventions		**Grade**
R6	Internet-delivered trauma-focussed therapy involving trauma-focussed cognitive behavioural therapy may be offered in preference to no intervention. (p.94)	**C**

Early pharmacological interventions for adults

Early pharmacological interventions for all		Grade
R7	For adults exposed to a potentially traumatic event, drug treatments should not be used for all those exposed as a preventive intervention. (p.95)	**C**

GPP53. Where significant sleep disturbance does not settle in response to reassurance, sleep hygiene and appropriate psychological interventions, cautious and time-limited use of appropriate sleep medication may be helpful for adults. (p.96)

Pharmacological treatment for adults with ASD or acute PTSD		Grade
R8	The routine use of pharmacotherapy to treat ASD or early PTSD (i.e., within four weeks of symptom onset) in adults is not recommended. (p.96)	**D**

GPP54 Pharmacotherapy may be indicated if the severity of the person's distress cannot be managed by psychological means alone, particularly when there is a pattern of extreme hyperarousal, sleep disturbance or nightmares. (p.96)

GPP55 For people who have a prior psychiatric history that has responded well to medication, the prescription of an appropriate medication should be considered if a progressive pattern of clinically significant symptoms, such as persistent intrusions with increasing affective distress, begin to emerge. (p.96)

GPP56 For adults with ASD or early PTSD, where significant sleep disturbance does not settle in response to reassurance, sleep hygiene and appropriate psychological interventions, cautious and time-limited use of appropriate sleep medication may be helpful. (p.96)

RR8 The effect of pharmacological treatment of ASD on subsequent PTSD status and severity following cessation of medication should be investigated. These studies may go beyond common psychotropic medication to include other agents that have shown promise such as narcotic analgesics, cortisol, and alcohol. (p.96)

Pharmacological interventions for adults with PTSD

		Grade
R9	Drug treatments for PTSD should not be preferentially used as a routine first treatment for adults, over trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing. (p.100)	**B**
R10	Where medication is considered for the treatment of PTSD in adults, selective serotonin reuptake inhibitor antidepressants should be considered the first choice. (p.100)	**C**

GPP57 Selective serotonin reuptake inhibitor antidepressant medication should be considered for the treatment of PTSD in adults when:

a) the person is unwilling or not in a position to engage in or access trauma-focussed psychological treatment (p.100)

b) the person has a comorbid condition or associated symptoms (e.g., severe depression and high levels of dissociation) where selective serotonin reuptake inhibitors are indicated (p.100)

c) the person's circumstances are not sufficiently stable to commence trauma-focussed psychological treatment (as a result, for example, of severe ongoing life stress such as domestic violence) (p.100)

d) the person has not gained significant benefit from trauma-focussed psychological treatment. (p.100)

GPP58 Where a decision has been made to commence pharmacotherapy, the person's mental state should be regularly monitored with a view to commencing adjunctive psychological treatment if/when appropriate. In the interim, supportive psychotherapy with a substantial psychoeducational component should be offered. (p.100)

GPP59 Where significant sleep disturbance or excessive distress does not settle in response to reassurance, sleep hygiene and evidence-based psychological interventions, or other non-drug intervention, cautious and time-limited use of appropriate sleep medication may be helpful. If the sleep disturbance is of more than one month's duration and medication is likely to be of benefit in the management of the person's PTSD, a suitable antidepressant should be considered. The risk of tolerance and dependence are relative contraindications to the use of hypnotics for more than one month except if their use is intermittent. (p.100)

GPP60 Where symptoms have not responded adequately to pharmacotherapy, further consultation with a specialist in the field should be undertaken to determine the appropriateness of:

a) increasing the dosage within approved limits (p.100)

b) switching to an alternative antidepressant medication (p.100)

c) adding prazosin, risperidone or olanzapine as an adjunctive medication (p.100)

d) reconsidering the potential for psychological intervention. (p.100)

GPP61 When an adult with PTSD has responded to drug treatment without experiencing any adverse effects, it should be continued for at least 12 months before gradual withdrawal. (p.100)

RR11 Given the extent to which adjunctive pharmacotherapy is used in routine clinical practice, particularly with chronic and treatment-resistant cases, it is recommended that large, well-controlled trials be conducted to clarify the benefits of multiple medications. (p.105)

RR12 Since preliminary evidence suggests that a range of medications may enhance psychological treatments, future research should further investigate this question. (p.105)

RR13 Further exploration is required of the potential benefits of combination and sequencing (pharmacological and trauma-focussed psychological) treatments. (p.105)

RR14 Future research should explore neurobiological and psychological markers that may be used in predicting likely treatment response. This research recommendation applies equally to pharmacological and psychological interventions. (p.105)

Psychosocial rehabilitation

CP3 Adult refugees with PTSD who have experienced war and famine may benefit from appropriate psychosocial support groups. (p.101) (Note that a broader discussion of the application of these Guidelines for refugee and asylum seeker populations in included is the "Specific populations" chapter later in this document).

GPP62 There should be a focus on vocational, family, and social rehabilitation interventions from the beginning of treatment to prevent or reduce disability associated with the disorder, and to promote recovery, community integration and quality of life. (p.102)

GPP63 In cases where people with PTSD have not benefited from a number of courses of evidence-based treatment, psychosocial rehabilitation interventions should be considered to prevent or reduce disability, and to promote recovery, community integration and quality of life. (p.102)

GPP64 Health care and rehabilitation professionals should be aware of the potential benefits of psychosocial rehabilitation and promote practical advice on how to access appropriate information and services. (p.102)

GPP65 In cases of work-related trauma, management of any return-to-work process needs to occur in the context of a thorough risk assessment of the potential for exposure to further stressors, balanced with the potential benefits of return to work. (p.102)

RR9 In adults with PTSD the impact of psychosocial rehabilitation on PTSD and social and occupational functioning should be investigated. (p.102)

Exercise and physical therapies

		Grade
R11	Acupuncture may be considered as a potential intervention for PTSD for people who have not responded to trauma-focussed psychological therapy or pharmacotherapy. (p.103)	**D**

GPP66 As part of general mental health care, practitioners may wish to advise people with PTSD that regular aerobic exercise can be helpful in managing their symptoms and as part of self-care practices more generally. Exercise may assist in the management of sleep disturbance and somatic symptoms that are common accompaniments of PTSD. (p.103)

RR10 Further research is needed into the effect of physical and exercise based interventions on PTSD. (p.103)

Single vs multiple interventions

GPP67 Psychosocial rehabilitation interventions should be used as an adjunctive therapy in combination with psychotherapy or pharmacotherapy. (p.106)

RR15 Large, well-controlled randomised trials comparing pharmacological with trauma-focussed psychological treatment across different trauma populations are required. This may be best achieved through coordinated international multi-site trials. (p.108)

Sequencing comorbidities

CP4 In the context of comorbid PTSD and mild to moderate depression, health practitioners may consider treating the PTSD first, as the depression will often improve with treatment of the PTSD. (p.109)

CP5 Where the severity of comorbid depression precludes effective engagement in therapy and/or is associated with high risk suicidality, health practitioners are advised to manage the suicide risk and treat the depression prior to treating the PTSD. (p.109)

CP6 In the context of PTSD and substance use disorders, practitioners should consider integrated treatment of both conditions. (p.109)

CP7 In the context of PTSD and substance use disorders, the trauma-focussed component of PTSD treatment should not commence until the person has demonstrated a capacity to manage distress without recourse to substance misuse and to attend sessions without being drug or alcohol affected. (p.109)

CP8 In the context of PTSD and substance use disorders, where the decision is made to treat substance use disorders first, clinicians should be aware that PTSD symptoms may worsen due to acute substance withdrawal or loss of substance use as a coping mechanism. Treatment should include information on PTSD and strategies to deal with PTSD symptoms as the person controls their substance abuse. (p.109)

Early psychological interventions for children and adolescents

Early psychological interventions for all		Grade
R12	For children exposed to a potentially traumatic event, psychological debriefing should not be offered. (p.110)	**B**
GPP68	Children, ranging from infants and pre-schoolers to older children and adolescents can be affected significantly by traumatic events, at higher rates than adults. Practitioners need to be conscious of this risk, must be proactive in assessing the range of psychological impacts of trauma, and should be prepared to provide appropriate assistance, including referral to specialist services if needed. (p.111)	
GPP69	Information is often provided to assist children following traumatic events. The content, when used, should be of high quality and tailored to the traumatic event type and the target audience. Information given following traumatic events may include: a) information about likely outcomes (most frequently positive); b) reinforcement of existing and new positive coping; c) advice on avenues for seeking further assistance if required; and d) possible indicators of a need for further assistance. Information following traumatic events may also include a recognition of the role of, and impact on, caregivers, siblings and teachers. (p.111)	
GPP70	For children exposed to trauma, psychoeducation should be integrated into a stepped-care approach that involves parents and the range of health, education and welfare service providers, and includes monitoring, targeted assessment and intervention, if necessary. (p.111)	
GPP71	Psychological first aid may be appropriate with children in the immediate aftermath of trauma, however if it is used there must be access available to infant, child and adolescent mental health specialists if and when required. (p.111)	
GPP72	Parents and caregivers provide a protective/buffering function against child traumatic stress. Clinicians should be aware of the potential for parents' own distress or other factors to compromise their capacity to provide a protective/buffering function. If distress or other relevant factors are identified, the clinician should respond accordingly. (p.111)	
RR16	Research across a range of trauma-exposed child and adolescent populations is needed to improve understanding of the role and effectiveness of early intervention. (p.111)	

Early psychological interventions for children and adolescents with ASD or acute PTSD

CP9	Trauma-focussed cognitive behavioural therapy may be useful as an early psychological intervention for children with a diagnosis of ASD in the initial four weeks after the traumatic event, based on the positive evidence for cognitive behavioural therapy in children with PTSD. However, the effectiveness of this approach with ASD in children is not yet established. (p.111)

Psychological interventions for children and adolescents with PTSD

		Grade
R13	For children of school age and above with PTSD, developmentally appropriate trauma-focussed cognitive behavioural therapy should be considered. (p.113)	**C**
GPP73	When assessing a child or adolescent for PTSD, healthcare professionals should ensure that they separately and directly assess the child or adolescent for the presence of PTSD symptoms. It is preferable not to rely solely on information from the parent or guardian in any assessment. (p.113)	
GPP74	Given that retention in therapy and the effectiveness of trauma-focussed cognitive behavioural therapy with children and adolescents both require strong parent and/or caregiver involvement, an initial phase of trauma-focussed cognitive behavioural therapy with this group is engagement of the parent(s) to improve their understanding and support of this treatment modality. (p.113)	
RR17	The effectiveness of trauma-focussed cognitive behavioural therapy on depression and other posttraumatic presentations (internalising and externalising behaviours) requires further investigation. (p.113)	
RR18	We recommend that further research examining eye movement desensitisation and reprocessing for PTSD in children is conducted. (p.113)	
RR20	The impact of treatment of trauma-related psychopathology in parents and/or caregivers of abused children prior to treatment of the children should be explored. (p.118)	

Individual vs group therapy		Grade
R14	For children with PTSD, individual psychological interventions should be considered in preference to group interventions. (p.114)	**C**

Early pharmacological interventions for children and adolescents

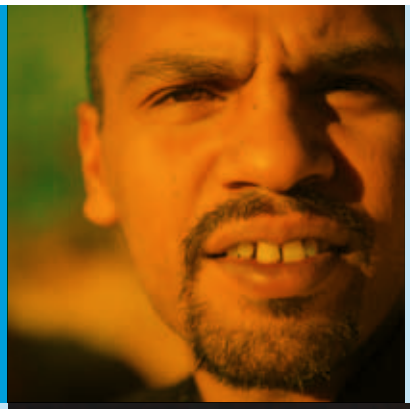
		Grade
R15	For children exposed to a potentially traumatic event, pharmacotherapy should not be used as a preventive intervention for all those exposed. (p.115)	**D**

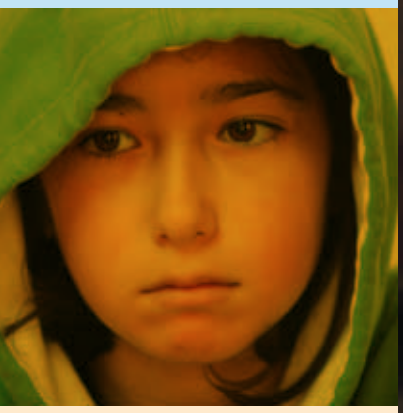
Pharmacological interventions for children and adolescents with PTSD

		Grade
R16	For children and adolescents with PTSD, pharmacotherapy should not be used as a routine first treatment over trauma-focussed cognitive behavioural therapy. (p.117)	**D**
R17	For children and adolescents with PTSD, pharmacotherapy should not be used routinely as an adjunct to trauma-focussed cognitive behavioural therapy. (p.117)	**D**
GPP75	Prescription of antidepressants in children should be guided by specific practice guidelines on depression, and practitioners should be aware of age-related side effects. (p.117)	

School-based interventions

		Grade
R18	For children exposed to trauma with symptoms of PTSD, where they were exposed to the same event, a school-based trauma-focussed cognitive-behavioural intervention aimed at reducing symptoms of PTSD should be considered. (p.117)	**C**
GPP76	An integrated model between education and health providers that facilitates appropriate support and referral is recommended. It is recommended that schools provide a facilitative function in intervening with children following trauma, especially after large-scale traumas. (p.118)	
RR19	There is a need to understand how the impact of trauma presents for children in schools, and the role of the school community in providing support to affected children and assisting in referral if required. (p.118)	





AAP Image/POOL, Herald Sun

Introduction 1

In 2007, the National Health and Medical Research Council (NHMRC) approved the first Australian Guidelines for the Treatment of Adults with Acute Stress Disorder and Posttraumatic Stress Disorder. The Guidelines were approved by the NHMRC for a five-year period and therefore were due for revision in 2012. The purpose of this chapter is to describe the revised Guideline aims, scope, development process and implementation strategy.

Please note that these Guidelines were commenced prior to January 2011 and as such were developed in accord with the NHMRC standards and procedures for externally developed guidelines (2007).

Comparison with the 2007 Guidelines

The current revision of the Guidelines includes a systematic review of the evidence that has been published in peer reviewed journals since the last Guidelines were published, a broadening of the research questions in certain areas, and perhaps most significantly, expansion to include the treatment of children and adolescents.

Although the basic approach to guideline development is the same for this version as it was for the 2007 Guidelines, there are minor differences. Membership of both the working party and the multidisciplinary panel was broader for the current Guidelines, reflecting the addition of people with expertise in child and adolescent trauma. The number and range of questions was broader on this occasion, predominantly reflecting the addition of evidence around children and adolescents.

The approach to conducting the systematic review was the same, although the manner in which the data was summarised is slightly different; notably, evidence statement matrices appear in this version, but were not used in the 2007 Guidelines. This is important in understanding the grading of recommendations. NHMRC criteria now dictate that a recommendation cannot be graded A or B unless the evidence base and consistency of the evidence are both rated A or B on some of the evidence forms (not necessarily all). This requirement did not exist for the 2007 Guidelines, and explains why some recommendations are lower on this occasion than in the earlier version, despite the evidence base being the same or comparable. The process of conducting the systematic review is described at the beginning of Chapter 5 and the full systematic review is included as Appendix 3.

Guideline aims

These Guidelines aim to support high quality treatment for children, adolescents and adults with ASD and PTSD by providing a framework of best practice around which to structure treatment. The Guidelines have been designed to be used by: a) the range of general and mental health practitioners planning and providing treatment across clinical settings; b) people affected by trauma making decisions about their treatment; and c) funding bodies making service purchasing decisions. The intended outcome of the Guidelines is increased recognition of ASD and PTSD, increased uptake of evidence-based care, and ultimately, better outcomes for people affected by trauma.

These Guidelines should not be regarded as an inflexible prescription for the content or delivery of treatment. They are guidelines, to be interpreted and implemented in the context of good clinical judgement, not rigid rules. They should not limit treatment innovation and development that is based upon scientific evidence, expert consensus, practitioner judgment of the needs of the person, and the person's preferences. Equally, these Guidelines should be used to drive the delivery of first and second line evidence-based treatment approaches unless there is a strong justification for not doing so in a particular case.

Scope of the Guidelines

These Guidelines provide information and recommendations about evidence-based methods of treating people who, following exposure to potentially traumatic events, have developed (or are at risk of developing) problems consistent with the criteria for ASD and PTSD. They do not seek to address the full range of possible responses to traumatic exposure, including those known as Complex PTSD or Disorders of Extreme Stress Not Otherwise Specified (DESNOS). They focus on the conditions of ASD and PTSD, not on the type of trauma that may have precipitated these disorders (although the final chapter discusses the application of the Guideline recommendations to various traumatised populations). It needs to be recognised that PTSD may exist in the context of a complex life history, other disorders and ongoing life issues and stressors.

The diagnostic criteria for ASD and PTSD are defined in internationally accepted diagnostic manuals. In research settings, the most widely used is the Diagnostic and Statistical Manual of Mental Disorders (DSM) published by the American Psychiatric Association. The fourth version of this manual (DSM-IV) was in use during the development of these guidelines and a large majority of the studies included in the systematic literature review adopted the DSM-IV criteria for ASD or PTSD. The release of the fifth version (DSM-5) coincides with these guidelines. Thus, although most of the discussion that follows refers to DSM-IV criteria, DSM-5 will be mentioned where appropriate. The other major diagnostic classificatory system is the International Classification of Diseases (ICD), with the current version being ICD-10. ICD-11 is in the early stages of development with release planned for 2015. Although widely used in clinical practice throughout many parts of the world, ICD is rarely used in the type of research trial included in this systematic review. Nevertheless, ICD will be mentioned in these guidelines where appropriate.

The Guidelines are intended to influence the care of all Australian men, women and children, across the full range of populations, who develop, or are at risk of developing, these forms of distress following traumatic events. They are intended to include the care of older adults who do not have significant age-related comorbidity.

The Guideline developers recognise that there are a number of interventions that are widely used in clinical practice that have not been adequately tested, and it is important to acknowledge that the absence of evidence does not necessarily mean that these interventions are ineffective. The gap between evidence-based interventions and clinical practice should help define the research agenda into the future. Equally, evidence-based interventions should be used in preference to non-evidence-based interventions, unless there is a strong reason not to do so.

The Guidelines have been formulated with the assumption that treatment will be provided by qualified professionals who are skilled in the relevant psychosocial and medical interventions, as assessed against the prevailing professional standards. The Guidelines do not substitute for the knowledge and skill of competent individual practitioners. The recommendations are not intended to be used prescriptively, but as a guide to appropriate interventions in the context of each person's unique circumstances and their overall mental healthcare needs. Practitioners should use their experience and expertise in applying these Guidelines in routine clinical practice and all clinical interventions should be provided with compassion and sensitivity. In the application of these Guidelines to the Australian healthcare setting, consideration needs to be given to the availability and accessibility of appropriate and relevant services – especially in rural and remote settings – and of appropriate education and training to support practitioners in the delivery of the recommended evidence-based interventions.

While those who have PTSD in combination with broader posttraumatic mental health problems or other mental health problems may require additional treatment and care, the recommendations in these Guidelines are still relevant and applicable. Where possible, recommendations are provided on the management of people with PTSD and comorbid conditions. The Guidelines are intended to include the care of older adults who do not have significant age-related comorbidity, and a brief section in the 'Specific Populations' chapter discusses issues relevant to that age group. Unlike the earlier (2007) Guidelines, this version is also intended to cover the treatment of children and adolescents with PTSD.

Limitations of the Guidelines

As noted above, these Guidelines do not seek to address the full range of possible responses to traumatic exposure beyond ASD and PTSD. The Guidelines are not intended to be used prescriptively; rather practitioners should use their experience and expertise in applying the Guidelines. All clinical interventions should be provided with compassion and sensitivity.

These guidelines are based on the highest quality research currently available. It is possible that new and emerging treatments will develop a sufficiently strong evidence base to be included as recommended interventions in subsequent updates to the Guidelines. For this reason, it is recommended that the Guidelines be reviewed every five years.

Development of the Guidelines

The terms of reference for the Guidelines, including the roles and responsibilities of personnel involved, is provided in Appendix 2. A brief overview is provided here.

Personnel

The Guideline development group was made up of three committees:

- a small core working party, comprising clinical and research experts in the field of traumatic stress
- a broad multidisciplinary panel, comprising representatives of providers, professional associations, and people affected by trauma
- a two-person steering committee, comprising Professor David Forbes (as Director, Phoenix Australia - Centre for Posttraumatic Mental Health) and Professor Beverley Raphael (as Chair of the working party and multidisciplinary panel).

The composition of the working party and multidisciplinary panel is listed at the front of the Guidelines document.

Adelaide Health Technology Assessment at the University of Adelaide (AHTA) is an external organisation with specific expertise in the conduct of systematic literature reviews. AHTA was engaged to undertake the systematic review of the literature.

The Guideline development group was supported by an independent methodologist, Dr Adele Weston, who was responsible for advising the Guideline development group on issues related to NHMRC requirements, particularly in relation to deriving recommendations from the systematic review and grading those recommendations.

The Guideline development group was also supported by the Phoenix Australia project team, led by Dr Andrea Phelps, Dr Lisa Dell and Dr Bronwyn Wolfgang who were responsible for coordinating the development and writing of the Guidelines.

Process

The working party and multidisciplinary panel worked in collaboration to establish the research questions for the systematic review of the literature, and to develop the recommendations arising from the literature review. With respect to the research questions, the working party drafted questions based on their knowledge of key questions for the field. The multidisciplinary panel provided feedback on the relevance and applicability of the draft questions to the stakeholders they represented. The agreed questions were then put to the systematic review of the literature, undertaken by AHTA. The AHTA report summarised the research evidence under each research question for consideration by the Guideline development group. The full evidence review is very lengthy and is available in Appendix 3, downloadable from www.phoenixaustralia.org.

The process for developing recommendations involved four stages. First, evidence contained in the systematic review was allocated to working party members based on their particular expertise and working party members were required to work in pairs to develop draft recommendations. Secondly, these draft recommendations were presented to others, including the independent methodologist, at a working party meeting. The methodologist ensured that the recommendations and their grading could be justified. Thirdly, the draft recommendations were circulated to the multidisciplinary panel for feedback on their relevance and applicability to the stakeholders they represented. Finally, the Chair of the working party led a process of formally voting on acceptance of each of the recommendations. Working party members with potential conflicts of interest were excluded from the vote on specific recommendations related to the conflict. In this process one significant difference of opinion arose. A member of the multidisciplinary panel objected to the inclusion of a good practice point (GPP) that indicated that eye movements per se had not been proven to have any active effect in the efficacy of eye movement desensitisation and reprocessing (EMDR). A vote was taken within the working party in relation to this issue and it was agreed that this GPP should be removed as the question of mechanisms of treatment had not been specifically addressed in the evidence review nor addressed in the recommendations pertaining to any other intervention. One member of the working party dissented from this view given the purported centrality of the eye movements to EMDR as reflected in its title.

Both committees, the working party and multidisciplinary panel, were chaired by Professor Beverley Raphael. As Chair, Professor Raphael oversaw the work done by the two committees and ensured that the diversity of views of the overall Guideline development group was considered in formulation of the final research questions and recommendations.

The Draft Guidelines for the Treatment of ASD and PTSD were made available for public consultation between November 30 2012 and January 11 2013. Four submissions were received and a small number of amendments were made to the Guidelines as a result. Please see Appendix 4 for details of the public consultation process, submissions received, and amendments made to the Guidelines. Further details of the process of Guideline development are available in the NHMRC administrative report. A copy of this report is available upon request to phoenix-info@unimelb.edu.au.

Additional notes

1. The Guideline developers recognise that the treatment studies subjected to this review are often specific to a particular trauma affected population, using different measurement instruments. The conduct of large national trials conducted across trauma affected populations with consistency of measurement will further inform future revisions to these Guidelines.

2. On a point of terminology, the terms *efficacy* and *effectiveness* appear in the literature review and carry different meanings in the context of clinical trials. Most of the evidence reviewed in this Guideline comes from 'efficacy' trials. These trials are conducted under carefully controlled conditions, with strict participant selection and randomisation, which often involves substantial deviation from usual care, for example, *"eliminating treatment preferences, providing free care, using specialised providers and settings, maintaining high treatment compliance, and excluding patients with major comorbid conditions".*[1]

In contrast, 'effectiveness' trials evaluate the effects of treatment under standard practice conditions; until recently, there have been few of these trials conducted with ASD and PTSD. Although these trials would seem at face value to be more relevant for clinical practice, the difficulty of standardising aspects of the treatment delivery dramatically increases the risk of errors in the results. In recent years, however, the methodology of these effectiveness trials has improved substantially, and many have been able to closely approach the rigour of a traditional efficacy trial while delivering the treatment in real-world settings. While the recommendations outlined in these Guidelines are applicable and appropriate to the Australian healthcare context, there is a need for further effectiveness trials to evaluate the recommended interventions under conditions approximating usual care. As the methodological rigour of effectiveness trials continues to improve, it is hoped that future guidelines may be in a stronger position to include such research in the body of evidence used to formulate recommendations. The enhanced ecological validity provided by those designs would help to ensure the applicability of guideline recommendations to real-world clinical settings.

3. In interpreting data from treatment outcome studies, several caveats are worthy of consideration. The recommendations in these Guidelines are, of necessity, derived from a sound statistical approach to the systematic literature review. While universally accepted as the best approach for clinical practice guidelines, it should be recognised that it does risk overlooking some of the many complexities underlying the data.

First, it is important to be aware of the comparator group used in the trial. Older studies (and a few more contemporary ones) used 'waitlist control' (WLC) as the comparator, with a random allocation to active treatment or WLC. More recent studies often use 'treatment as usual' (TAU) as the comparator (although the difference between WLC and TAU is often one in name only). In both cases, it is very hard to control for the care received by the person – we know that some 'usual care' will be highly effective, while in others the person may receive no care at all. This makes it difficult to compare effect sizes within, and across, studies.

In a related issue, pharmacological trials routinely test the active treatment against a placebo and, as shown later in pharmacological trial outcomes, substantial effects are often seen in the placebo group. The 'effect size' of the active medication is derived from the difference between the drug and the placebo. In psychological treatment trials, a genuine placebo arm is very hard to devise and it is much more likely that the effect size will compare active treatment to WLC or TAU. Only in comparisons of two active treatments is the effect size of one over the other used. Thus, when comparing pharmacological treatment effect sizes with psychological treatment effect sizes, it is important to remember that we are not comparing like with like.

It is relatively easy to rigorously monitor the type, quality and quantity of medication being administered. It is another thing altogether to be confident about these parameters in the delivery of psychological treatments. High quality contemporary trials now routinely include rigorous treatment fidelity checks, ideally by an independent expert in the therapy under consideration, and these go some way towards ensuring standardisation. In earlier trials, however, the reader must rely on the description provided in the paper, and unfortunately, a myriad of therapist characteristics and nuances in treatment, many of which may be important therapeutic elements, are lost in these descriptions. This highlights the importance of different clinical research groups publishing trials of the same intervention.

The question of how to deal in the analyses with research participants who drop out prematurely is a difficult issue. As noted in Chapter 5, one approach that is routinely used in high quality studies is to present 'intent to treat' (ITT) data – that is, all those who enrolled in the trial are included in the analyses. If the person drops out before completing treatment, his or her last data point is used as the outcome (even if this is the pre-treatment point). ITT data are not reported in many of the research trials included in the systematic review and we are forced to use the 'completer only' data for those trials. Evidence statements are based on a combined analysis of ITT and completer only trials. Where sufficient trials were available, however, a separate analysis of ITT studies only was conducted (see Appendix 3 for details, downloadable from www.phoenixaustralia.org). These comparisons were: a) trauma-focussed CBT versus waitlist control and versus treatment as usual; and b) paroxetine and fluoxetine versus placebo. Not surprisingly, effect sizes tend to be smaller in ITT trials compared with trials that only include those who finish treatment, but the main findings remained the same.

The fact is that accurately reviewing interventions for psychiatric disorders, and pooling data to generate recommendations about which we can be confident, presents multiple challenges. These Guidelines follow best practice approaches to produce the best possible recommendations. With the above caveats in mind, however, clinical judgement in interpreting the recommendations in routine clinical practice remains vital.

Implementation of the Guidelines

The overarching objective of these Guidelines is to improve outcomes for people affected by trauma. For this to be achieved, the key Guideline recommendations need to be effectively disseminated to health practitioners, service planners and purchasers and people directly affected by trauma. The communication objectives of the dissemination strategy include, to:

- generate awareness of the Guidelines and recommended interventions amongst health practitioners
- generate awareness of the Guidelines amongst education and child mental health professionals
- engage professional bodies and peak organisations in the dissemination process
- engage organisations that promote best practice in the dissemination process
- ensure mental health consumers have access to the Guidelines' key recommendations through the support of organisations such as the Mental Health Council of Australia
- demonstrate practical policy implications of the Guidelines to decision makers in key government departments and industry organisations.

These objectives will be met through a range of activities including the development of accessible Guideline companion documents for practitioners and community members, peer reviewed publications, media releases (including the use of social media), targeted consultation with key stakeholders and decision makers in government and mental health services and the integration of recommendations into relevant policy and training initiatives.

In regard to the implementation in Australia of pharmacological recommendations outlined in these Guidelines, doctors should be mindful of regulations that may apply where the cost of the medicine is subsidised by the Government (Pharmaceutical Benefits Schedule) or another third party.

Disclaimer

The recommendations in this document are based on the best evidence available at the time of compilation (November 2011). These Guidelines must be used in conjunction with clinical judgement and patient preference. The attending clinician has ultimate responsibility for the appropriate choice of therapy.

It is recommended that these Guidelines be reviewed in 2017.

References

1. Wells, K. B. (1999). Treatment research at the crossroads: The scientific interface of clinical trials and effectiveness research. *American Journal of Psychiatry,* 156(1), 5-10.

AAP Image/Julian Smith

Trauma and Trauma Reactions 2

Trauma, traumatic event and potentially traumatic event

The word trauma is used inconsistently within the mental health field, referring at times to an event and at other times to psychological injury arising from an event. Literally, trauma means wound, and the word is used routinely in the physical health sector to describe an injury. In mental health terms, it refers to an injury or wound to the 'psyche'; that is, damage to a person's emotional or psychological health and wellbeing. It is recognised that such an injury is characterised by biological, psychological, and social aspects (i.e., a biopsychosocial approach).

Potentially traumatic event (PTE) will be used in these Guidelines to refer to events that meet the *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition, text revision; DSM-IV-TR)[1] stressor criterion for PTSD and ASD. This term recognises the wide variation in individual appraisals of, and responses to, an event. A particular event, regardless of how threatening it may seem, is not necessarily going to cause 'psychic injury' to all who experience it.

Traumatic event will be used in these Guidelines to refer to an event that has actually resulted in psychic injury, and *trauma* will be used to refer to the psychic injury itself.

Potentially traumatic events

As defined by DSM-IV-TR, PTEs include any threat, actual or perceived, to the life or physical safety of the individual, their loved ones or those around them. PTEs include, but are not limited to, war, torture, sexual assault, physical assault, natural disasters, accidents and terrorism. Exposure to a PTE may be direct (i.e., actually experienced or witnessed), or indirect (i.e., confronted with or learnt about)*, and may be experienced on a single occasion, or repeatedly. By their very nature, some events are more likely to be experienced as extremely traumatic, and more likely to cause ongoing difficulties and clinically diagnosable symptoms of ASD and/or PTSD. Intentional acts of interpersonal violence, such as torture and assault, and prolonged and/or repeated events, such as childhood sexual abuse and concentration camp experiences, are more likely than natural events or accidents to result in a traumatic response.[2,3]

Although beyond the conceptualisation of PTEs, it is important to recognise the potential for transgenerational effects of trauma, in which the impact of systematic torture, genocide or family violence may be seen in mental health problems in the next generation.[4,5]

Generally, events that do not include an element of serious physical threat are not considered PTEs even if they constitute significant threats to psychological integrity or wellbeing. Thus, events such as divorce or separation, job loss, and verbal abuse/harassment are not considered PTEs and do not meet the stressor criterion for a PTSD diagnosis.

Common responses to potentially traumatic events

A degree of psychological distress is very common in the early aftermath of traumatic exposure and can be considered a part of the normal response. In cases of severe traumatic events, most people may be symptomatic in the initial fortnight after the event. Traumatised people are likely to experience emotional upset, increased anxiety, and sleep and appetite disturbance. Some will have additional reactions such as fear, sadness, guilt or anger. In most cases, psychological symptoms of distress settle down in the days and weeks following the traumatic event as people make use of their customary coping strategies and naturally occurring support networks to come to terms with the experience.[6] However, in a minority of people the symptoms persist and develop into ASD and/or PTSD.

* The stressor criterion for DSM-5 explicitly excludes the witnessing of traumatic events via electronic media, television, movies or pictures, unless this is part of a person's vocational role.

Traumatic stress syndromes

When the individual's psychological distress following exposure to a traumatic event persists, and is severe enough to interfere with important areas of psychosocial functioning, it can no longer be considered a normal response to traumatic exposure. The possibility of a posttraumatic mental health disorder such as ASD or PTSD should be considered. It should be noted that a wide range of other mental health conditions including anxiety, affective, and substance use disorders might be present either alone or together with ASD or PTSD. For example, a large study of traumatic injury survivors found that, while almost a third had a psychiatric diagnosis at 12 months post-injury, more than two-thirds of those did not have a diagnosis of PTSD.[7] The most common diagnosis at 12 months was depression (16%), followed by generalised anxiety disorder (GAD; 11%), substance abuse (10%), PTSD (10%), agoraphobia (10%), social phobia (7%), panic disorder (6%) and obsessive-compulsive disorder (OCD; 4%).

Acute stress disorder

After an individual has been exposed to a traumatic event, he or she may experience significant distress and/or impairment in social, occupational or other important areas of functioning. When this lasts longer than two days, a diagnosis of acute stress disorder may be considered.

The DSM-IV-TR requires several sets of criteria to be met for a diagnosis of ASD (see Table 2.1). Criterion A1 requires that the individual experienced or witnessed an event that involved actual or threatened death or serious injury to self or others, and Criterion A2 requires that the individual responded with fear, helplessness or horror. The B Criteria refer to dissociative symptoms during or after the event *(three or more of: a subjective sense of numbing, detachment or absence of emotional responsiveness, reduced awareness of one's surroundings, derealisation, depersonalisation, and dissociative amnesia).* The C Criteria require one or more re-experiencing symptoms *(reliving the event through one or more of: recurrent images, thoughts, dreams, illusions, flashbacks, sense of reliving the experience or distress on exposure to reminders of the event).* Criterion D requires "marked avoidance of reminders", Criterion E requires "marked anxiety or increased arousal", and Criterion F requires evidence of significant distress or impairment. These symptoms must last for a minimum of two days and a maximum of four weeks following the event, after which time a diagnosis of PTSD should be considered.

It is worth noting that several revisions to the ASD diagnostic criteria have been included in the recently released DSM-5.[8] Firstly, ASD has been moved from the Anxiety Disorders section to a new category – Trauma- and Stressor-Related Disorders.[9] The main criteria changes include eliminating Criterion A2 (as there is little empirical support for its utility), and removing the requirement for dissociative symptoms (as research indicates that dissociation is not always present). ASD is conceptualised as an acute stress response that does not require specific symptom clusters to be present. Rather, the person requires a certain number from a broad list of dissociative, re-experiencing, avoidance, and arousal symptoms.

Bryant[10] conducted a systematic analysis of literature examining the predictive utility of ASD. The review reported that individuals who experience ASD are at high risk of developing PTSD, with most studies indicating that at least half of those with ASD subsequently meet criteria for PTSD. However, the review also found that the majority of individuals who eventually developed PTSD did not previously meet full criteria for ASD. Thus, having an ASD diagnosis is moderately predictive of PTSD, but not having an ASD diagnosis should not necessarily be interpreted as indicating a good prognosis.

Table 2.1: DSM-IV-TR diagnostic criteria for acute stress disorder (DSM-IV-TR code 308.3)

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   (2) The person's response involved intense fear, helplessness, or horror.

B. Either while experiencing or after experiencing the distressing event, the individual has three (or more) of the following dissociative symptoms:
   (1) A subjective sense of numbing, detachment or absence of emotional responsiveness
   (2) A reduction in awareness of his or her surroundings (e.g., 'being in a daze')
   (3) Derealisation
   (4) Depersonalisation
   (5) Dissociative amnesia (i.e., inability to recall an important aspect of the trauma)

C. The traumatic event is persistently re-experienced in at least one of the following ways: recurrent images, thoughts, dreams, illusions, flashback episodes, or a sense of reliving the experience; or distress on exposure to reminders of the traumatic event.

D. Marked avoidance of stimuli that arouse recollections of the trauma (e.g., thoughts, feelings, conversations, activities, places, people).

E. Marked symptoms of anxiety or increased arousal (e.g., difficulty sleeping, irritability, poor concentration, hypervigilance, exaggerated startle response, motor restlessness).

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or impairs the individual's ability to pursue some necessary tasks, such as obtaining necessary assistance or mobilising personal resources by telling family members about the traumatic experience.

G. The disturbance lasts for a minimum of two days and a maximum of four weeks and occurs within four weeks of the traumatic event.

H. The disturbance is not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition, is not accounted for by Brief Psychotic Disorder, and is not merely an exacerbation of a pre-existing Axis I or Axis II disorder.

Posttraumatic stress disorder

As seen in Table 2.2, DSM-IV-TR requires six sets of criteria to be met in order for the diagnosis of PTSD to be made. Criterion A defines the stressor, including features relating to the event itself (Criterion A1) and the person's response to the stressor as 'fear, helplessness or horror' (Criterion A2). The B, C, and D Criteria refer to re-experiencing, avoidance and numbing, and hyperarousal symptom clusters, respectively. In the B, C and D symptom clusters, one of five symptoms, three of seven symptoms, and two of five symptoms respectively, are required to qualify for the diagnosis. Criterion E stipulates that the symptoms of clusters B, C and D need to have been present for at least one month. Criterion F requires that the disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning. PTSD is specified as acute when the duration of the symptoms is less than three months, and chronic if the duration of the symptoms is three months or more. In instances where the onset of symptoms is at least six months following the event, the disorder is specified as delayed onset.

It is worth noting that several revisions to the PTSD diagnostic criteria have been introduced in DSM-5.[11] Firstly, PTSD has been moved from the Anxiety Disorders section to a new category – Trauma- and Stressor-Related Disorders.[9] The changes to Criterion A include narrowing the definition of 'traumatic event' in Criterion A1, and eliminating Criterion A2 as there is little empirical support for its utility. The other main change includes having four rather than three symptom clusters by dividing the avoidance and numbing symptom cluster into two. This reflects the research showing active and passive avoidance to be independent phenomena. The passive avoidance cluster has become a more general set of dysphoric symptoms. The full DSM-5 criteria for PTSD can be found in Appendix 5.

Re-experiencing symptoms

The re-experiencing or 'intrusive' symptoms are often regarded as the hallmark feature of traumatic stress. Re-experiencing symptoms include intrusive and unwanted thoughts and images of the event and distressing dreams or nightmares. Re-experiencing symptoms can also include 'flashbacks' where people may lose awareness of their surroundings and become immersed in the memory of the event. These flashbacks may be so vivid that people feel as if they are experiencing the traumatic event again. People can become upset or distressed when reminded of what happened, and have intense physical reactions like sweating and rapid heartbeat.

Avoidance and numbing symptoms

Avoidance and numbing symptoms are generally understood to result from different underlying mechanisms. Avoidance is characterised by deliberate attempts to keep memories of the traumatic event out of mind by actively avoiding any possible reminders. Such avoidance can result in a person going to extreme lengths to avoid people, places, and activities that trigger distressing memories, as well as internal triggers such as thoughts and feelings. While those active avoidance symptoms involve effortful behaviour, numbing symptoms are more passive and may be less under voluntary control. Numbing symptoms are reflected through a loss of interest in activities that formerly brought enjoyment, detachment or estrangement from others, restricted emotional responses (e.g., being unable to experience joy or love), and a sense of a foreshortened future. These numbing symptoms are thought to particularly characterise more chronic and severe forms of the disorder. As such, they are usually considered to be a poor prognostic indicator.[12] As noted above, since empirical research indicates that avoidance and numbing are optimally considered as separate clusters, DSM-5 divides the existing C Criterion into two: (1) 'avoidance behaviour' (one symptom needed); and (2) 'negative alterations in cognitions and mood' which encompasses and expands upon the current numbing symptoms (two symptoms needed).

Arousal symptoms

PTSD is associated with a sustained increase in sympathetic nervous system activity, well beyond its adaptive function in response to the traumatic event. The individual experiences ongoing increased arousal, as though the 'fear system' has been recalibrated to a higher idling level. Increased arousal is evident in a range of symptoms such as poor concentration and memory, irritability and anger, difficulty in falling and staying asleep, being easily startled, and being constantly alert to signs of danger (hypervigilance). In DSM-5, an additional symptom of 'reckless or self-destructive behaviour' has been included in this cluster.

Table 2.2: DSM-IV-TR diagnostic criteria for posttraumatic stress disorder (DSM-IV-TR code 309.81)

A. The person has been exposed to a traumatic event in which both of the following were present:
   (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
   (2) The person's response involved intense fear, helplessness, or horror. Note: In children, this may be expressed instead by disorganised or agitated behaviour

B. The traumatic event is persistently re-experienced in one (or more) of the following ways:
   (1) Recurrent and intrusive distressing recollections of the event, including images, thoughts or perceptions. Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed
   (2) Recurrent distressing dreams of the event. Note: In children, there may be frightening dreams without recognisable content
   (3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). Note: In young children, trauma-specific re-enactment may occur
   (4) Intense psychological distress at exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event
   (5) Physiological reactivity on exposure to internal or external cues that symbolise or resemble an aspect of the traumatic event

C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
   (1) Efforts to avoid thoughts, feelings or conversations associated with the trauma
   (2) Efforts to avoid activities, places, or people that arouse recollections of the trauma
   (3) Inability to recall an important aspect of the trauma
   (4) Markedly diminished interest or participation in significant activities
   (5) Feeling of detachment or estrangement from others
   (6) Restricted range of affect (e.g., unable to have loving feelings)
   (7) Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
   (1) Difficulty falling or staying asleep
   (2) Irritability or outbursts of anger
   (3) Difficulty concentrating
   (4) Hypervigilance
   (5) Exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

Specify if:

Acute: if duration of symptoms is less than three months

Chronic: if duration of symptoms is three months or more

Specify if:

With delayed onset: if onset of symptoms is at least six months after the stressor

Features commonly associated with PTSD

In addition to these core symptoms, PTSD is also commonly associated with a range of features including anger,[13] guilt,[14,15] dissociation,[16] marked functional limitations and diminished quality of life,[17] and physical health problems.[18]

A subset of individuals with PTSD, more commonly those who have experienced events of an interpersonal, prolonged and repeated nature (e.g., childhood sexual abuse, imprisonment, torture), often referred to as Type II trauma,[19] present with a constellation of characteristic features alongside the core PTSD symptoms. These features can include: impaired emotional control; self-destructive and impulsive behaviour; impaired relationships with others; hostility; social withdrawal; feeling constantly threatened; dissociation; somatic complaints; feelings of ineffectiveness, shame, despair or hopelessness; feeling permanently damaged; and a loss of prior beliefs and assumptions about their safety and the trustworthiness of others.[20,21] Issues of chronic self-harm and/or suicidal ideation are more common in this group.

People exhibiting this constellation of features are often referred to as having Complex PTSD[22] or Disorders of Extreme Stress Not Otherwise Specified (DESNOS).[23] While these diagnoses are not included in either DSM-IV or DSM-5, ICD-10 includes "Enduring personality change after catastrophic experience (F62.0)" which closely resembles those categories. It is not yet known how ICD-11 will deal with these constructs.

Prevalence and incidence of PTSD

Rates of PTSD should be considered in the context of rates of exposure to PTEs in the general community. Large community surveys[2,3,24] indicate that 50–75 per cent of people report at least one PTE in their lives, with most reporting two or more events. Since the first Australian Guidelines were published, Mills and colleagues[24] have examined the Australian rates of exposure for a wider range of more specific PTEs than in previous studies. Their findings suggest that the most commonly reported PTEs are having someone close to the individual die unexpectedly (reported by about 35% of the population); witnessing someone being badly injured or killed, or unexpectedly seeing a dead body (27%); and being involved in a life-threatening car accident (13%). Although these figures are important in informing our understanding of trauma exposure rates, this type of retrospective data should always be interpreted with some caution.

When examining PTSD rates, both prevalence and incidence figures are used. Prevalence refers to the proportion of a population that has had PTSD during a given period of time, and incidence refers to the rate at which new diagnoses of PTSD occur following exposure to a PTE.

Reports of lifetime prevalence of PTSD (percentage of the population who have had PTSD at some time in their lives) in community samples range between 5 and 10 per cent. This can be interpreted to mean that approximately 15–25 per cent of people exposed to PTEs have also had a PTSD diagnosis.[25] These lifetime prevalence rates may be somewhat misleading however, as around half those people who develop PTSD recover in the first 12 months regardless of treatment.[3] In addition, of course, lifetime rates need to be interpreted with caution due to the retrospective nature of the inquiry. Reports of 12-month prevalence of PTSD (percentage of the population who have had PTSD in the past year) are 4.4 per cent in Australia[26] and 3.5 per cent in the United States.[27]

An important risk factor for developing PTSD following a PTE is the nature of the traumatic exposure. Those PTEs associated with the highest rates of PTSD are not necessarily the most commonly occurring PTEs.[24] Creamer and colleagues[2] found the highest 12-month prevalence of PTSD was associated with a prior history of rape and molestation, and the lowest 12-month prevalence of PTSD was associated with natural disasters and witnessing someone being badly injured or killed. Similar findings have been reported in the United States.[3] PTSD has traditionally been associated with military combat, and a recent review[28] found that point prevalence rates amongst US veterans since the Vietnam War range from 2–17 per cent. The review found that, in general, rates of combat-related PTSD are lower in veterans from other Western countries than in those from the US. For example, PTSD is estimated to affect 3–6 per cent of returning UK Iraq War veterans,[29] compared with around 13 per cent of US troops.[30] The prevalence of PTSD following natural disasters ranges from approximately 4–60 per cent with most studies reporting prevalence in the lower half of this range.[31] These rates are often lower than those following human-made disasters (including acts of terrorism) or technological disasters. The highest disaster-related PTSD prevalence is found amongst survivors (30–40%) and first responders (10–20%) in comparison to the general population (5–10%). See Neria et al.[31] for a recent review.

Currently, prevalence rates of ASD in the general Australian community are not available. However, a recent review of studies examining ASD8 found much variability between different PTEs, including, rates of 9 per cent following terrorist attacks, 13–25 per cent following motor vehicle accidents (MVAs), and a 33 per cent prevalence rate for witnesses to drive-by shootings. The prevalence of ASD varies considerably even when examining the same PTE type across settings. For example, most injury study prevalence rates lie between 6 and 10 per cent,[8] however in Australia alone studies have found an ASD prevalence of between 1[32] and 14 per cent[33] following traumatic injury.

Comorbid conditions

In chronic cases of PTSD (beyond three months), the core symptoms rarely exist in isolation. More commonly they exist alongside a number of associated features and other comorbid mental health disorders.[e.g., 2,3,34,35] Since the previous Guidelines were published, Australia and the USA have both conducted further epidemiological national health surveys, and have published updated comorbidity data. Data from the 2007 Australian National Mental Health and Wellbeing study[34] found that 86 per cent of men and 77 per cent of women with PTSD also met criteria for another lifetime Axis I disorder. This included anxiety (52% of men and 54% of women), affective (50% of men and 51% of women), and substance use disorders (65% of men and 32% of women).

A number of studies have found high rates of comorbidity between personality disorder and PTSD in the US adult population, although much of this research has been conducted with male combat veterans with longstanding PTSD.[36-39]

In addition to complexities arising from comorbidity, health practitioners working with individuals with more chronic PTSD often find themselves having to work with a myriad of psychosocial problems that have evolved secondary to the core disorder. These often include pain and somatic health complaints, relationship problems, and occupational impairment.

The course of PTSD

Information about the course of PTSD has been derived from large epidemiological studies[e.g., 3,34] that ask respondents how many weeks, months or years after the onset of the disorder they continued to experience symptoms. These retrospective reports are used to create 'survival curves' or models of the course of PTSD following exposure to a traumatic event. The survival curves suggest that most people with PTSD will eventually remit, with symptoms decreasing most substantially in the first 12 months following the event, although a substantial minority will continue to experience PTSD for decades. Findings from studies of the general population in the United States[3] and Australia[34] suggest that there is approximately 50–60 per cent remission between two and ten years after the event, with probable further remission over subsequent decades. Studies with specific trauma types and populations also show significant remission from PTSD over time. For example, a study of adults who survived a shipping disaster as adolescents found that 70 per cent of survivors who were diagnosed with PTSD after the incident did not meet criteria for PTSD between five and eight years after the disaster.[40] Research following the September 11, 2001 terrorist attacks has provided further evidence of a general decline in PTSD prevalence,[41] however, to date there has been no published research assessing the course of PTSD over several years following those events. Few published studies currently exist on the longer term course of PTSD following traumatic injury. Any future studies would need to be interpreted with caution, since the course of recovery in those samples is often heavily influenced by physical disability, rendering generalisation to other PTSD populations difficult.

Most of those studies used retrospective reports to determine the course of recovery. Lower rates of PTSD remission have been found in other populations particularly when more reliable prospective research designs have been used. A study that assessed Australian Vietnam veterans at two points 15 years apart found increased rates of PTSD at the later time point.[42] Similar rates of chronic PTSD have been found in firefighters after a major bushfire, where 56 per cent of those who had the disorder following the fire still had it four years later.[43] In a 20-year follow-up of Israeli veterans, Solomon found fluctuating PTSD prevalence, with reduced rates three years after the war but substantial increases at the 20-year point.[44] Data from several studies suggest that people who meet PTSD criteria at around six months post-trauma are likely (in the absence of effective treatment) to show a chronic course with symptoms potentially lasting for many decades.[3,45]

PTSD is less likely to follow a chronic course with effective treatment. Based on several studies it is reasonable to assume that around one-third of patients will make a good recovery following effective treatment, one-third will do moderately well, and one-third are unlikely to benefit.

Resilience in the face of potentially traumatic events

While the primary focus of these Guidelines is the treatment of people who develop ASD and/or PTSD following a traumatic experience, it needs to be emphasised that the majority of people exposed to trauma do not go on to develop these conditions. Resilience is the usual outcome following traumatic exposure,[46,47] although consensus on the definition of resilience is yet to be reached. Recent definitions of resilience have included: "a dynamic process encompassing positive adaptation within the context of significant adversity",[48] and "the ability to adapt and cope successfully despite threatening or challenging situations".[49] Some researchers have chosen to define resilience as the absence of PTSD symptomatology following exposure to a PTE,[e.g., 50] but others argue that the absence of PTSD symptoms does not equate to resilience any more than absence of disease equals health.[51] An excellent review of the area is provided by Layne and colleagues.[52]

Posttraumatic mental health disorders: Key differences between ASD and PTSD

There is significant overlap in the diagnostic criteria for the two posttraumatic mental health conditions, ASD and PTSD, described above. The key distinguishing feature between the two disorders is the duration of symptoms required for the diagnosis to be made. ASD is diagnosed between two days and one month following the traumatic event, while PTSD requires that the symptoms be present for at least one month following the traumatic event. Acute PTSD is diagnosed if symptoms have persisted for between one and three months; chronic PTSD is diagnosed if symptoms have persisted for three months or more. In terms of symptom constellation, the DSM-IV diagnoses differ in terms of dissociative and avoidance symptoms; ASD requires a number of dissociative symptoms not included in PTSD, while PTSD places greater emphasis on avoidance symptoms. Notably, the DSM-5 ASD criteria remove the requirement for dissociative symptoms, so that ASD is conceptualised as an acute stress response that does not require specific symptom clusters to be present.

Screening, assessment and diagnosis

People with ASD or PTSD will not necessarily express concern about a traumatic experience to their doctor or mental health professional in the first instance. They may present with any of a range of problems including mood disorders, anger, relationship problems, poor sleep, sexual dysfunction, or physical health complaints such as headaches, gastrointestinal problems, rheumatic pains, and skin disorders. Their traumatic experience may not even be mentioned. Indeed, a recent study found that only 11 per cent of primary care patients with PTSD had the diagnosis listed in their medical files.[53] This problem is due, in part, to the avoidance that is characteristic of PTSD, which may prevent the person speaking about it or seeking assistance. It also needs to be acknowledged that there remains a social stigma attached to mental health problems, and the fear of discrimination may be a barrier to some people reporting their symptoms. Furthermore, there is stigma attached to some forms of traumatic exposure, such as sexual assault, which may discourage the individual from disclosing the experience. The practitioner needs to be sensitive to these issues when screening for PTSD, and consider this when selecting cut-off scores on self-report instruments. This problem highlights the importance of empirically establishing the optimal cut-offs in different populations, and of educating clinicians about the appropriate use of such instruments. Self-report measures should be used as a guide, rather than as a categorical diagnostic tool.

In seeking to understand the origins of presenting problems, the practitioner should routinely enquire about any stressful or traumatic experiences, recently or in the past. If a traumatic experience is suspected, the practitioner may utilise a traumatic events checklist. If the person endorses any events on the checklist, then it is recommended that a brief PTSD screening tool be administered. Although the primary focus of such questions will be events experienced by the person, clinicians should also be sensitive to the potential for transgenerational effects of trauma, particularly among high-risk groups such as children of veterans or holocaust survivors.

There is a range of brief PTSD screening measures currently in use (see Brewin et al.[54] for a review). These include the Startle, Physiological arousal, Anger, and Numbness scale[55] (SPAN; four items), the Brief DSMPTSD-IV scale[56] (BPTSD-6; six items), and the Disaster-Related Psychological Screening Test[57] (DRPST; seven items). Measures recommended in the US Veterans Affairs/Department of Defense PTSD clinical practice guidelines[58] include the four-item Primary Care PTSD Screen[59] (PC-PTSD), the Short Screening Scale for DSM-IV PTSD[60] (SSSP; seven items) and the PTSD Brief Screen.[61] More recently, the PTSD Checklist (PCL)[62] has been abbreviated into four-item[63] and six-item versions.[64] There is probably little to choose between the various measures. The following is an example of a screening measure[59] that has been empirically validated and is widely used.

The Primary Care PTSD Screen (PC-PTSD):

In your life, have you ever had any experience that was so frightening, horrible, or upsetting that, in the past month, you:

1. Have had nightmares about it or thought about it when you did not want to?
2. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?
3. Were constantly on guard, watchful, or easily startled?
4. Felt numb or detached from others, activities, or your surroundings?

Current research suggests that a patient who responds "yes" to two or more items should be assessed further for trauma symptoms. In the original validation study using US Veterans Affairs primary care patients, a cut-off score of two favours sensitivity (with a sensitivity of .91 and specificity of .72) and a cut-off score of three favours specificity (with a sensitivity of .78 and specificity of .87). The PC-PTSD also displays good test–retest reliability.

The section above considers the implementation of screening in the context of people presenting to a practitioner for care. In considering the use of broader population screening, the potential benefits should be weighed up against practical concerns such as time constraints, staffing, follow-up care resources, and current clinical practice systems. For example, consideration may be given to systematic screening of populations identified as high risk on the basis of their exposure to a major disaster, occupational role (e.g., emergency services and military personnel), or other traumatic experience (e.g., refugees). Such an approach would have important implications for service planning, with the goal of identifying those at risk and targeting the limited available resources to those most likely to benefit from the provision of an evidence-based intervention. This, of course, assumes that there exists an adequate pool of trained and experienced clinicians to provide evidence-based care to those who screen positive within the affected community. Currently, there are many locations where individuals who screen positive for PTSD (or other high prevalence conditions) would have significant difficulty accessing evidence-based care. Population-based screening under those circumstances raises difficult ethical questions and should not be undertaken without careful consideration.

Good practice points

GPP1 For people presenting to primary care services with repeated non-specific physical health problems, it is recommended that the primary care practitioner considers screening for psychological causes, including asking whether the person has experienced a traumatic event and describing some examples of such events.

GPP2 Service planning should consider the application of screening (case finding) of individuals at high risk for PTSD after major disasters or incidents, as well as those in high-risk occupations.

GPP3 The choice of screening tool should be determined by the best available evidence, with a view to selecting the best performing screen for the population of interest. Application of an inappropriate screening tool may result in over- or under-identification of problems.

GPP4 Different populations may require different screening procedures. Programs responsible for the management of refugees should consider the application of culturally appropriate screening for refugees and asylum seekers at high risk of developing PTSD. Similarly, screening of children will require the use of developmentally sensitive tools designed for the purpose.

GPP5 Screening should be undertaken in the context of a service system that includes adequate provision of services for those who require care.

GPP6 Any individual who screens positive should receive a thorough diagnostic assessment.

Comprehensive assessment of PTSD

PTSD is often associated with diffuse and broad patterns of symptoms and impairments, and clinical presentations vary according to the unique characteristics and circumstances of the individual. As such, a comprehensive assessment, including a detailed history as per any good clinical assessment, is recommended. In PTSD and related conditions, assessment should include a trauma history covering prior traumatic experiences as well as the 'index' traumatic event. It is not necessary to obtain details of these experiences in the initial sessions; it is sufficient to get a brief idea of the traumatic events to which the person has been exposed. An insistence on obtaining details at this early assessment stage may not only be distressing for the person, but may actually be counter-therapeutic. Subsequent treatment for the PTSD, of course, is likely to involve going through the detailed descriptions of the traumatic events.

As part of assessing the history and current circumstances, current and past psychosocial functioning (past psychosocial functioning is particularly important where trauma has involved early sexual or physical abuse), the presence and course of PTSD symptoms, and any comorbid problems (including substance use) should all be considered. Clinicians should also be sensitive to the potential for transgenerational effects of trauma, particularly among high-risk groups such as children of veterans or holocaust survivors. Particular attention should also be paid to physical health issues. This may include issues related to injury arising from the traumatic incident, health behaviour change following the incident, concurrent or developing physical health problems, and medical treatment being undertaken for any physical health issues.

Broader quality of life indicators such as satisfaction with physical, social, environmental, and health status, marital and family situation, and occupational, legal and financial status should also be assessed. Accurate assessment of the person's support network is particularly important, since good social support is strongly associated with recovery.[65,66] Importantly, *perceived* social support may be more closely associated with mental health and wellbeing amongst first responders to traumatic events than *actual* social support.[67]

Where possible, and with the person's permission, information from other sources should be incorporated into the assessment process. This may include, for example, discussions with informants such as a partner, other family member, or colleague. It may include information from other health providers involved in the person's care, particularly those who have known the person over several years (and, ideally, since prior to the traumatic event). It may include information from medical notes or other documentation. This 'third party' information becomes especially important in cases where legal liability and/or compensation may be an issue, and where there is concern about the possibility of exaggeration or fabrication of symptoms. Even in routine clinical practice, it is possible to encounter individuals who may be exaggerating symptoms for non-financial secondary gain, such as for family dynamics and being in a sick role. This may, of course, also impact on financial benefits not connected with litigation (e.g., sickness benefits).

In formulating a treatment plan, consideration should be given to factors likely to influence outcome, such as prior mental health problems, especially depression,[66] prior treatment experience, and pre-trauma coping strategies. Risk of self-harm, suicide and harm to others should be considered; people with PTSD who are suicidal or homicidal need to be closely monitored. Attention should also be paid in the assessment to the person's resilience factors and strengths. Treatment plans should aim to build upon these strengths.

Comprehensive assessment and case formulation should not be confined to the initial presentation but should be an ongoing process. Throughout treatment, a collaborative approach should be adopted with the client to monitor wellbeing and progress. This becomes particularly critical where treatment does not appear to be helping the person to recover. In these circumstances, the practitioner should thoroughly reassess and address co-existing psychosocial problems and more thoroughly assess personality. Collaboratively discussing the formulation with the person, with particular reference to maintaining factors and barriers to improvement, increases engagement and is likely to enhance outcomes.

Good practice points

GPP7 A thorough assessment is required, covering relevant history (including trauma history), PTSD and related diagnoses, general psychiatric status (noting extent of comorbidity), physical health, substance use, marital and family situation, social and occupational functional capacity, and quality of life.

GPP8 Assessment should include assessment of strengths and resilience, as well as responses to previous treatment.

GPP9 Assessment and intervention must be considered in the context of the time that has elapsed since the traumatic event occurred. Assessment needs to recognise that whereas the majority of people will display distress in the initial weeks after trauma exposure, most of these reactions will remit within the following three months.

GPP10 As part of good clinical practice, assessment needs to occur at multiple time points following trauma exposure, particularly if the person displays signs of ongoing difficulties or psychological deterioration.

GPP11 Assessment and monitoring should be undertaken throughout treatment. When adequate progress in treatment is not being made, the practitioner should revisit the case formulation, reassess potential treatment obstacles, and implement appropriate strategies, or refer to another practitioner. Effective interprofessional collaboration and communication is essential at such times.

Diagnosis

In most clinical settings, an unstructured clinical interview comprises the primary assessment strategy. However, because PTSD may be linked to compensation, at some point there may be a need for objective assessment that will stand up to more rigorous scrutiny. Regardless of the context, the clinician must maintain a balance between providing empathic support to a distressed person while obtaining reliable and objective information. For a comprehensive overview of assessment issues in PTSD see Simon,[68] and Wilson and Keane.[69]

There is currently no agreed gold standard with which to make a comprehensive diagnostic assessment for PTSD. Rather, clinicians should adopt a multifaceted approach incorporating information from a variety of sources. In clinical settings, this may comprise unstructured psychiatric interviews (to explore the presenting problems and to collect the information detailed in the previous paragraphs), structured clinical interviews, self-report inventories, and (where possible) the reports of significant others in the person's life. In research contexts, the addition of psychophysiological measures that assess sympathetic nervous system activity through measures such as heart rate, muscle tension, blood pressure, and perspiration may provide an extra degree of objectivity, although this is rarely practical in clinical settings.

Differential diagnosis

It is important to remember that PTSD is not the only mental health consequence of exposure to traumatic events. Other common diagnoses for consideration include depression, other anxiety disorders such as panic disorder, generalised anxiety disorder and specific phobias, substance abuse/dependence and adjustment disorders. Consideration should also be given to the diagnosis of complicated grief (formerly known as traumatic grief) following bereavement, with increasing demand for its inclusion as a separate diagnostic entity. It is likely to be included in the DSM-5 Appendix as Bereavement Related Disorder while awaiting further study (see Shear et al.[70] for a review). Recent proposed criteria for complicated grief [70,71] contain some similarities to PTSD in regard to symptoms such as intrusive thoughts and memories of the deceased, avoidance of reminders of the loss, and feeling estranged from others. Importantly, however, the hallmark of complicated grief is yearning and sadness, unlike PTSD, which tends to be characterised by fear.

These disorders may develop following traumatic exposure instead of, or comorbid with, PTSD. Both possibilities should be considered when the clinical picture is complex. Although not necessarily part of the diagnostic picture, several associated features are also common, including guilt, aggression, somatic complaints, relationship problems, and impaired occupational functioning. These features are important to assess as they may influence treatment effectiveness and/or become targets themselves for direct intervention.

Survivors of prolonged or repeated traumatic events (e.g., childhood sexual abuse, torture) are more likely to experience a number of the associated features of PTSD, particularly somatic concerns, interpersonal and affective dysregulation, and identity disturbances. There is substantial symptom overlap between this more complex PTSD presentation and borderline personality disorder. Careful assessment is required to differentiate between these two diagnoses.

Good practice point

GPP12 Assessment should cover the broad range of potential posttraumatic mental health problems beyond PTSD, including other anxiety disorders, depression and substance abuse.

'Recovered memories'

The recollection of a memory that has been unavailable to deliberate recall for some period of time has been termed a recovered memory. This is distinct from incomplete or fragmented memories that may be commonly associated with PTSD. The issue of recovered memories has most commonly arisen in the area of childhood abuse. It is controversial and has attracted debate in both the professional and public arenas (see Loftus & Davis[72] for a review). The evidence suggests that trauma memories can be forgotten and then remembered at some later time. There is also evidence that 'false memories' can be suggested and remembered as true (see McNally[73] for a review). Therapy that attempts to recover otherwise forgotten memories of traumatic events has been criticised for lacking a sound theoretical basis, failing to consider the fallibility of memory, and using techniques such as suggestion that increase memory distortion and confabulation. In the absence of corroboration, it is not possible to unequivocally determine the validity of recovered memories. Such approaches are entirely inappropriate.

Risk associated with recovered memories can be minimised when clinicians are trained to professional standards, conduct full assessments at the start of treatment, adopt a neutral stance towards a history of abuse, avoid preconceived beliefs about factors that may or may not be causing the presenting problems, and avoid use of techniques that increase suggestibility and memory distortion. In the absence of corroboration of new memories, treatment should enable the person to arrive at their own conclusions with some understanding of memory processes, and to adapt to uncertainty when it persists. The Australian Psychological Society has developed ethical guidelines for clinicians working with clients who report previously unreported traumatic memories, and they advise against using interventions designed to 'recover' such memories. The relevant American and British professional bodies have also issued strong warnings against this therapy approach.

Symptom exaggeration and malingering

ASD and PTSD are the only mental health conditions with experience of a traumatic event as part of the diagnosis. Legal actions are, therefore, not uncommon. These legal actions may involve the individual seeking compensation for psychiatric conditions (e.g., PTSD following a motor vehicle accident or violent crime). Studies investigating whether compensation-seeking affects assessment processes have had mixed results and any possible relationship between financial incentives and symptom reporting in PTSD is presently unclear. It is important, however, to consider the possibility of symptom exaggeration and malingering in the assessment of PTSD where financial remuneration, government benefit eligibility, forensic determinations, or other potential gains are involved. A detailed description of this area is beyond the scope of these Guidelines and the interested reader is referred to appropriate books on the subject.[74]

The possibility of symptom exaggeration should be carefully considered if the person reports all 17 PTSD symptoms, particularly with a high severity rating for all, if the person emphasises re-experiencing (rather than avoidance and numbing) symptoms, or if the person's symptom report is inconsistent with their reported functioning. In order to assist in clarification of this issue, clinicians should not be satisfied with a simple "yes/no" response to questions, but should request further elaboration of reported symptoms (e.g., "tell me about the last time you experienced that – what was it like?"). During the interview the clinician should remain alert for PTSD symptoms that are directly observable (e.g., hypervigilance and flattened affect) and to any contradictions in the person's reports (e.g., complete inability to work but retention of an active social life). It is also useful to determine the course of the symptoms relative to the timing of the legal and compensation-seeking actions.

It needs to be emphasised that the issue of symptom exaggeration and malingering primarily arises in the context of litigation, compensation claims and contested cases rather than in the course of routine clinical practice. Even in these settings, the practitioner must retain and convey empathy for the person to avoid the risk of compounding suffering by being interviewed in an interrogatory fashion.

There are, of course, factors other than financial gain that can contribute to prolonged symptoms. Secondary gain in social, family or occupational settings may exert a powerful influence on the individual's sick role and ongoing disability, of which they may be unaware.

Assessment instruments

Diagnostic instruments for PTSD include both structured clinical interviews and self-report measures. Table 2.3 provides details of the most commonly used assessment instruments.

Structured clinical interviews

Structured clinical interviews provide the optimal strategy for making a reliable clinical diagnosis and an indication of symptom severity. For a competent, well-trained practitioner, these measures combine a standardised and objective instrument with an element of clinical judgment. The questions directly address PTSD symptoms and an objective scale determines whether each is sufficiently severe to meet criteria.

The Clinician Administered PTSD Scale (CAPS)[75,76] is a psychometrically robust instrument designed to overcome many of the limitations of other structured PTSD interviews.[76] Each symptom is assessed for intensity and frequency and, where possible, is behaviourally defined. While the CAPS is highly recommended in research settings, it is a little complex for use in routine clinical practice. Several other well-validated structured PTSD interviews, which are briefer and simpler to administer, are appropriate in this context. See Weiss[77] for a review. Two that are strongly recommended include the PTSD Symptom Scale Interview (PSS-I)[78] and the Structured Interview for PTSD (SIP).[79]

Self-report measures

There are a variety of general and population-specific self-report measures available to assess PTSD symptoms and a number of comprehensive reviews of measures are available.[e.g., 80,81] The best scales are psychometrically robust and relatively non-intrusive. While these measures provide a valid assessment of the person's own perception of his or her symptoms without influence from the interviewer, they may be more prone than interviews to symptom exaggeration or minimisation. They are also limited in their diagnostic accuracy as they pick up general feelings of distress more reliably than specific symptoms. Accordingly, it is not appropriate to rely on self-report measures as the only (or even the primary) diagnostic tool. Rather, they provide a useful screening device prior to more intensive interview procedures, or to assess symptom change as a function of treatment through repeated administration.[82]

Several established scales have been in use for decades and continue to be popular among clinicians and researchers (e.g., the Impact of Events Scale[83]). However, the diagnostic criteria have evolved in recent years and it is recommended newer scales that are both psychometrically strong and consistent with the current diagnostic criteria be used where possible. One example is the PTSD Checklist (PCL)[62] which assesses the 17 DSM-IV PTSD symptoms, with each rated on a five-point scale from 'not at all bothersome' to 'extremely bothersome'. Separate forms are available for military (M), civilian (C), and specific (S) stressors. The scale takes only a few minutes to complete and possesses sound psychometric qualities.[82,84] A score of 50 is most commonly recommended as the diagnostic cut-off, although the best approach to selecting a PCL cut-off score is to use one identified in studies examining similar trauma types in similar settings. There is notable variation in recommended cut-off scores; for example, a cut-off score of 50 is recommended for combat veterans, while lower cut-off scores of between 30 and 37 are recommended for use in civilian primary care settings[e.g., 85] McDonald and Calhoun[86] provide an up-to-date and valuable review of the PCL's diagnostic accuracy. The self-report version of the PTSD Symptom Scale (PSS-SR)[87] is similar to the PCL, while the Davidson Trauma Scale (DTS)[88] allows for both frequency and intensity ratings. In the final analysis, there is probably little to choose between these scales; any would be a useful addition for clinicians and researchers alike. It is worth noting however, that the PCL is one of the few scales available to clinicians around the world at no cost.

In addition to symptom measures, a broader quality of life instrument that measures progress in recovery and rehabilitation would be of value. One of the most commonly used quality of life measures is the short form of the World Health Organisation Quality of Life instrument (WHOQOL), the WHOQOL-BREF,[89] which research demonstrates is cross-culturally valid and has sound psychometric properties.[90]

Although resilience is an oft-cited outcome after exposure to a traumatic event, very few empirical measures of resilience exist. Instead, indicators of adaptive outcomes are described as evidence of resilience, usually in the realm of social and psychological competence. Available measures include the Resilience Scale[91] and the Connor-Davidson Resilience Scale[92] (CD-RISC). Although these show promise, there is not yet sufficient data from which to identify an optimal or recommended measure.

Good practice points

GPP13 It is recommended that practitioners be guided in their assessment of PTSD, comorbidity and quality of life, by the available validated self-report and structured clinical interview measures.

GPP14 It is recommended that practitioners also use validated, user-friendly self-report measures to support their assessments of treatment outcomes over time.

Table 2.3. Commonly used assessment instruments

Instrument	Number of items	Description
Interviews		
Clinician Administered PTSD Scale (CAPS)[75,76]	34 (+10)	Considered the 'gold standard' of PTSD assessment, although a little complex for use in routine clinical practice. Each DSM-IV PTSD symptom is assessed for intensity and frequency and, where possible, is behaviourally defined. In addition to the 17 core items, there are optional questions assessing guilt (4 questions) and dissociation (6 questions).
PTSD Symptom Scale Interview (PSS-I)[78]	17	Provides a single estimate of severity (from 0–3) for each PTSD symptom, yielding a total PTSD severity score as well as re-experiencing, avoidance, and arousal scores. Shorter administration time than the CAPS, particularly for patients with significant PTSD symptoms.[93]
Structured Interview for PTSD (SIP)[79]	17 (+2)	Assesses the 17 PTSD symptoms, with two additional questions assessing guilt. Each item is rated from 0–4 and provides a single estimate of frequency, severity, and functional impairment.
Self-report measures		
Impact of Event Scale – Revised (IES-R)[94]	22	Does not correspond directly with DSM-IV PTSD criteria, therefore does not provide direct information about PTSD diagnosis or severity.
PTSD Checklist (PCL)[62]	17	Assesses the 17 DSM-IV PTSD symptoms, with each rated on a five-point scale from 'not at all bothersome' to 'extremely bothersome'. Separate forms are available for military (M), civilian (C) and specific (S) stressors. There is notable variation in recommended cut-off scores; for example, a cut-off score of 50 is recommended for combat veterans, while lower cut-off scores of between 30 and 37 are recommended for use in civilian primary care settings.[e.g., 85]
Posttraumatic Diagnostic Scale (PDS)95	49	In addition to measuring the severity of PTSD symptoms (Criteria B, C & D), the PDS also inquires about the experience of Criterion A traumatic events, about duration of symptoms (Criterion E), and the effects of symptoms on daily functioning (Criterion F).
PTSD Symptom Scale (PSS-SR)78	17	The PSS-SR was a pre-cursor to the PDS. It consists of the same 17 items as the PSS-I (see 'Interviews' above), although some items are re-worded for clarity. As with the interview version, the severity of each symptom is rated from 0 to 3.
Davidson Trauma Scale (DTS)88	34	Each PTSD symptom is rated on a five-point scale for frequency ('not at all' to 'every day') and severity ('not at all' to 'extremely').
Detailed Assessment of Posttraumatic Stress (DAPS)96	105	Provides detailed information on the individual's history of trauma exposure, as well as his/her immediate psychological reactions, enduring posttraumatic stress symptoms, and level of posttraumatic impairment in the context of a specific traumatic event.
Trauma Symptom Inventory (TSI)97	100	Each symptom item is rated according to its frequency of occurrence over the prior six months, using a four-point scale ranging from 0 ('never') to 3 ('often'). The TSI does not generate DSM-IV diagnoses; instead, it evaluates the relative level of various forms of posttraumatic distress.
Harvard Trauma Questionnaire (HTQ)98	Varies	Cross-cultural assessment of trauma and PTSD. Several versions are available. The HTQ assesses exposure to a wide range of traumatic events, DSM-IV PTSD symptoms, culture specific symptoms, and social functioning. It also asks respondents to provide a subjective description of the most traumatic event(s) they have experienced.

Psychometric properties
Excellent reliability and validity.[76]
Good test–retest reliability (.66 to .80) over a 1-month period, and excellent interrater reliability (.93 to .97).[78] The PSS-I correlates strongly with the CAPS (.87).[93]
Good internal consistency (.80). Excellent test–retest reliability (.89) and interrater reliability (.90).
High internal consistency (.84 to .92) and fair to excellent test–retest reliability (.51 to .94).[94]
Excellent test–retest reliability over a 2–3 day period. Internal consistency is very high for each of the DSM-IV symptom clusters as well as for the full 17-item scale. The PCL has a high level of validity when tested against the CAPS.[84]
Excellent internal consistency (.84 to .92) and test–retest reliability (.77 to .85). The PDS has a sensitivity of .89 and specificity of .75.[95]
Good to excellent internal consistency (.78 to .91) and poor to acceptable test–retest reliability (.56 to .74). The PSS-SR demonstrates acceptable correlation with the PSS-I (.73).[78]
Excellent internal consistency (.83 to .93). Correlations between the symptom cluster scores on the DTS and CAPS range from .53 (avoidance) to .73 (arousal).
The probable DSM-IV PTSD diagnosis generated by the DAPS has good sensitivity (.88) and specificity (.86) when compared to the CAPS.
Excellent internal consistency (.84 to .87) and reasonable validity. Validity scales co-vary as expected with similar scales from other measures.
Varies according to version used.

Intervention planning

Factors influencing treatment outcome

Several factors that have been found to potentially influence treatment outcome and dropout should be considered when planning interventions. These factors include chronicity of PTSD, comorbid psychological, cognitive and physical conditions, therapeutic alliance, treatment expectancy and treatment setting. Although some patterns emerge from the research to guide the clinician, the findings are not as clear cut as might be expected, and it would be a mistake to be overly pessimistic at the start of treatment because of these factors.

Chronicity and delay in treatment

Surprisingly little research has looked at the impact of chronicity (duration of illness or delay in seeking treatment) on treatment outcomes in PTSD. The only two studies to date that have been designed explicitly to answer this question by randomly allocating participants to immediate or delayed treatment, found no differences in outcome between those receiving early treatment and those in the delayed treatment group.[99,100] Both studies used a 12-week waitlist condition and the sample populations were single trauma survivors. Other large treatment outcome studies that have explored this question retrospectively (that is, duration of illness before seeking treatment), have generally reached the same conclusion.[e.g., 101,102] Some caveats, however, should be noted. First, it may be that those who delay their treatment differ in some important ways from those who seek treatment earlier. Second, there is evidence to suggest that early intervention is associated with better outcomes in depression, a disorder that shares many clinical and neurobiological features with PTSD. From a clinical perspective, it is reasonable to assume that longer duration of illness will be associated with a range of other social and occupational problems, as well as significant distress. For that reason alone, it would be sensible to encourage those with PTSD to access treatment as early as reasonably possible. Equally, it is important to emphasise to people who experienced trauma some time ago that the limited available data suggest that treatment can be effective regardless of duration of illness.

Comorbidity

In terms of influence of psychological comorbidity on treatment response, the data are also mixed and inconsistent. Several studies identify features such as depression,[103,104] generalised anxiety disorder,[105] borderline personality disorder,[106,107] anger,[13,108-110] alcohol use disorder,[111,112] social alienation,[107,113,114] and emotional dysregulation[115] as negatively influencing outcome. On the other hand, a number of studies have failed to find an effect of comorbidity on outcome[e.g., 116,117,118] suggesting that the influence of comorbidity may be sample specific[103] or that more specific predictive components of these factors have not yet been identified.

Where comorbidity is present, the extent to which it should become a focus of treatment before, alongside, or following the PTSD treatment is a decision to be made by the clinician. While no studies have compared sequencing models specifically, there have been some studies that have commenced consideration of the treatment of PTSD and comorbidity, particularly substance use and depression.

Substance use

There is some limited evidence favouring combined substance abuse and PTSD treatment. One systematic review provided some support for the notion that simultaneously treating substance use disorders and PTSD may be more effective than treating either disorder alone.[119] In line with the recommendations of these Guidelines, this advantage appeared to be limited to trauma-focussed therapies. These conclusions should be interpreted with caution, however, as the review included only a small number of studies, with few participants.

Dismantling studies are required to provide stronger evidence regarding elements of the interventions that may be applied sequentially or simultaneously for the treatment of comorbid PTSD and substance use. In the absence of such evidence, these Guidelines provide additional recommendations for practitioners based on expert consensus opinion (see Chapter 5, “Sequencing comorbidities”). Simultaneous treatment is most commonly characterised by educative and symptom-focussed cognitive behavioural interventions for both disorders prior to the introduction of trauma-focussed interventions, *in vivo* or imaginal.[120] The research at present provides no firm conclusion on the temporal course of improvement in comorbid PTSD and substance use; some authors report that initial improvement in PTSD severity leads to decreased substance use,[121] while others have suggested that decreased substance use is likely to effect a change in PTSD symptoms.[118]

PTSD and comorbid substance use may also be treated concurrently with pharmacotherapy, keeping in mind the potential for drug interactions. For example, in the case of comorbid opioid dependence, some selective serotonin reuptake inhibitors (SSRIs) may inhibit methadone metabolism, increasing the risk of toxicity.[122] Note also that antidepressants may not be appropriate for patients actively abusing alcohol or other central nervous system (CNS) depressants.

Depression

Depression is another condition often comorbid with PTSD. The early and ongoing assessment of suicide risk is of primary importance in these cases of comorbid PTSD and depression. There are as yet no studies examining the sequencing of the treatment of comorbid depression and PTSD. There is, however, a body of research outlining the effectiveness of PTSD treatment on comorbid depression and prediction studies; this literature identifies comorbid depression severity as a negative influence on PTSD outcome (see above). This information has been considered in the consensus points in Chapter 5 on the sequencing of treatment in the context of PTSD and major depression.

Two recent studies have examined the effectiveness of integrating depression and PTSD treatment, focussing on behavioural activation during the first half of treatment and exposure during the second. The effect of reversing the order of treatment has not been investigated. Both studies found that behavioural activation improved symptoms of both comorbid disorders and that the exposure component resulted in decreased PTSD severity.[123,124] Gros and his colleagues reported that the exposure component also resulted in significant change in depression, but that across both phases of treatment, improvements in depression were explained by improvements in PTSD. Thus, in many cases, addressing PTSD symptoms will result in improvements in comorbid depression. People with severe depression, with symptoms that are unlikely to respond to PTSD treatment, may benefit from the addition of depression-specific techniques.

In terms of pharmacological treatment for comorbid PTSD and depression, there is some evidence to suggest that patients who show an incomplete or non-response to antidepressants may benefit from adjunctive treatment with the antipsychotic aripiprazole.[125]

Terminal illness

Terminally ill people with PTSD, regardless of its cause, may suffer more emotional distress, lower quality of life and poorer medical prognosis than those without PTSD.[126] The appropriateness of standard treatment for PTSD is largely dependent on the patient's stage of illness. For patients in the final stages of terminal illness, numerous lengthy and intensive sessions designed to effect long-lasting improvement in PTSD symptoms would not generally be considered appropriate. Instead, a focus on maximising quality of life in the short term may be more beneficial. One potential approach to PTSD management in this population is a stepped care model in which the intensity of treatment is increased only if the patient's prognosis allows sufficient time to do so, and if lower-level interventions have not been effective.[126] So for example, the initial stage of treatment may involve addressing practical issues such as social connectedness, while subsequent stages may teach coping strategies such as relaxation or cognitive restructuring, and with the introduction of trauma-focussed techniques only if required and if time permits.[126] Modifications to standard exposure-based therapy may be required, for example by shortening the length of sessions if fatigue is a concern or by decreasing the intensity of exposure.[126]

Traumatic brain injury and other physical comorbidity

In recent years, there has been considerable interest in the association between mild traumatic brain injury (mTBI) and PTSD, with particular reference to military personnel. There appears to be substantial overlap, with some evidence to suggest that when the two co-exist the cognitive deficits can be accounted for entirely by the PTSD,[127,128] although this is not a universal finding.[129] The effect of mTBI on PTSD treatment response is unclear. A recent systematic review of the literature commissioned by US Veterans Affairs noted the almost total lack of adequate research on the subject, and concluded that high-quality randomised trials are urgently needed to examine the effectiveness (as well as the potential for harm) of treatments for individuals with mTBI/PTSD.[130] Notwithstanding that caveat, those authors refer to case material suggesting the benefits of a standard cognitive behavioural therapy (CBT) approach, albeit with minor modifications as required. To manage mTBI-related symptoms, therapists may encourage patients to use compensatory strategies (e.g., using personal digital assistants, scheduling cognitive breaks).

Increasing attention has also been paid in recent years to the impact of other physical comorbidity (particularly pain), on the maintenance of, and recovery from, PTSD. There is a general recognition that pain and PTSD may exacerbate – or at least mutually maintain – each other`, and there is some evidence that the two may share similar neurobiological features.[132,133] A recent study of US veterans found that two-thirds of those with PTSD also met criteria for chronic pain,[134] highlighting the need to include pain as part of a routine assessment for PTSD. Those authors also reported that effective PTSD treatment resulted in a reduction in chronic pain. Although it is premature to make definitive recommendations, it is reasonable to assume on the basis of the limited available data that attention to chronic pain in people with PTSD would be good clinical practice.

Compensation

It is sometimes speculated that outcomes are compromised in people seeking compensation for PTSD and this is, not surprisingly, a topic of considerable interest and concern. An important distinction should be made between the possible impact of compensation in reporting (or even developing) PTSD and the impact of compensation on treatment outcome. There is some evidence, albeit variable, that compensation may affect reporting and diagnosis of PTSD (see, for example, Marx et al.[135] and McNally et al.[136]). A recent review, however,[137] found no consistent evidence that compensation status predicts PTSD outcome in veterans or motor vehicle accident survivors. Studies examining broader recovery outcomes have mixed findings.138-140 In summary, the relationship between compensation and health outcomes is complex and requires further study. Rigorous attention to appropriate methodology is essential to reduce the chances of artifactual findings.

Therapeutic alliance and treatment expectations

The establishment of a good therapeutic alliance has been found to improve the outcome of PTSD treatment.[115,141,142] This is consistent with findings for a range of other anxiety and mood disorders.[143] Unfortunately, for people who have experienced a severe interpersonal trauma such as torture or childhood sexual abuse, the establishment of a trusting therapeutic relationship can often be particularly difficult. In most cases, this difficulty will be overcome if the practitioner is able to convey genuine empathy and warmth towards the person, and the use of introductory components to treatment – such as psychoeducation and symptom management skills – may also help. More time may need to be devoted to developing the therapeutic relationship prior to focussing on the trauma with these populations.

There is also evidence that a person's expectation of the outcome of their treatment is positively related to actual outcomes. This effect of treatment expectancy has been found with Vietnam veterans with PTSD,[144] and others with PTSD, generalised anxiety disorder,[145,146] social anxiety,[147,148] and chronic pain.[149] These findings highlight the importance of the clinician taking the time in the early stages to clearly explain the nature and expected outcomes of treatment, generating a collaborative and (realistically) optimistic approach.

Motivation for change

Another potential influence on response to treatment is the patient's motivation to change. Some individuals with PTSD may find it difficult to recognise when their thoughts or behaviours are unhelpful and therefore do not see any reason to change. Prochaska and DiClemente's Transtheoretical Model[150] suggests that the five stages of readiness for change (precontemplation, contemplation, preparation, action, maintenance) require different therapeutic approaches. According to this model, trauma-focussed treatment for PTSD is unlikely to be effective for patients who are in the early stages of change and who may not yet recognise that their symptoms are problematic. Such patients may however benefit from motivational interviewing techniques, shown to be helpful in facilitating readiness for change in populations such as substance abusers.[151] This approach may include providing psychoeducation, assisting the patient to think of the pros and cons associated with his or her behaviour, and comparing behaviour to that of the average person without PTSD.[151] Understanding the need for change will allow the patient to more seriously consider taking steps to enact that change, such as engaging in trauma-focussed therapy.

Demographics

The large majority of research in the PTSD field has been conducted on adults, generally between the ages of 18 and 65. Less research is available on younger people, but the following chapter is devoted to PTSD in children and adolescents, and outlines issues for consideration for the treatment of these age groups. A similar dearth of empirical data exists with regard to the treatment of PTSD in the elderly. While it is often speculated that older adults (defined as adults aged 65 and older) may be less responsive to PTSD treatment, there is limited research to inform this question. Promisingly, however, two recent reviews do not support this speculation. On the contrary, both conclude that mainstream psychological treatments such as CBT do benefit older adults with PTSD,[152,153] although there is some evidence to suggest that the addition of a narrative life-review approach to standard CBT may be helpful with the elderly. Further research in this area is needed.

Interestingly, the evidence suggests that other demographic variables such as marital status, employment and level of education are largely unrelated to treatment outcome.[113,154,155] Epidemiological studies generally indicate a higher prevalence of PTSD in females than males, although the reasons for this are unclear. It may, for example, be explained by trauma type, with females more likely to suffer interpersonal violence perpetrated by someone they know and trust. Research has yet to reliably identify any other biopsychosocial factors that may explain this gender difference. In terms of treatment, research findings suggest either that females respond better to psychological treatment[105] or that there are no significant gender differences in outcome.[156,157] Although there are some suggestions that females may respond better to pharmacological treatments for PTSD than males, it is hard to disentangle these findings from other sample characteristics such as veteran status that may explain poorer outcomes.[158]

Treatment setting

There are times when treatment for PTSD needs to be delivered in settings where there is exposure to ongoing stress and trauma. Such settings may include immigration detention facilities and refugee camps, corrective facilities, theatres of combat, and where there is the threat of domestic violence. As well as the degree of stress inherent in these settings, treatment delivery can be further complicated by potential for exposure to further trauma, short and unpredictable lengths of stay, lack of access to mental health history, and the client's reluctance to disclose information for fear of compromising their status (e.g., legal, application for asylum, deployment status). Despite the large number of people that could benefit from PTSD treatment in these settings, few studies have examined the implementation and effectiveness of interventions under such conditions. Neuner and colleagues, however, conducted two notable studies on the delivery of PTSD treatment to individuals in a Ugandan refugee camp.[159,160] Both studies showed promising results. A review by Heckman, Cropsey, and Olds-Davis[161] highlighted the lack of methodologically sound research on PTSD treatment in correctional settings, citing only one study with promising results.[162] Similarly, there is very little research on PTSD treatment for serving personnel while still in the combat theatre.[e.g., 163] In summary, more research on the effectiveness of PTSD treatment and strategies for implementation in these settings is greatly needed.

Good practice points

GPP15 Mental health practitioners are advised to note the presence and severity of comorbidities in their assessments, with a view to considering their implications for treatment planning.

GPP16 Residual symptomatology should be addressed after the symptoms of PTSD have been treated.

GPP17 The development of a robust therapeutic alliance should be regarded as the necessary basis for undertaking specific psychological interventions and may require extra time for people who have experienced prolonged and/or repeated traumatic exposure.

GPP18 Mental health practitioners should provide a clear rationale for treatment and promote realistic and hopeful outcome expectancy.

GPP19 Mental health practitioners and rehabilitation practitioners should work together to promote optimal psychological and functional outcomes.

GPP20 In most circumstances, establishing a safe environment is an important precursor to commencement of trauma-focussed therapy, or indeed, any therapeutic intervention. However, where this cannot be achieved (for example, the person is seeking treatment for their PTSD whilst maintaining a work role or domestic situation that may expose them to further trauma), some benefit may still be derived from trauma-focussed therapy. This should follow careful assessment of the person's coping resources and available support.

Potential mechanisms of change

While some treatments are clearly more effective than others, the fact is that a variety of therapeutic approaches have demonstrated beneficial effects in the treatment of PTSD. In light of that, there is a strong argument for suggesting that future research should focus on furthering our understanding of what mechanisms are involved in the development and maintenance of PTSD and, by extension, what mechanisms need to be targeted in treatment.[164] Research identifying common mechanisms may help to explain why some apparently quite different therapeutic approaches can all produce improved outcomes. Although much has been written regarding mechanisms underlying trauma-focussed approaches (see, for example, Ehlers et al.[165] or Foa et al.[166]), it is important to understand the mechanisms by which present-focussed therapy, interpersonal therapy, stress inoculation training, and other forms of therapy that do not involve a focus on the traumatic memories may work. If the mechanisms were better understood, refinement of procedures that target these mechanisms in treatment may lead to improved outcomes.

In this context, it is important to note that the concept of placebo controls in psychological treatment trials is problematic[167] and, as noted below, can make comparisons between psychological and pharmacological treatments difficult. Psychological control treatments aim to control for non-specific elements of treatment such as a trusting relationship, emotional support, education about PTSD, mobilisation of hope, giving a rationale, or homework assignments.[164] Some of these non-specific elements may actually be active mechanisms of change. For example, many patients with PTSD following interpersonal violence believe that they cannot trust anybody. Establishing a trusting relationship with the therapist can help shift this belief, modifying the 'traumatic memory network' so central to trauma-focussed approaches.

At this stage of our knowledge, identifying the active ingredients of treatment – the mechanisms of change beyond those non-specific components – must remain largely speculative. On the basis of existing evidence-based guidelines regarding successful treatment, however, it may be speculated that the most effective treatments for PTSD all involve:

- an opportunity to activate or confront the traumatic memories in a safe environment
- an opportunity to modify the traumatic memories, with particular reference to the relationship between the stimulus material (the sights, sounds, etc.) and the response components (physiological, behavioural, cognitive appraisals, etc.)
- an opportunity to repeatedly (but safely) confront situations or activities that had been avoided or that provoked high anxiety, since the trauma.

The manner in which these elements are delivered may, of course, differ widely across treatment approaches.

Treatment goals

The goals of treatment should be established collaboratively with the patient following the initial assessment, and should be guided by a comprehensive assessment of the individual and their personal priorities. Treatment goals should be collaboratively reviewed, and modified as required, at regular intervals during the treatment process. Ideally, goals should be SMART: specific, measurable, attainable, relevant, and time-bound (or, better, SMARTER – with the addition of evaluate and re-evaluate).

The first goal of treatment is likely to be a reduction in PTSD and related symptoms. The evidence-based treatment research routinely uses measures of PTSD symptom severity as the primary outcome, and it is this goal that the interventions are designed to achieve. In addition to core PTSD symptoms, likely targets may include comorbid depression and anxiety, as well as anger and guilt. All have implications for treatment, with some likely to adversely affect outcomes of PTSD symptoms. For some, especially those who have been subjected to protracted child sexual abuse or torture, clinical interventions often need to focus initially on symptoms of dissociation, impulsivity, emotional lability (affect regulation), somatisation and interpersonal difficulties.[168]

While most of the evidence-based literature focusses on symptom reduction, the practitioner should not lose sight of the broader wellbeing, daily functioning and quality of life issues. Achievement of optimal psychosocial functioning is as important, if not more so, than symptom reduction. Indeed, for those with chronic PTSD, improvements in psychosocial functioning may be the primary goal over and above reduction of PTSD symptoms. With this end in mind, immediate needs for practical and social support should be assessed, and treatment planning focussed on wellbeing and psychosocial rehabilitation from the outset.

Psychosocial rehabilitation may improve functional ability and facilitate recovery by minimising associated problems such as homelessness, social inactivity, high-risk behaviours, and unemployment.[169] Targeted clinical and disability management interventions may assist people with PTSD improve their role functioning, and develop skills and resources specific to their individual needs with the aim of averting, preventing further, or reducing, disability associated with the disorder.[170]

Psychosocial rehabilitation interventions have strong empirical support in populations experiencing a range of mental disorders,[171] and a growing literature identifies such approaches as being beneficial for people with PTSD (for reviews see [169,172]). Interventions including family psychoeducation, supported education, housing and employment, intensive case management, peer counselling, and 'vet to vet' services are being implemented with positive outcomes in veteran populations with varying mental disorders and several randomised controlled trials (RCTs) of their efficacy are currently underway.[172] Among other mental health populations, similar interventions are associated with a range of positive outcomes, including symptom reduction, decreased risk of relapse, increased housing stability, improved social and work functioning, reduced stress in families, and enhanced quality of life.[173-176]

Therefore attention should be paid to social reintegration and vocational rehabilitation needs during the initial assessment and treatment planning phase. In some cases, this may include supporting the individual's capacity to stay at work or facilitating return to work as soon as is practical, even if on restricted work duties. It should also involve review of, and if necessary, intervention to optimise the person's social support networks. The family and broader system of care should be engaged early and provided with information about PTSD, as well as being involved in the collaborative care and recovery plan as far as is possible.

Good practice points

GPP21 The practitioner should assess immediate needs for practical and social support and provide education and referrals accordingly.

GPP22 Appropriate goals of treatment should be tailored to the unique circumstances and overall mental healthcare needs of the individual and established in collaboration with the person.

GPP23 From the outset, there should be a collaborative focus on recovery and rehabilitation between the person and practitioner, and where appropriate, family members.

Cultural and linguistic diversity (CALD)

Australian adults with PTSD come from diverse ethnic and cultural backgrounds, with English a second language for many. Services should be made as accessible as possible, with information available in a number of different languages and distributed through general practitioners and health centres that provide primary care services to various ethnic and cultural groups. Further, interpreters should be available as required. Several issues for consideration when working with interpreters (and other issues related to CALD populations) are included in the section on Refugees and Asylum Seekers in Chapter 7 of these Guidelines.

An obvious question for the mental health field in general, and the PTSD field in particular, is the extent to which treatments that have proven efficacy in Western countries can be applied in other contexts and cultures. Clearly, culturally sensitive adjustments to the manner in which treatment is delivered are crucial. Beyond that, however, as noted in the systematic literature review that follows, several well-controlled trials of evidence-based treatment for PTSD have now been completed in non-Western cultural settings with encouraging results. There is every reason to assume that these treatments are likely to be effective across cultures, provided that they are delivered in culturally sensitive and appropriate ways. When working with an individual from a non-English speaking background, the practitioner should become familiar with the person's cultural background and liaise with population-specific healthcare providers as necessary, to understand cultural expressions of distress and support the appropriate applications of the interventions described in these Guidelines.

Good practice point

GPP24 Recommended treatments for PTSD should be available to all Australians, recognising their different cultural and linguistic backgrounds.

Research recommendation

RR1 The conceptualisation of psychological trauma in different and diverse cultural contexts needs to be further researched so that this can inform processes of assessment and management of such trauma syndromes for people of culturally and linguistically diverse backgrounds.

The impact of PTSD on family

The impact of PTSD can extend beyond the individual directly affected to those around them – family and close friends. As such, the practitioner should consider the support and treatment needs of those close to the person with PTSD, as well as the person's own needs. In involving family members, the person's confidentiality must be respected and the family members' own needs considered. In exceptional circumstances, where there are issues of risk of harm to self or others, family involvement may need to occur without the person's consent.

Family members can be affected both directly and indirectly by the person's PTSD symptoms. Research has consistently shown that partners of people with PTSD experience significant psychological distress in comparison to the general population.[177] They may develop significant emotional difficulties of their own as a result of their partner's PTSD. Symptoms such as irritability and anger, withdrawal from family involvement, emotional numbing, or substance abuse can have profound effects on close personal relationships. Additional problems such as being unable to cope at work may emerge, leading to financial pressures for the family. Family members may adjust their own lives in an attempt to support the family member with PTSD or to conceal difficulties from those outside the family.

In some cases, family members may develop problems that mirror those of the person with PTSD, for example, adopting similar views of the world as a dangerous place, and resultant fear and avoidant behaviours. In other cases, emotional problems of family members may be in response to living with the person with PTSD, for example, developing feelings of helplessness and hopelessness if the person with PTSD's condition remains untreated and unchanged over time, or turning to alcohol to avoid having to face the problems at home.

Although empirical evidence is lacking, good clinical practice would suggest that effective treatment of PTSD should involve partners at some level, where appropriate (and with the person's permission). Partners have the potential to be a great ally if they understand the nature of PTSD and the likely course of treatment. A lack of understanding can contribute to partners inadvertently undermining treatment efforts. It is often useful to invite the partner to a session early in the treatment process to discuss the rationale for subsequent interventions and to clarify the partner's role – usually simply one of support and gentle encouragement (but not one of co-therapist). The partner's own need for mental healthcare or support should be considered and, where appropriate, referral made to another provider for assessment and possible treatment.

Good practice point

GPP25 Wherever possible, family members should be included in education and treatment planning, and their own needs for care considered alongside the needs of the person with PTSD.

General professional issues

The Guidelines make recommendations about treatment for people with ASD and PTSD on the assumption that treatment is being provided by appropriately qualified and professionally supported practitioners. In effect, this means that individual practitioners should not deliver interventions that are beyond their level of expertise.

It needs to be recognised that various practitioners will contribute to the care of the individual with PTSD in different ways. In most cases, the specialist symptom-focussed interventions will be undertaken by psychiatrists, psychologists and other mental health practitioners specifically trained in recommended treatments, while occupational therapists, rehabilitation counsellors and social workers are more likely to address family, social and occupational recovery, and rehabilitation issues. Ideally, the general practitioner will have an existing relationship with the individual that allows provision of holistic care and support to the person and family over time. In some settings, particularly in the military and following large-scale disasters in the civilian community, chaplains and other pastoral care providers can play an important role. Where a number of practitioners are involved in care, the general practitioner is well placed to assume overall management of care, making appropriate referrals and coordinating the contribution of other practitioners. The individual, their family and carers also play a critical role in support and recovery. Effective collaboration between all relevant people is important for optimal care of the person with PTSD.

Unfortunately, this ideal circumstance is not always possible, most notably in rural and remote parts of Australia where a visiting nurse or general practitioner may be the sole health professional in the region. In these circumstances, the responsibility for care of people with ASD and PTSD may largely rest with these primary care practitioners. It needs to be recognised that these practitioners are unlikely to have the time or training to undertake the full range of recommended psychological and psychosocial rehabilitation interventions for ASD and PTSD. Their role is more likely to involve screening, assessment, pharmacotherapy, and possibly general psychological interventions such as psychoeducation and simple arousal management. Where the person with PTSD is using self-help materials (e.g., web-based treatment) the primary care practitioner may also offer support and monitoring. Wherever possible the person should be referred to an appropriately trained mental health practitioner who can provide time-limited specialist psychological treatment and ongoing consultation to the primary care practitioner. In some cases, it may be possible to achieve this through telemedicine or even telephone consultations. To address psychosocial rehabilitation needs, the primary care practitioner should ideally consult with a psychosocial rehabilitation specialist in planning interventions. In their care of people with ASD and PTSD, primary care practitioners should be supported with provision of education and training materials that can be accessed remotely, for example, via the internet.

Good practice points

GPP26 Practitioners who provide mental healthcare to children, adolescents or adults with ASD and PTSD, regardless of professional background, must be appropriately trained to ensure adequate knowledge and competencies to deliver recommended treatments. This requires specialist training, over and above basic mental health or counselling qualifications.

GPP27 Primary care practitioners, especially in rural and remote areas, who assume responsibility for the care of people with ASD and PTSD in the absence of specialist providers, should be supported with accessible education and training, as well as access to specialist advice and supervision where possible.

Self-care

All practitioners in the field of posttraumatic mental health need to be aware of the potential adverse impacts of the work on themselves. Repeated exposure to the traumatic experiences of others, combined with the high levels of distress often seen when people recount their experiences, can take a toll on the practitioner. Often referred to as 'compassion fatigue', health professionals can be at risk of general stress or adverse psychological reactions such as depression, substance abuse and professional burnout. This compassion fatigue can negatively impact upon the practitioner's clinical skills and consequently on patient care.[178] These adverse impacts may be particularly apparent if the practitioner does not place appropriate limits on the nature and size of their caseload, and if he or she does not receive sufficient training and support.

Responsibility for self-care should be shared between the individual practitioner and, where appropriate, their employer organisation and professional body.[179] With evidence that isolation is a risk factor for developing stress-related problems, the needs of practitioners working in isolated rural and remote communities warrant special consideration. For these practitioners, routine training and support may need to be addressed remotely (for example, via the internet and teleconferencing). For general practitioners who are geographically isolated, Balint groups offering peer support operate in some areas of Australia.[180]

Good practice points

GPP28 In their self-care, practitioners should pay particular attention to skill and competency development and maintenance including regular supervision, establishing and maintaining appropriate emotional boundaries with people with PTSD, and effective self-care. This includes maintaining a balanced and healthy lifestyle and responding early to signs of stress.

GPP29 For those practitioners who work in an organisational context, broader policies and practices should support individual practitioners in these self-care measures.

Research recommendation

RR2 In recognition of the developing science around dissemination and implementation of evidence-based treatment, future research should explore the most effective ways of generating reliable and sustainable change in policies and practice for areas covered in these Guidelines.

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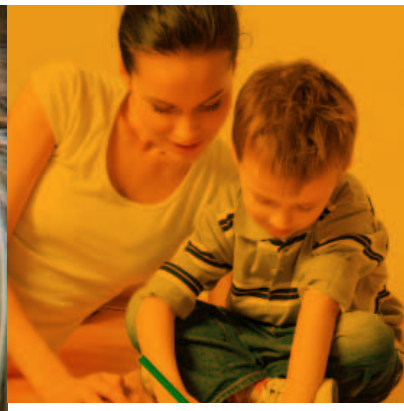

General Considerations when Working with Children and Adolescents

3

Although most principles that underpin good clinical practice apply equally when working across various age groups, some differences will inevitably apply when working with children and adolescents. The following considerations should inform every aspect of the way in which clinicians think about, assess, and treat posttraumatic mental health problems in children and adolescents. Many of these points will be elaborated on in the following sections.

1. Children and adolescents are typically dependent upon an adult to present them for treatment in the first instance and to ensure that they attend subsequent appointments. This means that it is as important to engage with, and maintain, the relevant adult's motivation to pursue treatment, as it is to do these things with the child or adolescent client.
2. Children and adolescents are part of a system (typically a family). Thus, their symptoms have the potential to both influence, and be influenced by, anything that is happening within the system in which they live. Thus, the clinician needs to be continually aware of what is happening within the child's system (e.g., significant life events for other family members, emotional wellbeing of other family members, and relationships within the family – not only those between the child and his/her parents).
3. In line with the first two considerations, common sense suggests that involving parents/caregivers in children's treatment should be helpful. However, as will be discussed below, there are many reasons why parents/caregivers may be unwilling or unable to participate in their child's treatment in a helpful manner. The clinician needs to be aware of this and to manage the relationships accordingly.
4. The rate of agreement between parents/caregivers and children in relation to internalising symptoms (and especially posttraumatic mental health problems) is very low. Never rely solely on an adult's report of a child's internalising symptoms – even if the child is of preschool age.
5. Infancy and adolescence are the two most change-filled periods of development in the entire lifespan. Keeping in mind models of psychosocial development such as that proposed by Erik Erikson,[1] children and adolescents have substantially more developmental challenges and conflicts to master than adults. It is essential to keep this kind of framework in mind when assessing and treating children and adolescents with posttraumatic mental health problems. For instance, a 40-year-old who is assaulted physically is less likely than a three-year-old to develop attachment problems. In other words, children and adolescents have a much greater potential to be rendered either 'stuck' or developmentally regressed by trauma.
6. Depending on their age and developmental stage, children have less well-developed linguistic, affect regulation, cognitive and perceptual capacities than adults. Naturally, these developmental limitations will influence the nature of treatment and the manner in which it is delivered.

Note: For the purposes of this chapter, the term 'pre-schoolers' or 'preschool-aged children' is used to refer to children aged birth to 5 years. The term 'primary school-aged children' is used to refer to children aged 6 to 11 years, and the term 'adolescents' is used to refer to youth aged 12 to 17 years. Where the term 'children and adolescents' is used, the reader can assume that this entire age span is being referred to.

Trauma and trauma reactions

Trauma, traumatic event and potentially traumatic event

As noted in the previous chapter, the terms *trauma, traumatic event*, and *potentially traumatic event* are used in a variety of ways. The *Diagnostic and Statistical Manual of Mental Disorders* (fourth edition; DSM-IV) defines a traumatic event as one in which *"the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others"*.[2] Children and adolescents are commonly exposed to such events, with more than two-thirds of children in the US reporting exposure to at least one traumatic event by the age of 16 years.[3] Terr[4] proposed two broad categories of childhood trauma: Type I trauma in which a child experiences a single event (such as a physical assault, a natural or man-made disaster, traffic accident, other accidental injury, house fire, a terrorist attack, or witnessing a single episode of violence); and Type II trauma, in which a child experiences multiple repeated exposures to the traumatic event (such as physical and/or sexual abuse, neglect, domestic violence, or war).

By no means do all young people exposed to such events develop significant psychological problems. More recently, use of the term potentially traumatic events (PTEs) has been advocated to highlight this point. Bonanno and Mancini[5] note that, "highly aversive events that typically fall outside the range of normal everyday experience are 'potentially' traumatic because not everyone experiences them as traumatic" (p. 369). In other words, not everyone develops a (psychological) injury as a consequence. In the Copeland et al.[3] study, for example, 1420 children and adolescents aged 9, 11, and 13 years at intake were followed up annually until they were 16 years of age. Although trauma exposure (across the full range of potentially traumatic events) was common, the development of full PTSD as per DSM-IV criteria was very rare (0.5%).

Increasingly, it is being recognised that exposure to PTEs can result in the development of many forms of psychopathology. To date, most attention has been focussed on PTSD, other anxiety disorders, and affective disorders. Increasingly, however, in the field of children and adolescents (especially preschool-aged children) this focus is broadening to include behavioural and attentional problems (such as oppositional defiant disorder and attention deficit hyperactivity disorder).

Clinical presentations in children and adolescents following potentially traumatic events

Yule[6] described the manifestation of traumatic stress responses in children and adolescents in a manner that has withstood the test of time and burgeoning research. He noted that, while the majority of children are bothered almost immediately by repetitive, intrusive thoughts about the event, dissociative flashbacks are not common. In the first few weeks, disturbances in sleep are often seen – including nightmares (where the content is not necessarily able to be articulated, or where it is not necessarily linked in an obvious way to the PTE), fear of the dark, fear of going to sleep and risking the possibility of a nightmare, and waking during the night. Separation anxiety is common in young children and even among adolescents. As in adults, irritability, anger and aggression are common, often manifested as temper tantrums in preschool-aged children. Many primary school-aged children and adolescents are able to articulate a desire to talk about their experiences, but also note that they find it difficult to speak about what happened with their parents and peers. Children and adolescents frequently report, and demonstrate, difficulties in concentration and memory. Hypervigilance to danger in their environment (including increased awareness of trauma-related reminders in the media) is typical. Primary school-aged children and adolescents often endorse a sense of foreshortened future, or what is perhaps more usefully viewed as a new awareness of their own mortality. The development of increased general anxiety, as well as specific fears related to aspects of their trauma experience, is common – although often the link between the feared stimulus and the trauma experience is not always immediately obvious (for instance, a child who develops a fear of helicopters after being involved in a natural disaster where helicopters were used to rescue people). Some primary school-aged children and adolescents will describe feeling survivor guilt, while depression and increased substance use is often reported by adolescents exposed to PTEs. Other important aspects of clinical presentation in preschool-aged children that were not explicitly described by Yule include new oppositional behaviour, regression in, or loss of, previously mastered developmental skills (e.g., speech, toileting), and new fears not associated with the traumatic event (e.g., fear of going to the toilet alone).[7]

Traumatic stress syndromes

To date, diagnostic classification systems have tended to not include specific child and adolescent versions of traumatic stress syndromes. Rather, the clinician is required to apply the same criteria as those used for adults, albeit sometimes with minor adjustments. As noted below, it is likely that some modifications will be made to child-specific criteria in DSM-5.

Acute stress disorder

Given that the DSM-IV diagnostic criteria for ASD do not differ depending on whether the individual in question is an adult, adolescent or child, these criteria will not be reviewed in any detail here (see previous chapter for the diagnostic criteria). However, the relationship between this diagnosis and the diagnosis of PTSD in youth – a focus of much research in the adult literature – is worthy of brief attention. The DSM-IV diagnosis of ASD requires that an individual demonstrate three or more dissociative symptoms. With the exception of the duration criteria (maximum of four weeks), the remaining diagnostic criteria for ASD are similar to those for PTSD. The presence of dissociation in an individual's acute response to trauma exposure is thought to identify those at risk for long-term PTSD, meaning that one of the key functions of ASD as a diagnosis is to assist in the prediction of which individuals experiencing distress after trauma exposure will go on to develop PTSD.[8] However, paralleling the adult research (e.g., Harvey and Bryant[9]), in a large study of youth aged 6 to 17 years who had survived a motor vehicle accident, dissociation (when considered in isolation – that is, separate to the other criteria of ASD) failed to account for any unique variance in predicting later PTSD.[10] As a result of this body of research across the lifespan, the requirement for dissociation in ASD has been dropped in DSM-5.

Posttraumatic stress disorder

The diagnosis of PTSD was officially extended to youth for the first time in 1987 with the advent of DSM-III-R (Diagnostic and Statistical Manual of Mental Disorders, third edition, revised). The DSM-IV criteria for PTSD as applied to children and adolescents are identical to those used with adults, with a few caveats (as there are for many of the DSM-IV diagnoses). Thus, the full adult-centric diagnostic criteria will not be reviewed here (see previous chapter for the diagnostic criteria). In assessing children and adolescents using the DSM-IV criteria, clinicians are asked to consider the following caveats:

A2 – 'In children, this [the person's response] may be expressed instead by disorganised or agitated behavior'.

B1 – 'In young children, repetitive play may occur in which themes or aspects of the trauma are expressed'.

B2 – 'In children, there may be frightening dreams without recognisable content'.

B3 – 'In young children, trauma-specific re-enactment may occur'.

Debate regarding the validity and utility of the DSM-IV PTSD criteria for children and adolescents, and particularly for preschool-aged children, has been ongoing since their publication. This is not surprising given that the DSM-IV field trial for PTSD did not involve any participants under the age of 15 years. One of the strongest criticisms of the criteria concerns the requirement for children to report on complex internal states (e.g., C5 feeling of detachment or estrangement from others, and C7 sense of a foreshortened future) which are often difficult for children to understand and almost impossible for adults around a child to observe. This debate has been informed by strong empirical data. Importantly, it has been demonstrated that there is no difference in terms of distress, or social and academic impairment, between children meeting full criteria (i.e., all three of the symptom clusters) and children demonstrating what is referred to as 'partial PTSD' – that is, two of the three symptom clusters.[11]

In relation to preschool-aged children – a group for whom, until fairly recently, uncertainty about the relevance of PTSD existed – a substantial body of work now exists documenting a distinct and detectable constellation of PTSD symptomatology in this age group. Research has demonstrated these symptom profiles following disaster,[12,13] terrorist attack,[14] and exposure to domestic violence.[15,16]

In response to concerns about the validity of the existing diagnostic criteria, several alternative algorithms have been proposed in considering how best to conceptualise and assess PTSD in children and adolescents. The most prominent of these are the 'two of three' method,[11] and the PTSD-AA (alternative algorithm) method.[17] In line with the results noted above, the two of three method requires children and adolescents to meet criteria for only two of the three symptom clusters. Scheeringa and colleagues' PTSD-AA algorithm requires preschool-aged children to demonstrate one Cluster B symptom, one Cluster C symptom and two Cluster D symptoms.[18] Such an approach is largely consistent with widely accepted criteria for partial and subsyndromal PTSD in adults (e.g., Mylle and Maes[19]).

Moving to DSM-5

In relation to PTSD in children and adolescents, a number of important changes have been introduced in DSM-5. In a significant restructure, the existing diagnoses of ASD and PTSD have been moved from the Anxiety Disorders section to a new category – Trauma- and Stressor-Related Disorders.[20] This new category also includes reactive attachment disorder and disinhibited social engagement disorder (analogous to the inhibited and disinhibited subtypes of DSM-IV reactive attachment disorder and important diagnoses in understanding reactions to trauma in children with longstanding histories of maltreatment), and the age-related PTSD subtype – PTSD in preschool children – for children under the age of 6 years.

As noted in the previous chapter, the most significant change to the PTSD criteria is to separate the existing Cluster C symptoms into Criterion C (persistent avoidance of stimuli related to the trauma) and Criterion D (negative alterations in cognitions and mood). For children aged 6 years and over, the diagnosis of PTSD requires that the following criteria be met: one symptom from Criterion C, two symptoms from Criterion D, and two symptoms from Criterion E (alterations in arousal and physical reactivity). In relation to preschool-aged children, following much research examining the PTSD-AA algorithm,[e.g., 21] the DSM-5 PTSD criteria for this age group requires a child to demonstrate only one symptom from either Criterion C or D. In recent research with young burns victims, the new DSM-5 criteria for preschool-aged children has been demonstrated to be the most developmentally sensitive and valid measure of PTSD.[22]

Prevalence

Few studies have examined the prevalence of ASD in children and adolescents. The studies that have been conducted have focussed on samples of youth involved in motor vehicle accidents and single assaults, with relatively low prevalence rates reported: 8 per cent;[23] 19 per cent;[24] and 9 per cent.[25] In preschool-aged children, only one study has examined the prevalence of ASD to date. Meiser-Stedman et al.[21] found that 1.6 per cent of 60 children aged 2 to 6 years met criteria for ASD following an MVA.

In terms of PTSD, the prevalence rates vary widely depending on the sample under study, the type of trauma experienced, and the methodology used to make the diagnosis.[26,27] Lifetime estimates of PTSD in children and adolescents in the overall population range from 6 per cent[28] to a low 1.6 per cent reported in a large scale (N=1035) German study of youth aged 12 to 17 years.[29] In preschool-aged children, prevalence rates range from 13 per cent of burned children[30] to 38 per cent of war-exposed children.[31] Other studies focussing on specific types of trauma exposure have reported on the prevalence of PTSD at short-term follow-up (generally just over one month following trauma exposure). Thus, 22.5 per cent of children exposed to physical injury,[32] 34 per cent of youths exposed to community violence in an urban setting,[33] and 36 per cent of maltreated (physically and/or sexually abused) children[34] have been reported to meet criteria for acute PTSD. Examining trauma exposure to a motor vehicle accident across studies, approximately 27 per cent of children and adolescents meet criteria for PTSD between one and two months later,[e.g., 35,36,37] reducing to approximately 13 per cent between three and six months later.[e.g., 35,37,38] A meta-analysis of primary school-aged children and adolescents exposed to a range of trauma events found that, overall, 36 per cent of participants were diagnosed with PTSD.[39]

In summary, while the numbers vary widely, it is clear that only a minority of children and adolescents exposed to a PTE will go on to develop PTSD. It is equally clear that the numbers – even at the low end of the ranges – are substantial and highlight the need for effective evidence-based treatment.

Comorbid conditions

In preschool-aged children, comorbidity is common. Scheeringa and Zeanah[40] reported the following comorbidity prevalence rates among preschool children with PTSD following Hurricane Katrina: 61 per cent met criteria for oppositional defiant disorder (ODD); 21 per cent met criteria for separation anxiety disorder (SAD); 33 per cent for attention deficit hyperactivity disorder (ADHD); and 43 per cent met criteria for major depressive disorder (MDD). In a mixed sample of traumatised pre-schoolers, Scheeringa et al.[18] reported similarly high levels of comorbidity. In a recent sample of preschool-aged burns victims, children with PTSD at one month were more likely to have comorbid MDD, ODD, SAD, and a specific phobia; while children with PTSD at six months were significantly more likely to meet criteria for comorbid ADHD, ODD and SAD.[30]

In primary school-aged children, PTSD is commonly comorbid with other anxiety disorders, mood disorders (most notably depression), and attention deficit hyperactivity disorder.[41] Other comorbid problems less commonly seen in primary school-aged children, but more common in adolescents, include suicidal ideation and substance dependence.[41,42]

One of the largest studies of adolescents following a disaster centred around the survivors of the cruise ship, *Jupiter*, which sank in 1988. Of the adolescents on board, 217 agreed to participate in an assessment conducted between five and eight years after the event.[43] These young people were found to have developed a wide range of psychiatric disorders in addition to PTSD following the sinking.[44] Over 40 per cent of the sample met criteria for 'any anxiety disorder', with specific phobia (24%), panic disorder (12%), SAD (7%), and generalised anxiety disorder (GAD; 6%) being the most common anxiety disorders. With the exception of GAD, the risk for these disorders was significantly higher in survivors compared to controls. Similarly, 38 per cent of the sample met criteria for 'any affective disorder', with 34 per cent meeting criteria for MDD. Again, the risk to survivors of developing any affective disorder or MDD was significantly higher when compared with controls. Most of these conditions were comorbid with PTSD. When the survivor sample was separated into those with PTSD and those without, the rates of other psychiatric diagnoses in those without PTSD were not significantly different from the rates seen in controls. Mueser and Taub[45] have also reported that adolescents with PTSD are more likely to engage in high-risk behaviours, such as running away from home, self-injury, and substance use.

Importantly, although a largely neglected area, an association has recently been demonstrated between the development of PTSD and children's health-related quality of life (i.e., the impact of disease and therapy on a person's life situation), both in the short term and the long term. A wide range of adverse health consequences for pre-schoolers through to adolescents has been identified,[e.g., 46] including poorer adherence to medical protocols.[47]

The course and prognosis of PTSD in children and adolescents

In preschool-aged children, symptoms of PTSD tend to be persistent over time.[48,49] Scheeringa et al.[50] reported that the mean severity of PTSD ratings for preschool-aged children did not reduce over a two-year period. Importantly, PTSD in very young children is also associated with a range of poor developmental outcomes,[e.g., 51] which in turn negatively impact upon children's developmental trajectories.

Recently, two very long-term follow-ups of children who experienced a landslide and bushfire disaster were reported. McFarlane and Van Hooff[52] reported on the rates of PTSD and other mental disorders in adults who had experienced a devastating bushfire 20 years previously. This group was compared with matched controls recruited at the time of the original study. No difference was found in the lifetime prevalence of PTSD between the group who had been impacted by the bushfire as children (mean age at time of original assessment = 8.44) and the matched control group. In fact, the only difference in terms of lifetime rates for an individual disorder was specific phobia (environmental subtype), with this being more prevalent in the disaster-impacted sample. Interestingly, however, 30 per cent of the bushfire-impacted sample nominated the bushfire as the worst experience of their life. In stark contrast to McFarlane, Morgan et al.[53] conducted a 33-year follow-up of children who experienced the Aberfan landslide (children were aged 4 to 11 years at the time of the disaster) and reported that 29 per cent of those adults able to be contacted continued to meet criteria for PTSD. Of the disaster-impacted sample, 46 per cent met criteria for a lifetime history of PTSD, compared to 20 per cent in the matched control group.

Referring back to the long-term follow-up of the *Jupiter* survivors,[43] 52 per cent of the adolescents (mean age 14.7 years at time of disaster; mean age 21.3 years at follow-up) had developed PTSD, most commonly in the first few weeks following the disaster. There were few cases of delayed or late-onset PTSD reported. Approximately one-third of the youth had recovered spontaneously within a year of onset, but 34 per cent still met criteria for PTSD between five and eight years after the sinking.

Risk factors

In relation to preschool-aged children, the following risk factors have been identified for the development of PTSD in infants and young children exposed to war-related trauma: child age, maternal psychopathology, family social support, and maternal and child attachment-related behaviours.[31] It has been suggested that parental and familial factors (e.g., psychopathology, social support) may be more important for younger children in the development of PTSD, given that they are more dependent on their parents and family system in order to have their needs met.

A recent meta-analysis conducted by Trickey, Siddaway, Meiser-Stedman, Serpell, and Field,[54] provides the most up-to-date and thorough summary of risk factors for the development of PTSD in primary school-aged children and adolescents. Trickey et al. found that across 64 studies of children and adolescents aged 6 to 18 years of age, factors relating to the subjective experience of the event and post-trauma variables (specifically, low social support, pre-trauma fear, perceived threat to life, social withdrawal, psychiatric comorbidity, poor family functioning, use of cognitive strategies such as distraction and thought suppression, and diagnosis of PTSD at an earlier assessment point following the trauma event) accounted for medium-to-large population effect sizes. Small-to-medium effect sizes were found for the following risk factors: being female, low intelligence, low socioeconomic status, pre- and post-trauma life events, pre-trauma low self-esteem, pre-trauma psychological problems in the youth and parent, post-trauma parental psychological problems, bereavement, time elapsed since the trauma event, trauma severity, and media exposure to the event. Small effect sizes were observed for younger age and race. Interestingly, a risk factor that has only recently been hypothesised to be important in the development of child PTSD, namely, parenting practices, was not able to be studied in this meta-analysis due to lack of research examining this potential risk factor.

Relational PTSD patterns: The importance of parents

In the meta-analysis reviewed above,[54] poor family functioning was observed to have a medium-to-large population effect size, while pre- and post-trauma psychopathology were observed to have small-to-medium population effect sizes in predicting child PTSD. These factors are only a few of the many variables included in the meta-analysis – clearly, they do not account for all, or even a majority, of the variance in predicting which children and adolescents develop PTSD. Nevertheless, they are important, not least because these are among the few factors listed above that can be targeted for change. Across the age span that makes up childhood and adolescence, parents or caregivers and the family system occupy unique positions of reciprocal influence (in other words, children and adolescents influence their parents' behaviour, and vice versa). These systemic influences can be crucial in relation to seeking and receiving psychological help following traumatic exposure. Children and adolescents very rarely decide themselves that they require professional help with a psychological problem (the exception being school counselling). Even if they were to do so, it would be almost impossible for children and adolescents to independently access such outside assistance. Typically, children and adolescents require their parent or caregiver to make the decision that professional help is warranted and to access that help. When parents and caregivers do not make these decisions, children and adolescents do not receive treatment. Among the many reasons why parents and the family system are important in the assessment and treatment of children and adolescents, the single fact that they determine whether or not treatment is received makes parents critically important.

In 2001, Scheeringa and Zeanah[13] proposed three relational PTSD patterns to describe a situation in which posttraumatic stress exists in both an adult caregiver and a young child. (The traumatic stress may be in relation to the same event or different events.) The relational patterns illustrate how the symptomatology of one member of this dyad (typically the parent or caregiver) exacerbates the symptoms of the other member. Although these patterns were proposed for cases where the caregiver also demonstrates PTSD symptomatology, there is significant overlap between these patterns and the substantial literature examining the reciprocal patterns of influence between parents and their anxiety-disordered children. It is suggested, therefore, that the patterns described below should be kept in mind when working with a child of any age with PTSD, regardless of whether or not their caregiver also demonstrates PTSD symptoms (although, clearly they are more salient where the caregiver is also experiencing posttraumatic stress). It is also suggested that the second pattern in particular (overprotection) is likely to be reciprocal in nature. As is well documented in the child anxiety literature, when parents respond in an overprotective manner to a child's distress, that response contributes to the maintenance of the distress and elicits continuing overprotection. Understanding these reciprocal relationships is important to avoid falling into the trap of blaming one or other member of the dyad.

The three patterns are:

1. Withdrawn/ Unresponsive/ Unavailable
   Owing to their own trauma-induced impairments, the adult is less available to the child. Their ability to read, recognise and respond sensitively to the child is significantly compromised.
2. Overprotective/ Constricting
   After a traumatic event occurs, parents may become more protective and less granting of autonomy. Although an understandable response, often driven by fear that the child may be traumatised again, prolonged overprotection can send negative messages to a child, including, 'the world is not safe', and 'there is still something to be frightened of'.[55]
3. Re-enacting/ Endangering/ Frightening
   A traumatised adult may become preoccupied with reminders of the traumatic event and attempt to discuss the event repeatedly with their child. (Of course, it is also possible that a non-traumatised caregiver who is concerned for their child may engage in this same pattern – of talking with their child at length about the traumatic event and how they are feeling. While avoiding the topic altogether is not helpful either, it is important to find a balance and not to allow the issue to continually dominate interactions with the child).

In concluding their discussion of these relational patterns, Scheeringa and Zeanah[13] recommended that for young children experiencing posttraumatic stress, caregiver symptomatology must be attended to first. This recommendation will be further discussed below.

Assessment

Note that many of the screening, assessment, and diagnosis issues discussed in the previous chapter with reference to adults, are relevant for children and adolescents also. Clearly, clinical judgement is required to make adjustments as necessary. This section highlights some specific issues to be considered when working with this age group.

Who to talk to? The low rate of agreement between parents and children

There is a long history of studies indicating a low level of agreement between parents and children when it comes to internalising symptoms.[56] Many studies have suggested that this pattern holds true for trauma exposure and posttraumatic stress symptoms, with parents under-reporting children's and adolescent's exposure and symptomatology.[e.g., 57,58-60] Unfortunately, as noted by Stover et al.,[60] in the acute aftermath of a traumatic event, first responders typically refer questions about a child's wellbeing and responses to parents, rather than to the child. Even when children are included in their own assessment, clinicians often give priority to parent report, based on the assumption that parents are more accurate reporters.61 When it comes to pre-schoolers, clinicians have traditionally been in the habit of relying solely on parental report.

Parents' tendency to underreport their children's trauma exposure and posttraumatic stress symptoms is troubling for a number of reasons:

- Family and social support has been found to be an important protective factor in terms of whether exposure to PTEs converts into a posttraumatic mental health problem in children and adolescents.[62,63] However, if parents do not realise that their children have been exposed to a PTE (or that they have been distressed by it), they are not able to provide appropriate support.
- As already noted, parents are gatekeepers for their children's access to psychological care. If they do not see that there is a problem, they are not likely to seek intervention for their children.
- Similarly, if parents are not aware of their children's exposure to a PTE, they may not be appropriately protective (e.g., in the case of physical or sexual abuse).

The simple conclusion to be drawn from the above information is that, even in the case of preschool-aged children, it is not only important, but necessary, to seek information from the child as well as the parent(s). Shemesh et al.[59] note that parental reports of their children's trauma symptomatology often offer important information about the parents' own level of posttraumatic stress.

When to assess for trauma exposure and symptoms

In their Practice Parameters, the American Academy of Child and Adolescent Psychiatry[27] (AACAP) recommends, as a minimum standard, inclusion of questions about exposure to potentially traumatic events during any psychiatric assessment of children and adolescents. This recommendation is based on the high degree of trauma exposure experienced by children and adolescents, and the importance of identifying symptoms early. Thus, the guidelines state that "even if trauma is not the reason for referral, clinicians should routinely ask children about exposure to commonly experienced traumatic events… and if such exposure is endorsed, the child should be screened for the presence of PTSD symptoms" (p. 418).

Following on from this recommendation, it is important to briefly consider the place of screening in the identification of children and adolescents at risk for developing PTSD. Trauma exposure is a diagnostic requirement for PTSD. And yet, as discussed, not all children and adolescents exposed to a PTE develop PTSD. The use of screening instruments to identify at-risk youth following trauma exposure would, in principle, seem to be a good idea in that it potentially allows for the early identification and treatment of this group. Unfortunately, very few cost-effective and valid screening tools for the identification of childhood PTSD exist.[64] Commonly used screening tools include the University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index (UCLA PTSD-RI)[65], the Child Trauma Screening Questionnaire (CTSQ)[66], and the PTSD subscale of the Child Behaviour Checklist (CBCL).[67] Although relatively little literature examining the merits of screening children and adolescents for PTSD exists, in line with the adult literature, the developing consensus appears to be that screening of high-risk groups, as opposed to non-targeted population-wide screening (e.g., all youth in a disaster-impacted community) may be the more useful approach. While population-wide screening arguably identifies children who would not otherwise be identified, there are risks associated – including the risk of false positives, and the service/resource implications.

How to assess for trauma exposure and symptoms

A number of reviews of PTSD measures in children and adolescents have now been published.[e.g., 64,68] These reviews provide useful information regarding the assessment of PTSD in children and adolescents at a level of detail beyond the scope of this chapter. Many of the most commonly used assessment tools are open to the following criticisms:

- They represent downward extensions of measures originally designed for adults and often have not undergone systematic psychometric evaluation in their revised form.
- They often fail to take developmental considerations into account, with scales typically designed for broad age ranges, such as 8 to 16 years.
- They lack different versions for different informants – the necessity of obtaining information from both the child and parent has already been discussed, yet many of the most commonly used measures do not have parallel versions that allow clinicians to do this.
- They may require intensive training to administer and are very lengthy (pertains to interviews only).

Table 3.1. Assessment tools for children and adolescents

Instrument	Age range	Interview / questionnaire
Preschool Age Psychiatric Assessment (PAPA)[69]	2–5 years	Structured diagnostic interview completed with caregiver.
Diagnostic Infant Preschool Assessment (DIPA)[71]	1–6 years	Structured diagnostic interview completed with caregiver.
The Trauma Exposure Symptom Inventory – Parent Report Revised (TESI-PRR)[72]	0–6 years	Checklist completed by caregiver.
Trauma Symptom Checklist for Young Children (TSCYC)[73]	3–12 years	Questionnaire completed by caregiver.
The Trauma Exposure Symptom Inventory – Parent Report (TESI-PR)[76]	3–18 years	Checklist completed by caregiver.
The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA)[77]	8–15 years	Interview completed with youth.
The Children's PTSD Inventory (CPTSDI)[79]	7–18 years	Interview completed with youth.
The Anxiety Disorders Interview Schedule for Children – Child and Parent Versions (ADIS-IV-C/P)[80]	7–17 years	Interview completed separately with youth and caregiver (i.e., parallel versions).
The Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Parent and Lifetime Version (K-SADS-PL)[81]	7–17 years	Interview completed separately with youth and caregiver (i.e., parallel versions).
The Trauma Symptom Checklist for Children (TSCC)[82]	8–16 years	Questionnaire completed by youth.
The Child PTSD Reaction Index (CPTSD-RI)85 and the UCLA PTSD Index for DSM-IV (UPID)[86]	6–18 years	Questionnaire completed by youth. UPID has parallel child, adolescent and parent versions.
The Child PTSD Symptom Scale (CPSS)[87]	8–18 years	Questionnaire completed by youth.

Description	Psychometric properties
Allows diagnosis of most common childhood psychiatric disorders (ODD, SAD, ADHD, MDD & PTSD). Includes empirically validated developmental modifications to PTSD criteria. Provides measure of degree of impairment or disability caused by symptoms.	Good test–retest reliability. Adequate intraclass coefficients for the PTSD category.[70]
First interview to be evaluated with children under the age of 2 years. Allows diagnosis of most childhood psychiatric disorders. Includes empirically validated developmental modifications to PTSD criteria. Provides assessment of child distress and functional impairment caused by symptoms.	Acceptable reliability and validity. Adequate–excellent test–retest reliability.[71]
Checklist of potentially traumatic events to which a child may have been exposed – e.g., accidents, abuse, witnessing community and domestic violence, terrorism. Caregiver indicates the child's age when the event occurred and indicates whether the child experienced reactions to each event.	Currently no psychometric data available.
Assesses post-trauma responses. Produces nine clinical scales and a total scale (providing tentative PTSD diagnosis). Yields several scales designed to ascertain the validity of caregiver reports. Designed specifically for traumatised children in this age range.	Established norms and clinical cut-offs based on standardisation sample (containing only a small number of 3 & 4 year olds). Acceptable scale internal consistency, moderate convergent and discriminant validity on the Trauma Symptom Checklist completed by 8–12 year olds.[74] Excellent concurrent validity demonstrated with other parent report measures.[75]
Original measure of trauma exposure. Caregivers indicate whether their child has experienced any of a range of trauma events (ranging from accidental injury to sexual assault). Caregivers indicate their child's age for each event endorsed, as well the child's reactions in response to the trauma.	Adequate test–retest reliability.
Downward modification of the Clinician Administered PTSD Scale (CAPS).[78] Assesses current and lifetime trauma exposure + frequency and intensity of PTSD symptoms in relation to these events.	Sound psychometric properties.[11,41]
Assesses presence of PTSD symptoms relative to specific events. Allows for DSM-IV diagnosis.	
Caregiver and child interviewed separately. Diagnoses reached on the basis of the combined information. Allows for diagnosis of all anxiety disorders, depressive disorders and behavioural disorders following DSM-IV criteria. The PTSD module lacks specificity around symptom clusters, frequency and duration of symptoms. Allows for identification of lifetime or present exposure to specified traumatic events.	Strong psychometric properties for the interviews in their entirety. Psychometric data on the PTSD module less well described, with existing data suggesting excellent inter-rater reliability and fair parent–child agreement.[25]
Assesses broad psychopathology using DSM-IV criteria. Allows assessment for lifetime and present PTSD, trauma exposure, and distinction between full and partial PTSD.	Strong psychometric properties for the overall scale. However, the PTSD module has poor test–retest reliability.[81]
Typically used to assess PTSD symptoms following sexual-related trauma, although can be used more generally. Generates six clinical scales (depression, anger, anxiety, posttraumatic stress, sexual concerns and dissociation).	One of the most thoroughly validated measures, with strong psychometric properties.[83,84]
The UPID is a revision of the CPTSD-RI. Both assess for frequency and duration of posttraumatic symptoms. Revision necessary because the CPTSD-RI does not address all PTSD symptoms. UPID assesses exposure to 26 different types of trauma and assesses all DSM-IV diagnostic criteria.	Original CPTSD-RI has strong psychometric properties. Little research to date on the UPID.
Downward modification of the adult Posttraumatic Diagnostic Scale. Assesses for presence, frequency and severity of DSM-IV PTSD symptoms in the past month. Able to generate a diagnosis. Allows assessment of functional impairment related to PTSD symptomatology.	Strong psychometric properties.

Table 3.1 summarises key information relating to the most commonly used and psychometrically strong assessment tools. Generally speaking, although many of the clinical interviews require training and are quite time-intensive, a structured interview is regarded as a better assessment measure for diagnostic purposes than a questionnaire.[26,27] Questionnaires, on the other hand, can be very useful for repeated assessments when monitoring treatment progress over time. The Clinician Administered PTSD Scale for Children and Adolescents (CAPS-CA)[77] is arguably the most commonly used diagnostic interview, although it is best suited to research settings and can be cumbersome to use in routine clinical practice. The Diagnostic Infant Preschool Assessment (DIPA)[71] is a recently published interview for use with preschool-aged children that is expected to become the gold standard in assessing this age group. Among the self-report questionnaires, the Child PTSD Reaction Index (CPTSD-RI)[85] and its revision, the UCLA PTSD Index for DSM-IV (UPID),[86] as well as the Child PTSD Symptom Scale (CPSS),[87] tend to be the most commonly used measures. More general measures such as the Child Behavior Checklist (CBCL)[88] are also often used to complement the more specialised assessment of trauma symptoms.

Good practice points

GPP30 Questions about exposure to commonly experienced potentially traumatic events should be included as standard during any psychiatric assessment of children and adolescents. If such exposure is endorsed, the child should be screened for the presence of PTSD symptoms.

GPP31 Children and adolescents are typically dependent upon an adult to present them for assistance. This means that it is equally important to engage with and maintain the relevant adults' motivation to pursue assistance, as it is the child or adolescent's.

GPP32 Assessment of children and adolescents should include assessment of the system (typically the family) in which they live, as their symptoms will both influence and be influenced by what else is happening within the system.

GPP33 The rate of agreement between parents/caregivers and children in relation to internalising symptoms of posttraumatic mental health problems may be very low. Practitioners should not rely solely on an adult's report of a child's internalising symptoms – even if the child is preschool-aged. Where assessment involves very young children (aged 0–3) this should include an evaluation of the behaviour of the child with particular reference to developmental stage and attachment status. Some symptoms of PTSD such as sense of foreshortened future and inability to recall some aspects of the trauma are unlikely to be usefully assessed in this age group.

GPP34 In children, the range of potential posttraumatic mental health problems includes behavioural and attentional problems (such as oppositional defiant disorder and attention deficit hyperactivity disorder) as well as anxiety disorders (such as separation anxiety disorder) and affective disorders.

GPP35 For children and adolescents, a structured clinical interview is regarded as a better assessment measure than a questionnaire for making a diagnosis.

Intervention planning

Access to psychological care

Many of the issues identified in the intervention planning section of the previous chapter apply equally to working with children and adolescents. However, there are some additional considerations in working with children and adolescents outlined in this section.

Although efficacious treatments for PTSD in children and adolescents exist, only a minority of children with posttraumatic mental health problems engage in treatment. For instance, of traumatised children and adolescents living in urban settings, up to 90 per cent have been reported to terminate treatment early.[e.g., 89] In the aftermath of a community-wide event, such as a natural disaster, it has been repeatedly noted that children and families do not access existing care pathways (such as child and adolescent mental health services). One of the most promising strategies for engaging and keeping children, adolescents and families in treatment has been found to be the delivery of services in schools.[90] This is discussed in greater detail below.

What's different about working with children and adolescents?

Although the core principles of each of the major therapeutic approaches used is very similar when applied to either children, adolescents or adults experiencing posttraumatic stress, there are several considerations that need to be kept in mind when working with children and adolescents.

- Parents/caregivers need to be involved to some degree. There are many reasons for this:
  - As previously discussed, the significant adults around children and adolescents function as gatekeepers in terms of access to and continued engagement in therapy. In order to ensure that children and adolescents return for therapy sessions, parents/caregivers need to be convinced that the work proposed is worthwhile. This is particularly true of trauma-focussed cognitive behavioural therapy (TF-CBT), where one of the core elements (the telling and retelling of the trauma narrative) often seems counter-intuitive to parents, who tend to be concerned that this will serve only to re-traumatise their child. Time spent explaining the rationale for this kind of strategy, as well as answering any questions parents might have is essential for the successful engagement of families.
  - The majority of children and adolescents (obviously this varies depending on the age and temperament of the child) benefit from parental 'coaching' around the use of strategies they are learning in therapy. Thus, parents or caregivers can play a crucial role in helping children and adolescents to generalise and maintain any gains they make in a therapy situation.
  - Many of the homework tasks set in therapeutic approaches such as TF-CBT require the active participation of a parent/caregiver (e.g., *in vivo* exposure hierarchies, reward systems and behavioural experiments).
  - Despite the documented tendency for parents to underreport their children's trauma exposure and symptomatology, they are often able to provide important information that children may have forgotten, were not aware of, or do not consider to be important. It is also important to regularly get parents' perspectives on how the family as a whole is functioning.
  - As discussed, parents and children influence each other. It is important for clinicians to regularly (if informally) assess how parents are functioning. (This is particularly important following exposure to a community-wide trauma such as a natural disaster, but research has also shown that a significant proportion of parents develop trauma symptomatology themselves after their child has been exposed to a PTE – such as a car accident – in which they themselves were not involved).
  - Parents are experts when it comes to their children (although, as previously discussed, this expertise may be compromised if parents themselves are struggling). An excellent example of this is the way in which parents are able to interpret or 'translate' their preschool-aged child's body language for therapists.
- Programs need to be tailored to meet the developmental needs of an individual child. It is not usually appropriate to simply take an adult treatment protocol and try to modify it for a child or adolescent. Well-validated protocols designed specifically for children and adolescents of all ages now exist, and these should be used in preference to attempting to modify an adult program. At all times, the developmental stage and capabilities of the child should be kept in mind – remembering that chronological age does not necessarily equate to levels of cognitive functioning and developmental mastery.
- Children tend to respond well to highly visual materials. Educationalists also recommend the use of different media in working with adolescents, who are used to being exposed on an everyday basis to a variety of media.

The role of parents/caregivers in treatment

Somewhat unusually in the field of child and adolescent mental health, there are some types of trauma exposure resulting in PTSD (child sexual and physical abuse) where, historically, treatment has been offered to parents alone, without involving children. In other types of trauma exposure (e.g., accidental injury, natural disaster), treatment has historically focussed on the child. Thus, there are different questions to be considered depending on the type of trauma exposure examined. In the child sexual and physical abuse literature, the focus is on how three distinct types of treatment (parent-only, child-only, and parent + child) compare. In other literatures, the focus is on whether involving parents in treatment enhances outcomes for children and adolescents. Unfortunately, this area has not been well researched to date. However, early work with children who had experienced sexual abuse[e.g., 91] suggested that treating parents in isolation from their children may not be the best way to help children overcome PTSD. In this study, Deblinger et al.[91] delivered TF-CBT to parents alone, children alone, or parents plus children. These three conditions were then compared with community treatment as usual. The results indicated that the combined parent and child condition produced superior results. Runyon, Deblinger and Steer[92] compared a parent-only group cognitive behavioural therapy (CBT) treatment with a parent plus child group CBT treatment in 60 youth aged 7 to 13 years who had experienced physical abuse. The combined intervention was found to produce greater improvements in posttraumatic symptoms and parenting skills compared to the parent-only condition.

Studies have also indicated that parental distress is negatively related[93,94] and parental support is positively related[95] to children's outcomes (as measured by PTSD symptomatology), following TF-CBT. In these studies, the trauma exposure was to a terrorist act and sexual abuse.[94,95]

However, a recent study[96] found that posttraumatic symptoms in adult caregivers did not compromise treatment outcomes for children. Thus, in circumstances where the adult caregiver is also experiencing posttraumatic mental health problems, it is preferable to treat the caregiver before treating the child, but if this is not possible, the emerging evidence supports going ahead and treating the child.

Does it matter where treatment occurs?

Increasingly, treatments for child PTSD are being offered within a school environment, often by school professionals.[97] In an important paper, Jaycox et al.[98] demonstrated the significance of location. This study allocated non-treatment-seeking children who were experiencing posttraumatic stress 15–24 months following Hurricane Katrina to one of two active treatments: TF-CBT delivered individually in a clinic setting versus group-based cognitive behavioural intervention for trauma in schools (CBITS). Both treatments were offered free of charge as part of Project Fleur-de-lis.[99] The average age of children was 11.6 years. Although both treatments produced comparable and significant reductions in PTSD symptoms, the crucial difference was in uptake. Within the CBITS condition, 98 per cent and 91 per cent of children commenced and completed treatment, respectively. Within the TF-CBT condition, only 37 per cent of children attended the initial assessment. Of these children, 32 per cent were found not to meet PTSD criteria on the K-SADS. Thus, 23 per cent of allocated children commenced treatment in this condition, with 15 per cent completing treatment. The authors noted that, "CBITS was far more accessible to families who may not have been willing or able to participate in individual, clinic-based treatment" (p. 230).

Clearly, it will not always be possible or appropriate to offer treatment within the school setting, particularly where an individual traumatic event is the focus. In situations where many children in the same school were exposed, however – such as a natural disaster or terrorist attack – school-based group interventions should be considered seriously in the first instance.

Good practice points

GPP36 As noted in reference to assessment, children and adolescents are typically dependent upon an adult to present them for treatment and ensure that they attend subsequent appointments. This means that it is equally important to engage with and maintain the relevant adults' motivation to pursue treatment, as it is the child or adolescent's.

GPP37 For children and adolescents, treatment needs to be tailored to meet the developmental needs of the individual. Protocols that have been designed specifically for children and adolescents should be used in preference to attempting to modify an adult treatment protocol.

GPP38 When the adult caregiver of a child with PTSD is also experiencing posttraumatic mental health problems, their symptoms may exacerbate each other's. For this reason, it may be preferable to treat the caregiver first or in parallel.

GPP39 In the treatment of children and adolescents, parents/caregivers need to be involved to some degree, not only because of their gatekeeper role in terms of access to and continued engagement in therapy, but also because of their role in helping to generalise and maintain treatment gains, direct participation in homework tasks (e.g., reward systems), and providing important information that the child may have forgotten, be unaware of, or not recognise the importance of.

GPP40 The delivery of services in schools may be an effective strategy for engaging and keeping children, adolescents and families in treatment.

GPP41 Parent/caregiver involvement in assessment and treatment is desirable for children and adolescents with ASD or PTSD.

GPP42 Practitioners who provide mental healthcare to children, adolescents or adults with ASD and PTSD, regardless of professional background, must be appropriately trained to ensure adequate knowledge and competencies to deliver recommended treatments. This requires specialist training, over and above basic mental health or counselling qualifications.

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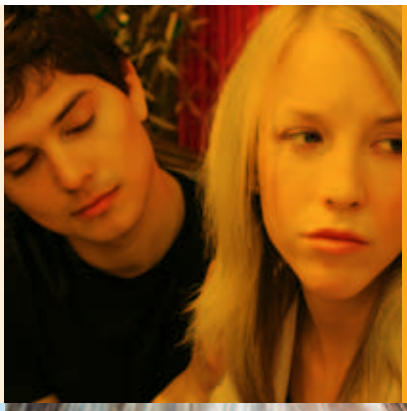

Interventions

4

Please note that the interventions described in this section are those that are referenced in the systematic review of the literature; not all are recommended treatments. Interventions within each category are listed in alphabetical order.

A range of psychological and pharmacological interventions is currently used in the treatment of people with ASD and PTSD. The purpose of this chapter is to provide a brief summary of the most common interventions. In routine clinical practice, of course, these interventions do not occur in isolation but in the context of a trusting therapeutic relationship and, in many cases, broader mental healthcare for a range of associated posttraumatic mental health issues. They are also not mutually exclusive and the overall treatment may involve several of these interventions at various stages of the treatment process.

The systematic evidence review underpinning the development of these Guidelines investigated the full range of current treatments used for people with PTSD, people with ASD, and 'treatment for all' following exposure to a traumatic event. In this section, the main interventions are described with particular attention to those mentioned in any of the Guidelines recommendations. It is beyond the scope of these Guidelines to describe every intervention (including those with little or no empirical evidence base) and the interested reader is referred to the relevant literature.

This chapter begins with brief descriptions of pre-incident preparedness and interventions for all, before going on to discuss psychological interventions, pharmacological interventions, psychosocial rehabilitation, and physical therapies. These distinctions are somewhat arbitrary. Psychological first aid, for example, while usually considered an 'intervention for all' in the exposed populations, could be (and is) also offered as pre-incident preparedness training. Similarly, stress management (or stress inoculation), while considered below as a psychological treatment for PTSD, could also be used appropriately as pre-incident preparedness or an intervention for all.

Pre-incident preparedness

Pre-incident preparedness training

Very little has been written on pre-incident preparedness training and, as noted in the systematic review, there is little in the way of research evidence to suggest which elements may or may not be helpful. Nevertheless, it usually involves a broad range of strategies to enhance expectations of recovery and provide education about adaptive coping strategies to reduce the adverse impact of a traumatic experience.

Post-incident interventions for all

Psychological debriefing

The terms psychological debriefing and critical incident stress debriefing (CISD) are often used interchangeably. The former describes a class of interventions delivered shortly following a trauma (usually between 24 and 72 hours) that aim to relieve distress and facilitate a rapid return to normal functioning, thereby mediating or avoiding long-term psychopathology. Psychological debriefing operates on the principles of ventilation (an opportunity to talk about the experience), normalisation of distress, and psychoeducation regarding presumed symptoms. CISD, on the other hand, is a specific form of debriefing developed in the 1980s.[1] It centres predominantly around group-based interventions for secondary victims such as emergency services personnel, rather than primary victims. While generally group-based, it also advocates individual (or one-on-one) interventions as an acceptable and expected variant. It relies heavily on processes of reconstruction of the traumatic event, ventilation, and normalisation, and includes a structured education component. More recently, CISD has been amalgamated within a framework of self-help activities and structured organisational processes, called critical incident stress management (CISM).[2] Note that CISD and psychological debriefing differ from operational debriefing, a group process undertaken in high-risk industries to review a particular operation or activity. The aim of operational debriefing is to review the events and processes of the operation and to apply the lessons learnt to future events. Operational debriefing is considered good practice in high-risk industries as a method of improving service quality and is not a focus of these Guidelines.

Psychological first aid

Psychological first aid (PFA) seeks to reduce distress and attend to basic needs following a potentially traumatic event by providing simple interventions such as comfort, information, support, and practical assistance.[3] There are eight core components of psychological first aid, as follows:

1. initiating contact and engaging with an affected person in a non-intrusive, compassionate and helpful manner
2. ensuring immediate and ongoing safety, and providing both physical and emotional comfort
3. stabilising survivors who are overwhelmed and distraught by providing reassurance and containment
4. gathering information in order to determine immediate priority needs and concerns, and to tailor subsequent PFA interventions
5. providing practical assistance in helping the survivor address immediate needs and concerns
6. connecting the survivor with social supports by helping to structure opportunities for brief or ongoing contacts with primary support persons and/or community helping services
7. providing information on coping, including education about stress reactions and coping (often in a written format)
8. linking the survivor with appropriate services and providing information about services that may be needed in the future.

Thus, the primary goal of PFA is to enhance an individual's natural resilience and coping ability in the face of trauma.

Stepped care

A stepped care model recognises that not all those exposed will develop a diagnosable disorder; many will experience only subthreshold symptoms and others will not experience significant symptomatology at all. Therefore, stepped care aims to ensure that individuals receive care commensurate with the severity and complexity of their need. The approach involves ongoing monitoring of people who are more distressed and/or at heightened risk of poor psychological adjustment, with increasingly intensive interventions delivered as indicated.

Psychological interventions for ASD and PTSD

Brief psychodynamic psychotherapy

Building on traditional psychotherapeutic approaches, psychodynamic therapy encourages the individual to use the supportive relationship with a therapist, and the transference that occurs within that relationship, to verbalise and reflect upon their experiences. This process allows unconsciously held thoughts, urges and emotions to be brought into conscious awareness, which in turn allows the cognitive, emotional and social aspects of experience to be integrated into a meaningful structure that helps the person to accept and adapt to their experiences. Brief models of psychodynamic psychotherapy have been developed for the treatment of PTSD following recent traumatic events. Brief psychodynamic therapy focusses on the emotional conflicts caused by a specific traumatic event. The patient is encouraged to put their experience into words and examine the meaning that the event and surrounding circumstances holds for them. Through this retelling, the therapist assists the individual to integrate the event and re-establish a sense of purpose and meaning in life.

Eye movement desensitisation and reprocessing

Another type of trauma-focussed psychological intervention is eye movement desensitisation and reprocessing (EMDR), a treatment for PTSD developed by Shapiro in the late 1980s. EMDR is based on the assumption that, during a traumatic event, overwhelming emotions or dissociative processes may interfere with information processing. This leads to the experience being stored in an 'unprocessed' way, disconnected from existing memory networks. In EMDR the person is asked to focus on trauma-related imagery, negative thoughts, emotions, and body sensations while simultaneously moving their eyes back and forth following the movement of the therapist's fingers across their field of vision for 20–30 seconds or more. This process may be repeated many times. It is proposed that this dual attention facilitates the processing of the traumatic memory into existing knowledge networks, although the precise mechanism involved is not known. (Forms of bilateral stimulation other than following a therapist's fingers, such as tapping, light bars, or auditory stimulation, have also been used. These will not be discussed further here since they have not been tested in the RCTs reported in the systematic literature review).

Over time, EMDR has increasingly included more treatment components that are comparable with the cognitive behavioural therapy (CBT) interventions described below. These include cognitive interweaving (analogous to cognitive therapy), imaginal templating (rehearsal of mastery or coping responses to anticipated stressors), and standard *in vivo* exposure. Combined with its initial inclusion of imaginal focus on traumatic images, EMDR now includes most of the core elements of standard trauma-focussed CBT (TF-CBT). In addition, the protocol has shifted from a single session treatment to eight phases of treatment with the above elements included, comparable in length to standard trauma-focussed CBT. The unique feature of EMDR is the use of eye movements as a core and fundamental component throughout treatment.

Group therapy

Group therapy is, of course, not an intervention per se, but rather a vehicle for delivering an intervention. Group therapies for PTSD have included supportive, psychodynamic and cognitive behavioural approaches (including exposure, cognitive processing therapy (CPT), problem-solving, etc.). Common features include: a relatively homogenous group membership, provision of mutual support, acknowledgement and validation of the traumatic experience, and normalisation of traumatic responses. The presence of other individuals with similar experiences may help to overcome a belief that the therapist cannot be helpful because he or she has not experienced the specific trauma. The group may also be used to promote a non-judgmental approach towards behaviour required for survival during the traumatic event.

Hypnosis

Hypnotherapy is the therapeutic application of hypnosis to various mental health problems. Hypnosis is achieved through an induction process and may be likened to a form of dissociation. The hypnotic state is characterised by heightened mental focus and suggestibility, allowing the therapist to implant suggestions that aid the individual in better controlling their symptoms. It is important to recognise that hypnosis is not an intervention in itself; rather, it is the induction of a state of relaxation and receptivity that (purportedly) makes interventions easier to implement. Thus, hypnosis in PTSD may be used as a precursor to several interventions including imagery, stress management techniques, ego strengthening self-talk, and exposure.

Imagery rehearsal

Imagery rehearsal therapy (IRT) is a cognitive behavioural approach for the treatment of chronic trauma-related nightmares. IRT involves the person recalling the dream and then changing the imagery of the dream in such a way that the new version is not upsetting and that increases their sense of mastery or control. The individual then rehearses the changed imagery in their imagination, particularly just before going to bed.

Interapy

Interapy is a broad term applied to a range of internet-mediated therapies. Although some web-based interventions operate as purely self-help approaches with no therapist involvement, in most cases there is some limited contact between the therapist and the individual with PTSD via a computer. This approach is likely to be particularly useful for people living in remote areas, for those who are physically disabled and have restricted mobility, or who are unwilling to seek face-to-face therapy due to anxiety or fear of stigmatisation. Web-based treatment for PTSD usually includes psychoeducation, symptom management, exposure, and cognitive reappraisal, all of which involve structured writing assignments that can be submitted to the therapist for feedback.

Interpersonal therapy

Interpersonal therapy (IPT) is a time-limited therapy that was originally designed for the treatment of depression. IPT considers that interpersonal relationships are important to the formation and maintenance of psychological problems due to a strong relationship between symptoms and social environment, that is, interactions with other people affect psychological wellbeing and vice versa. IPT focusses on identifying specific problems and patterns in personal relationships, and on building skills to improve interpersonal functioning and increase social support. It may include addressing grief over lost relationships, different expectations in relationships, changing roles in relationships, and improving social skills.

Mindfulness-based therapies

Mindfulness-based therapies are considered part of the 'third-wave' of cognitive and behavioural psychotherapies, and include acceptance and commitment therapy (ACT), mindfulness-based cognitive behavioural therapy (MCBT) and mindful meditation. Although relatively new to Western approaches, mindfulness has a long history of practice in Eastern philosophies (e.g., Buddhism, Taoism and Yoga). Mindfulness can be defined as 'paying attention in a particular way: on purpose, in the present moment, and non-judgmentally'.[5]

Narrative exposure therapy

Narrative exposure therapy (NET) is a standardised short-term intervention adapted from testimony therapy (traditionally used with survivors of torture and civilian casualties of war), as well as from mainstream exposure approaches. It was originally developed both to treat survivors and to document human rights violations. In NET, the person is asked to construct a narrative of their life from early childhood to present, focussing in detail on the traumatic events and elaborating on the associated thoughts and emotions. It is proposed that NET works in two ways: promoting habituation to traumatic memories through exposure, and reconstructing the individual's autobiographic memory.

Stress management

The term *stress management* is used here to cover a broad range of non-trauma-focussed cognitive, behavioural and physiological techniques aimed at reducing levels of arousal and modifying lifestyle factors that contribute to an individual's level of stress or anxiety. The application of stress management to PTSD aims to reduce arousal symptoms and address the impact of anxiety and avoidance symptoms on the individual's lifestyle. Core components of stress management used in PTSD may include: a) physical strategies such as relaxation training, controlled breathing (to counter hyperventilation), aerobic exercise, sleep hygiene and diet; b) cognitive strategies such as adaptive coping self-statements for use when confronting feared or avoided situations, distraction techniques and thought stopping; and c) behavioural strategies such as structuring daily routines, increasing enjoyable activities and utilising social support.

Supportive counselling and present centred therapy

Supportive counselling, another non-trauma-focussed approach, focusses on aspects of a person's current life situation with a view to addressing and solving current issues or problems. In PTSD, supportive counselling addresses problems arising from posttraumatic psychopathology as well as other general life circumstances. It aims to help the individual better understand and help themselves through the application of practical problem-solving and coping strategies. The level of therapist direction and advice varies in supportive counselling. One variant of supportive counselling is present centred therapy. These approaches are often used as comparison conditions in randomised controlled trials.

Trauma-focussed cognitive behavioural therapy

The term *trauma-focussed cognitive behavioural therapy* (TF-CBT) is a subset of trauma-focussed psychological treatment. Although it often includes psychoeducation and symptom management strategies (notably arousal reduction), the two core interventions under the rubric of TF-CBT for PTSD are exposure and cognitive restructuring. Thus, TF-CBT strategies are derived from behavioural and cognitive theories. These are short-term, structured psychological interventions that aim to address the emotional, cognitive and behavioural sequelae of exposure to traumatic events.

Although the following intervention types are described separately, there is much overlap and experienced clinicians often use combinations in routine clinical practice. A common approach, for example, would be to use psychoeducation, anxiety management, exposure, cognitive restructuring, and relapse prevention to treat PTSD. Eye movement desensitisation and reprocessing incorporates many of these elements also, and EMDR practitioners will often add *in vivo* exposure to their intervention.

Exposure therapy

Exposure therapy has long been established as an effective treatment for a range of anxiety disorders. The key objective of exposure therapy is to help the person confront the object of their anxieties. A fundamental principle underlying the process of exposure is that of *habituation*, the notion that if people can be kept in contact with the anxiety-provoking stimulus for long enough, their anxiety will inevitably reduce. This may occur within an exposure session (within-session habituation) or across a series of sessions (between-session habituation). More contemporary models emphasise information processing as a key mechanism. Exposure therapy, starting with the early desensitisation treatments with veterans conducted by Keane and colleagues and then developed by Foa's group into prolonged exposure (PE), has become the cornerstone of psychological treatment of PTSD. Exposure therapy for PTSD involves confronting the memory of traumatic experiences in a controlled and safe environment (imaginal exposure), as well as confronting trauma-related avoided situations and activities through *in vivo* exposure. The importance of grading the exposure (often using a hierarchy), prolonging the exposure until the anxiety has reduced, and repeating the exposure item until it evokes minimal anxiety are central to traditional exposure approaches.

Cognitive therapy

Beck introduced cognitive therapy (CT) as a treatment for depression in the 1970s, and several others were promoting similar approaches around the same time (e.g., Ellis, Meichenbaum). Since then, it has been successfully used in the treatment of a range of other emotional disorders including anxiety disorders and, to some extent, the psychoses and personality disorders (see Beck[6] for an overview). In the treatment of PTSD, cognitive therapy helps the individual to identify, challenge and modify any biased or distorted thoughts and memories of their traumatic experience, as well as any subsequent maladaptive or unhelpful beliefs about themselves and the world that they may have developed.

Cognitive processing therapy

A particular form of cognitive therapy refined specifically for the treatment of PTSD is cognitive processing therapy.[7] CPT appeared as a 12-session cognitive-behavioural manualised treatment for PTSD that systematically addresses key posttraumatic themes, including safety, trust, power and control, self-esteem and intimacy. Treatment helps the person to identify unhelpful thoughts and beliefs ('stuck points'), challenge them, and replace them with rational alternatives in an adaptation of standard cognitive therapy approaches. The systematic manner in which CPT identifies key themes and issues associated with reactions to the trauma makes it highly suitable for addressing the more complex psychiatric sequelae emerging from recent military conflicts. It has a smaller exposure component than imaginal exposure therapy (restricted to writing an account of the experience) and is therefore potentially more acceptable to veterans or practitioners seeking alternatives to purely exposure-focussed treatments. It also has the advantage of helping to address associated problems such as depression, guilt and anger.

Alternative approaches

Several novel treatments for PTSD have been promoted as working much more rapidly than standard treatments, although properly controlled studies are generally lacking at this point. These are sometimes collectively known as "power therapies". The most well known of these is emotion freedom techniques (EFT). EFT requires the client to focus on the traumatic memory while the therapist (or patient) taps lightly on various traditional acupuncture meridian points on the face, upper body and hands. Underlying EFT is the assumption that emotional disturbances associated with traumatic events are caused by disturbances in the body's energy field (meridian system) that can be restored using this technique. Other related approaches include thought field therapy (TFT), visual–kinaesthetic dissociation (VKD) and traumatic incident reduction (TIR). Another alternative approach, the counting method, was developed by Ochberg.[4] This method involves the therapist counting out loud from 1 to 100 as the patient goes through the traumatic memory from start to finish in their mind. The counting itself is considered a way of assisting the patient to maintain focus on the traumatic memory and impede avoidance. Readers interested in any of these approaches are encouraged to consult the relevant literature.

Pharmacological interventions for PTSD

Pharmacological treatments (medications) used in PTSD are intended to ameliorate symptoms and, as a result, improve function. When the person is less symptomatic it may be easier to 'work through' or confront the traumatic memories in line with normal recovery processes. Medication is often used in combination with psychological treatment. A wide range of psychotropic (affecting a person's mental state) medications have been examined and used in clinical practice to treat PTSD. Of these, most are the focus of only one trial (if that), with the only group of drugs having a substantial body of research evidence being the selective serotonin reuptake inhibitor (SSRI) antidepressants.

Antidepressants

There are many different classes of antidepressant medication and a full description is beyond the scope of this chapter. Brief reference only will be made to those classes that have been used in the treatment of PTSD.

Often referred to as the 'new generation antidepressants', the SSRIs are the most widely used class in PTSD (and more generally), and the class that has the strongest research base. Common agents include fluoxetine, sertraline, paroxetine, and escitalopram, but there are several others. Although they have several possible side effects, they tend to have fewer than the older antidepressants, are relatively easy to use, and are relatively safe in overdose.

Since the SSRIs came onto the market, several other new generation antidepressants have appeared. The other common classes are: serotonin-noradrenaline reuptake inhibitors (SNRIs, e.g., venlafaxine); selective noradrenaline reuptake inhibitors (NRIs); noradrenaline-dopamine reuptake inhibitors (NDRIs); and noradrenergic and specific serotonergic antidepressants (NaSSAs).

The monoamine oxidase inhibitor (MAOI) antidepressants have been around for a long time. The best known of the older MAOIs is phenelzine, a drug that has been used in PTSD. The main problem with MAOI antidepressants is that they are very difficult to use and require careful dietary restrictions. More recently, a new type of MAOI has been developed, known as a reversible inhibitor of monoamine oxidase (RIMA, e.g., moclobemide), which is easier to use and does not require the dietary restrictions.

The other most common older class of antidepressant medications is the tricyclic antidepressants (TCAs, e.g., imipramine). These have been used with some success in PTSD in the past, but are less commonly used now and tend to be unsafe in overdose.

Atypical antipsychotics

The new generation of antipsychotic medications, usually known as 'atypical antipsychotics', are sometimes used as adjunctive pharmacotherapy in PTSD to supplement other medications in complex and treatment resistant cases. Commonly used antipsychotics in Australia include olanzapine, quetiapine, clozapine, and risperidone. They are designed to treat the agitation often seen in more chronic and complex PTSD presentations.

Hypnosedative agents

Another type of psychotropic medication that may be used to treat PTSD and related symptoms includes hypnosedative agents that are designed to reduce anxiety and treat insomnia. They are, therefore, drugs that have both sedative (quietening, tranquilising) and hypnotic (sleep-producing) effects. The group includes benzodiazepines (e.g., diazepam, temazepam, alprazolam), barbiturates (now only used in rare circumstances), and other sleeping medications.

Other medications

Although generally not supported by empirical data, several other classes of medication are often used in PTSD. Mood stabilisers are used to treat intense and sustained mood shifts; bipolar disorder is the primary example, but some people with chronic PTSD also show intense alterations in mood. Common mood stabilisers in Australia include carbamazepine and topiramate. Although originally developed for the treatment of epileptic seizures, anticonvulsants also appear to have mood stabilising properties and are occasionally used in PTSD.

Medications that are not traditionally considered to be psychotropic have also been borrowed from other areas of medicine to target specific PTSD symptoms. The most commonly used of these are medications that alter adrenergic function. These include beta-blockers (e.g., propranolol), alpha-1 adrenergic agonists (e.g., prazosin), and alpha-2 adrenergic agonists (e.g., clonidine). These drugs may be useful in reducing physiological arousal. A final example of a non-psychotropic medication that has been used to treat PTSD symptoms is the older antihistamine medicines.

Psychosocial rehabilitation interventions for PTSD

Traditionally, psychosocial rehabilitation interventions are used to facilitate independent living, socialisation, and effective life management in people who have chronic mental health conditions including PTSD.[8] Psychosocial interventions help an individual compensate for the negative effects of disability by reducing some of the problems associated with PTSD, such as lack of self-care/independent living skills, homelessness, high-risk behaviours, interactions with family or friends who do not understand PTSD, social inactivity, unemployment, and other barriers to receiving various forms of treatment/rehabilitation.[9] Components of psychosocial rehabilitation include social skills training and activities, job skills training, housing support, vocational rehabilitation, case management, and family support.[8]

Psychosocial rehabilitation often occurs alongside other treatments, but rather than aiming to reduce symptoms, it is designed to promote community integration and improved functioning.

There is increasing recognition that rehabilitation interventions that promote optimal vocational, family and social functioning should routinely begin in the earliest phase of care rather than being reserved for chronic conditions. For an individual with PTSD, this would entail early psychoeducation of the individual and family members, maximising existing social supports or creating new ones, and providing vocational support to enable the individual to maintain their optimal work/study performance.

Social emotional rehabilitation

Social emotional rehabilitation (SER) was designed as part of therapy specifically for veterans, and has three components. The first component is social skills training, which focusses on practising basic conversational skills, particularly those important for creating and maintaining social networks. The second component is anger management and problem-solving skills training which was designed to reduce temper outbursts by introducing alternative ways of expressing anger, teaching problem-solving and emotion regulation skills, as well as teaching veterans how to communicate assertively in a non-threatening way. The third component is veterans' issues management. In this component, veterans are taught how to talk to civilians about combat trauma and other military issues in a way that fosters understanding of these issues by the veteran's significant others. They are also taught to identify and challenge negative and dichotomous thinking (e.g., the notion that all civilians will not understand them/cannot be trusted because they have not been to war), which limits their social connections with others.

Vocational rehabilitation

A common focus of psychosocial rehabilitation will be vocational, helping the person with PTSD return to an optimal level of functioning. Although the goal for many will be paid employment, it does not have to be the only goal. Voluntary work, study, and other key roles in society such as parenting, are all a valid focus for vocational rehabilitation.

Depending on the current level of functioning, interventions may involve support to stay in the person's current role or employment, and/or to return to that role in a supported and graded fashion. In other cases, it may be a longer process, potentially involving retraining, with a view to finding meaningful occupation for the person. The benefits of work and related activities are well established[10] – provided that the workplace is not 'psychologically toxic' for the person. Psychosocial rehabilitation helps the person to regain the best possible level of social functioning and occupational functioning, which is so fundamental to quality of life.

Physical therapies for PTSD

Acupuncture

Acupuncture is an alternative medicine that treats patients by manipulating thin, solid needles that have been inserted into acupuncture points in the skin. According to traditional Chinese medicine, stimulating these points can correct imbalances in the flow of energy through channels known as meridians. The use of acupuncture for certain conditions (e.g., several types of pain, nausea, osteoarthritis of the knee) has been endorsed by the United States National Institutes of Health, the National Health Service of the United Kingdom, and the World Health Organisation. There is general agreement that acupuncture is safe when administered by well-trained practitioners using sterile needles, and carries a very low risk of serious adverse effects.

Repeated transcranial magnetic stimulation

An innovative and relatively new treatment that has shown some promise in depression has also been considered for the treatment of PTSD. Repeated transcranial magnetic stimulation (rTMS) involves the application of a pulsing high intensity current through an electromagnetic coil placed on the side of the head. Although immediate comparisons may be drawn with electroconvulsive therapy (ECT), the two procedures are completely different in application and in the effect on the patient. rTMS is a pain-free, non-invasive technique for stimulating cortical neurons which may assist in reducing the symptoms of various conditions, including PTSD.[11]

Interventions for children and adolescents

Most of the above interventions have been applied with children and adolescents, sometimes with minor adjustments, although few have been the subject of rigorous evaluation with that population. The purpose of this section is to provide additional information specific to this age group.

Cognitive behavioural intervention for trauma in schools

Cognitive behavioural intervention for trauma in schools (CBITS) includes most of the PRACTICE components of the TF-CBT program of Cohen et al. (see below)[12] It can be administered in either a group or individual format, does not typically include a parent component, and perhaps most importantly, is implemented in schools. It comprises ten group sessions and one to three individual sessions, and is specifically designed to be used in schools. CBITS provides a teacher component designed to educate teachers about the potential impact of trauma exposure on children's classroom behaviour and learning. In CBITS, the trauma narrative is developed and explored in individual sessions.

Psychodynamic trauma-focussed psychotherapies

Designed for younger children (three to five years of age in trials conducted to date), child–parent psychotherapy (CPP)[13] is a relationship-based treatment developed for young children exposed to domestic violence. CPP integrates elements of psychodynamic, attachment, trauma, cognitive–behavioural, and social learning theories. The child–parent relationship is viewed as the key mechanism for change in improving the child's emotional, social and cognitive functioning. The therapy focusses on safety, the joint construction between parent and child of a trauma narrative, affect regulation, and behavioural activation. Children and parents are seen together and individual sessions with the mother are scheduled as necessary. The following domains of functioning are targeted by the intervention: play; sensorimotor disorganisation and disruption of biological rhythms; fearfulness; reckless, self-endangering and accident-prone behaviour; aggression; punitive and critical parenting; the child's relationship with the perpetrator of the violence and/or the absent father; and separation issues related to therapy termination.[14]

Trauma-focussed cognitive behavioural therapy

Silverman and colleagues[15] reviewed psychological treatments for youth exposed to traumatic events using criteria for establishing empirically supported therapies developed by Chambless and colleagues.[16,17] Trauma-focussed cognitive behavioural therapy was the only treatment to meet these well-established criteria.

Although many different programs and protocols exist, the version of TF-CBT that is most well-known is the intervention developed by Cohen et al.[12] This program has been widely researched, and disseminated internationally (including through a web-based training program maintained by the Medical University of South Carolina; this high quality TF-CBT training program is free of charge). This program has been manualised and consists of a highly structured intervention in which parents and children are seen conjointly in 90-minute weekly sessions. The clinician works through eight standard components with the parent and child, adapting the pace and focus to meet the client's needs. The intervention is based on the acronym PRACTICE, with the eight components comprising:

Psychoeducation: educating parents and children about the type of traumatic event experienced (e.g., how common exposure to this type of event is), common trauma reactions, and the TF-CBT approach, as well as parenting skills (e.g., use of effective parenting interventions such as positive attention, praise, selective attention, time out, etc.)

Relaxation: controlled breathing, progressive muscle relaxation

Affective modulation skills: identification of feelings, positive self-talk, thought stopping, positive imagery, problem-solving, and self-regulation of negative affective states

Cognitive coping and processing: recognising the relationship between thoughts, feelings and behaviours; monitoring and changing inaccurate, unhelpful thoughts

Trauma narrative development and processing: creating a narrative of the child's trauma experience and helping the child to correct cognitive distortions related to this experience

***In vivo* exposure:** gradual exposure to feared, trauma-related stimuli

Conjoint parent/child sessions: in which the child shares their trauma narrative with their parent(s), and other family issues are addressed

Enhancing safety/future development: addressing concerns related to prevention of future trauma and a return to a normal developmental trajectory.

Completion of the PTSD module of the Kiddie Schedule for Affective Disorders and Schizophrenia for School-Aged Children – Parent and Lifetime Version (K-SADS-PL) interview[18] is also part of the TF-CBT protocol.

Scheeringa and colleagues have recently reported on the development and evaluation of a TF-CBT program for three-to-six-year-old children with PTSD.[19] The program is described as highly structured and consists of 12 sessions. Specific therapy strategies include psychoeducation about PTSD, recognition of feelings, training in coping skills, graduated exposure to trauma-related reminders using three modalities (drawings, imaginal and *in vivo*), and safety planning. The primary caregiver sits in on sessions 1, 2 and 12. Caregivers observe the remaining sessions on a TV monitor in order to become familiar with the material being taught to their children. Sessions 3–11 are split into two halves, with the therapist working with the child in the first half (observed by caregivers), and the therapist working with the caregiver in the second half of the session. This second half of the session was used by therapists to obtain caregivers' assistance in making sense of children's words and body language, as well as to discuss and problem-solve around homework tasks.

Summary

As noted above, many of the approaches described earlier in this chapter with reference to adults, have also been used with children. These include EMDR, stress management, and pharmacotherapy, to name but a few. In most cases, however, these treatments have not been studied systematically in the treatment of PTSD in children and adolescents, and/or the details of the approach taken – to the point that it can be reliably replicated – have not been provided.

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Evidence Review and Treatment Recommendations

5

The purpose of this chapter is to provide an overview of the systematic review process followed by a brief summary of the key research evidence in each area together with the clinical practice recommendations (denoted as "R" and graded A–D), the research recommendations (RR), consensus points (CP), and good practice points (GPP). The criteria used to designate a recommendation type and grading is detailed in "Assessing the body of evidence and generating recommendations" below. The full detail of the evidence review can be seen in Appendix 3.

Approach to the systematic review

Systematic literature reviews use explicit, systematic methods to limit bias and reduce the effect of chance in the review, thereby providing the most reliable and consistent results upon which to draw conclusions and develop clinical practice guidelines. The National Health and Medical Research Council (NHMRC) has published the Procedures and requirements for meeting the 2011 NHMRC standard for clinical practice guidelines to assist developers with the process of producing and disseminating clinical practice guidelines.[1] The document contains the mandatory and desirable requirements for the evidence review component of guideline development. The NHMRC has also produced other resources for guideline developers that have been utilised in the systematic review including, *A guide to the development, evaluation and implementation of clinical practice guidelines*,[2] and handbooks such as, *How to review the evidence: Systematic identification and review of scientific literature*.[3]

Evidence-based guidelines reports should include:

- the development and statement of a specific research question or hypothesis
- a transparent methodical process defined a priori (i.e., a review protocol)
- an exhaustive search for relevant primary (and secondary) research on the topic
- application of inclusion criteria and critical appraisal of the research
- an attempt to answer the research question(s) and to resolve conflicts in the literature
- the identification of issues central to future research on the topic and the practical application of results
- the development of guidelines or recommendations that are based on this evidence (research), and are applicable to the target population or patient group.[2-8]

Research questions

The research questions for the systematic literature review were developed by the working party and underwent finalisation through discussions with the multidisciplinary panel. In exploring the results of the systematic review, gaps in the evidence base were identified where questions could not be (or could only partially be) answered by the existing research. In such cases, suggestions for further research were generated, and are provided throughout the Guidelines document.

For each of these research questions, evidence was collected separately for children under 6 years of age, children 7 to 13 years of age, adolescents 14 to 18 years of age, and adults.

The research questions that the systematic review was commissioned to investigate were:

1. For people exposed to trauma, does pre-incident preparedness training improve outcomes compared to no intervention?
2. For people exposed to trauma, does any pre-incident preparedness training confer any advantage over other pre-incident preparedness training?
3. For people exposed to trauma, do early psychological interventions improve outcomes compared to no intervention?
4. For people exposed to trauma, does any early psychological intervention confer any advantage over other early psychological interventions?
5. For people exposed to trauma, do early pharmacological interventions improve outcomes compared to no intervention?
6. For people exposed to trauma, does any early pharmacological intervention confer any advantage over other early pharmacological interventions?
7. For people exposed to trauma, is a single early intervention more effective than multiple early interventions?
8. For children exposed to trauma, does any intervention delivered through school improve outcomes for the child over no intervention?
9. For children exposed to trauma, does any intervention delivered through school improve outcomes for the child over any other intervention delivered through school?
10. For people with PTSD, do psychological interventions improve outcomes compared to no intervention?
11. For people with PTSD, does any psychological intervention confer any advantage over other psychological interventions?
12. For people with PTSD, is individual therapy more effective than group therapy?
13. For people with PTSD, is the combination of individual therapy and group therapy more effective than either alone?
14. Are established interventions for PTSD effective when self-delivered or self-delivered with practitioner support compared to practitioner-delivered intervention or no intervention?
15. For people with PTSD, do pharmacological interventions improve outcomes compared with placebo?
16. For people with PTSD, does any pharmacological intervention confer any advantage over other pharmacological interventions?
17. For people with PTSD, does psychosocial rehabilitation improve outcomes compared to no intervention?
18. For people with ASD or PTSD, do physical interventions or exercise improve outcomes compared to no intervention?
19. For people with ASD or PTSD, do physical interventions or exercise confer an advantage over psychological or pharmacological interventions?
20. For people with PTSD, is a single intervention more effective than multiple interventions?
21. For people with PTSD, is any intervention (pharmacotherapy, psychotherapy or psychosocial rehabilitation) more effective than any other intervention (pharmacotherapy, psychotherapy or psychosocial rehabilitation)?
22. In the context of PTSD and comorbidity, is sequencing of intervention per diagnosis more effective than simultaneous interventions for both diagnoses?
23. For children with PTSD, does the inclusion of parents/primary caregivers improve outcomes compared to no parent/primary caregiver inclusion?
24. For children with PTSD, does any psychological intervention that includes parents/primary caregivers improve outcomes compared to any other psychological intervention that includes parents/primary caregivers?

Overview of methodology

This systematic review was designed to update the systematic review conducted for the 2007 Australian Guidelines for the Treatment of Adults with ASD and PTSD. That review, and the current review, were both undertaken by Adelaide Health Technology Assessment (AHTA). The 2007 review included studies identified in the National Institute for Clinical Excellence (NICE)[9] guidelines and the Veterans Affairs/Department of Defense (VA/DoD)[10] guidelines. The current review also included the studies identified in that previous systematic review where the research questions were the same, provided they met the inclusion criteria. The current review also reviewed the research on a broader range of questions and included children and adolescents for the first time.

Inclusion criteria

Criteria for including studies in the updated systematic literature review are provided in Boxes 1–190 of Appendix 3. In order to ensure that the selection of studies to answer specific research questions was not biased, these criteria were delineated prior to collating the literature. The type of patient Population, Intervention (treatment), Comparator (against which the treatment's effectiveness is measured), and Outcomes of interest were made explicit – these are known as the PICO criteria and they relate directly to the research question that is being addressed. Additional limits to the literature search were also made clear, such as restricting the search to studies of a certain research design(s) (e.g., likely to provide unbiased or more reliable results), to a certain search period, or a certain language.

Studies were excluded if they:

- did not meet the inclusion criteria
- could not provide adequate data on the outcomes (e.g., data only provided in graphical format, missing information, format or type of data are unable to be used)
- were updated by the same research group on the same research question for the same patients, with no different information provided
- could not be located
- used an analogue for a traumatic event (e.g., student convenience samples).

Studies assessing the benefits of interventions in adults were included if:

- PTSD symptoms were measured
- the main target of the treatment was ASD or PTSD, or preventing the development of these disorders
- for questions pertaining to PTSD, at least 70 per cent of the participants have PTSD, and the remaining participants have symptoms of PTSD following a traumatic event
- for continuous data, at least 50 per cent of the intent-to-treat sample were assessed at the relevant time point.

The inclusion criteria for children and adolescents were the same as for adults, except the inclusion criteria that 70 per cent of participants within a study require PTSD was not applied, as the diagnostic criteria for child and adolescent PTSD is still evolving and relatively undeveloped.[9] All studies, however, were required to include a measure of the child's PTSD symptoms.

Literature sources

To be consistent with the evidence-based guidelines documents that have gone before this one, including the NICE and VA/DoD guidelines and the previous Australian Guidelines, the following databases were searched: Medline, Exerpta Medica Database (EMBASE), PsychINFO, Cumulative Index to Nursing and Allied Health Literature (CINAHL), the Dartmouth College Published International Literature on Traumatic Stress (PILOTS) catalogue and the Cochrane Library (See Table 200 in Appendix 3). To meet NHMRC Minimum Requirements standards, Clinical Evidence and the internet (Google Scholar, and websites of specialty organisations) were also searched (See Table 201 and Appendix E of Appendix 3), and the reference lists of all included studies were scanned for potentially relevant studies. The Australian and New Zealand Clinical Trials Register was searched in January 2012 and, where a relevant study was identified as being completed, the corresponding research groups were contacted to see whether they had any recently published or in press articles in an attempt to ensure the Guidelines were based on the most recent applicable evidence available.

Also, to be consistent with the previous evidence-based guidelines documents, the search was restricted to English language literature and to either a systematic review/meta-analysis of randomised controlled trials (RCTs; level I evidence), or to randomised controlled trials (level II evidence), unless fewer than two randomised controlled trials were identified to answer a particular question, in which case lower levels of evidence were assessed for inclusion.

Search strategies

A series of six separate searches was conducted to extract comparative studies relating to psychological interventions, pharmacological interventions, psychosocial rehabilitation, physical therapies and exercise, and comorbidities, from which relevant papers were identified for each research question. Where the question remained the same from the 2007 guidelines and no new levels of evidence were scoped in the search, the evidence derived from the previous 1996–2004 search was retained and a separate search occurred from 2005 to October 2011. However, for children and adolescents a separate search occurred from 1996 to October 2011 as they were not included in the previous search. The search terms used are listed in Table 202 of Appendix 3. The search terms were developed on a PubMed platform. Similar search strategies were used for the different bibliographic databases, with the same text words being used along with the relevant alternatives to MeSH headings.

Validity assessment

All studies identified through the new searches, and those identified through the previous reviews (AHTA, NICE and VA/DoD), were critically appraised – in terms of internal and external validity – and the statistical and clinical relevance and applicability of results were determined utilising the NHMRC dimensions of evidence (NHMRC 2000a; NHMRC 2000b) and the recently developed NHMRC interim levels and grades of evidence (see Table 205 of Appendix 3). Critical appraisal of the identified studies was performed using the NHMRC quality checklist[3] (see Appendix B of Appendix 3). The checklist for appraising the quality of intervention studies was designed to assess features of randomised trials. Only those trials which reported a correct, blinded randomisation method, and had high rates of follow-up with intention-to-treat analyses conducted, were considered to be low in bias. This rating was applicable to very few studies identified in the systematic review, resulting in the majority of studies being considered to be at moderate or high risk of bias. For cohort studies, a protocol amendment was made, and a checklist by Downs and Black was used (see Appendix B of Appendix 3).

Publication bias was assessed using funnel plots. Comparisons within the review with three or more studies were assessed for publication bias on the primary outcomes (PTSD diagnosis and severity).

The NHMRC dimensions of evidence (Table 204 of Appendix 3) considers three main aspects that are critical to an assessment of evidence: strength of the evidence, size of the effect and relevance of the evidence. The first domain is derived directly from the literature identified as informing a particular intervention. The last two require expert clinical input as part of their determination.

Table 5.1 Evidence dimensions

Type of evidence	Definition
Strength of the evidence	
Level	The study design used, as an indicator of the degree to which bias has been eliminated by design.*
Quality	The methods used by investigators to minimise bias within a study design.
Statistical precision	The *p*-value or, alternatively, the precision of the estimate of the effect. It reflects the degree of certainty about the existence of a true effect.
Size of effect	The distance of the study estimate from the 'null' value, and the inclusion of only clinically important effects in the confidence interval.
Relevance of evidence	The usefulness of the evidence in clinical practice, particularly the appropriateness of the outcome measures used.

*See Table 205 in Appendix 3

Data extraction and analysis

The process of study selection went through six phases, and the number of literature citations retrieved and retained at each phase was documented (See Table 203 of Appendix 3).

Evidence tables were used as a guide to summarise the extraction of data from the individual studies (See Appendix G of Appendix 3).[11] Intention-to-treat analyses should be used in preference to completer data as they limit the effect of selection bias on the results. Therefore, intention-to-treat data was used in preference to completer data, when it was available. However, when such data was not available, completer data was used.

Meta-analyses for specific research questions were conducted originally in the NICE guidelines document9 and updated where appropriate in the previous Australian Centre for Posttraumatic Mental Health (ACPMH) Guidelines. These meta-analyses were again updated, where appropriate, using the results of the new randomised controlled trials identified for this report. Meta-analyses were conducted using a fixed effects model when studies were homogenous ($p>0.05$), or a random effects model in the presence of between-study heterogeneity (where that heterogeneity could not be explained). Effect measures that were extracted or calculated for individual or pooled results included Relative Risk (RR; for count data) and standardised mean differences (SMD; Hedges g) for continuous data. As per the methodology used by NICE, mean post-treatment scores (or follow-up scores) were combined with mean change-from-baseline scores, where the scores were on the same outcome measure.

It should be noted that the SMD method does not correct for differences in the direction of the scale. For meta-analyses where some scales increase with disease severity whilst others decrease, the mean values from one set of studies were multiplied by –1 to ensure that all the scales point in the same direction. Heterogeneity in the meta-analysis was assessed using the Cochran Q statistic, and publication bias was tested using the Begg funnel plot. Where a meta-analysis could not be conducted, a qualitative synthesis of the data was undertaken.

Effect sizes were interpreted using methodology developed by NICE (see below) and NHMRC designations of level of evidence were used (Appendix B of Appendix 3).

"For each outcome a clinical statement describing the evidence found was developed. To assess clinical importance where a statistically significant summary was obtained (after controlling for heterogeneity), the Group set thresholds for determining clinical importance, in addition to taking into account the trial population and nature of the outcome.

Two separate thresholds for determining clinical importance were set. For comparisons of one active treatment against waiting list or non-active interventions, a higher threshold was applied than for comparisons of active treatments against one another.

For comparisons of one active treatment against another treatment, the following thresholds were applied: for dichotomous outcomes an RR of 0.80 or less/1.25 or more was considered clinically important, and for continuous outcomes an effect size of approximately 0.5 (a 'medium' effect size; Cohen, 1988) or more (or less than -0.5) was considered clinically important.

For comparisons of active treatment against waiting list, the following thresholds were applied: for dichotomous outcomes an RR of 0.65 or less/1.53 or more was considered clinically important, and for continuous outcomes an effect size of approximately 0.8 (a 'large' effect size; Cohen, 1988) or more (or less than -0.8) was considered clinically important.

In cases where the point estimate of the effect was judged clinically important, a further consideration was made about the precision of the evidence by examining the range of estimates defined by the CI [confidence interval]. Where the effect size was judged clinically important for the full range of plausible estimates, the result was described as evidence favouring intervention x over intervention y (i.e., statement 1, or S1). In situations where the point estimate was clinically important but the CI included clinically unimportant effects, the result was described as limited evidence favouring intervention x over intervention y (i.e., S2). Where a point estimate was judged as not clinically important and the CI did not include any clinically important effects, the result was described as unlikely to be clinically important (i.e., S3). Alternatively, if the range of estimates defined by the CI included clinically important benefits as well as no effect or harmful effects, the result was described as inconclusive (i.e., S4).

S1= There is evidence favouring x over y on…

S2= There is limited evidence favouring x over y on…

S3= There is evidence suggesting that there is unlikely to be a clinically important difference between x and y on…

S4= The evidence is inconclusive and so it is not possible to determine whether there is a clinically important difference between x and y on…." (Adapted from NICE, 2005 p.45)

The same approach to data extraction and analysis was adopted for all trials reviewed for the guidelines, regardless of the nature of intervention. It is acknowledged that this renders direct comparisons between studies of psychological interventions and studies of pharmacological interventions difficult, since they tend to use different control groups. (If such comparisons are of interest, the best approach is a 'head to head' design; regrettably, few such studies exist at this point). Nevertheless, it is the most defensible approach and is routinely used in systematic reviews of this kind. Further discussion of some of these complexities appears below in the "Summary of the literature" subsection of the "Pharmacological interventions for adults with PTSD" section.

All statistical calculations and testing were undertaken using the biostatistical computer package Stata version 12.0.12 Calculations of effect sizes (Hedges g) for individual studies were performed using The Effect Size Generator version 4.1.[13]

Assessing the body of evidence and generating recommendations

Once each included study was assessed according to the three dimensions of evidence, an evidence statement matrix was developed for each group of studies focussing on a particular topic (see the full systematic literature review in Appendix 3). That matrix rated each body of evidence on five components: evidence base, consistency, clinical impact, generalisability, and applicability. Each of those components was given a rating from A to E (or 'not applicable'), with a brief description explaining how that rating was derived. From those evidence statement matrices, a grade for the whole body of evidence supporting each recommendation can be determined (see Appendix B of Appendix 3). As described above, the working party then reviewed the strength of the evidence in each area and generated recommendations accordingly. In addition to the recommendations, the working party was required to provide a grade to indicate the strength of the recommendation. This grade is based on, but not necessarily a direct translation of, the strength of evidence.

NHMRC grades of recommendation are provided to assist users of the clinical practice guidelines in making clinical judgements and to indicate the strength of the recommendation. Grade A and B recommendations are generally based on a body of evidence which can be trusted to guide clinical practice, whereas Grade C and D recommendations must be applied carefully to individual clinical and organisational circumstances, and should be followed with care.[11]

Grade of recommendation	Description
A	Body of evidence can be trusted to guide practice
B	Body of evidence can be trusted to guide practice in most situations
C	Body of evidence provides some support for recommendation(s) but care should be taken in its application
D	Body of evidence is weak and recommendation(s) must be applied with caution

There are many areas of clinical practice for which there is simply no research evidence available. Rather than provide no guidance in these areas, the working party generated Consensus Points (CP – used when a research question was asked of the data, but no evidence was forthcoming) and Good Practice Points (GPP – used when the research question was not asked; this was often because the working party was confident that no evidence existed).

Limitations of the review

This systematic review of the treatments for ASD and PTSD is limited by the following factors. The review:

- does not cover questions pertaining to an assessment of some additional multiple treatments versus other multiple treatments or versus placebo/waitlist for the populations under review
- does not assess levels of evidence lower than randomised controlled trials (level II intervention evidence) for many questions
- does not provide a comprehensive review of potential safety issues (i.e., studies too small to detect many adverse events, particularly rare adverse events) – this is of particular relevance to the section on pharmacological treatments
- excludes some reports if they were updates of previously published studies, and patient follow-up was less than 50 per cent.

These Guidelines were based in part on the NICE systematic review and the VA/DoD guidelines, which both have their own limitations. In updating these Guidelines, some of these limitations must be acknowledged, despite the use of a near-identical methodology.

- Some studies that potentially met the inclusion criteria may have been missed.
- Effect sizes were calculated on the difference in post-treatment scores between the groups, the assumption being that randomisation negated any potential baseline differences between the groups. This assumption may be valid for large trials but is not necessarily correct for small trials.
- Some of the studies included in the reviews presented statistical testing on a large range of outcomes, without correction for multiple comparisons in their analysis. This increases the likelihood that a statistically significant difference will be identified, just through chance.

The full evidence review is available in Appendix 3.

Research questions, evidence summaries and treatment recommendations

As noted at several other points in these Guidelines, the recommendations, CPs and GPPs in these Guidelines are provided on the assumption that they will be implemented by practitioners with appropriate training, qualifications and experience. They are also provided on the assumption that they will be implemented in the context of good clinical practice more broadly. In that light, the first good practice point for this chapter is as follows:

Good practice point

GPP43 Best practice procedures should be adopted when using psychological, psychosocial or pharmacological treatments, including provision of information prior to commencement, monitoring and management of side effects, monitoring of suicide risk, and in the case of pharmacological intervention, appropriate discontinuation and withdrawal practices.

Early psychological interventions for adults exposed to a potentially traumatic event

This section addresses the provision of psychological interventions for all those exposed – not only those who are presenting with adjustment problems. It covers both pre-incident and immediate post-incident options for all, before going on to look at those who develop diagnosable conditions. These “interventions for all” may be provided by a range of personnel many of whom (such as first responders or chaplains) may not be health professionals.

Pre-incident preparedness training

Research questions 1 and 2

1. For people exposed to trauma, does pre-incident preparedness training improve outcomes compared to no intervention?
2. For people exposed to trauma, does any pre-incident preparedness training confer any advantage over other pre-incident preparedness training?

Selection criteria

Population	People exposed to trauma (including the subgroup with ASD)
Intervention	Pre-incident preparedness training, delivered by any method
Comparator	1. No training
	2. Other pre-incident preparedness training
Outcome	Primary outcome: symptoms of ASD or PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials. As fewer than two Level II studies were found, then pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, and case-control studies were also considered.
Search Period	1966 to October 2011 for adults, children and adolescents[a]
Language	English

[a] New research questions

Summary of the literature

There is very little controlled research on the capacity of preparing people to cope with the stress of a potentially traumatic event. Preparedness training can involve a collection of strategies to enhance expectations of recovery, and to provide education about adaptive coping strategies to reduce any adverse impact of traumatic experience. Only one study was noted in the evidence review.14 In this study, education prior to assault resulted in less PTSD. However, this is limited evidence and has not been replicated. Accordingly, we recognise that the field of research at this point of time is in its infancy, and systematic intervention for preparedness training cannot be backed by a body of data.

Consensus point

CP1 For adults likely to be exposed to a potentially traumatic event, pre-incident preparedness training may facilitate psychological adaptation following the event.

Research recommendation

RR3 There is an urgent need for carefully controlled research to study the content and possible benefits of preparedness training prior to trauma exposure.

Early psychological interventions for all
Research questions 3, 4 and 7

3. For people exposed to trauma, do early psychological interventions improve outcomes compared to no intervention?

4. For people exposed to trauma, does any early psychological intervention confer any advantage over other early psychological interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Early psychological intervention (e.g., debriefing, trauma-focussed counselling, education – performed within one month of trauma)
Comparator	No intervention (e.g., assessment only)
Outcome	Primary outcomes: symptoms of ASD and PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

7. For people exposed to trauma, is a single early intervention more effective than multiple early interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Single early psychological or pharmacological intervention
Comparator	Early combined psychological or combined pharmacological interventions (within one month of the traumatic event) or combined psychological and pharmacological interventions (within one month of the traumatic event)
Outcome	Primary outcomes: symptoms of ASD or PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Trials addressing question 3 are as follows:

- one study tested an educational intervention against control[15]
- seven studies (eight publications) compared psychological debriefing to no debriefing in adults[16-23]
- one study compared trauma-focussed counselling with monitoring control[24]
- one study compared the provision of an intensive care unit (ICU) diary to a waitlisted control.[25]

Studies addressing question 4 are as follows:

- two studies compared a collaborative care program with usual[26,27]
- one study compared immediate versus delayed psychological[28]
- one study compared emotional debriefing with educational debriefing[29]
- two studies compared cognitive behavioural therapy (CBT) with usual care[30,31]
- one study compared an interactive self-help workbook with an information booklet.[32]

Studies addressing question 7 are as follows:

- one study compared educational intervention against debriefing plus education[15]
- three studies compared trauma-focussed CBT with either acupoint stimulation or hypnosis against CBT alone.[33-35]

Summary of the literature

The quality of studies on universal early interventions for all survivors of potentially traumatic events is limited, in part, because of the difficulties in trial design in the immediate phase after potentially traumatic events. It should be noted that group interventions have been rarely tested in field trials, even though this was the initial format for debriefing interventions.

Twelve comparisons were identified in the evidence review that investigated the effectiveness of psychological debriefing in preventing PTSD and related conditions.[15-23,28,29] At this time there is no evidence of benefit in reducing traumatic stress symptoms from early individual or group debriefing interventions. Although the research is limited, there is some evidence that those who received debriefing were at increased risk of PTSD diagnosis, changing jobs, and interference with everyday functioning compared to controls. Gamble's study[18] suggests that two sessions of information and support provided by a domain-specific expert, four to six weeks apart following traumatic childbirth, may have (limited) utility. One study[28] showed early debriefing with victims of crime was better than delayed, but there was no comparison to controls. There are conflicting outcomes regarding different versions of 'debriefing' when compared to each other (even within the same study).

Recommendation		Grade
R1	For adults exposed to a potentially traumatic event, a one-session, structured, psychological intervention in the acute phase, such as psychological debriefing, should not be offered on a routine basis for the prevention of PTSD.[15-35]	**B**

Good practice points

GPP44	For adults exposed to a potentially traumatic event, if required, provide practical and emotional support, facilitate ways to manage distress and access social supports, and promote positive expectations.
GPP45	Adults exposed to a potentially traumatic event who wish to discuss the experience, and demonstrate a capacity to tolerate associated distress, should be supported in doing so. In doing this, the practitioner should keep in mind the potential adverse effects of excessive ventilation in those who are very distressed.
GPP46	For adults exposed to a potentially traumatic event, a stepped care approach tailored to individual need is advised. This would involve ongoing monitoring of people who are more distressed and/or at heightened risk of adverse mental health impact, with targeted assessment and intervention when indicated.
GPP47	For adults who develop an extreme level of distress or are at risk of harm to self or others, thorough diagnostic assessment and appropriate interventions should be provided.

Research recommendation

RR4 In view of the importance of providing a best practice response for adults exposed to a potentially traumatic event for high-risk industries and for the general community, future research should examine the most effective strategy to adopt for all those exposed to a traumatic event.

Psychological treatment for adults with ASD or acute PTSD

This section covers interventions for people who develop a diagnosable condition – ASD or acute PTSD – in the immediate aftermath of trauma exposure (within the first four weeks).

Research questions 3, 4 and 7

Note that the same research questions were used to generate data for this section and the section "Early psychological interventions for all" – see above boxes for details.

3. For people exposed to trauma, do early psychological interventions improve outcomes compared to no intervention?
4. For people exposed to trauma, does any early psychological intervention confer any advantage over other early psychological interventions?
7. For people exposed to trauma, is a single early intervention more effective than multiple early interventions?

The following studies reported on early psychological interventions for individuals who were exposed to traumatic events within the past month and developed ASD or acute PTSD:

- five studies (six publications) compared CBT with supportive counselling[3633,34,37-39]
- one study compared CBT with an assessment condition[39]
- one study compared CBT with prolonged exposure (PE)[38]
- two studies compared the cognitive and PE components of CBT with waitlist[40,41]
- one study compared PE with supportive counselling[38]
- one study compared an assessment condition with supportive counselling[39]
- one study compared eye movement desensitisation and reprocessing (EMDR) with a waitlisted control[42]
- one study compared a self-help booklet with no information.[43]

Summary of the literature

Ten studies were identified in the evidence review on early interventions for adults with ASD or early PTSD,[33,34,36-43] six of which had been published since the 2007 Guidelines.[34,39-43] Although a newer field of enquiry relative to chronic PTSD, there is a substantial body of evidence of moderate quality indicating that trauma-focussed cognitive behavioural therapy (TF-CBT), comprising prolonged exposure and cognitive restructuring, is beneficial in reducing subsequent PTSD symptoms in people who present with ASD or acute PTSD. It is important to note that these studies are distinct from debriefing programs that provide intervention to all trauma survivors, because CBT approaches adopt an indicated intervention that aims to alleviate symptoms in people with a diagnosis of ASD or early PTSD.

Although there are a few studies favouring prolonged exposure over cognitive restructuring, both interventions are typically provided. On balance, provision of exposure therapy seems important in the treatment planning. TF-CBT appears beneficial relative to both waitlist and nondirective supportive counselling. It should be noted that a preponderance of studies have come from a limited number of centres, and therefore further replications are needed.

Sessions that involve imaginal exposure require 90 minutes to ensure that therapy is adequate in those sessions. Following diagnosis, assessment and treatment planning, five to ten sessions of trauma-focussed treatment is usually sufficient. Longer treatment may be required if symptoms do not abate during treatment.

Recommendation		Grade
R2	For adults displaying symptoms consistent with ASD or PTSD in the initial four weeks after a potentially traumatic event, individual trauma-focussed cognitive behavioural therapy, including exposure and/or cognitive therapy, should be considered if indicated by a thorough clinical assessment.[33,34,36-43]	**C**

Psychological interventions for adults with PTSD

Research questions 10 and 11

10. For people with PTSD do psychological interventions improve outcomes compared to no intervention?
11. For people with PTSD, does any psychological intervention confer any advantage over other psychological interventions?

Selection criteria

Population	People with PTSD
Intervention	Psychological intervention (e.g., TF-CBT, stress management therapy, eye movement desensitisation and reprocessing, narrative exposure therapy, supportive counselling, interapy, thought field therapy)
Comparator	1. No intervention (e.g., assessment only) 2. Other psychological intervention
Outcome	Primary outcome: resolution of symptoms of PTSD Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity. Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

The following studies were identified in relation to question 10:

- twenty-nine studies compared trauma-focussed CBT against a waitlist/control condition in adults[44-72]
- one study compare a trauma affect regulation therapy against a waitlist condition in adults[73]
- six studies compared EMDR against waitlist in adults[65,68,74-76]
- two studies compared problem-solving therapy against a waitlist condition in adults[62,73]
- one study compared interpersonal psychotherapy against a waitlist condition in adults[77]
- one study compared psychodynamic therapy against a waitlist condition in adults[48]
- one study compared hypnotherapy against a waitlist condition in adults[48]
- two studies compared supportive counselling against a waitlist condition in adults[47,56]
- two studies compared group CBT against a waitlist condition in adults[78,79]
- one study compared group and individual CBT against a waitlist condition in adults[80]
- one study compared group imagery rehearsal therapy against a waitlist condition in adults[81]
- four studies compared stress management therapy against a waitlist condition in adults[55,56,71,82]
- two studies compared narrative exposure therapy against a waitlist condition in adults[83,84]
- two studies compared a spiritually based intervention against waitlist.[85,86]

The following comparisons are discussed for question 11:

- sixteen studies compared trauma-focussed CBT against treatment as usual in adults[87-102]
- three studies (four citations) compared EMDR against treatment as usual in adults[82,95,103,104]
- one study compared narrative exposure therapy against treatment as usual in adults[99]
- one study compared 'the counting method' against treatment as usual in adults[94]
- nine studies compared trauma-focussed CBT against stress management therapies in adults[55,56,62,71,105-109]
- six studies (seven citations) compared trauma-focussed CBT against supportive counselling in adults, including one study where both conditions were delivered over the internet[47,56,110-114]
- one study compared trauma-focussed CBT against psychoeducation in adults[115]
- one study compared trauma-focussed CBT against hypnotherapy in adults[48]
- one study compared trauma-focussed CBT against psychodynamic therapy in adults[48]
- one study compared trauma-focussed CBT against the counting method in adults[94]
- one study compared narrative exposure therapy against supportive counselling in adults[116]
- two studies compared narrative exposure therapy against brief psychoeducation in adults[116,117]
- one study compared narrative exposure therapy against stress inoculation training[118]
- one study compared narrative exposure therapy with cognitive processing therapy including NET[119]
- one study compared narrative exposure therapy with cognitive processing therapy without NET[119]
- one study compared written emotional disclosure with a control writing condition in adults[120]
- one study compared supportive counselling against brief psychoeducation in adults[116]
- one study compared CBT (non-trauma-focussed) against present centred therapy[73]
- three studies (four citations) compared CBT with an exposure component against CBT without an exposure component in adults[105,119,121,122]
- two studies compared trauma-focussed CBT against "other" therapies in adults: skills training plus exposure; skills training plus supportive counselling, and supportive counselling plus exposure[123]; and imaginal exposure (IE), *in vivo* exposure (IVE), imaginal plus *in vivo* exposure (I/IVE), and imaginal and *in vivo* exposure with cognitive therapy (I/IVE/CR)[124]
- six studies compared EMDR against trauma-focussed CBT in adults[65,68,71,95,106,125]
- three studies compared EMDR against stress management therapies in adults[71,82,106]
- one study compared EMDR against supportive counselling in adolescents/adults[126]
- one study compared EMDR against "the counting method" in adults[95]
- one study compared EMDR against emotional freedom techniques in adults[127]
- one study compared stress management against supportive counselling[56]
- one study compared group CBT (trauma-focussed) against group CBT (non-trauma-focussed) in adults[128]
- one study compared group CBT (videoconference) against group CBT (same-room)[129]
- one study compared group non-trauma focussed CBT against group psychoeducation[130]
- one study compared group imagery rehearsal therapy against group sleep and nightmare management.[131]

Summary of the literature

The evidence review identified 29 studies that compared TF-CBT to waitlist or control conditions[44-72] and a further 38 studies that compared TF-CBT to treatment as usual or another intervention.[47,48,55,56,62,71,87-102,105-115,119,122-124] Six studies compared EMDR to waitlist[65,68,74-76] and a further 9 studies compared EMDR to treatment as usual or another intervention.[71,82,95,103,104,106,126,127] The most studied form of therapy for adults with PTSD is trauma-focussed therapy, which involves direct engagement with the traumatic memory. There are variants of trauma-focussed therapies that differentially emphasise exposure to trauma memories, traumatic reminders, or cognitive restructuring. These interventions have been called prolonged exposure, cognitive processing therapy, cognitive therapy, narrative exposure therapy, and eye movement desensitisation and reprocessing, to name just a few. They each show significant positive treatment effects for adults with PTSD, with cognitive behaviour therapy that incorporates imaginal and *in vivo* exposure, as well as cognitive restructuring, having received the most attention. Multiple trials indicate that trauma-focussed therapy (comprising exposure and/or cognitive restructuring which engage with the trauma memory) results in greater reduction in PTSD symptoms than supportive counselling, thereby providing solid evidence that it is a relatively stronger intervention than generic psychotherapeutic support. In terms of the weight of evidence, more trials have been conducted on cognitive behavioural therapy than other forms of trauma-focussed therapies.

EMDR has repeatedly been shown to be effective in reducing PTSD symptoms relative to waitlist, and also to nondirective counselling. There are six studies directly comparing CBT to EMDR,[65,68,71,95,106,125] and the evidence suggests that the two variants of trauma-focussed therapy are not statistically different. This conclusion is made on the basis of head-to-head comparisons. Of considerable debate has been the contribution of the eye movements as an active treatment component in EMDR.

Although stress-inoculation training has been shown to have some treatment gains in treating adults with PTSD, these effects are not as great as exposure or cognitive restructuring.

Recent trials have explored the efficacy of CBT techniques with internet-delivered or assisted formats. While the number of trials is limited, they do show some benefits in reducing PTSD symptoms. Again, engagement with the trauma memory seems central to the treatment.

Sessions that involve imaginal exposure require 90 minutes to ensure that therapy is adequate in those sessions. Following diagnosis, assessment and treatment planning, eight to twelve sessions of trauma-focussed treatment are usually sufficient. More treatment sessions are likely to be required in cases of multiple traumas.

Importantly, in interpreting the above cited study findings, it must be noted that participants in trials of psychological treatment are often taking medication concurrently. The contribution of these medications to treatment outcomes in research trials has not been investigated.

To varying degrees, the studies cited in this section also include adults with PTSD as a result of prolonged and/or repeated trauma (e.g., studies by Resick and Foa). Two studies[49,123] specifically provided support for the effectiveness of graded trauma-focussed CBT for adult survivors of childhood sexual assault. Thus, there is evidence to support the use of trauma-focussed psychological interventions in adults with PTSD following prolonged and/or repeated trauma. Issues of chronic self-harm and suicidal ideation are more likely in this group and, therefore, may warrant special attention or consideration. The adult presenting with these issues may have a comorbid personality disorder that requires management. In such cases, more time and attention to stabilisation and engagement may be required in preparation for trauma-focussed therapy, as outlined in Cloitre et al.[49,123] papers. Distress tolerance and coping capacity in some individuals may become compromised over periods of developmental, prolonged or repeated trauma. Individuals who do not respond optimally to exposure therapy because of emotional over-reactivity may benefit from assistance in enhancing coping resources, both practical and emotional, before further proceeding with exposure therapy. In some cases, however, the individual with PTSD may have ongoing suicidality until the traumatic experience is addressed, in which case delay in trauma focus therapy should be avoided.

Recommendations		Grade
R3	Adults with PTSD should be offered trauma-focussed cognitive behavioural interventions or eye movement desensitisation and reprocessing.[44-72,74-76,82,87-115,123,124,126-128]	**A**
R4	Where symptoms have not responded to a range of trauma-focussed interventions, evidence-based non-trauma-focussed psychological interventions (such as stress inoculation training) may be considered.[55,56,62,71,82,105-109,118]	**D**

Consensus point

CP2	On the basis of some evidence that *in vivo* exposure (graded exposure to feared/avoided situations) contributes to treatment gains, it is recommended that *in vivo* exposure be included in treatment.

Good practice points

GPP48 Where symptoms have not responded to one form of first line trauma-focussed intervention (trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing), health practitioners may consider the alternative form of trauma-focussed intervention.

GPP49 For adults with PTSD with several problems arising from multiple traumatic events, traumatic bereavement, or where PTSD is chronic and associated with significant disability and comorbidity, sessions using specific treatments to address those problems may be required.

GPP50 Where adults have developed PTSD and associated features following exposure to prolonged and/or repeated traumatic events, more time to establish a trusting therapeutic alliance and more attention to teaching emotional regulation skills may be required.

GPP51 Prescribed medication can continue while people are undertaking psychological treatments and any changes should only occur in close consultation with the treating physician. However, some medications, such as benzodiazepines, may interfere with some effective psychological treatments.

GPP52 Sessions that involve imaginal exposure may require up to 90 minutes to avoid premature termination of therapy while anxiety is still high, and to ensure appropriate management of distress.

Research recommendations

RR5 Mechanisms underpinning effective treatments should be subject to systematic research.

RR6 There should be large and well-controlled trials of new and emerging interventions for PTSD.

RR7 Further research is required to evaluate the extent to which treatments with demonstrated efficacy are effective when delivered by non-specialist practitioners in real-world settings. The focus of research should not be restricted to outcomes only, but should also include factors such as cost-effectiveness, acceptability for practitioners and clients, treatment fidelity, and success of practitioner training.

Research question 12

12. For people with PTSD, is individual therapy more effective than group therapy?

Selection criteria

Population	People with PTSD
Intervention	Individual therapy (e.g., psychodynamic psychotherapy, individual cognitive behavioural therapies, EMDR, narrative exposure therapy, image rehearsal therapy, supportive counselling, hypnosis)
Comparator	Group therapy (e.g., supportive therapy, psychoeducation, psychodynamic therapy, group CBT such as anxiety management, stress inoculation, assertiveness training, prolonged exposure, cognitive restructuring)
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Research question 13

13. For people with PTSD, is the combination of individual therapy and group therapy more effective than either alone?

Selection criteria

Population	People with PTSD
Intervention	Individual therapy and group therapy (see research question 12 for examples)
Comparator	Individual therapy or group therapy (see research question 12 for examples)
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder / conduct disorder / oppositional defiant disorder / attachment reactive disorder / social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

Two studies were identified in the evidence review comparing group therapy to no intervention.[78,79] There were no studies comparing group versus individual treatment. Overall, the prevailing evidence base rests on psychological interventions that are administered at an individual level, and on this basis it is recommended that psychological therapy be individually, rather than group, administered.

Recommendation		Grade
R5	Group cognitive behavioural therapy (trauma-focussed or non-trauma-focussed) may be provided as adjunctive to, but not be considered an alternative to, individual trauma-focussed therapy.[44-72,74-76,78-80,82,87-115,123,124,126-128]	**C**

Research question 14

14. Are established interventions for PTSD effective when self-delivered or self-delivered with practitioner support, compared to practitioner-delivered intervention or no intervention?

Selection criteria

Population	People with PTSD
Intervention	Self-delivered psychological intervention with/without face-to-face practitioner support (e.g., web-based interapy or telephone support)
Comparator	1. Practitioner-delivered psychological intervention
	2. No treatment (e.g., assessment only)
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The evidence review identified four studies that pertained to this question: three comparing internet-delivered CBT to waitlist or control,[132-134] and one that compared a CBT self-help booklet to practitioner-delivered CBT and waitlist.[53] (In all of these studies, at least 70% of participants had a diagnosis of PTSD). There is limited evidence from this small number of studies that internet-delivered therapy, either as the sole treatment or with the support of a therapist, can be somewhat beneficial in reducing PTSD symptoms. Internet programs that have been shown to have some moderate treatment effects have employed CBT techniques, in the form of psychoeducation, exposure (often in the form of writing about one's trauma experience), anxiety management, and cognitive restructuring.

The single study that investigated the effects of self-help (booklet) intervention for adults with PTSD, found no support relative to repeated assessments. Therefore, there is as yet no evidence that a booklet-based self-administered approach based on CBT techniques is beneficial.

Recommendation		Grade
R6	Internet-delivered trauma-focussed therapy involving trauma-focussed cognitive behavioural therapy may be offered in preference to no intervention.[132-134]	**C**

Early pharmacological interventions for adults exposed to a potentially traumatic event

Early pharmacological interventions for all

This section addresses the provision of pharmacological interventions for all those exposed – not only those who are presenting with adjustment problems.

Research questions 5 and 6

5. For people exposed to trauma, do early pharmacological interventions improve outcomes compared to no intervention?
6. For people exposed to trauma, does any early pharmacological intervention confer any advantage over other early pharmacological interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Early pharmacological intervention, (e.g., imipramine, propranolol, benzodiazepines, other sympatholytics, other antidepressants, anticonvulsants, antipsychotics, chloral hydrate, given within one month of trauma)
Comparator	No intervention (e.g., assessment only)
Outcome	Primary outcomes: symptoms of ASD or PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

With regard to interventions for all, the evidence review identified only two studies of pharmacotherapy as a preventive intervention for all adults exposed to a potentially traumatic incident. One small study with a high risk of bias found no clinically important differences between propranolol and placebo for people exposed to a potentially traumatic event.[135] Another small study found limited evidence favouring administration of hydrocortisone over placebo, although this was an atypical ICU sample experiencing 'toxic shock'.[136] Thus, consistent with the 2007 Guidelines, there is insufficient literature to support the use of drug treatments as a preventive intervention non-selectively (i.e., in the absence of any reported symptoms) with populations exposed to potentially traumatic events. Given the risk of harm associated with population-wide administration of medication to all those exposed to the event, these guidelines recommend against this approach.

Recommendation		Grade
R7	For adults exposed to a potentially traumatic event, drug treatments should not be used for all those exposed as a preventive intervention.[135,136]	**C**

Good practice point

GPP53. Where significant sleep disturbance does not settle in response to reassurance, sleep hygiene and appropriate psychological interventions, cautious and time-limited use of appropriate sleep medication may be helpful for adults.

Pharmacological treatment for adults with ASD or acute PTSD

This section covers pharmacological interventions for people who develop a diagnosable condition – ASD or acute PTSD – in the immediate aftermath of trauma exposure (within the first four weeks).

Research questions 5 and 6

Note that the same research questions were used to generate data for this section and for the section "Early pharmacological interventions for all"– see above boxes for details.

5. For people exposed to trauma, do early pharmacological interventions improve outcomes compared to no intervention?
6. For people exposed to trauma, does any early pharmacological intervention confer any advantage over other early pharmacological interventions?

Summary of the literature

With regard to interventions for people with ASD (or PTSD within four weeks of exposure), the evidence review identified one small study with a low risk of bias published since the last Guidelines. That study, part of a large and well-designed trial conducted by Shalev and colleagues in Israel, found no clinically important differences between escitalopram (a selective serotonin reuptake inhibitor (SSRI) antidepressant) and placebo in patients recently exposed to trauma.[41] No other randomised trials have explored the use of pharmacotherapy for ASD or PTSD within four weeks of the trauma. Thus, consistent with the 2007 Guidelines, there is insufficient literature to guide any positive recommendations about the use of medication as an early intervention for ASD or related conditions. However, we do recognise the benefits of pharmacological interventions in terms of managing current acute symptoms in certain cases. Since this is a relatively common scenario for practitioners, we provide several good practice points for this area.

Recommendation		Grade
R8	The routine use of pharmacotherapy to treat ASD or early PTSD (i.e., within four weeks of symptom onset) in adults is not recommended.[41]	**D**

Good practice points

GPP54 Pharmacotherapy may be indicated if the severity of the person's distress cannot be managed by psychological means alone, particularly when there is a pattern of extreme hyperarousal, sleep disturbance or nightmares.

GPP55 For people who have a prior psychiatric history that has responded well to medication, the prescription of an appropriate medication should be considered if a progressive pattern of clinically significant symptoms, such as persistent intrusions with increasing affective distress, begins to emerge.

GPP56 For adults with ASD or early PTSD, where significant sleep disturbance does not settle in response to reassurance, sleep hygiene and appropriate psychological interventions, cautious and time-limited use of appropriate sleep medication may be helpful.

Research recommendation

RR8 The effect of pharmacological treatment of ASD on subsequent PTSD status and severity following cessation of medication should be investigated. These studies may go beyond common psychotropic medication to include other agents that have shown promise such as narcotic analgesics, cortisol, and alcohol.

Pharmacological interventions for adults with PTSD

Research questions 15 and 16

15. For people with PTSD, do pharmacological interventions improve outcomes compared with placebo?
16. For people with PTSD, does any pharmacological intervention confer any advantage over other pharmacological interventions?

Selection criteria

Population	People with PTSD
Intervention	Pharmacological intervention (e.g., SSRIs, other second-generation antidepressants, tricyclic antidepressants, monoamine oxidase inhibitors, benzodiazepines, mood stabilisers, anti-convulsants, and some non-benzodiazepine hypnotics and anti-anxiety medications)
Comparator	1. Placebo 2. Other pharmacological intervention
Outcome	Primary outcome: resolution of symptoms of PTSD Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity. Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1996 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Studies addressing question 15 are as follows:

- four studies compared paroxetine and placebo[137-140]
- eight studies compared sertraline against placebo[141-148]
- six studies compared fluoxetine and placebo[149-154]
- one study compared citalopram against placebo [147]
- one study compared amitriptyline against placebo[155]
- one study compared brofaromine against placebo[156]
- one study compared mirtazapine against placebo[157]
- two studies compared venlafaxine against placebo[146,158]
- one study compared nefazodone against placebo[159]
- one study compared olanzapine and placebo[160]
- four studies compared risperidone against placebo[161-164]
- one study compared topiramate against placebo[165]
- one study compared tiagabine and placebo[166]
- one study compared divalproex against placebo[167]
- one study compared guanfacine against placebo[168]
- two studies compared prazosin against placebo[169,170]
- one study compared eszopiclone against placebo[171]
- one study compared selective neurokinin-1 receptor antagonist GR205171 against placebo[172]
- one study compared methylenedioxymethamphetamine (MDMA) against placebo[173]
- one study compared Chinese herbal formula against placebo[174]
- one study compared hydrocortisone sodium succinate against placebo[175]
- one study compared imipramine plus psychotherapy against placebo[176]
- one study compared phenelzine plus psychotherapy against placebo plus psychotherapy.[176]

Studies addressing question 15 are as follows:

- one study compared paroxetine 20mg against paroxetine 40mg[139]
- one study compared fluoxetine 20mg against fluoxetine 40mg[177]
- one study compared fluoxetine against moclobemide[178]
- one study compared fluoxetine against tianeptine[178]
- one study compared reboxetine against fluvoxamine[179]
- one study compared amitriptyline against paroxetine[180]
- one study compared mirtazapine against sertraline[181]
- one study compared mirtazapine against paroxetine[182]
- one study compared venlafaxine against sertraline[146]
- one study compared nefazodone against sertraline[183]
- one study compared tianeptine against moclobemide.[178]

Summary of the literature

In reviewing the evidence base for the use of pharmacotherapy in the treatment of PTSD, some caveats are warranted. First, pharmacological trials are routinely designed to compare the active drug to placebo. There is now considerable data to show that placebo interventions routinely produce substantial symptom reductions in many disorders. These large placebo effects often render the effect size for the drug intervention small or insignificant, despite relatively large pre- to post-treatment changes (in both groups). Thus, the drug may still be a valuable intervention even if the difference from placebo is small. In comparing pharmacotherapy trials with psychotherapy trials, the size of the post-treatment change in the control requires consideration in determining the relative effect size ascribed to the active treatment.

Second, it is reasonable to assume that different groups of pharmacological agents have relatively specific mechanisms of action due to their biological effects impacting on different neurotransmitter systems. This contrasts to psychological treatments where non-specific effects account for some of their therapeutic value. PTSD is a heterogeneous disorder, with quite different clinical presentations all meeting criteria for a diagnosis, and recent research has begun to shed light on possible subtypes. Research to date, however, has not explored differential treatment response according to clinical profile. It may be, for example, that certain drug types work better for PTSD that is characterised by dysphoria and a high overlap with depressive symptoms, while others may be more effective in high anxiety presentations. If so, it is likely that potential beneficial effects may be lost in clinical trials on heterogeneous groups of PTSD patients.

Notwithstanding those caveats, the fact is that pharmacological interventions for PTSD have, to date, been somewhat disappointing. Up till now no drug has been specifically developed for PTSD, rather, medications designed for a variety of other disorders have been trialled in PTSD to ascertain their therapeutic value. The lack of development of drugs specific to PTSD is somewhat surprising, given that it is the most prevalent disorder in the National Mental Health and Wellbeing Study in Australia.[184] Also, a range of neurobiological abnormalities have been documented and good animal models exist that would provide excellent platforms for the development of novel pharmacological agents for PTSD.

The evidence review identified four studies of paroxetine in the treatment of PTSD, two of which were published since 2007.[137-140] Three had a moderate risk of bias and one had a high risk of bias. The evidence from these studies suggested no clinical benefit from paroxetine in comparison to placebo for the treatment of PTSD in a mixed trauma population. This finding held up when only intent to treat data were used. No differences were found between 20mg and 40mg of paroxetine.[139]

The evidence review identified eight studies of sertraline in the treatment of PTSD, one of which was published since 2007.[141-148] Two had a low risk of bias, four had a moderate risk, and two had a high risk. Only five of these were able to be included in the meta-analysis due to the nature of data reported. There was relatively strong evidence suggesting no clinically important benefit of sertraline over placebo for the treatment of PTSD. One small study favoured sertraline in veterans with combat-related PTSD, although no difference was found for depression or attrition.

The evidence review identified six studies of fluoxetine in the treatment of PTSD, all of which were published prior to 2007.[149-154] Two of these had a low risk of bias and four had a moderate risk. One was not able to be included in the meta-analysis. While limited evidence favoured fluoxetine over placebo for the treatment of PTSD, the intent to treat analyses showed no difference. No evidence was found for a clinically important effect in combat veterans, and there was no difference between 20mg and 40mg dosages.

Two studies investigating venlafaxine vs. placebo were identified. Both were large studies with moderate risk of bias. There was no evidence of a clinically important benefit of venlafaxine over placebo for the treatment of PTSD in a mixed trauma population.

The evidence review identified four studies of risperidone in the treatment of PTSD, one of which had been published since 2007.[161-164] One (the most recent study, with a large combat veteran sample) had a low risk of bias. One had a moderate risk, and two had a high risk of bias. The evidence from these studies suggested no clinically important difference between risperidone and placebo for the treatment of PTSD, either in mixed trauma or combat PTSD populations.

The evidence review identified two studies of prazosin in the treatment of PTSD.[169,170] Both were published after 2007 and both were at moderate risk of bias. Those studies found no clinically important differences between prazosin and placebo for the treatment of PTSD symptoms or depressive symptoms, although one found greater improvement in global functioning in those receiving prazosin.

A large number of single studies explored the effects of different drugs compared with placebo, or compared with another drug, in the treatment of PTSD (e.g., moclobemide, tianeptine, citalopram, reboxetine, amitriptyline, imipramine, brofaramine, phenelzine, mirtazapine, nefazodone, olanzapine, topiramate, tiagabine, divalproex, guanfacine, eszopiclone, GR2051717, tianeptine, glucocorticoid, and methylenedioxymethamphetamine (MDMA). Of these, eight had been published after 2007 (two on antidepressants,[180,182] three on anticonvulsants,[165-167] one on a non-benzodiazepine hypnotic,[171] one on a selective neurokinin-1 receptor antagonist (GR2051717),[172] one on intravenous glucocorticoid,[175] and one on MDMA[173]). Although one or two showed promise, the results of most of these trials were either inconclusive or showed no clinically significant effect.

Moving away from mainstream western pharmacotherapy, the review identified one recent trial (with moderate risk of bias) of a Chinese herbal formula compared with placebo.[174] That study found no clinically significant differences between the conditions.

In reviewing these data, two conclusions are apparent. First, surprisingly little research has been conducted over recent years in a consistent way on individual drugs, or even classes of drugs. The approach has not been strategic, systematic or coherent. Rather, recent pharmacotherapy research has been characterised by single trials of a wide range of medications. The result is that our knowledge of pharmacological interventions has not substantially increased in the last five years. Second, those new trials that have appeared do not seem to have substantially changed the overall evidence. The vast majority of trials have produced disappointing results with little evidence to support the use of medication over placebo in the treatment of PTSD.

In interpreting the recommendations in this section, it is also important to note that all agents have the potential for negative effects. This is true also, of course, for psychological therapies – it is not unusual for symptoms to increase in the short term before they improve – although there is greater awareness of potential side effects from medications. As a result, adults with PTSD may be reluctant to accept pharmacological treatment or, alternatively, side effects may lead to discontinuation. Side effects associated with the SSRIs, for example, include headaches, nausea, loss of libido and agitation. The novel antipsychotics, particularly olanzapine, are associated with substantial weight gain and a risk of type 2 diabetes. The potential for adverse side effects, combined with the questionable benefits, should raise caution in the widespread use of pharmacotherapy in PTSD.

In summary, little evidence has emerged in the last five years to warrant a substantial modification to the 2007 Guidelines recommendations with regard to pharmacotherapy for PTSD. The evidence continues to suggest that larger clinical effects are likely to be obtained from trauma-focussed psychological treatment than from pharmacological treatment in most people with PTSD. We do not, however, believe that the available evidence warrants a negative recommendation to avoid pharmacological treatments. The reality is that they will remain the most accessible treatment for a large section of the population. On the basis of the (albeit mixed) evidence reported in this review, and on that of other credible meta-analyses such as the Cochrane review,[185] we believe there is insufficient new evidence to justify changing the 2007 recommendation favouring the SSRIs as the first choice of medication for the treatment of PTSD. The evidence regarding specific types of SSRI medication is conflicting and often of poor quality, with no single SSRI type consistently emerging as more efficacious than any other. Thus, we do not consider there is sufficient data to warrant recommending one SSRI over another, and have chosen to retain the 2007 recommendation that leaves the final decision regarding the specific drug to the clinician. Other new generation (and old generation) antidepressants will continue to be recommended as a second line medication, as will the atypical antipsychotics such as risperidone and olanzapine. Naturally, the potential interaction of medications prescribed for any physical health issues with those recommended for PTSD and comorbid psychological disorders needs to be considered in treatment decisions. For example, the potential benefits of prazosin in the treatment of PTSD may argue for its usage in the treatment of hypertension in patients who have this physical comorbidity.

Importantly, in interpreting the above cited study findings, the range of trauma populations included in the above studies and the pharmacotherapies provided are generalisable to the PTSD populations in Australia and the Australian healthcare context.

Recommendations		Grade
R9	Drug treatments for PTSD should not be preferentially used as a routine first treatment for adults, over trauma-focussed cognitive behavioural therapy or eye movement desensitisation and reprocessing.[44-72,74-76,82,87-115,123,124,126-128,137-176]	**B**
R10	Where medication is considered for the treatment of PTSD in adults, selective serotonin reuptake inhibitor antidepressants should be considered the first choice.[137-182]	**C**

Good practice points

GPP57 Selective serotonin reuptake inhibitor antidepressant medication should be considered for the treatment of PTSD in adults when:

a) the person is unwilling or not in a position to engage in or access trauma-focussed psychological treatment

b) the person has a comorbid condition or associated symptoms (e.g., severe depression and high levels of dissociation) where selective serotonin reuptake inhibitors are indicated

c) the person's circumstances are not sufficiently stable to commence trauma-focussed psychological treatment (as a result, for example, of severe ongoing life stress such as domestic violence)

d) the person has not gained significant benefit from trauma-focussed psychological treatment.

GPP58 Where a decision has been made to commence pharmacotherapy, the person's mental state should be regularly monitored with a view to commencing adjunctive psychological treatment if/when appropriate. In the interim, supportive psychotherapy with a substantial psychoeducational component should be offered.

GPP59 Where significant sleep disturbance or excessive distress does not settle in response to reassurance, sleep hygiene and evidence-based psychological interventions, or other non-drug intervention, cautious and time-limited use of appropriate sleep medication may be helpful. If the sleep disturbance is of more than one month's duration and medication is likely to be of benefit in the management of the person's PTSD, a suitable antidepressant should be considered. The risk of tolerance and dependence are relative contraindications to the use of hypnotics for more than one month except if their use is intermittent.

GPP60 Where symptoms have not responded adequately to pharmacotherapy, further consultation with a specialist in the field should be undertaken to determine the appropriateness of:

a) increasing the dosage within approved limits

b) switching to an alternative antidepressant medication

c) adding prazosin, risperidone or olanzapine as an adjunctive medication

d) reconsidering the potential for psychological intervention.

GPP61 When an adult with PTSD has responded to drug treatment without experiencing any adverse effects, it should be continued for at least 12 months before gradual withdrawal.

Psychosocial rehabilitation interventions

Research question 17

17. For people with PTSD, does psychosocial rehabilitation improve outcomes compared to no intervention?

Selection criteria

Population	People with PTSD
Intervention	Psychosocial rehabilitation (e.g., teaching self-care and independent living skills techniques, providing supported housing, marital/family skills training, social skills training, vocational rehabilitation and case management) in addition to a psychological intervention or pharmacological intervention
Comparator	1. No intervention (e.g., assessment only)
Outcome	Primary outcome: functional improvement, quality of life
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The evidence review identified two studies that compared outcomes from psychosocial rehabilitation with those from no intervention. One moderate quality trial compared provision of psychosocial group support to that of assessment only on mothers' mental health.[186] The other trial, which had a high risk of bias, assessed the benefit of family group psychoeducation with assessment only on a number of mental health visits made by the participant and their family.[187] There is limited evidence from these trials of increased treatment-seeking and improved mental health in participants of psychosocial support groups when compared to participants receiving assessment only. The evidence is specific to refugees from Bosnia and Herzegovina and its generalisability to other PTSD populations in Australia may be limited. Adult refugees with PTSD who have experienced war and famine may therefore benefit from appropriate psychosocial support groups.

Consensus point

CP3 Adult refugees with PTSD who have experienced war and famine may benefit from appropriate psychosocial support groups. (Note that a broader discussion of the application of these Guidelines for refugee and asylum seeker populations in included in the "Specific populations" chapter later in this document).

Good practice points

GPP62 There should be a focus on vocational, family, and social rehabilitation interventions from the beginning of treatment to prevent or reduce disability associated with the disorder, and to promote recovery, community integration and quality of life.

GPP63 In cases where people with PTSD have not benefited from a number of courses of evidence-based treatment, psychosocial rehabilitation interventions should be considered to prevent or reduce disability, and to promote recovery, community integration and quality of life.

GPP64. Healthcare and rehabilitation professionals should be aware of the potential benefits of psychosocial rehabilitation and promote practical advice on how to access appropriate information and services.

GPP65 In cases of work-related trauma, management of any return-to-work process needs to occur in the context of a thorough risk assessment of the potential for exposure to further stressors, balanced with the potential benefits of return to work.

Research recommendation

RR9 In adults with PTSD the impact of psychosocial rehabilitation on PTSD and social and occupational functioning should be investigated.

Exercise and physical therapies

Research questions 18 and 19

18. For people with ASD or PTSD, do physical interventions or exercise improve outcomes compared to no intervention?
19. For people with ASD or PTSD, do physical interventions or exercise confer an advantage over psychological or pharmacological interventions?

Selection criteria

Population	People with ASD or PTSD
Intervention	1. Physical therapy (e.g., electroconvulsive therapy, transcranial magnetic stimulation, massage, acupuncture, acupressure, Healing Touch, CranioSacral therapy) 2. Exercise therapy (e.g., yoga, T'ai Chi, movement-to-music, rhythm activities, competitive sports, walking, jogging, swimming)
Comparator	1. No intervention/placebo 2. Any psychological or pharmacological intervention (e.g., TF-CBT, stress management therapy, EMDR, narrative exposure therapy, supportive counselling, interapy, SSRIs, other second-generation antidepressants, tricyclic antidepressants, monoamine oxidase inhibitors, benzodiazepines, mood stabilisers, anticonvulsants, and some non-benzodiazepine hypnotics and anti-anxiety medications)
Outcome	Primary outcome: resolution of symptoms of ASD or PTSD Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity. Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The evidence review identified five studies that examined the effectiveness of exercise and physical therapies for the treatment of PTSD in adults, two of which were included in the 2007 Guidelines review. One moderate risk study examined high and low frequency repeated transcranial magnetic stimulation (rTMS) compared with placebo, with limited evidence suggesting that high frequency rTMS was more effective over 14 days on a range of outcome measures than control.[188] The evidence for low frequency rTMS was inconclusive. One moderate risk study examined body-orientated therapy versus waitlist in a female population with a history of sexual abuse.[189] Although it favoured body-orientated therapy, the small size and poor study quality (e.g., waitlist control) meant the results need to be interpreted with caution for a reduction in severity of PTSD symptoms.

Three studies in this area have been published since 2007. One study with a low risk of bias, examined acupuncture in comparison to placebo, providing limited evidence to suggest that acupuncture is more effective at three-month follow-up.[190] The same study also compared acupuncture to CBT, with no difference found in efficacy. One study with a moderate risk of bias reported on the effectiveness of acupuncture in addition to CBT compared to CBT alone for a reduction in PTSD symptoms.[35] Limited evidence was found in favour of CBT plus acupuncture. One study with a moderate risk of bias, examining relaxation versus CBT, provided limited evidence favouring muscle relaxation.[108]

In summary, there is very limited evidence upon which to base a recommendation for physical therapies, with only one study addressing most of the interventions. The only intervention with more than one study was acupuncture, which did seem to show the potential for modest effects and warrants a cautious recommendation.

Recommendation		Grade
R11	Acupuncture may be considered as a potential intervention for PTSD for people who have not responded to trauma-focussed psychological therapy or pharmacotherapy.[35,190]	**D**

Good practice point

GPP66 As part of general mental healthcare, practitioners may wish to advise people with PTSD that regular aerobic exercise can be helpful in managing their symptoms and as part of self-care practices more generally. Exercise may assist in the management of sleep disturbance and somatic symptoms that are common accompaniments of PTSD.

Research recommendation

RR10 Further research is needed into the effect of physical and exercise-based interventions on PTSD.

Single vs multiple interventions

Psychological interventions for adults with PTSD
Research question 20

20. For people with PTSD, is a single intervention more effective than multiple interventions?

Selection criteria

Population	People with PTSD
Intervention	Single psychological or pharmacological intervention or psychosocial rehabilitation strategy
Comparator	Combined psychological interventions, combined pharmacological interventions, combined psychosocial interventions, or combined psychological, pharmacological, physical, exercise therapy, or psychosocial interventions
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Studies addressing research question 20 were as follows:

- three studies compared exposure therapy alone with exposure therapy plus cognitive restructuring[105,111,191]
- one study compared cognitive restructuring alone with cognitive restructuring plus exposure therapy[105]
- one study compared relaxation to exposure therapy plus cognitive restructuring[105]
- one study compared supportive counselling to exposure therapy plus cognitive restructuring[111]
- one study compared imaginal exposure against imaginal exposure plus *in vivo* exposure[124]
- one study compared imaginal exposure against imaginal exposure plus *in vivo* exposure and cognitive restructuring[124]
- one study compared *in vivo* exposure against imaginal exposure plus *in vivo* exposure and cognitive restructuring[124]
- one study compared prolonged exposure against prolonged exposure plus stress inoculation training[55]
- one study compared stress inoculation training against prolonged exposure plus stress inoculation training[55]
- one study compared exposure therapy against exposure therapy plus social emotional rehabilitation[192]

Summary of the literature

The evidence review identified several studies that examined the combination of CBT strategies, primarily including exposure and cognitive restructuring. Three studies have compared the additive effect of combining exposure and cognitive restructuring, but the overall finding is that they do not lead to additive gains. It should also be noted that the presence of exposure or cognitive restructuring is preferable to stress inoculation training alone. In summary, the majority of the evidence suggests that both interventions are effective and that combining them may not increase the treatment gains for PTSD-specific symptoms. It should be noted, however, that this is based upon a limited evidence base.

Recommendations

None.

Pharmacological interventions for adults with PTSD

Research question 20

The research question for this section was the same as that for the section "Psychological interventions for adults with PTSD" – see above for details.

20. For people with PTSD, is a single (pharmacological) intervention more effective than multiple interventions?

Summary of the literature

The evidence review identified a single small trial (n=19) with moderate risk, included in the 2007 evidence review, that found treatment with SSRI (fluoxetine, sertraline or paroxetine) plus olanzapine to be more effective than SSRI plus placebo in US combat veterans with PTSD.[193]

Thus, there is some very tentative evidence that adding olanzapine to an SSRI may have some benefits in combat-related PTSD. Given the interest in adjunctive pharmacotherapy, more research in this area is warranted.

Recommendations

None.

Research recommendations

RR11 Given the extent to which adjunctive pharmacotherapy is used in routine clinical practice, particularly with chronic and treatment-resistant cases, it is recommended that large, well-controlled trials be conducted to clarify the benefits of multiple medications.

RR12 Since preliminary evidence suggests that a range of medications may enhance psychological treatments, future research should further investigate this question.

RR13 Further exploration is required of the potential benefits of combination and sequencing (pharmacological and trauma-focussed psychological) treatments.

RR14 Future research should explore neurobiological and psychological markers that may be used in predicting likely treatment response. This research recommendation applies equally to pharmacological and psychological interventions.

Psychosocial rehabilitation interventions for adults with PTSD
Research question 20

20. For people with PTSD, is a single intervention more effective than multiple interventions?

Selection criteria

Population	People with PTSD
Intervention	Single psychological or pharmacological intervention or psychosocial rehabilitation strategy
Comparator	Combined psychological interventions, combined pharmacological interventions, combined psychosocial interventions, or combined psychological, pharmacological, physical, exercise therapy, or psychosocial interventions
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The evidence review identified one study that compared exposure therapy and social emotional rehabilitation with exposure therapy alone on clinical symptoms and quality of life in male combat veterans.[192] The study was small (n=34), and was assessed as having a high risk of bias. The evidence from this trial was inconclusive.

Good practice point

GPP67 Psychosocial rehabilitation interventions should be used as an adjunctive therapy in combination with psychotherapy or pharmacotherapy.

Pharmacological and psychological interventions for adults with PTSD
Research question 20

The research question for this section was the same as that for the section "Psychological interventions for adults with PTSD"– see above for details.

20. For people with PTSD, is a single intervention more effective than multiple interventions?

Summary of the literature

Pharmacotherapy alone versus pharmacotherapy plus psychotherapy

The evidence review identified two studies, both with moderate risk of bias, comparing sertraline alone with sertraline plus CBT.[194,195] Both these studies were included in the 2007 evidence review. The larger study (n=65) found no clinically important differences between treatments. While the small study with Cambodian refugee women found a small advantage for sertraline plus CBT over sertraline alone, this should be interpreted with caution given the small sample size and specific context of the trial population.

Thus, there is little to suggest that adding CBT to sertraline significantly improves outcomes.

Psychotherapy plus pharmacotherapy versus psychotherapy plus placebo
The evidence review identified two studies, both with moderate risk of bias, comparing prolonged exposure plus paroxetine with PE plus placebo. Both these studies have been published since the 2007 evidence review. The study with larger subject numbers (n=37)[196] found limited evidence showing that the combined treatments were more effective than PE with placebo, but results were calculated from completer data only (no intent-to-treat analysis was possible), and so should be interpreted cautiously. The smaller study (n=23) found no conclusive evidence of a difference.[197] One well designed but very small pilot study with a low risk of bias found psychotherapy plus MDMA to be better than psychotherapy plus placebo in reducing PTSD symptoms.[173]

Thus, there is little to suggest that adding paroxetine to prolonged exposure significantly improves outcomes, and there is tentative evidence that MDMA may enhance psychotherapy, although both warrant further research.

Recommendations

None.

Psychological vs pharmacological vs psychosocial interventions

Research question 21

21. For people with PTSD, is any intervention (pharmacotherapy, psychotherapy or psychosocial rehabilitation) more effective than any other intervention (pharmacotherapy, psychotherapy or psychosocial rehabilitation)?

Selection criteria

Population	People with PTSD
Intervention	1. pharmacological intervention 2. psychological intervention 3. psychosocial rehabilitation intervention
Comparator	1. psychological or psychosocial rehabilitation intervention 2. pharmacological or psychosocial intervention 3. psychological or pharmacological intervention
Outcome	Primary outcome: resolution of symptoms of PTSD Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity. Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	1966 to October 2011[a]
Language	English

[a] New research questions

Summary of the literature
The evidence review identified two studies that assessed comparisons relating to this question, one comparing paroxetine with TF-CBT[198] and the other comparing fluoxetine to EMDR.[199] The former was included in the 2007 evidence review, but the latter was not.

The paroxetine trial was of low quality with small subject numbers (n=21), and data analysis was based on completers (not intent-to-treat). In this type of study, individuals are (obviously) not masked to treatment allocation, but neither were the rating assessors. There was limited evidence favouring CBT on self-ratings but not on clinician ratings. Given the flaws, these results are hard to interpret. The EMDR trial was better designed and had a low risk of bias. It found a small benefit of EMDR over the SSRI.

There is insufficient evidence upon which to make a recommendation, although further research on this question, including comparisons with standard care, is clearly warranted.

Recommendations

None.

Research recommendation

RR15 Large, well-controlled randomised trials comparing pharmacological with trauma-focussed psychological treatment across different trauma populations are required. This may be best achieved through coordinated international multi-site trials.

Sequencing comorbidities

Research question 22

22. In the context of PTSD and comorbidity, is sequencing of intervention per diagnosis more effective than simultaneous interventions for both diagnoses?

Selection criteria

Population	People with PTSD and comorbidity (e.g., grief, depression, personality disorder, pain and substance misuse)
Intervention	Sequenced psychological or pharmacological intervention per diagnosis, i.e., treatment for PTSD and then comorbidity or vice versa
Comparator	Simultaneous psychological and/or pharmacological interventions for both diagnoses
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

There were no studies identified in the systematic review that specifically addressed the question of treatment sequencing. However, a number of studies have reported treatment outcomes for people with PTSD and comorbid conditions. This literature has been included in Chapter 2 of this Guidelines document. The key findings are re-presented here as they underpin the consensus points that follow.

With regard to PTSD and comorbid substance use disorder, the literature suggests that treating the two disorders concurrently may be more effective than treating either disorder alone. Similarly, no studies of PTSD with comorbid depression have explored sequencing of treatment or patterns of symptom change over time. A large body of evidence, however, demonstrates that effective treatment of PTSD symptoms is associated with improvements in comorbid depression. However most studies exclude patients with very severe depression and such comorbidity may indicate the need for depression-specific techniques prior to trauma focus treatment.

Given the above literature and in the absence of any specific studies examining the issue of sequencing specifically, consistent with the previous 2007 Guidelines, the following consensus points are offered to practitioners.

Consensus points

CP4 In the context of comorbid PTSD and mild to moderate depression, health practitioners may consider treating the PTSD first, as the depression will often improve with treatment of the PTSD.

CP5 Where the severity of comorbid depression precludes effective engagement in therapy and/or is associated with high-risk suicidality, health practitioners are advised to manage the suicide risk and treat the depression prior to treating the PTSD.

CP6 In the context of PTSD and substance use disorders, practitioners should consider integrated treatment of both conditions.

CP7 In the context of PTSD and substance use disorders, the trauma-focussed component of PTSD treatment should not commence until the person has demonstrated a capacity to manage distress without recourse to substance misuse and to attend sessions without being drug or alcohol affected.

CP8 In the context of PTSD and substance use disorders, where the decision is made to treat substance use disorders first, clinicians should be aware that PTSD symptoms may worsen due to acute substance withdrawal or loss of substance use as a coping mechanism. Treatment should include information on PTSD and strategies to deal with PTSD symptoms as the person controls their substance abuse.

Early psychological interventions for children and adolescents exposed to a potentially traumatic event

In line with the section "Early psychological interventions for adults exposed to a potentially traumatic event", this section addresses the provision of psychological interventions for all children and adolescents exposed to trauma – not only those who are presenting with adjustment problems. It covers immediate post-incident options for all, before going on to look at those who develop diagnosable conditions.

Early psychological interventions for all
Research questions 3, 4 and 7

3. For people exposed to trauma, do early psychological interventions improve outcomes compared to no intervention?
4. For people exposed to trauma, does any early psychological intervention confer any advantage over other early psychological interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Early psychological intervention (e.g., debriefing, trauma-focussed counselling, education, performed within one month of trauma)
Comparator	No intervention (e.g., assessment only)
Outcome	Primary outcomes: symptoms of ASD and PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ posttraumatic growth / physical comorbidity
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Research question

7. For people exposed to trauma, is a single early intervention more effective than multiple early interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Single early psychological or pharmacological intervention
Comparator	Early combined psychological or combined pharmacological interventions (within one month of the traumatic event) or combined psychological and pharmacological interventions (within one month of the traumatic event)
Outcome	Primary outcomes: symptoms of ASD or PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The literature on interventions for children exposed to potentially traumatic events is not well developed. Three studies were identified in the evidence review. Two moderately sized studies using good methodology [200,201] found that psychological debriefing was no better than usual care in school-aged children exposed to road traffic accidents. The third study [202] evaluated an information-based intervention in school-aged children exposed to accidental injury, and found some benefit but no clinical effects. However, this study was of low quality and probably under-powered.

Recommendation		Grade
R12	For children exposed to a potentially traumatic event, psychological debriefing should not be offered.[200,201]	**B**

Good practice points

GPP68 Children, ranging from infants and pre-schoolers to older children and adolescents can be affected significantly by traumatic events, at higher rates than adults. Practitioners need to be conscious of this risk, must be proactive in assessing the range of psychological impacts of trauma, and should be prepared to provide appropriate assistance, including referral to specialist services if needed.

GPP69 Information is often provided to assist children following traumatic events. The content, when used, should be of high quality and tailored to the traumatic event type and the target audience. Information given following traumatic events may include: a) information about likely outcomes (most frequently positive); b) reinforcement of existing and new positive coping; c) advice on avenues for seeking further assistance if required; and d) possible indicators of a need for further assistance. Information following traumatic events may also include a recognition of the role of, and impact on, caregivers, siblings and teachers.

GPP70 For children exposed to trauma, psychoeducation should be integrated into a stepped care approach that involves parents and the range of health, education and welfare service providers, and includes monitoring, targeted assessment and intervention, if necessary.

GPP71 Psychological first aid may be appropriate with children in the immediate aftermath of trauma, however if it is used there must be access available to infant, child and adolescent mental health specialists if and when required.

GPP72 Parents and caregivers provide a protective/buffering function against child traumatic stress. Clinicians should be aware of the potential for parents' own distress or other factors to compromise their capacity to provide a protective/buffering function. If distress or other relevant factors are identified, the clinician should respond accordingly.

Research recommendation

RR16 Research across a range of trauma-exposed child and adolescent populations is needed to improve understanding of the role and effectiveness of early intervention.

Early psychological interventions for children and adolescents with ASD or acute PTSD Research questions 3, 4 and 7

The research questions for this section are the same as those used for the preceding section – see above for details.

3. For people exposed to trauma, do early psychological interventions improve outcomes compared to no intervention?
4. For people exposed to trauma, does any early psychological intervention confer any advantage over other early psychological interventions?
7. For people exposed to trauma, is a single early intervention more effective than multiple early interventions?

Summary of the literature

The evidence review identified two studies that evaluated psychotherapies as early interventions for children with symptoms of PTSD. In one small study[203] narrative exposure therapy was associated with a non-significant reduction in the likelihood of PTSD in a sample of school-aged children exposed to a series of past traumas. Another study[204] found support for an intervention targeting the child–caregiver relationship in children exposed to a range of traumas. However, the study was of moderate quality and found no clinically meaningful effects.

Recommendations

None.

Consensus point

CP9 Trauma-focussed cognitive behavioural therapy may be useful as an early psychological intervention for children with a diagnosis of ASD in the initial four weeks after the traumatic event, based on the positive evidence for cognitive behavioural therapy in children with PTSD. However, the effectiveness of this approach with ASD in children is not yet established.

Psychological interventions for children and adolescents with PTSD

Research questions 10 and 11

10. For people with PTSD do psychological interventions improve outcomes compared to no intervention?
11. For people with PTSD, does any psychological intervention confer any advantage over other psychological interventions?

Selection criteria

Population	People with PTSD
Intervention	Psychological intervention (e.g., TF-CBT, stress management therapy, EMDR, narrative exposure therapy, supportive counselling, interapy, thought field therapy)
Comparator	1. No intervention (e.g., assessment only)
	2. Other psychological intervention
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

The studies considered in relation to question 10 were as follows:

- two studies compared trauma-focussed CBT against a waitlist/control condition in children[205,206]
- three studies compared EMDR against waitlist in children/adolescents[207-209]
- one study compared stress management therapy against a waitlist condition in adolescents[210]

The following comparisons were identified for question 11:

- four studies (six articles) compared trauma-focussed CBT against treatment as usual in children[211-216]
- one study compared EMDR against standard care in children[217]
- one study compared trauma-focussed CBT against a psychoeducation and stress management condition in adolescents[218]
- one study (two articles) compared trauma-focussed CBT against supportive therapy (child centred therapy) in children[219,220]
- one study compared trauma-focussed CBT against psychodynamic therapy in adolescents[221]
- one study compared trauma-focussed CBT administered to different people to treat children with PTSD[213,214]
- one study compared narrative exposure therapy against supportive counselling in adolescents/young adults[83]
- two studies compared CBT with an exposure component against CBT without an exposure component in children[222,223]
- two studies compared trauma-focussed CBT against EMDR in children[224,225]
- one study compared parent and child group CBT with parent-only group CBT for children[226]

Summary of the literature

Investigations of trauma-focussed cognitive behavioural therapy in children and adolescents included studies comparing TF-CBT with waitlist control (two studies),[205,206] treatment as usual (four studies),[211-216] and other active treatments (five studies).[218,221-223] Study sample sizes were generally small to moderate (study participant range: [24-229]). Study participants experienced a range of traumatic events from motor vehicle accidents and other single-event traumas to more repetitive experiences such as exposure to domestic violence or sexual abuse. Design issues were common; frequently there was moderate or high risk of bias and many studies did not include an intent-to-treat analysis. Generalisability to an Australian context was high across studies (rating either A or B). Clinical impact was generally rated as a C; if cited as a trend this was also in the direction of favouring TF-CBT. There have been two studies in this review examining the effects of EMDR compared with TF-CBT for PTSD in children that demonstrate an equivalent effect for both conditions.[224,225] One of these studies is however very small (n=9) with high risk of bias.[224] In view of the limited nature of the current evidence we are unable at this point to make a clear recommendation in relation to EMDR. However we recommend that given the findings of these studies further research examining EMDR for PTSD in children is conducted.

Recommendation		Grade
R13	For children of school age and above with PTSD, developmentally appropriate trauma-focussed cognitive behavioural therapy should be considered.[205,206,211-216,218,221-223]	**C**

Good practice point

GPP73 When assessing a child or adolescent for PTSD, healthcare professionals should ensure that they separately and directly assess the child or adolescent for the presence of PTSD symptoms. It is preferable not to rely solely on information from the parent or guardian in any assessment.

GPP74 Given that retention in therapy and the effectiveness of trauma-focussed cognitive behavioural therapy with children and adolescents both require strong parent and/or caregiver involvement, an initial phase of trauma-focussed cognitive behavioural therapy with this group is engagement of the parent(s) to improve their understanding and support of this treatment modality.

Research recommendations

RR17 The effectiveness of trauma-focussed cognitive behavioural therapy on depression and other posttraumatic presentations (internalising and externalising behaviours) requires further investigation.

RR18 We recommend that further research examining eye movement desensitisation and reprocessing for PTSD in children is conducted.

Research question 12

12. For people with PTSD, is individual therapy more effective than group therapy?

Selection criteria

Population	People with PTSD
Intervention	Individual therapy (e.g., psychodynamic psychotherapy, individual cognitive behavioural therapies, EMDR, narrative exposure therapy, image rehearsal therapy, supportive counselling, hypnosis)
Comparator	Group therapy (e.g., supportive therapy, psychoeducation, psychodynamic therapy, group CBT such as anxiety management, stress inoculation, assertiveness training, prolonged exposure, cognitive restructuring)
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

Two further studies compared group versus individual psychological interventions. In one,[227] CBT was the treatment model employed to treat post-disaster PTSD, and the second[228] compared a psychodynamic individual therapy to a psychoeducation-based group for sexually abused children. Outcome measures were used only to assess PTSD severity, but in both studies, despite differences in treatment model, outcomes favoured individual treatments.

Recommendation		Grade
R14	For children with PTSD, individual psychological interventions should be considered in preference to group interventions.[227,228]	**C**

Research questions 13 and 14

The research questions used for this section were the same as those used in the section "Psychological interventions for adults with PTSD" – see above for details.

13. For people with PTSD, is the combination of individual therapy and group therapy more effective than either alone?
14. Are established interventions for PTSD effective when self-delivered or self-delivered with practitioner support, compared to practitioner-delivered intervention or no intervention?

Summary of the literature

There were no studies identified in the systematic review.

Recommendations

None.

Early pharmacological interventions for children and adolescents exposed to a potentially traumatic event

Early pharmacological interventions for all

This section addresses the provision of pharmacological interventions for all those exposed – not only those who are presenting with adjustment problems.

Research questions 5 and 6

5. For people exposed to trauma, do early pharmacological interventions improve outcomes compared to no intervention?

6 For people exposed to trauma, does any early pharmacological intervention confer any advantage over other early pharmacological interventions?

Selection criteria

Population	People exposed to trauma, including the subgroup of patients with ASD
Intervention	Early pharmacological intervention, (e.g., imipramine, propranolol, benzodiazepines, other sympatholytics, other antidepressants, anticonvulsants, antipsychotics, chloral hydrate, given within one month of trauma)
Comparator	No intervention (e.g., assessment only)
Outcome	Primary outcomes: symptoms of ASD or PTSD
	Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity.
	Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature

The evidence review identified only one small trial evaluating pharmacological intervention using sertraline.229 Whilst there were some positive outcomes, particularly for depression and parent-rated PTSD symptoms, no differences were found for child-rated PTSD symptoms.

Recommendation		Grade
R15	For children exposed to a potentially traumatic event, pharmacotherapy should not be used as a preventive intervention for all those exposed.[229]	**D**

Pharmacological treatment for those with ASD or acute PTSD

Research questions 5 and 6

The research questions for this section were the same as those for the previous section – see above for details.

5. For people exposed to trauma, do early pharmacological interventions improve outcomes compared to no intervention?

6. For people exposed to trauma, does any early pharmacological intervention confer any advantage over other early pharmacological interventions?

Summary of the literature
There were no studies identified in the systematic review.

Recommendations

None.

Pharmacological interventions for children and adolescents with PTSD

Research questions 15 and 16

15. For people with PTSD, do pharmacological interventions improve outcomes compared with placebo?
16. For people with PTSD, does any pharmacological intervention confer any advantage over other pharmacological interventions?

Selection criteria

Population	People with PTSD
Intervention	Pharmacological intervention (e.g., SSRIs, other second-generation antidepressants, tricyclic antidepressants, monoamine oxidase inhibitors, benzodiazepines, mood stabilisers, anticonvulsants, and some non-benzodiazepine hypnotics and anti-anxiety medications)
Comparator	1. Placebo 2. Other pharmacological intervention
Outcome	Primary outcome: resolution of symptoms of PTSD Secondary outcomes: symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ side effects/ posttraumatic growth/ physical comorbidity. Additional outcomes for children: attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	August 2005 to October 2011 for adults[a]; 1966 to October 2011 if required[b] 1966 to October 2011 for children and adolescents[c]
Language	English

[a] Updated search from 2007 Guidelines
[b] Expanded search period if fewer than two Level II studies are found
[c] New research questions

Summary of the literature
Only two pharmacological intervention studies involving children and adolescents met the Guidelines inclusion criteria. The study by Robb and colleagues[230] reported the comparison of the SSRI antidepressant sertraline versus placebo in 129 children and adolescents who experienced mixed (single event and/or complex) trauma. At post-treatment the active and placebo treatments did not significantly differ on PTSD, depression or quality of life outcomes. The risk of study bias was graded as high.

A second small study (n=24) by Cohen and colleagues[231] compared TF-CBT plus sertraline with TF-CBT plus placebo in 10 to 17 year olds with sexual abuse-related PTSD symptoms. Study risk of bias was rated as moderate, however, the result is considered to be generalisable to the local context. No conclusive between-group differences were noted on participant self-report of PTSD symptoms.

Recommendations		Grade
R16	For children and adolescents with PTSD, pharmacotherapy should not be used as a routine first treatment over trauma-focussed cognitive behavioural therapy.[230,231]	**D**
R17	For children and adolescents with PTSD, pharmacotherapy should not be used routinely as an adjunct to trauma-focussed cognitive behavioural therapy.[231]	**D**

Good practice point

GPP75 Prescription of antidepressants in children should be guided by specific practice guidelines on depression, and practitioners should be aware of age-related side effects.

School-based interventions

In those exposed to trauma or with ASD/acute PTSD

Research questions 8 and 9

8. For children exposed to trauma, does any intervention delivered through school improve outcomes for the child over no intervention?
9. For children exposed to trauma, does any intervention delivered through school improve outcomes for the child compared to any other intervention delivered through school?

Selection criteria

Population	Children exposed to trauma
Intervention	Any intervention delivered through school
Comparator	1. No intervention
	2. Other intervention delivered through school
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: resolution of symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ posttraumatic growth/ oppositional defiant disorder/ attention deficit hyperactivity disorder/ social anxiety disorder/ physical comorbidity.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies.
Search Period	1966 to October 2011
Language	English

Summary of the literature

The evidence review identified five studies that conducted trials of intervention within schools, two using TF-CBT,[232,233] two using a combination of CBT and play,[234,235] and one using group supportive counselling.[236] Those employing TF-CBT alone were of moderate quality and had effects in favour of CBT with a range of effects, but with some indication of clinically significant effects. The studies employing the combined CBT and play were relatively larger, the results generally favoured the combined CBT and play intervention over control, but the effects were small and not clinically meaningful and the settings were less likely to facilitate generalisability. A study of group supportive counselling was of lesser quality but had a reasonable sample size. Effects favoured group supportive counselling over control, but these effects were not clinically significant.

Recommendation		Grade
R18	For children exposed to trauma with symptoms of PTSD, where they were exposed to the same event, a school-based trauma-focussed cognitive behavioural intervention aimed at reducing symptoms of PTSD should be considered.[232-236]	**C**

Good practice point

GPP76 An integrated model between education and health providers that facilitates appropriate support and referral is recommended. It is recommended that schools provide a facilitative function in intervening with children following trauma, especially after large-scale traumas.

Research recommendation

RR19 There is a need to understand how the impact of trauma presents for children in schools, and the role of the school community in providing support to affected children and assisting in referral if required.

Interventions that include parents

Research questions 23 and 24

23. For children with PTSD, does the inclusion of parents/ primary caregivers in psychological interventions improve outcomes for the child compared with no parent/ primary caregiver inclusion in the psychological interventions?
24. For children with PTSD, does any psychological intervention that includes parents/ primary caregivers improve outcomes for the child compared to any other psychological intervention that includes parents/primary caregivers?

Selection criteria

Population	Children with PTSD
Intervention	Any psychological intervention that includes parents/ primary caregivers
Comparator	1. Psychological interventions that do not include parents/ primary caregivers
	2. Any other psychological interventions that includes parents/ primary caregivers
Outcome	Primary outcome: resolution of symptoms of PTSD
	Secondary outcomes: resolution of symptoms of depression, anxiety and substance misuse/ social and occupational function/ quality of life/ treatment refusal/ dropout over 12 months/ posttraumatic growth/ oppositional defiant disorder/ attention deficit disorder/ social anxiety disorder/ physical comorbidity/ attention deficit hyperactivity disorder/ conduct disorder/ oppositional defiant disorder/ attachment reactive disorder/ social anxiety disorder.
Study design	Systematic reviews of randomised controlled trials, randomised controlled trials; if fewer than two Level II studies are found, consider: pseudo-randomised controlled trials, non-randomised controlled trials, cohort studies, before-and-after controlled studies, case-control studies
Search Period	1966 to October 2011
Language	English

Summary of the literature

The evidence review identified two papers that reported psychological interventions for children with PTSD, with and without concurrent treatment of parent or caregiver, that met the Guidelines inclusion criteria. Deblinger and colleagues[213,214] compared child-only CBT, mother-only CBT, child and mother CBT, and waitlist control. King and colleagues[237] compared child-only CBT, child and parent CBT, and treatment as usual. Study sample sizes were small (range 36–100) and were rated as moderate to high risk of bias. The participant group, sexually abused children, was considered very generalisable to the Australian context.

Both studies reported no difference on outcomes measures in groups with and without parent or caregiver involvement. The exception was the study by King et al.,[237] which reported some improvement in global functioning with inclusion of parents.

Research recommendation

RR20 The impact of treatment of trauma-related psychopathology in parents and/or caregivers of abused children prior to treatment of the children should be explored.

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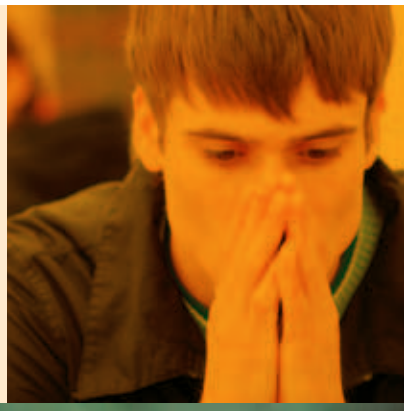

Economic Considerations 6

Note: A detailed economic evaluation of these Guidelines and the key recommendations therein appears in a separate companion document which is available for download from the Phoenix Australia website (www.phoenixaustralia.org). The purpose of this chapter is to provide a broad overview of the economic considerations presented by the diagnosis and treatment of PTSD and ASD, with particular reference to the Australian community.

Building on the economic analysis completed for the previous version of these Guidelines, a brief search of the literature was conducted to identify any key studies published since 2007. Key search terms, combined with PTSD, included: economic, cost, resource, economic evaluation, cost-benefit, cost-utility, and cost-effectiveness.

Summary of literature collected

In the previous (2007) Guidelines, twelve records were identified in the search, of which five were considered potentially useful. The current research revealed a further seven, of which six were considered potentially useful. The following provides a brief summary of the studies identified in both searches.

The cost burden of PTSD

Chan et al.[1] explored the economic impact of psychiatric disorders resulting from motor vehicle accident in South Australia. Approximately nine months after their accident, 31 per cent of respondents were identified as depressed and 62 per cent as anxious, while 29 per cent met criteria for PTSD. Chan concluded that PTSD cases incurred significantly higher healthcare costs compared with non-PTSD cases ($p<.001$), with untreated PTSD cases incurring significantly higher economic losses than treated PTSD and non-PTSD cases ($p<.05$).

A US study by Walker et al.[2] examined the healthcare costs of a large group of women. After adjusting for depression, chronic medical disease, and demographic factors, women with high PTSD symptoms had significantly greater odds of having non-zero healthcare costs than women with low PTSD scores. Compared with women who had low PTSD symptoms, those with moderate symptoms had, on average, a 38 per cent increase in adjusted total annual healthcare costs, and those in the high PTSD group had a 104 per cent increase. The authors suggest that instituting health services interventions to improve recognition and treatment of PTSD in primary and specialty care clinics may be a cost-effective approach for lowering the prevalence of this disorder.

Going beyond PTSD, Zatzick et al.[3] investigated the association between psychiatric disorders, length of stay (LOS) and cost in a large cohort of trauma inpatients in the US. The authors estimated that 29 per cent of participants had one or more psychiatric diagnoses, with those patients demonstrating between 46 per cent and 103 per cent increases in LOS and cost ($p<0.01$). The authors highlighted the potential cost benefits of early recognition and intervention.

More recently, data from 26 countries involved in the World Mental Health project were analysed to explore partial disability associated with a range of physical (e.g., cardiovascular disease, diabetes, cancer, back pain) and mental health conditions.[4] Mental and physical disorders have a considerable impact on partial disability, in addition to their toll on full disability, at both the individual and at the societal level. At an individual level, PTSD was consistently found to result in the highest levels of partial disability, followed by depression and bipolar disorder. At a population level, physical disorders resulted in higher disability levels than mental disorders due to their greater prevalence.

With regard to the healthcare burden associated with PTSD compared to other psychiatric disorders, annual per-patient healthcare costs in a civilian US population were between 4 per cent and 9 per cent higher for patients with PTSD than for those with major depressive disorder.[5] The difference in costs was driven by higher mental health service use among patients with PTSD.

Similarly, US veterans of the Iraq and Afghanistan conflicts with PTSD and depression had greater utilisation of specialty mental health treatments, greater use of antidepressant medications, and higher overall mental healthcare costs in the previous 12 months than depressed patients without PTSD.[6]

In an economic analysis of healthcare costs following the current Middle East conflicts, the US National Bureau of Economic Research found that soldiers deployed to combat zones where they engaged in frequent enemy contacts, or witnessed allied or civilian deaths, were at substantially increased risk for suicidal ideation and PTSD.[7] The authors estimate healthcare costs to be a minimum of US$1.5 to $2.7 billion for combat-induced PTSD.

The effect of treatment

A US study by Fontana et al.[8] compared the outcomes and costs of three models of Department of Veterans Affairs (VA) inpatient treatment for PTSD: 1) long-stay specialised inpatient PTSD units; 2) short-stay specialised evaluation and brief treatment PTSD units; and 3) nonspecialised general psychiatric units. Veterans in the short-stay PTSD units and in the general psychiatric units showed significantly more improvement during follow-up than veterans in the long-stay PTSD units. The long-stay units proved to be 82.4 per cent and 53.5 per cent more expensive over one year than the short-stay PTSD units and general psychiatric units, respectively. The authors recommended systematic restructuring of VA inpatient PTSD treatment to improve the effectiveness of services to larger numbers of veterans. (These changes, of course, took place some time ago in the US VA system; the primary emphasis is now on evidence-based care – prolonged exposure or cognitive processing therapy – delivered in outpatient settings.)

Issakidis et al.[9] conducted a cost-effectiveness study that aimed to identify the averted burden and economic efficiency of current and optimal (i.e., evidence-based) treatment for the major mental disorders. The authors estimated that receipt of interventions consistent with evidence-based care ranged from 32 per cent of those in contact with services for social phobia to 64 per cent for posttraumatic stress disorder. In terms of direct treatment costs, they found that PTSD treatment had higher per case per year costs than any of the other anxiety disorders. According to this study, individuals with PTSD constituted one-third of people treated for an anxiety disorder, but their treatment accounts for 40 per cent of the total cost of treatment for all anxiety disorders. The authors estimated that the costs to the community of 'years living with disability' from PTSD would be reduced by 34 per cent if evidence-based care were used for all. The authors conclude that evidence-based care for anxiety disorders would produce greater population health gains at a similar cost to current care, resulting in a substantial increase in the cost-effectiveness of treatment.

In a large analysis of the benefits of evidence-based treatment, Kilmer and colleagues used microsimulation modelling to estimate the social costs of depression and PTSD for the 261,827 US troops deployed on June 30, 2008, for Operations Enduring Freedom and Iraqi Freedom.[10] They estimated that, given current standards of care, roughly half of these individuals will be treated for these conditions in the two years after they return, and 30 per cent of those treated will receive evidence-based treatment. The authors estimated that the two-year social costs of depression and PTSD for this cohort will be US$923 million. Policy simulations evaluating the savings associated with universal access to evidence-based treatment suggest that such access would generate cost savings of $138 million (15 per cent).

Contrary to much other research, a study in the former Yugoslavia found that the recovery rate among patients treated in specialised centres for war-related PTSD several years after the war, was poor (14 per cent), and symptom improvements were small.[11] The recovery rate was not linked to service costs. The exact nature of treatment provided, however, was hard to determine, and the authors suggest that recovery rates might be improved with different treatment methods or different service models.

Finally, on a slightly different topic, Jones and colleagues explored the benefits of remote screening for mental health conditions.[12] They found that using telehealth-only mental health screening for large numbers of soldiers within a compressed time frame was more expensive than in-person screening. Soldiers showed a strong preference for in-person screening, and telehealth resulted in higher referral rates (potentially a result of higher false positives). The authors conclude that there is no evidence of cost savings or improved acceptability for telehealth mental health post-deployment screening.

Summary

Although the amount of high quality research literature is sparse, particularly around the economic burden of PTSD and the cost-benefits of evidence-based treatment, it is clear that PTSD is a disorder that carries a high level of disability – possibly higher, in fact, than any other physical or mental disorder. It is also clear that people with PTSD tend to be high users of healthcare services and incur high healthcare costs – again, higher than those of other psychiatric disorders. There is preliminary evidence that routine use of evidence-based treatments may go some way, not only to improving outcomes for people with PTSD, but also to reducing the associated disability and healthcare costs.

This area is increasingly a topic of interest to governments and service provider agencies. Deployments to the Middle East in the last decade, with large numbers of personnel returning with combat-related PTSD, have brought the topic towards the top of the healthcare agenda for agencies such as the US VA system. They have responded with a commitment to evidence-based care for PTSD, and no doubt analyses of the success or otherwise of this approach will appear in the literature shortly.

Commentary on economic burden

Thus, notwithstanding the paucity of literature, it is clear that PTSD is associated with high service use, high healthcare costs, and long-term disability. PTSD is a high burden disorder that impairs functioning in many, if not all, areas of life, with consequences extending beyond the individual to impact on family members and society as a whole. To date there has been no comprehensive economic assessment of PTSD from a social perspective. Studies included in this review focus mainly on health service utilisation, and there is a paucity of evidence that uses surrogate outcomes of burden including rates of hospitalisation, work impairment and a greater risk of motor vehicle accidents. Further, the relative lack of evidence pertaining to treatment costs – particularly in Australia – makes it difficult to identify whether increased healthcare costs are a direct result of PTSD or are indirectly accounted for by the poor physical health commonly associated with PTSD.

The importance of addressing these issues though the use of health economic techniques was comprehensively addressed by McCrone et al.[13] Health economics provides tools (including cost-effectiveness, cost-benefit, and cost-utility analyses) to ascertain the relative efficiency of different treatment options. McCrone concludes that the quality of life and resource consequences of PTSD require a better understanding of the economics of the disorder and the alternative ways to treat it. These sentiments are echoed by the authors of the costing articles identified in the preceding section. The economic burden associated with PTSD is significant, but treatments are available to alleviate this burden. These treatments, however, require the use of scarce resources and there is a shortage of adequately trained clinicians. In this environment of increased fiscal restraint, there is a need to identify those healthcare interventions, whether they are psychosocial or pharmacological, that provide the greatest benefit for the limited health dollar.

Current funding of ASD and PTSD treatment

In the Australian healthcare system, a diverse range of practitioners provide treatment services for people with PTSD, variously funded by Commonwealth and state governments as well as by third-party insurers and the affected individuals themselves. As a result of these diverse funding arrangements there are differences in availability of treatment between states. To date, there is no overall assessment of financing arrangements for the treatment of ASD and PTSD in Australia and the extent of unmet need for treatment is not known. In this context, it is difficult to make an assessment of the feasibility or cost and benefit of recommendations made in these Guidelines.

Of interest in this context, is the fact that the previous (2007) Guidelines recommended 90-minute sessions for trauma-focussed therapy. Some jurisdictions have created a new item number allowing clinicians to claim a limited number of these extended sessions for trauma-focussed PTSD treatment (at the time of writing, the Department of Veterans' Affairs and several victims of crime agencies, for example), and other jurisdictions allow extended sessions more broadly if they can be justified (e.g., Comcare). To date, no data have been published on the cost benefit of these changes, but at least they give providers the opportunity to be remunerated for evidence-based treatment. It should also be emphasised, of course, that many other fee structures for mental health providers do not support consultation times of this length. Those briefer consultation times may favour short interactions – presumably with an emphasis on symptom management – rather than the recommended trauma-focussed interventions. Having said that, the recommendation for 90-minute sessions is not based on a strong empirical database and should not necessarily preclude the use of trauma-focussed interventions in shorter (e.g., one hour) sessions.

Potential implications

The accompanying economic evaluation document provides more detail on the implications of the above discussion and makes a number of recommendations. In the context of this brief chapter, however, several implications are apparent.

First, there is an urgent need for a comprehensive assessment of the economic burden associated with PTSD. Such research would provide the platform for identifying, measuring and valuing the private and social costs associated with PTSD.

Second, rigorous research is required to ascertain the cost-effectiveness of different interventions identified by the systematic review and recommended as treatment options. Of particular interest would be a study that looks at each recommendation if delivered as first, second or third line treatment, and is then able to identify the optimal package of cost-effective interventions. Given the impact of PTSD on morbidity and quality of life, it is particularly important that the economic evaluation uses a measure of disease burden as the outcome (i.e., disability-adjusted life year (DALY), quality-adjusted life year (QALY), years of life lost due to disability (YLD)).

Third, an assessment of current financing arrangements for treating ASD and PSTD should be conducted to ensure that adequate resources are provided. This strategy should complement the economic evaluation approach to ensure that the full spectrum of treatment options is evaluated and costed.

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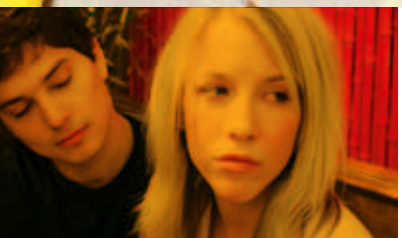

Specific Populations and Trauma Types: Issues for Consideration in the Application of the Guidelines

7

This section contains broad comment on issues to be considered when applying the Guidelines recommendations to particular populations who develop PTSD following trauma, and to particular types of trauma. It is beyond the scope of the section to include an exhaustive list of all traumatised populations and so it is limited to populations for whom specific contextual information may assist practitioners in the appropriate application of recommended treatments.

While there are significant differences between the trauma populations identified in this section, an experience common to many is exposure to sustained and/or repeated traumatic experiences, sometimes referred to as Type II trauma.[1] In many cases, these sustained and/or repeated traumatic events are of human design, intended to leave the victim in a state of fear and feeling helpless to prevent further trauma. Examples of Type II trauma include childhood sexual or physical abuse, domestic violence, incarceration as a prisoner of war, torture and, arguably, prolonged combat. Repeated exposure to trauma on a family, community, and cultural level, such as may be the case in the Aboriginal and Torres Strait Islander community, may also be consistent with this definition. It is also worth noting that, because of the sustained nature of some these traumatic experiences, people presenting for treatment may still be facing ongoing threat and be at risk of further exposure to trauma. Emergency and defence personnel, victims of domestic violence, and victims of sexual assault perpetrated in the context of their current employment or intimate relationships are some of the groups whose treatment may be affected by having to return to unsafe environments. In the context of such ongoing risk, the focus of interventions – at least initially – should be on ensuring safety, stabilisation and symptom management, rather than commencing the trauma-focussed components of treatment.

As outlined in the introductory chapter, there is a body of literature suggesting that the symptom constellation that follows Type II trauma is broader than PTSD, although not necessarily reflected merely in more extensive comorbidity with other psychological disorders.[2] This presentation, often referred to as Complex PTSD or Disorders of Extreme Stress Not Otherwise Specified, includes features such as impulsivity, problems with emotional regulation, identity disturbance, dissociative symptoms, self-destructive behaviour, abnormalities in sexual expression, and somatic symptoms.[3] Issues of deliberate self-harm and suicidality are more likely to be present in this group. All of these features need to be considered in both treatment planning (see Chapter 2) and in delivering psychological interventions (see Chapter 5).

This chapter differs from the clinical practice recommendations sections in that it is not based on a systematic review of the empirical evidence. Rather, it is based on information provided by specialists in these areas and a broad understanding of the relevant literature. Within the section, emphasis has been placed on populations under-represented in the studies included in the systematic review. This material should be used in conjunction with the information about particular types of traumatic events that follows.

The special populations covered in this chapter are:

- Aboriginal and Torres Strait Islander peoples
- refugees and asylum seekers
- military and ex-military personnel
- emergency service personnel
- older people.

The categories of traumatic event covered in the chapter are:

- motor vehicle accidents
- crime
- sexual assault
- natural disasters
- terrorism.

Aboriginal and Torres Strait Islander peoples

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although no studies were identified in the systematic review that included Aboriginal or Torres Strait Islander peoples, there is no evidence to suggest that radically different treatment approaches are required. Rather, it is a question of adapting the guideline recommendations to the specific needs of this population.

Specialised training in cultural competency and safety has been developed for practitioners working with Aboriginal and Torres Strait Islander peoples and, wherever possible, practitioners intending to work with this population should receive such training. However, in circumstances where this is not possible, culturally informed care for Aboriginal and Torres Strait Islander peoples should be available within non-specialised primary and mental healthcare settings. The information presented here is intended to assist practitioners in these settings in their work with Aboriginal and Torres Strait Islander peoples.

The document *Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice*[4] is an excellent guide to working with this population. As well as comprehensive information on history and other contextual issues, the document provides practical advice for clinicians in mental health practice, as well as suggestions around broader service design issues. We strongly recommend that clinicians working with this population familiarise themselves with this text.

Background issues

Since white settlement in Australia, Aboriginal and Torres Strait Islander peoples have suffered separation from land, family, and cultural identity. This has resulted in multiple experiences of trauma, grief, and loss, which have affected people at the level of the individual, family, and community. In this process, some aspects of traditional kinship and community systems have been destroyed and, in some cases, formerly protective influences within those systems that functioned to buffer individuals and families from further trauma have been lost. Thus, the legacy of historical trauma is still apparent in the increased risk and incidence of traumatic exposure amongst Aboriginal and Torres Strait Islander peoples today. For example, Indigenous Australians are twice as likely to be the victims of violence or threatened violence than other Australians.[5] In effect, family and community functioning can continue to be compromised in each subsequent generation by social and psychological problems (such as substance use), leading to a vicious cycle of deteriorating conditions, pervasive social disadvantage and, for individuals, increased risk of further victimisation and traumatic exposure, antisocial behaviour, and reduced psychological resilience. Among Aboriginal and Torres Strait Islander men, for example, there appears to be a link between exposure to traumatic or violent events during childhood and the subsequent perpetration of violent crime.[6] Notwithstanding these comments, it needs to be acknowledged that Aboriginal and Torres Strait Islander peoples have shown remarkable resilience in surviving such historical and ongoing adversity and continue to display cultural strengths today.

Given this context, the notion of trauma and PTSD in Aboriginal and Torres Strait Islander peoples is inevitably complex. It is multigenerational and across all communities. Many Aboriginal and Torres Strait Islander persons presenting with mental health problems in both urban and rural/remote locations have multiple severe traumatic exposure within their family, community and personally that may include domestic violence, sexual abuse, murder, and suicide. In seeking to understand the impact of traumatic experiences on the individual, the practitioner should consider not just the nature or number of specific experiences, but the contextual factors that predispose and/or amplify the experience of, and response to, trauma. Traumatic experiences that are recurrent and difficult to talk about are likely to have the most profound impact. Therefore, even when the focus is on a specific recent event (for instance, a violent death), it is critical for the practitioner to explore the person's prior experience of traumatic events – particularly those that occurred in early life, such as physical and sexual abuse. This, of course, is true for any traumatised individual but it is of particular importance in disadvantaged sections of the community who may be at much higher risk for those experiences.

Due to the importance of extended kinship systems to Aboriginal and Torres Strait Islander peoples, a traumatic loss is likely to be felt broadly throughout the kinship group, rather than confined to the immediate nuclear family. For example, a person may have several 'mothers', or be considered a mother to several nieces/nephews/grandchildren. If this is not recognised, the intensity of the loss may be underestimated. In responding to this cultural context, it may be important to conceptualise interventions as being broader than simply the treatment of a single affected individual.

Presentation

Aboriginal and Torres Strait Islander peoples' understanding of mental health can differ markedly from that of the non-Indigenous population and often mental illness is not viewed as a condition requiring treatment. Furthermore, in the event that mental illness is recognised as a problem, its management generally falls to the person's immediate family in the first instance, followed by the extended family and, if necessary, community elders.[7] Hence, by the time many Aboriginal and Torres Strait Islander people present to services, their condition is likely to be very serious. It is not uncommon for the individual to be in crisis at first contact with presentations of acute distress, including interpersonal chaos, self-harm and depression. Indeed, Indigenous Australians are hospitalised for mental health problems at nearly twice the rate of other Australians and suicide is also more prevalent in this population (particularly among males, and females under the age of 25).[5]

Substance abuse/dependence is very often the presenting problem, with abused substances including alcohol, illicit drugs, and prescribed medications, such as analgesics. It is common to see high levels of dissociative symptoms and prominent auditory and visual phenomena that could be mistaken for psychosis. In many cases, PTSD co-exists with prolonged grief/depression. While some people experience textbook PTSD symptoms, many more present with the range of additional symptoms associated with chronic and complex trauma (i.e., enduring patterns of social, psychological and behavioural difficulties, usually compounded by substance use). Further, culture-bound expressions of distress are often interpreted by non-Indigenous people as anger. The complexity of these presentations can lead to a diagnosis of personality disorder, with PTSD being overlooked. Clinicians should be aware that many Aboriginal and Torres Strait Islander women and men in refuges and in prison have PTSD. In fact, one study found PTSD to be second only to substance use disorders in terms of prevalence among incarcerated Aboriginal and Torres Strait Islanders, affecting almost one-third of women and 12 per cent of men.[8]

Assessment

Access, engagement, and trust in the therapeutic setting are complicated for Aboriginal and Torres Strait Islander peoples by a number of factors. These include the complexity of the trauma (particularly community level trauma), cultural factors, and the historical legacy of mistrust of authorities. The potential for stigma and discrimination associated with mental health treatment to pose a barrier to engagement should be considered. Experiences of chronic loss mean that issues of abandonment and (the potential for) shaming may be heightened. As such, the recommendation noted in Chapter 2 regarding the need to allow more time and attention to the therapeutic relationship for people who have experienced prolonged and repeated trauma would generally apply to this group.

Due to the complexity of the presenting problems for this population, PTSD is often overlooked. A culturally appropriate assessment is required for any diagnosis to be reliable. If no suitably trained practitioner is available, consultation with an Aboriginal and Torres Strait Islander mental health worker is highly recommended.

Issues of eldership, traditional law, and taboo need to be understood, at least to some extent, for reliable assessment. The *Working Together* document[4] provides excellent advice on this issue. The following general practical advice, developed by Medicine Australia, may be useful also:[9]

- Allow plenty of time.
- Gain permission from the person (and others in attendance) for the interview.
- With empathy, explain purpose of questions, the timeframe of the assessment, and potential outcomes.
- Identify relationships between the person and others present and be aware of their significance.
- Check with the person whether they prefer to be interviewed with/without significant others present.
- Observe cultural norms (e.g., eye contact, seating arrangements).
- Do not refer to a dead person by name.
- Do not refer to certain close relatives by name (e.g., a Torres Strait Islander male may not refer to his brother-in-law by name).
- Do not criticise an elder or other members of the extended family.
- Be cautious of confiding certain personal information to a member of the opposite sex (to the client), as men's and women's business are usually kept separate.
- Anxiety can be generated by interviewing someone in a confined space.
- Spiritual experiences are not necessarily hallucinations or delusions.
- Be aware of possible somatisation symptoms.
- Allow for reflection, periods of silence and any questions.
- Minimise the use of direct questions.
- Advise the person of confidentiality.

As noted in Chapter 2 and re-iterated above, the assessment of PTSD should not be limited to a recent traumatic event, but should take into account previous traumatic experiences. Even if the person's PTSD or presentation for treatment has been triggered by a recent event, it is often the case that a recent loss or trauma brings up unresolved past events. The potential impact of the traumatic experiences of previous generations on members of the current generation, either directly (e.g., family environments characterised by psychosocial problems, violence, impaired parenting), or indirectly (e.g., vicarious traumatisation), should be considered.

Further, given the high physical health morbidity among disadvantaged groups, even in young people, careful screening or review of general health status may be important, especially if pharmacological treatment is likely to be prescribed, or if there is a lack of progress in treatment. Diseases such as diabetes, renal failure, chronic infection, anaemia, etc., can complicate recovery from traumatic events and vice versa.

Treatment

In the review of evidence-based treatment for PTSD, no trials have investigated treatments specifically for Aboriginal and Torres Strait Islander peoples. In the application of these treatment Guidelines to Aboriginal and Torres Strait Islander peoples the practitioner is advised to consider the recommendations in combination with common sense and knowledge of traditional practices. Where available, appropriate partnerships with Indigenous mental health workers should be developed. In cases where this is not possible, consultation with Indigenous mental health workers or other practitioners with appropriate cultural training is recommended.

Within Aboriginal and Torres Strait Islander cultures, traditional therapies include the use of healers, rituals, and ceremonies. In working with an Aboriginal person or Torres Strait Islander with PTSD, practitioners should apply the Guidelines in a culturally sensitive way, with consideration given to what combination of traditional, pharmacological, and psychological approaches to treatment will be most effective for the individual.

In establishing treatment goals, practitioners should give consideration to a number of factors in addition to those outlined in Chapter 2. First, the magnitude of trauma in Aboriginal and Torres Strait Islander families may be overwhelming to practitioners and lead them to feel powerless and be inclined to give up. Good supervision is essential and collaboration with an Aboriginal or Torres Strait Islander mental health professional is preferred. Second, as noted in Chapter 2, with people who have experienced prolonged or repeated traumatic experiences, more preparatory work is required before trauma-focussed work begins. As such, unless the practitioner has the capacity to make a commitment to being available in the longer term, it is often more appropriate to address current life and behavioural problems, focussing on issues of structure and problem solving, rather than delving into a potentially long history of trauma. Third, specific cultural factors should also be considered. Issues of age, seniority, and gender impact on who should provide treatment and how the treatment should be given. If the practitioner is ignorant of, or disregards these traditions, the Aboriginal or Torres Strait Islander person may be less likely to engage effectively in treatment.

With regard to early interventions following traumatic events affecting whole communities, local and traditional Aboriginal peoples and Torres Strait Islander approaches should be identified and supported. Contemporary approaches such as psychological first aid (PFA) may also be appropriate, provided they can be delivered in a culturally sensitive manner.

There are significant challenges in the application of these Guidelines to Aboriginal and Torres Strait Islander peoples. In addition to the historical and current sociopolitical factors referred to above, the pervasive and enduring social disadvantage and the prevalence and complexity of traumatic experience, geographical isolation and limited availability of appropriately trained mental health practitioners all combine to create considerable barriers to effective care for posttraumatic mental health conditions.

Working with children

As discussed above, transgenerational issues are significant in the Aboriginal and Torres Strait Islander population and thus require careful consideration by practitioners working with Indigenous children. As with adults, compared to the general population, Aboriginal and Torres Strait Islander children are more likely to experience mental health problems and commit suicide, but less likely to present to formal mental health services.[10] Exposure to trauma is also more common; for example, Indigenous children are five times more likely to be hospitalised for injuries occurring due to assault, and twice as likely to be hospitalised for burn or scald injuries.[11] Including family members in the assessment and treatment process may be particularly beneficial for this population, given the importance of family in the Indigenous community.[10] Issues of safety are, of course, paramount, and family involvement may not be appropriate in some cases.

Recommended reading

Dudgeon, P., Garvey, D., & Pickett, H. (2000). *Working with Indigenous Australians: A handbook for psychologists*. Perth: Gunada Press.

Human Rights and Equal Opportunity Commission. (2007). *Bringing them home: A guide to the findings and recommendations of the National Inquiry into the separation of Aboriginal and Torres Strait Islander Children from their Families.* See http://www.hreoc.gov.au/education/bth/community_guide/index.html

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Refugees and asylum seekers

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although a few studies identified in the systematic review included participants that were refugees or asylum seekers, there is no evidence to suggest that radically different treatment approaches are required. Rather, it is a question of adapting the guideline recommendations to the specific needs of this population.

Practitioners working with refugees and asylum seekers need to be aware of their own ethnocentricity, need to be culturally skilled and informed, and need to be open to different cultural perspectives on psychological problems. This includes awareness of differing values, avoidance of stereotyping, the capacity to respond to potential conflicts between traditional values and values of the dominant culture, and the ability to understand and choose an appropriate treatment approach. A range of cultural factors influence the individual's decision to seek treatment and subsequent engagement in therapy, including beliefs about the importance of family in healthcare, the cause of illness, and stigma attached to mental illness and treatment. Clinicians should also recognise that cultural factors interact with what are commonly termed social factors – region of origin, socioeconomic status, education, social status, rural or urban background – and these factors are equally found to predict PTSD symptoms.[12]

The following section outlines a range of general issues with which practitioners working with refugees and asylum seekers in Australia should be familiar. Detailed information about the specific background and experience of the individual is, of course, still required.

Background issues

There is an inevitable political context in which the traumatic experiences and subsequent treatment of refugees and asylum seekers occurs. Within Australia, as well as internationally, government policy, community attitudes, and media coverage of refugee and asylum seeker issues impact the mental health and wellbeing of this group. The impact can be direct, creating a welcoming or hostile environment, or indirect, potentially influencing public attitudes. For asylum seekers, government policies relating to detention, visa options, and fundamental rights and entitlements such as access to medical care have the potential to significantly influence mental health and wellbeing.

The traumatic experiences of refugees need to be understood also in the context of sociopolitical factors in their country of origin. It is helpful for the practitioner to have an understanding of these factors at both the macro level – the nature and history of the conflict and its impact on the individual, their family, and community over time – as well as at the level of the individual's experience.

There are three defining characteristics of the refugee and asylum seeker experience common to most, and based on deliberate and targeted prosecution against their ethnic, cultural, religious or political beliefs or values:

1. Trauma (experienced or witnessed situations where their lives have been threatened or people close to them have been threatened, injured, raped, tortured or killed).
2. Loss (of family members, friends and relatives, abduction of children, possessions, livelihood, country, status, etc.).
3. Deprivation (of basic human rights and needs such as food, water, shelter, education, and medical attention).

The frequency and nature of traumatic exposure inevitably varies, but the following experiences, designed to maximise psychic injury, are common:

- Extreme forms of violence that have been repeated and/or prolonged.
- Destruction of identity and the breakdown of families and communities, which may occur deliberately through the systematic disruption of core attachments to families, friends, and religious and cultural systems.
- Conditions of inescapability and unpredictability, maximising the experience of helplessness.
- Loss under violent circumstances with consequences such as prolonged grief.
- Witnessing atrocities such as mass killings, rape, torture, children targeted for violence and death, the violation of sacred values, betrayal, and the weakness of restorative justice.
- Deliberate erosion of personal integrity – physical boundaries invaded, the right to privacy violated, basic functions of eating and sleeping closely controlled, confronted with impossible choices, such as choosing who should die or who should be left behind.

The practitioner should also be aware that, once in Australia, there are several stressors that can continue to impact upon the mental health of refugees and, in some cases, may be more salient to the development of psychopathology than pre-migration trauma exposure.[13] Post-migration stressors underlie the extent to which refugees and asylum seekers continue to maintain their culture or heritage and the degree to which they decide to adapt and interact with the new host society.[14,15] These factors may include:

- Concern about the safety of relatives and friends remaining in the country of origin when conflict is ongoing.
- Loss of, or separation from, family and friends.
- Difficulties in tasks of settlement such as learning a new language, gaining employment and accommodation.
- Isolation and lack of social support.
- Acculturation (e.g., ethnic and religious identity; inter-generational tensions associated with changes relating to the cultural, linguistic and social domains).
- Discrimination, racism and social exclusion in the host community relating to economic, social, cultural or religious beliefs.
- Minority status and potential marginalisation in dominant Australian culture, loss of social status and poverty. In the case of asylum seekers, environmental and policy factors such as mandatory or indefinite detention and temporary protection (see additional issues specific to this group below).

Use of interpreters

In working with refugees and asylum seekers, interpreters are often involved. Practitioners should be mindful of the following issues when working with interpreters. First, with regard to perceptions of confidentiality, interpreters should not be known to clients. In small migrant communities, interpreters are frequently educated members of the community, often community leaders. People may feel that their confidentiality is compromised when they have to disclose their experiences through known members of their own community. Secondly, when interpreters are used for specific interventions such as imaginal exposure, it is important that the interpreter understands the procedure as well as the underlying rationale and potential client responses, so that the intervention is not unintentionally compromised. Clear roles should be established for therapist and interpreter,[16] ensuring that all parties, including the client, understand these roles. Finally, practitioners should be aware of the potential negative emotional impact on interpreters of retelling the client's traumatic experiences. In addition to the general point made in Chapter 2 regarding the potential for all practitioners in the field of posttraumatic mental health to be adversely affected by the work, the possibility that the interpreter has had similar traumatic experiences of their own needs to be considered. Appropriate preparation, debriefing and clinical supervision may help mitigate any distress experienced by interpreters.[16]

Presentation

As noted above, refugees and asylum seekers have typically been exposed to prolonged and repeated traumatic experiences. While there are likely to be some differences in presentation (e.g., somatisation, spiritual interpretations such as loss of soul), the construct of PTSD is broadly applicable across cultures.[17-20] Around 10 per cent of adult refugees are estimated to have PTSD,[21] however, this percentage increases to almost 25 per cent in those who have experienced torture,[22] with many of those experiencing comorbid problems such as:

- anxiety, depression, substance abuse, compulsive gambling and brief reactive psychoses
- interpersonal difficulties associated with mistrust, fear, anger, and withdrawal
- high-risk and maladaptive behaviours
- grief responses such as numbing, anger, hopelessness, and meaninglessness
- family conflict, family breakdown, and domestic violence
- physical illness and somatic complaints.

In addition, language difficulties, availability of interpreters, culturally sensitive information about treatment, stigma and other service barriers often prevent refugees and asylum seekers from accessing the right services. Hence, the utilisation of mental health services is often below the population average in the first years of resettlement and due to these barriers refugees and asylum seekers may not present until much later, when severely distressed or disordered.[23]

In seeking to understand refugees and asylum seekers with PTSD, the potential existential impact of this particular type of traumatic experience needs to be recognised. Interventions should go beyond assessment and treatment of PTSD to address other forms of distress that may have resulted from either daily stressors, or exposure to war-related violence and loss.[24] For example:

- Violence and uncertainty experienced during trauma may lead to anxiety, fear, and helplessness.
- Forced impossible choices, and experiences of humiliation experienced, may lead to feelings of guilt and shame.
- Disruption of relationships, separation, and isolation may lead to grief, depression, and altered interpersonal relatedness (e.g., fear of relationships, dependency or extreme self-sufficiency).
- Shattered values of human existence resulting from trauma may lead to a loss of faith in humanity, distrust, sensitivity to injustice, and idealisation and devaluing of others.
- Anger and potentially aggressive behaviour can result from low frustration tolerance, protest about loss, reaction to injustice and betrayal, and as a defence against shame and guilt.

It is also important to recognise that individual strengths can emerge in the face of trauma with resilience and posttraumatic growth as an outcome which also presents itself in those patients who have PTSD symptoms. Human beings are often remarkably resilient and it is important that clinicians are able to identify and build upon those strengths in treatment.

Assessment

As a general rule, standardised assessment measures are appropriate for use with refugee and asylum seeker clients, bearing in mind the need for culturally sensitive administration and interpretation of results. Adequate psychological and social support during the initial phase is of utmost importance. In addition, it is recommended to undertake a rapid and contextually grounded assessment of the daily stressors, that is, post-migration stressors mentioned in the above section, which may be pertinent and particularly salient to an individual's daily functioning, and the resolution of which may have a direct influence on mental health symptoms.

A framework for assessment that covers the multiple potential contributing factors to a refugee or asylum seeker's PTSD and related problems is critical. The following table summarises the information that should be collected for a comprehensive assessment.

Assessment domain	Implications
Country of origin and date of arrival	This information alone alerts the assessor to: • region-specific physical health problems • nature and duration of violence and hardship • access to healthcare.
Visa status	Visa status is critical to understanding rights and entitlements and thereby the stresses of the client's everyday environment.
Language	Check preferred language and country of origin of interpreter as some prefer that the interpreter does not come from their country.
Cultural background	Cultural notions of causal attributions, stigma, help-seeking behaviour, and concepts of healing are important to assess, as well as familiarity with systems in Australia. A cultural, ethnic or religious group is very diverse; generalisations need to be cautious. Some may wish to involve other family members in healthcare decision-making.
Extent of exposure to violence and other traumatic events (e.g., child abuse, intimate partner violence, etc.)	A 'thumbnail' sketch is sufficient for the assessment process and provides an indication of likely physical and psychological health sequelae.
Family functioning and social support	Children and adolescents have usually been directly affected through the experience and/or witnessing of violence, disrupted schooling and ongoing loss or separation from important caregivers. Ascertaining whether children and other family members require support involves proactive and sensitive exploration, particularly in the context of domestic violence.
Post-migration circumstances including housing, employment, language barriers, social isolation, etc.	Potential sources of stress or strength.
Legal-immigration situation regarding refugee determination or family sponsorship	Sponsorship issues and refugee determination processes are major sources of stress and mental health problems.
Physical health screening	Considerations include: • physical injuries or pain which are the result of torture/physical trauma • somatisation of a psychological problem • dental care • in women, reproductive health-related problems • in children, health consequences of neglect, abandonment, domestic violence.

As noted in Chapter 2, a comprehensive assessment should go beyond the Diagnostic and Statistical Manual of Mental Disorders (fourth edition; DSM-IV) diagnosis of PTSD to include comorbidity and broader psychosocial factors. In refugees and asylum seekers, particular attention should be paid to: indicators of family breakdown, behavioural problems, quality of daily functioning, socially disruptive, aggressive or withdrawn behaviour, and physical symptoms. In undertaking the assessment and planning treatment, the suggestions outlined in Chapter 2, for people with PTSD arising from prolonged and repeated trauma, apply. The following additional considerations are recommended for refugees and asylum seekers with PTSD.

- Trust and rapport are very important. First appointments often need to be longer and/or several appointments may be needed for a comprehensive assessment.
- Refugees need to be seen in a safe place which does not trigger traumatic memories of overly officious, authoritarian behaviour.
- Awareness that medical settings may act as reminders of torture, and that some refugees may have a fear of intrusive investigative procedures.
- Gender of the therapist can be especially important for survivors of sexual assault.
- Understanding that a person's hostility may be a reaction to fear and uncertainty.
- Information provision (e.g., on the purpose of the assessment and use of information once disclosed) and encouraging the person to ask questions promotes a sense of control. However, practitioners need to be aware that in some cultures such practices are unfamiliar and may require extra encouragement and multiple checks on behalf of practitioners.
- Explanations of the meaning of confidentiality, privacy and consent are helpful.
- Factors affecting 'non-compliance' are important to anticipate, such as cultural beliefs about damaging effects of investigations such as taking blood, attitudes to medication and misunderstanding of side effects, suddenly stopping medication.

Treatment

In treating refugees and asylum seekers with PTSD, the practitioner is faced with a number of complex factors over and above the individual's traumatic experiences, including language, ethnocultural, sociopolitical, and community issues, as well as the person's current clinical and psychosocial situation. It is not uncommon for practitioners to feel overwhelmed by these cultural and clinical complexities. In some cases this can lead the practitioner to being immobilised for fear of making mistakes, and in other cases it can lead to practitioners ignoring the complexities completely and proceeding as though they did not exist. Either response is unlikely to result in effective treatment. The middle ground in which the practitioner is mindful of ethnocultural issues, but does not attempt to deal with them as the end in itself, is ideal. The practitioner's genuine interest and respect are the most effective tools for building trust and the positive therapeutic relationship needed to help the individual recover from their traumatic experience.

Note that refugees may have differing interpretations of the cause of their current difficulties, with treatment expectations varying accordingly. Many will take a Western view of mental health problems, seeing them as disorders that will improve with appropriate treatment. Others may feel that their problems are a natural consequence of chronic exposure to inhuman conditions and will not respond to treatment, or that their difficulties will subside naturally over time, and thus treatment is unnecessary.[25] Yet others will attribute their traumatic experiences to supernatural or religious reasons, presenting a potential difficulty for treating practitioners as to how to present and explain trauma-focussed treatments of PTSD. Regardless of their views on the importance of treatment and the likelihood of success, refugees will often have a poor understanding of what the treatment process will involve.[25] Clearly, the provision of a clear explanation of assessment findings, as well as a description and rationale for the proposed treatment, is crucial.

A small number of studies suggest that culturally-adapted cognitive behavioural therapy (CBT) (including exposure) may be effective for refugees with trauma-related disorders.[26] There is a need, however, to define more clearly who needs specific psychological (specifically CBT) interventions and/or pharmacological interventions over and above the general psychosocial assistance and counselling that is given in contemporary programs provided by torture and trauma services. Little research has investigated the use of interpreters in the delivery of trauma-focussed therapy, although there is some indication that interpreter-mediated and standard therapy result in equivalent treatment gains in refugees with PTSD.[27] If an interpreter is required, it is recommended that therapist and client use shorter 'chunks' of speech during exposure therapy in order to ensure appropriate monitoring of the client's narrative and levels of distress.[16]

Consistent with the good practice points in Chapter 2, it is essential that a therapeutic relationship and conditions of trust and safety are established in working with refugees and asylum seekers. In addition, the clinician should consider the following issues:

- the need for a holistic framework for treatment, which parallels the holistic framework for assessment
- recognising the value of different levels of intervention – individual, family, community, and important settings such as schools, cultural and religious associations
- being aware of coping strategies that may have developed in response to situations of chronic violence and extensive losses – such as denial, withdrawal, and anger – and their protective value for the person
- the critical role of guilt and shame in maintaining health problems.

In working with a refugee or asylum seeker, treatment goals need to extend beyond PTSD. Of uppermost importance for refugees and their families is usually the rebuilding of their lives through a successful settlement process. The practitioner should facilitate opportunities for retraining, employment, recovery of status, and establishing connections. Where this is beyond the scope of the individual provider, the person should be linked in with appropriate services to address those issues. Attention also needs to be paid to physical health, as the alleviation of physical health problems can be a pathway to mental health wellbeing.

Finally, it needs to be recognised that mental health problems in refugees are the result of systematic violation of their human rights. Restoration of faith in human beings, the right to health, the right to protection from human rights violations, and restoration of justice are part of the process of healing for refugee survivors of torture and trauma. Services which address the mental health needs of survivors must respect and reinforce the concept of human rights as expressed in various international charters and agreements.[28]

Additional issues specific to asylum seekers subject to mandatory detention and temporary protection

Australia's policies of mandatory detention and temporary refugee protection have been implicated as predictors of PTSD in refugees in Australia. Steel and colleagues[29,30] report extremely high incidence of PTSD in temporary visa holders and asylum seekers in detention, as well as in the years after release. This group is also more likely to experience ongoing language difficulties, social isolation, and increasing anxiety and depression over time, compared to refugees granted permanent protection.[31] In addition, asylum seekers in detention are at significant risk of suicidal behaviour, with rates of approximately 41 and 26 times the national average for men and women, respectively.[32]

The particular difficulties of working with this group of asylum seekers should be noted. Asylum seekers subject to mandatory detention or temporary protection often have difficulty engaging in therapy to address their trauma, as their traumatic experiences are, in many cases, ongoing. Most have a history of pre-migration trauma, followed by a dangerous and traumatic flight to safety and finally prolonged and indefinite detention in penal-like institutions, where they are faced with loss of control, long-term separation and uncertainty about their family members left behind in the country of origin. These factors exacerbate the impact of war-related traumas, and coupled with long periods in detention are associated with worse mental health outcomes.[30,33] Such experiences are then followed by limitations of the temporary visas (employment restrictions, reduced access to settlement services and welfare benefits) that cause severe distress to many.

In addition, during the processing time, asylum seekers face further distressing events – interviews to apply for permanent protection, the frequent rejections of their application, the appeals to the Refugee Review Tribunal and other courts of appeal. Many report that their intense intrusive and disturbing thoughts and nightmares are about being arrested by detention guards and returned to detention or being deported – they experience 'flash-forwards'. McInerney and Kaye[34] argue that standard diagnostic categories and individual therapy in these conditions may be inadequate to address these complexities that have such a devastating impact on asylum seekers' lives.

Treatment of PTSD therefore needs to consider providing care in the context of the traumas experienced, current living circumstances and asylum seekers' cultural beliefs and values. There is some evidence to suggest that refugees on temporary protection visas experience improved mental health on receipt of permanent residency,[35] however, harmful effects can remain despite initial improvements due to release from detention, and further research is required to assess the long-term impact of detention and subsequent acculturation stressors.

There are significant challenges in the application of these Guidelines to refugees and asylum seekers. In addition to the complexity and severity of their traumatic experience, ongoing trauma of detention and ongoing stressors of resettlement, asylum seekers are generally detained in geographically remote areas with limited or no access to appropriately trained mental health practitioners, thus presenting considerable additional barriers to the delivery of effective care for their posttraumatic mental health needs.

Working with children

Children make up almost half the refugee population worldwide, and represent approximately one-third of asylum seekers.[36] Around 11 per cent are likely to develop PTSD.[21] As with adults, a range of pre-, peri- and post-migration stressors put refugee children and adolescents at increased risk of developing mental health problems. Estimates of the prevalence of PTSD in this group vary widely but are generally well above the rates seen in non-refugee children.[37] The available literature indicates a strong association between prolonged immigration and detention and mental health problems in children and adolescents, with reported difficulties including:

- attachment issues, developmental, emotional and behavioural delays[38]
- depression, anxiety, and behavioural problems, which may be early indicators of the subsequent development of PTSD[39]
- self-harm and suicidal ideation[40]
- separation anxiety, sleep disturbance, disruptive conduct and somatic symptoms.[40,41]

In addition to the experience of trauma, flight and displacement, children also experience disruptive schooling and many are separated or lose their parents or caregivers. Evidence suggests that unaccompanied refugee children and adolescents are at greater risk of psychological distress than those who are accompanied by a parent or guardian.[37,42] On the other hand, children's experiences and wellbeing are mediated by their parents' mental health, and thus accompanied children whose parents experience mental health problems may be more likely to develop significant levels of distress themselves.[33]

In general, however, refugee children and adolescents tend to be more resilient than adults, and find it easier to adapt to life in a new country. Younger children in particular are less likely to feel guilt at leaving friends and family behind, and may feel more excited than afraid of starting a new life.[43] Nonetheless, children's adaptability can create additional stressors, such as a change in family dynamics as they become more fluent in their new language and are required to act as 'interpreters' for parents. With the loss of identity and social roles, families are exposed to further tensions which can cause widening of the cultural gap between family members and can lead to conflict and anger. While the literature suggests that anger experienced as a part of a PTSD diagnosis is often directed towards a spouse, recent research suggests that anger towards children is also very common, and a linguistic gap experienced between parents and children may contribute to generating this conflict and anger.[44] However, there is a lack of systematic studies investigating the effect of anger on children and the impact on the family unit as a whole.

Limited research has investigated the assessment and treatment of trauma-related mental health problems in refugee children.[45,46] In the absence of conflicting evidence, judicious application of the suggestions for working with refugee adults (above), and with non-refugee children (see Chapter 3) is recommended.

Recommended reading

Andary, L., Stolk, Y., & Klimidis, S. (2003). *Assessing mental health across cultures.* Bowen Hills: Australian Academic Press.

Aristotle, P. (1990). A wholistic approach. In P. Hosking (Ed.), *Hope after horror: Helping survivors of torture and trauma* (pp. 157-176). Sydney: Uniya.

McInerney, D., & Kaye, J. (2006). Asylum seekers, therapy and ethics. *Critical Psychology, 16*, 166-179.

Nickerson, A., Bryant, R. A., Silove, D., & Steel, Z. (2011). A critical review of psychological treatments of posttraumatic stress disorder in refugees. *Clinical Psychology Review, 31*(3), 399-417.

Steel, Z., Momartin, S., Bateman, C., Hafshejani, A., & Silove, D. M. (2004). Psychiatric status of asylum seeker families held for a protracted period in a remote detention centre in Australia. *Australian and New Zealand Journal of Public Health, 28*(6), 527-536.

Steel, Z., Silove, D., Brooks, R., Momartin, S., Alzuhairi, B., & Susljik, I. (2006). Impact of immigration detention and temporary protection on the mental health of refugees. *British Journal of Psychiatry, 188,* 58-64.

Victorian Foundation for Survivors of Torture. (1998). *Rebuilding shattered lives.* See www.foundationhouse.org.au/LiteratureRetrieve.aspx?ID=25045.

Victorian Foundation for Survivors of Torture. (2012). *Promoting refugee health: A guide for doctors, nurses and other health care providers caring for people from refugee backgrounds* (3rd ed.). See www.foundationhouse.org.au/LiteratureRetrieve.aspx?ID=104997.

Military and ex-military personnel

There were sufficient studies identified in the systematic review that included participants that were past or present members of the armed forces to allow a subgroup analysis within the systematic review. This analysis confirmed that the general treatment recommendations are applicable to this group, although outcomes may not be as strong. Particular issues to consider in the treatment of military/veteran populations are presented here. As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. (Note that the term 'veteran' is used to describe both a past member of the armed services and a current member who has seen one or more deployments).

Background issues

Military personnel are confronted with a range of experiences that may contribute to PTSD, including both military-specific events and traumas that also affect the general population. Research with the Australian Defence Force (ADF) suggests that the most common traumatic event experienced by serving members is seeing someone badly injured or killed, or unexpectedly seeing a dead body. In terms of developing PTSD, experiences such as witnessing atrocities and accidentally injuring or killing another person, in addition to other interpersonal traumas such as rape, domestic violence, being stalked, and being kidnapped or held captive, pose the most significant risk.[47]

During deployment, it is not uncommon for military personnel to experience multiple traumatic events. Military deployment frequently involves exposure to real or threatened death and serious physical injury that can lead to PTSD. Furthermore, the nature of traumatic events experienced on deployment can challenge fundamental beliefs about the self, the world, and humanity. For example, traumatic events may involve the death of civilians and destruction of communities on a scale that is often unimaginable and for which the veteran has had little preparation. Military personnel themselves may have committed acts of violence that, with the benefit of hindsight or emotional distance from the event, may be deemed to be atrocities – such experiences may shatter previously held beliefs about the self.

Increasingly, as the armed services are involved in humanitarian and peacekeeping duties, military personnel can be exposed to situations of considerable human suffering without any immediate threat to themselves. It was initially thought that peacekeepers had low rates of exposure to traumatic stressors. Several recent studies, however, have indicated that peacekeeping missions may present a range of unique stressors that can have a significant psychological impact on deployed personnel.[48] For example, in one study, peacekeepers reported negative deployment experiences including knowing that many of the war criminals were not arrested, seeing children who were the victims of war, seeing civilians in despair, seeing the physical devastation of the country's infrastructure and environment, and knowing that there was a lack of supplies for civilians.[49] In addition, peacekeepers often experience frustrations associated with peacekeeping duties, such as restrictive rules of engagement.[50]

An understanding of the psychological underpinnings of the serving member or veteran's initial presentation and a preparedness to give sufficient time to establish a trusting relationship will be immeasurably helpful. Given the war-related nature of traumatic events experienced by many veterans, they may anticipate negative evaluation on the part of the clinician. To work effectively with military personnel, the clinician must demonstrate a willingness to listen and the capacity to tolerate the details of traumatic experiences whilst maintaining a positive regard for the individual throughout.

Finally, there is some evidence to suggest that military recruits have increased rates of childhood physical abuse, sexual abuse and neglect, as well as high rates of family dysfunction compared with community averages, and that these factors are particularly salient in the development of PTSD in this population.[51,52] The practitioner needs to be aware of any such pre-military history, as it is likely to influence the establishment of a therapeutic relationship as well as treatment planning.

Presentation

Research in the US, conducted across a range of conflicts, indicates that PTSD affects between two and 17 per cent of veterans at any given time.[53] Australian data is limited, however the available evidence suggests that the figures published by Richardson and her colleagues are relevant in the Australian context. For example, the point prevalence of PTSD is estimated to be around 12 per cent in Vietnam veterans, 5 per cent in Gulf war veterans, and 8 per cent in current serving members of the ADF.[47,54,55] The presentation of symptoms for this group tends to be somewhat different to other traumatic stress victims. The association between the trauma exposures and the workplace means PTSD often has an indirect presentation in these cases. For example, the individual's difficulties may manifest as increasing conflict with senior personnel over a variety of operational and disciplinary issues. Furthermore, the individual may have had a prolonged period of symptomatic distress that they have attempted to minimise and deny. The general sense of camaraderie and collegial support in the military often assists the individual in maintaining a facade of functioning. A failed promotion or a disciplinary charge may be a consequence of the individual's increasingly disorganised behaviour, and often becomes the focal point around which an individual's distress is manifest. The indirect manifestation of the individual's distress can delay appropriate assessment and diagnosis.

The clinical manifestation of an individual's distress in these situations can occur in a variety of ways. For example:

- The individual may initially present with a prolonged period of numbing and increasing interpersonal insensitivity. This can manifest as inappropriate management of junior personnel or conflict with superiors.
- Interpersonal conflict with family and, in particular, violent outbursts, is another indirect manifestation that may first be brought to the attention of welfare services from a secondary victim, such as the spouse.
- Comorbid alcohol abuse is not an uncommon presentation where the individual attempts to self-medicate. The associated interpersonal and work-related difficulties may lead to others in the person's social or work networks being aware of the difficulties prior to the individual themselves.
- Physical complaints may be the primary presenting problem. Veterans with PTSD tend to have more physical symptoms and higher symptom severity than veterans without PTSD.[56] It may be that given the stigma surrounding mental health problems, expressing distress in the form of somatic symptoms is perceived to be more acceptable than showing signs of PTSD.
- An intense pattern of distress may emerge in response to a recent traumatic event, even one of apparently minor severity. The recent event, however, may have some particular similarity to a prior exposure – perhaps a more severe event that played an important role in the initial disruption of the individual's reactivity to stress. Hence, the longitudinal pattern of symptoms needs to be assessed, as well as the acute disorganisation in response to recent exposures.
- Individuals who leave the military may first present some time after their discharge. The loss of identity and support through the structure of the organisation that has provided the *raison d'etre* for the individual's functioning can lead to the progressive emergence of PTSD symptoms, including increasing and distressing recollections and nightmares.

Assessment

Systematic screening has an important role in identifying PTSD in military personnel who are either engaged in repeated high-risk exposures or who have had a recent deployment or major event which carries a significant risk of PTSD.[57] Recent research suggests that it may also play a valuable role at pre-deployment.[58] However, it should be recognised that the emergence of symptoms might be delayed, pointing to the value of an annual health assessment above and beyond an initial screening process. The administration of screening questionnaires should only be seen as a guide to a more systematic diagnostic assessment by a trained clinician for anyone who screens as being at risk.

A range of psychometric instruments have been trialled in military services for monitoring the emergence of symptoms. Given the issues about under reporting, there may be some value in using lower thresholds to determine referral for a clinical assessment. Any screening process should also regularly interview a fixed proportion of people who are symptomatic to remove the stigma of referral for follow-up. Measures of trauma exposure and mental health symptoms need to be flexibly applied in regards to the nature of the exposure. The Posttraumatic Checklist (PCL; described in Table 2.3) has a military version which addresses this challenge because it does not simply focus on exposure to a sole traumatic event but, rather, talks more generally about 'military experiences'. There has been considerable work published in the literature in relation to cut-offs on the PCL that are indicative of a PTSD diagnosis for treatment-seeking veterans.[59] However, it needs to be recognised that optimal cut-off scores are very population-specific. Therefore, in view of the need to minimise false negatives (that is, to minimise the chances of missing someone who has PTSD), a cut-off of 30 may be more appropriate when the PCL is used for screening and case detection purposes. A brief version of the PCL for use as a screening measure in military populations has also been developed.[60]

Individuals with a work-related disability are often placed in a difficult conflict about seeking assistance because this can lead to significant discrimination and disadvantage in the workplace. This is a recognised difficulty when presenting to occupational health services and has particular relevance for military populations, where an adverse health assessment may make the person unsuitable for deployment. The potential stigma of mental health problems as a sign of weakness in the 'warrior culture' of the military can also be an important barrier to care. This situation requires a high level of skill from the assessing clinician. It is important that supervisors who are familiar with the individual's normal disposition and capability have some awareness of the indirect manifestation of the effects of PTSD in the workplace so that appropriate referrals can occur. The health professional needs to have access to personnel records (which may, for example, highlight absences or disciplinary measures for aggression or substance abuse) to assist in a clinical assessment.

The clinical presentation of military personnel and veterans infrequently occurs following the initial exposure to a single traumatic incident. The more typical scenario is where the individual breaks down after repeated experiences of a variety of traumatic incidents which entail varying degrees of a sense of personal threat, often combined with the witnessing of harm or death to others. The extent to which a specific incident is personalised through some identification with the event or the victim plays an important role in modifying the resilience and vulnerability of the individual. Military deployments that involve close personal contact with civilians (or even enemy personnel) carry a particular risk.

The available evidence suggests that prolonged exposure or repeated intense exposures over a period of time lead to an accumulated risk (see, for example, Smid et al.[61]). While there appears to be some relationship between multiple deployments and level of symptomatology, the intensity of trauma or combat exposure appears to be more important than the actual number of deployments in predicting mental health outcomes.[47] As a consequence, the recommendation regarding comprehensive assessment of the individual's trauma history (see Chapter 2) applies; the history obtained from military personnel should focus on the lifetime exposure, as well as the immediate antecedent event that may have prompted the presentation for treatment.

Treatment

The particular challenge with veteran and military populations is to implement treatment as early as possible. Using the principles of secondary prevention, this minimises the development of a series of secondary patterns of adaptation that in themselves can present a significant disadvantage. The systems of care that ensure early identification, such as screening and addressing stigmatisation in the workplace are of particular importance. Recognition of the value to a defence force of maintaining the skill base of highly trained personnel is an important priority in encouraging a general attitudinal change within these organisations. Significant experience in dealing with veteran and military populations is also an important matter for clinicians, because understanding the specific culture of military organisations can be central to the development of a positive therapeutic relationship with the person with PTSD.

A number of clinical treatment trials with veteran populations, both pharmacological and psychological, have found treatment to be less effective than for non-veterans with PTSD. However, this is not a consistent finding, with the only randomised controlled trial (RCT) of psychological treatment for Australian veterans with PTSD indicating cognitive processing therapy (CPT) to be highly effective in this population.[62] More modest outcomes in a number of these studies may be due to characteristics of the veterans themselves (male gender, nature and duration of traumatic experiences, chronicity of PTSD, high rate of comorbidity), the less rigorous treatment interventions generally used with this population, or potentially complicating factors relating to veterans' compensation, pensions, and other entitlements. All these factors are often associated with more modest responses to treatment. Specific consideration of the following points may be helpful:

- Treatment planning needs to take into consideration the multiplicity of traumatic exposures that military personnel have had to deal with and the consequent multiple 'triggers' or trauma reminders.
- Many symptoms of PTSD, including hypervigilance, exaggerated startle response, anger, and emotional numbing, can be adaptive and even life-saving in combat situations. Addressing these issues can be of particular relevance to those individuals who have had a prolonged period of service where these responses may have become ingrained.
- The existence of comorbid substance abuse is a frequent therapeutic challenge. This should be dealt with alongside the initial control of an individual's symptomatic distress (see consensus points 6–8 in Chapter 5). This approach takes account of the fact that frequent alcohol usage has often been a form of self-medication that the individual has used to address their difficulties.
- Due to the nature of veterans' compensation systems, some people may perceive a vested interest in maintaining symptomatology until all proceedings associated with their claim have been completed. Therapists are advised to address this issue with the person before initiating treatment. An open discussion of the pros and cons of maintaining symptomatology can often be useful.

A particular challenge when working with currently serving military personnel is the management of exposure to further stressors in the workplace during the immediate aftermath of treatment. In general, it is important to remove the external threat and triggers to the individual's distress. A model of sensitisation and kindling (whereby repeated experiences of traumatic incidents result in increased responsivity and progressively more severe reactions over time) is a valuable theoretical construct to inform any cognitive behavioural management.

Although no empirical evidence exists, it is reasonable to assume that the challenge of determining recommendations for future duties – and particularly fitness to deploy following treatment for PTSD – should be based on an individual's residual pattern of arousability, degree of recovery, and general adaptation. If a significant degree of triggered distress remains, it is probable that further exposures will exacerbate the individual's symptoms. In these instances, it is best to minimise the probability of such exposures and recommend alternative duties. Other factors to consider might include current circumstances (especially support networks within and outside the military), duration and severity of the most recent episode, and prior risk factors (such as adverse childhood, other traumatic exposures, prior psychiatric history). A key additional issue will be the person's wishes – do they want to redeploy? It is reasonable to assume that relapse will be more likely if the person does not want to be redeployed.

Recommended reading

Kearnery, G. E., Creamer, M., Marshall, R., & Goyne, A. (2003). *Military stress and performance: The Australian Defence Force experience.* Melbourne: Melbourne University Press.

Moore, B. A., Penk, W. E., & Friedman, M. (2011). *Treating PTSD in military personnel: A clinical handbook.* New York: Guildford Press.

Emergency services personnel

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although several studies identified in the systematic review included participants who were emergency services workers, there was no evidence to suggest that different treatment approaches are required. Rather, it is a question of adapting the Guidelines recommendations to the specific needs of this population.

Background issues

Members of the emergency services are invariably exposed to multiple traumatic events, or 'critical incidents', over the course of their careers. Such events may include witnessing gruesome scenes, being unable to prevent another person's death or serious injury, and being at personal risk of injury or death. The clinical presentation of emergency services personnel infrequently occurs following the initial exposure to a single traumatic incident. More common is the process of sensitisation, where repeated experiences of traumatic incidents result in progressively more severe reactions over time.[63] A related construct is that of kindling, whereby repeated exposure to traumatic events results in an increased responsivity, such that events that would not previously have affected the individual begin to trigger mental health symptoms.[63] Given that cumulative trauma exposure is associated with increased risk of disorder, long-term emergency services employees may be more likely than new recruits to develop mental health problems such as PTSD.

Emergency services personnel are likely to be more affected by some incidents than others; the extent to which a specific incident is personalised through some identification with the event or the victim plays an important role in modifying the resilience and vulnerability of the individual.[64] Unlike members of other emergency services, police officers may also be required to injure or kill another person in the course of duty. As a precipitating event for mental health problems, that experience is more likely to lead to PTSD than other problems such as depression or alcohol use.[65]

In addition, emergency services personnel are exposed to significant routine workplace stressors such as long hours, physical exertion, interpersonal conflict, budgetary constraints, and so on. There is some evidence to suggest that daily, low-level stressors may be related more closely to the development of PTSD than the experience of isolated single critical incidents.[66,67]

Approximately 10 per cent of first responders are estimated to have PTSD, although the prevalence may vary across services. Results of one meta-analysis suggest the disorder is most common among ambulance personnel (15%), with lower rates in firefighters (7%), police (5%), and other rescue workers (13%).[68] However, police were only included in Berger et al.'s meta-analysis if they were exposed to a natural disaster; the prevalence of PTSD in studies with more representative police samples ranges from 7 to 19 per cent.[69]

Presentation

Emergency services personnel often respond to traumatic experiences differently to other trauma-exposed populations, reporting occupationally appropriate responses such as anger or guilt rather than emotions such as fear or horror commonly seen in civilian trauma survivors. Indeed, anger is a significant issue in this population. Pre-existing anger may influence the development of PTSD following a critical incident, while PTSD in turn is associated with an increase in anger.[70] Its visible nature and effect on work and interpersonal relationships mean anger may be more likely to bring attention to the individual than internal expressions of distress. Substance use is another common presenting problem, for similar reasons. In terms of PTSD symptoms, personnel who have experienced particularly frequent exposure to critical incidents may be more likely to present with prominent hyperarousal.[64]

Many individuals will experience significant subsyndromal distress, which can impair their resilience following future traumatic events and increase the risk of subsequently developing PTSD.[61] Subsyndromal PTSD symptoms can result in similar levels of disability to full-blown disorder, and are associated with other problematic behaviours such as binge drinking.[63]

Assessment

Systematic screening potentially has an important role in identifying PTSD in emergency services personnel. Pre-exposure screening has not been found to have much benefit in this population. Post-exposure screening may be more helpful, and should generally focus on personnel who display one or more risk factors, such as past psychiatric history, repeated exposure to fatal or grotesque incidents, performance deterioration, interpersonal conflict, or increased alcohol use.[71] However, screening in the immediate aftermath of trauma exposure may not identify individuals who experience a delayed onset of clinically significant symptoms, and routine annual screening is therefore recommended.[72]

A number of screening and assessment measures have been designed specifically for use with emergency services personnel.[e.g., 67,73] Until these have been more thoroughly researched, however, the use of standard measures such as the PCL (see Table 2.3) is recommended. Underreporting of symptoms is common, due to concerns about disadvantage and discrimination, and as such there may be some value in using lower thresholds to determine referral for a clinical assessment.[71]

In assessing for the risk or presence of PTSD in emergency services personnel, practitioners should consider both the frequency and severity of trauma exposure. Research with police officers suggests that the less frequently a given event occurs (i.e., the less it is considered a normal part of the job), the more it is perceived as traumatic.[73,74]

The available evidence suggests that prolonged exposure to trauma, or repeated intense exposures over time leads to an accumulated risk (see, for example, Smid et al.[61]). As a consequence, a comprehensive assessment of trauma history is required (see Chapter 2); the history obtained from emergency services personnel should focus on the lifetime exposure, as well as the immediate antecedent event that may have prompted the presentation for treatment.[71]

Individuals with a work-related disability are often placed in a difficult conflict about seeking assistance because this can lead to significant discrimination and disadvantage in the workplace. This is a recognised difficulty when presenting to occupational health services and has particular relevance for emergency services populations where an adverse health assessment may make the person unsuitable for front-line duties. This situation requires a high level of skill from the assessing clinician. It is important that supervisors who are familiar with the individual's normal disposition and capability have some awareness of the indirect manifestation of the effects of PTSD in the workplace so that appropriate referrals can occur. The health professional needs to have access to personnel records (which may, for example, highlight absences or disciplinary measures for aggression or substance abuse) to assist in a clinical assessment.

Treatment

Limited treatment research has been conducted with this population, although the available evidence supports the relevance of standard treatment guidelines for PTSD.[69]

In the aftermath of a critical incident, the provision of peer support as a secondary prevention strategy is recommended. Several guidelines for the implementation of successful peer support programs have been identified, with the overarching principle being the need for such programs to be well planned, integrated, and tailored to the particular organisation, and available to both current and recently serving personnel.[75]

As for other populations who encounter potentially traumatic events on a regular basis, it is important to encourage treatment seeking as early as possible in emergency services personnel. Effective early intervention minimises the development of secondary problems, or the escalation of subthreshold symptoms into disorder, and increases the chances of a rapid return to full functioning. Thus, a supportive and enlightened workplace culture, along with strategies to facilitate early identification, such as screening and addressing stigmatisation in the workplace, are of particular importance.

Once PTSD has been identified, the general recommendations outlined earlier regarding treatment will apply. Specific consideration of the following points may be helpful.

- Treatment planning needs to take into consideration the multiplicity of traumatic exposures that emergency services personnel have had to deal with and the consequent multiple 'triggers' or trauma reminders.
- Many symptoms of PTSD, including hypervigilance, exaggerated startle response, anger, and emotional numbing, can be adaptive and even life-saving in some situations encountered by emergency services personnel. Addressing these issues can be of particular relevance to those individuals who have had a prolonged period of service where these responses may have become ingrained.

A particular challenge when working with emergency services personnel is the potential for further trauma exposure during treatment. In most circumstances, establishing a safe environment is an important precursor to commencement of trauma-focussed therapy, or indeed, any therapeutic intervention. However, it is rarely helpful to remove the person from the work situation altogether. Such an approach creates problems in terms of daily activity scheduling and makes rehabilitation and return to work harder. Rather, an opportunity to perform a different (non-front-line) role at work provides access to organisational and collegiate support, daily structure, and a sense of self-esteem that can greatly facilitate recovery. In circumstances where ongoing exposure cannot be avoided, some benefit may still be derived from trauma-focussed therapy. This should follow careful assessment of the person's coping resources and available support. A model of sensitisation and kindling is a valuable theoretical construct to inform any cognitive behavioural management.

Although empirical evidence is lacking, it is reasonable to assume that decisions regarding fitness for return to normal duties following treatment should be based on an individual's residual pattern of arousability, degree of recovery, and general adaptation. If a significant degree of triggered distress remains, it is probable that further exposures will exacerbate the individual's symptoms. In these instances, it is best to minimise the probability of such exposures and recommend alternative duties. Other factors to consider might include current circumstances (especially support networks within and outside the service), duration and severity of the most recent episode, and prior risk factors (such as adverse childhood, other traumatic exposures, prior psychiatric history). A key additional issue will be the person's wishes – do they want to go back to the same front-line role? It is reasonable to assume that relapse will be more likely if the person does not want to return to their former duties. In summary, for emergency services personnel on sick leave as a result of PTSD, return to work is an important goal of treatment. While avoidance behaviours may pose a barrier for many, research suggests that following a work-related traumatic experience, individuals who return to work are more likely to recover than those who do not. Workplace-based interventions may assist in improving both work and mental health outcomes.[76]

PTSD in older people

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although few studies identified in the systematic review focussed on older participants, there is little evidence to suggest that different treatment approaches are required. Rather, it is a question of adapting the Guidelines recommendations to the specific needs of this population.

Background issues

In 2011, 14 per cent of Australians were aged 65 or over, compared to just 4 per cent a century earlier.[77] As the Baby Boomer generation ages and life expectancies continue to increase, this figure is likely to rise significantly, reaching up to 25 per cent by midway through this century.[78] Thus, older Australians represent a rapidly growing and often overlooked population of trauma survivors.

Older people with PTSD may be categorised into two broad classes. The first is those who experienced a traumatic event years or decades earlier, including subpopulations such as war veterans from conflicts such as Vietnam, Korea, and WWII, Holocaust survivors, and former refugee children.[e.g., 79,80] Older people who experienced trauma earlier in life may have chronic PTSD, or find that the ageing process exacerbates pre-existing PTSD symptoms. For example, medical illness or reduced physical ability may mean the individual is unable to manage PTSD symptoms using his or her previous coping strategies. At the same time, retirement from work and fewer family responsibilities mean less distractions from PTSD symptoms.[81]

The second group of older people with PTSD are those who have experienced trauma relatively recently, as an older adult. A number of factors may put older people at greater risk of trauma exposure. For example, they may be less likely to be able to escape quickly from dangerous situations, and decreased reaction times may make it difficult to avoid motor vehicle or other accidents. In the event of a natural disaster, older people may be less likely to receive early warnings through automated text message systems. This group may also be more likely to sustain physical injury in an accident or disaster, and to experience serious medical complications.

In understanding traumatic memories in this population, it is important to consider the influence of the ageing process on cognitive functioning. The majority of people are unlikely to develop cognitive deficits (in areas such as cognitive flexibility, concept formation, goal setting, planning, and organisation) until at least their eighties.[82] Dementia most commonly affects people who are aged 65 years and older, and is generally caused by Alzheimer's disease. It is estimated that around nine per cent of Australians aged over 65, and 30 per cent of those aged 85 years and over, suffer from dementia.[83] There is some evidence from veteran samples that dementia is more common in older people with PTSD, although the nature of this relationship is not clear; it is possible that PTSD increases the risk of dementia, or that a shared risk factor drives the development of both disorders.[84,85] Research with other trauma-exposed populations, such as ageing Holocaust survivors, has shown similar rates of dementia to non-trauma-exposed groups.[86] Regardless, the presence of cognitive impairment has implications for the assessment and treatment of PTSD, as discussed below.

Presentation

While it may be expected that cumulative exposure to trauma over the lifespan would result in high rates of PTSD in older people, in fact PTSD tends to be less common in older adults than their younger counterparts.[87,88] In an Australian community study, 4 per cent of men and 6 per cent of women aged 18–24 were diagnosed with PTSD, compared to just 0.4 per cent of men and even fewer women aged 65 and over.[89]

As in younger populations, research with older adults supports the existence of separate avoidance and numbing PTSD symptom clusters.[90,91] There is some evidence that PTSD tends to be less severe in older adults, with a decline in re-experiencing symptoms but an increase in avoidance symptoms. Nonetheless, for many older people, traumatic memories remain highly disruptive, and have been found to be a significant barrier to good sleep among nursing home residents.[93] It may be speculated that age-related deterioration in cognitive functioning makes it harder to control or suppress painful memories of past trauma. Older people with PTSD are also at significantly higher risk of developing other mental health problems, particularly depression and anxiety,[94] and misdiagnosis often occurs.[92]

Among older veterans in particular, denial or avoidance of psychiatric symptoms is common, as is alcohol abuse.[81] Anecdotal reports suggest that, particularly in older males, an increase in agitated and aggressive behaviour may be associated with the emergence of PTSD; if so, this has implications for management of the behaviour.

While as a general rule, older people are less likely to develop significant mental health problems after trauma, natural disasters may pose a particular risk to their mental and physical wellbeing.[95,96] Older survivors of natural disaster are more likely to experience grief reactions and survivor guilt than younger survivors, particularly if younger family members perished. Older people may be less likely to relocate following a disaster, preferring to remain in their own community, and there is some evidence that those who do relocate are at greater risk of developing PTSD.[97] Other risk factors for more severe symptoms include female gender, higher levels of disaster exposure, and the use of behavioural or avoidant coping styles.[95,98] Despite many experiencing significant distress in the aftermath of disaster, older people may be less likely than younger survivors to present to health or general support services.[95,99]

Assessment

As a general rule, standard screening and assessment measures (see Chapter 2) are appropriate for use with this population, although lower cut-off scores have been recommended than are used with younger adults.[91] Given the potential for a long history of trauma exposure, it may be useful to enquire about lifetime exposure, as well as the immediate antecedent event that prompted the presentation for treatment. Interestingly, despite the predicted 'accumulation' of traumatic events over the course of a long life, the elderly actually tend to report fewer events than younger people.[89] The reasons for this are unclear, but probably comprise several explanations including simple forgetting, reappraisal (in the context of their whole life, the event is no longer considered distressing), and shame (especially, for example, older woman reluctant to acknowledge earlier sexual abuse). In the context of shame, older people can be concerned about the stigma of mental health and therapy and may be reluctant to disclose their trauma history. Providing a clear rationale for the assessment and treatment can facilitate disclosure.[92] Importantly, a range of other physical and social issues may be present that could impact upon the individual's presentation, quality of life, and ability to engage in trauma-focussed therapy. Comprehensive assessment of not only PTSD symptoms but also the person's broader biopsychosocial wellbeing is therefore important.

Assessment should include a comprehensive history, including developmental (e.g., pregnancy, birth and milestones), medical, psychiatric, substance use, and educational/ occupational history. If possible, the use of a cognitive screening tool is recommended with a view to establishing both past and current cognitive functioning. Cognitive screening tools are not, and do not, replace the need for a comprehensive diagnostic assessment. They will however, give a broad indication as to whether a person's cognition is intact or whether it requires closer examination. Widely used screening tools include the Mini Mental State Examination (MMSE),[100] the Rowland Universal Dementia Assessment Scale (RUDAS)[101] developed in Australia for multicultural populations, and the General Practitioner Assessment of Cognition (GPCOG)[102], also developed in Australia for cognitive screening in general practice. Patients who show signs of experiencing difficulties or a decline in cognitive functioning should be referred for further assessment to a specialist such as a clinical neuropsychologist, geriatrician, neurologist or psychiatrist with special expertise in the elderly to provide a diagnosis and identify underlying causes of the cognitive impairment.

Treatment

Evidence supports the use of standard PTSD treatment approaches with older patients, although some modifications may be necessary. Fatigue can pose a barrier in older people with PTSD's engagement in treatment.[103] Therapy sessions may need to be shortened, or held earlier in the day, to improve alertness.

Consultation with the patient's GP can help establish any physical condition that may impact upon the patient's ability to engage in therapy.[92] Although some authors advise caution in using exposure therapy with older patients who have cardiovascular disease (due to the potential danger posed by high physiological arousal), others suggest that when graded appropriately and done at the client's own pace, exposure can be highly beneficial (and safe) even for patients with significant cardiovascular illness.[103] Exposure has also been shown to be effective in treating older veterans with chronic PTSD.[104]

For older patients with some level of cognitive decline, the following suggestions may be helpful:

- As with many PTSD clients, behavioural interventions such as relaxation and other arousal reduction techniques, or activity scheduling, are often easier to understand than the cognitive elements of CBT. Introducing these early in treatment can help build the person's confidence and engagement with the CBT approach.
- Practical solutions to the presence of trauma reminders may be more effective than attempting cognitive restructuring in relation to the significance of the trigger. For example, cognitively impaired Holocaust survivors for whom showers serve as a reminder of concentration camps may be reassured by the use of a hand-held shower head.[105] Naturally, the education and involvement of care providers is critical in developing and implementing such interventions.
- Use the strengths and weaknesses identified by neuropsychological assessment to adapt therapy delivery. For example, use diagrammatic representations to explain concepts with clients who have good visual memory.
- Slow down the therapy process by focussing on only a couple of concepts each session, and make the most of review and repetition.
- Utilise memory aids where possible. For example, provide the client with recordings of relaxation exercises, provide diagrammatic representations or written summaries, use calendars/diaries, or cue cards that can be carried in the person's wallet, and make the most of technology, e.g., phone reminder alerts.
- It may be helpful to enlist the support of a 'therapy partner' (i.e., a family member or close friend) who can help to reinforce the therapy techniques in between appointments. It is important to encourage repeated practise of skills in naturalistic settings, and a therapy partner can be helpful in implementing strategies.

Directions for future research

Although a few studies have appeared recently, there remains a dearth of good quality research on PTSD in the elderly. Any well designed studies that further our understanding of the nature and treatment of PTSD in the elderly will be useful, especially as our population continues to age. Some specific research areas to consider include:

- What is the relationship between cognitive decline (particularly dementia) and the onset or exacerbation of PTSD? What are the mechanisms involved and to what extent are traumatic memories likely to surface for the first time (or the first time in many years)?
- Is PTSD a risk factor for dementia? If so, how does it affect the manifestation of dementia and what are the implications for early intervention?
- What is the relationship between PTSD and the emergence of behavioural management problems such as agitation and aggression? If there is a relationship, what does that suggest about intervention approaches?
- In what ways should evidence-based psychological approaches be adapted for the elderly and is there evidence to suggest that one type of trauma-focussed approach is more appropriate than another for this group?
- Which pharmacological approaches are most effective in the treatment of PTSD in elderly populations?

Motor vehicle accident and other traumatic injury survivors

There were sufficient studies identified in the systematic review that included motor vehicle accident (MVA) and injury survivors to allow a subgroup analysis within the systematic review. This analysis confirmed that the general treatment recommendations are applicable to this group. Particular issues to consider in the treatment of MVA and injury survivors are presented here. As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature.

Background issues

With study participants recruited from hospital admissions, most of what we know about MVA and other injury survivors is based on people who have been severely injured and hospitalised, or at least admitted to a hospital emergency department. MVA survivors with less severe injuries, for example soft tissue injury, may of course also develop PTSD, and many of the issues discussed in this section are relevant to that group. The section addresses issues of PTSD in the context of physical injury and so does not necessarily relate to MVA survivors with PTSD who have sustained no physical injuries. The Guidelines recommendations can be applied to that group without need for special consideration.

Approximately 2 per cent of all Australians every year are injured severely enough to require a hospital admission. The frequency with which severe injury occurs makes it one of the greatest causes of PTSD in Australia. MVAs are a major cause of severe injury and therefore contribute significantly to the PTSD rate in Australia. Consistent with common responses to traumatic experiences noted in Chapter 2, many injury survivors will display PTSD symptoms (nightmares, intrusive memories) in the initial weeks after being injured, but for most, these symptoms will resolve within three months. Approximately 10 to 15 per cent of injury survivors will go on to develop chronic PTSD.[106]

The severity of the injury in terms of its relationship to mortality does not predict the development of PTSD. That is, those with a life threatening injury are no more likely to develop PTSD than those who sustain a serious injury that is not life threatening. While rates of PTSD in those with soft tissue injury have not been established, rates for particular types of soft tissue injury such as whiplash appear to be similar to severe injury.[107] The relationship between injury severity and PTSD is, however, different with traumatic brain injury (TBI). Those with severe TBI are less likely to develop PTSD while those who have a mild TBI are just as likely to develop PTSD as those with no brain injury. This is probably associated with the high level of amnesia experienced by those with a severe TBI – those with no memory of the event are less likely to develop PTSD. For discussions of risk factors in this population, see, for example, Bryant et al.[106] or O'Donnell et al.[108]

Presentation

Common presenting problems in injury survivors include distressing memories and nightmares about the accident, insomnia, irritability, elevated startle response, and concentration problems. Individuals often avoid situations that are consistent with the event in which they were injured. For example, those injured in an MVA often experience fear of driving and avoidance of traffic. In some cases, individuals become avoidant of hospitals and fail to attend appointments, or do not have follow-up surgery. This may significantly impact their physical recovery. Practitioners should be aware that many injury survivors sustain a mild TBI, and have no memory of some parts of the event in which they were injured. Interestingly, although these people may not be able to remember critical aspects of the event, they can still be fearful and avoidant of situations which trigger memories of the event. Depression is very commonly comorbid with PTSD in injury survivors.[109] This is especially the case with those who experience orthopaedic injuries that require long-term rehabilitation. The loss of important roles, financial difficulties and uncertainty about the future often contribute to depression. Many injury survivors also have chronic pain. Pain and PTSD may act to drive each other over time, with pain triggering memories of the event, and hyperarousal increasing perceptions of pain.[110] This can result in individuals avoiding situations that may cause pain to escalate such as exercise or physiotherapy.

Assessment

There are three main issues pertaining to injury survivors with PTSD that need to be considered during assessment.

First, be aware of the timing of the assessment. Many PTSD-type reactions that occur in the initial two months will subside in the following period. Intense reactions in this period are less likely to subside without intervention and may need immediate attention. Less severe reactions, however, which are common in this period, are more likely to be transient and resolve without treatment.

Second, injury survivors are characterised by comorbid presentations that have implications for treatment planning. As discussed, depression, mild TBI, and chronic pain are the major problems that co-exist with PTSD after severe injury. It is important to ask specifically about each of these problems to determine the primary presenting problem. Often patients will focus on pain because of its highly intrusive and aversive nature, and the clinician needs to focus interview questions specifically on PTSD or depression in order to avoid missing important information. In the case of mild TBI, it should be noted that people can meet the re-experiencing criteria for PTSD if they are distressed by reminders of the injury-causing event (e.g., returning to driving), even if they cannot recall some critical aspects of the accident. Motivational issues are often a problem for patients who have experienced moderate to severe TBI and should be assessed as these issues may have an impact on engagement in therapy.

Third, many injury survivors are involved in litigation for criminal or civil purposes. This issue can complicate treatment planning because it can confound the motivational stance of the patient, especially if legal advice is suggesting a particular view about PTSD and its treatment. Assessment should explicitly enquire about litigation status.

Treatment

Injury survivors may be entitled to treatment for mental health conditions arising from their accident through third party insurers or other individual state-based authorities. This is especially the case for MVAs and workplace accidents. Practitioners should be familiar with entitlements and procedures in the state in which they work.

Practitioners treating injury survivors should follow standard guidelines, with particular attention to several possible modifications that are dependent on comorbid presentations.

Chronic pain is a major obstacle to treating PTSD because it can actively interfere with attention to therapy tasks. Also, pain can act as a reminder of the trauma which complicates treatment for both the pain and PTSD. Depending on the severity of the pain, it may be preferable to achieve adequate pain management prior to the commencement of PTSD treatment. Equally, there is also evidence to suggest PTSD symptoms play a causal role in the development and persistence of pain,[110] implying that pain may improve following successful PTSD treatment.

Depression that is comorbid with PTSD typically leads to a more severe clinical presentation. As outlined in the Guidelines recommendations, suicidal ideation requires careful assessment and management prior to commencement of exposure therapy.

Patients with brain injury who are amnesic of the accident (or part of it) may benefit more from *in vivo* exposure to situations that elicit anxiety than imaginal exposure. This approach can be beneficial because imaginal exposure can be limited when there are few memories of the trauma and when attentional deficits interfere with focus on trauma memories for prolonged periods. Those with brain injuries which impact on their ability to engage with therapy may benefit from motivational interviewing strategies.[111]

Although exposure therapy is the treatment of choice for people who develop PTSD following injury, clinicians should be aware that any therapy that actively addresses trauma memories has the potential to alter memory and, therefore, may be subjected to scrutiny in court. Some courts are particularly concerned about the use of hypnosis and eye movement desensitisation and reprocessing (EMDR) as techniques that have the potential to modify trauma-related memories. Thus the use of these treatments may lead to a client's evidence being inadmissible in court. It is advisable to avoid these treatments in cases that are subject to litigation. If such approaches are adopted, the practitioner would be well advised to videotape all sessions.

Working with children

PTSD is common in children following a traumatic injury, with a prevalence of approximately 20 per cent.[112] Emergency department staff should inform parents or guardians of the risk of their child developing PTSD following emergency attendance for a traumatic injury, and advise them on what action to take if symptoms develop. Injured children and young people with PTSD should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

Victims of crime

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although several studies identified in the systematic review included participants who were victims of crime, there is no evidence to suggest that different treatment approaches are required. Rather, it is a question of adapting the Guidelines recommendations to the specific needs of this population. Note that this section refers to victims of crime generally; the following section addresses sexual assault specifically.

Background issues

There is debate in the literature about what constitutes a victim of crime, but the following United Nations[113] definition is widely accepted:

"… persons who, individually or collectively, have suffered harm, including physical or mental injury, emotional suffering, economic loss or substantial impairment of their fundamental rights, through acts or omissions that are in violation of criminal laws operative within Member States, including those laws proscribing criminal abuse of power."

Around 30 per cent of the Australian population report being a victim of crime (including robbery, burglary, attempted burglary, car theft, car vandalism, bicycle theft, sexual assault, theft from car, theft of personal property, assault and threats) in a given year. However, PTSD is not a potential outcome for all victims of crime. The diagnosis is applicable only in cases where the crime constituted a potentially traumatic event as defined by DSM-IV. In general terms these are crimes of an interpersonal and violent nature. A much lower, though still significant, proportion of the Australian population report being a victim of personal crimes, such as robbery, sexual assault and assault with force, which are more likely to be associated with subsequent PTSD. Males are more likely than females to be victims of all personal crimes, except sexual assault. For example, in 2009–2010, 3.4 per cent of males reported that they were a victim of physical assault (compared to 2.4% of females), while 0.4 per cent of females reported being a victim of sexual assault (compared to 0.1% of males).[114] However, because low incidence of reporting is suspected, the true figure of victimisation, particularly for sexual crimes, is unknown.

Presentation

The prevalence of PTSD in victims of crime is dependent upon the type of crime, the method of measurement and the definitions used. The lifetime PTSD prevalence rate for victims of crime is estimated to be about 25–28 per cent, with higher rates following interpersonal crimes such as rape (e.g., 45–60% following rape in both men and women).[115] It has been suggested that the fact that women report higher rates of PTSD than men may be largely explained by the fact that they are more likely to develop PTSD following assaultive violence; PTSD rates following other trauma types differ little.[116] In addition to being more common, PTSD is often more severe in victims of interpersonal or violent crime than survivors of other traumas.[117,118] It is thought that this may be partially explained by the intention by another human to cause harm, and the challenge this poses to the individual's long-held beliefs (e.g., that the world is generally a safe place and people are generally good).

In addition to more globally severe PTSD, victims of crime may present with more prominent disturbance in particular symptoms, such as exaggerated startle response, hypervigilance, emotional numbing, and re-experiencing symptoms such as nightmares and psychological distress when reminded of the event.[117,119,120] Individuals surviving assault are often avoidant of social situations, especially where there may be crowds or intoxicated people. Many may fear that the perpetrator will come back to hurt them again, even if the perpetrator has been incarcerated.

Note that the PTSD presentation commonly seen in this population is predominantly fear-based, in contrast to other presentations more reminiscent of depression (e.g., loss of interest in activities or concentration difficulties).[119] This has implications for treatment, as discussed below.

For some victims of crime, interactions with the criminal justice system serve as constant reminders of the trauma and can exacerbate distress. On the other hand, some may find comfort in the potential for the perpetrator to be held responsible for the crime, a resolution not often possible for survivors of other traumatic events.

Anecdotal reports suggest that PTSD in victims of crime is frequently erroneously diagnosed. It is likely that the diagnosis is sometimes given based upon the type of incident, rather than the actual presentation, with the symptoms cited to support the diagnosis frequently not PTSD criteria.

Assessment

In addition to the recommendations regarding assessment in Chapter 2, the likelihood of legal proceedings raises issues of particular relevance to victims of crime during assessment, including:

- The practitioner should clarify with the person whether the interview is a forensic assessment or a therapeutic assessment; it is inadvisable for a single practitioner to attempt to fill both roles.
- A full assessment of the person's functioning and impairment *before* the crime in question and an assessment of *current* functioning need to be conducted.
- The full breadth of areas affected by the crime needs to be assessed – including reactions to both personal victimisation and property damage, subsequent family, vocational and social relationships, as well as the affective and psychological reaction of the victim.
- General interview-based questions need to initiate the assessment procedure rather than the use of specific questions or structured questionnaires, which may prime the person to answer in certain ways.
- Unless conducting a forensic assessment (or, if possible, even when conducting a forensic assessment), conclusions should be fed back to the person and explained appropriately so as to minimise later confusion should these results be called into court.
- It is essential that complete and full notes be taken during the assessment interviews and subsequent treatment sessions. Failure to do so may later prejudice the victim's rights should any court case ensue.

Treatment

An awareness of the legal system is important when treating victims of crime with PTSD. In Australia the rights and laws pertaining to victims of crime are predominantly state-based rather than national, and hence vary between states. However, all the states have some mechanism whereby victims of crime can claim either compensation and/or access to mental health treatment for conditions related to their victimisation. Mental health practitioners need to have knowledge of these laws and services specific to where they practice.

In addition to the recommendations regarding treatment outlined in Chapter 5, issues of particular relevance to victims of crime include:

- Due to the nature of criminal compensation some people may perceive a vested interest in maintaining symptomatology until all proceedings have been completed. Therapists are advised to address this issue with the person before initiating treatment. An open discussion of the pros and cons of maintaining symptomatology can often be useful.
- Additional time on arousal management strategies and cognitive techniques addressing erroneous beliefs about the likelihood of another assault may be required for some patients. (Obviously, realistic concerns about future assault need to be taken seriously – safety is a primary concern – but very often fears of another assault are grossly excessive).
- Prolonged imaginal exposure to the event, when managed by a well-trained therapist, has demonstrated efficacy with victims of crime and should be administered, sensitively, as a matter of course.
- It can be difficult for new therapists to avoid being compromised in their role as an agent of change and becoming, instead, an advocate. Therapeutic outcomes are best served through objective analysis of the presenting problems and the impartial application of evidence-based practice.
- In certain cases, it may be worth considering the recording of treatment sessions so that any accusations of tainted evidence arising during later litigation can be evaluated. Of course, the rationale for recording sessions should be carefully explained to the person and their consent obtained before recording begins.

Beyond these general considerations, an individual's needs will vary depending on the nature of the crime. For example, there is domain-specific knowledge related to rape victims that may be less relevant to victims of non-sexual assault and practitioners should acquaint themselves with these areas before providing treatment. Secondary consultation with a counsellor from a specialist sexual assault centre in your state would be recommended. The practitioner may also consider referring the person to a specialist sexual assault centre for advocacy or assistance with court proceedings if the practitioner is not going to offer this service themselves.

Working with children

Children and young people with PTSD resulting from being a victim of crime should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

Sexual assault

There were sufficient studies identified in the systematic review that included sexual assault survivors to allow a subgroup analysis within the systematic review. This analysis confirmed that the general treatment recommendations are applicable to this group. However, particular issues to consider in the treatment of sexual assault survivors are considered here. As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. This section addresses issues that apply to adults with PTSD arising from sexual assault whether that assault occurred during childhood or adulthood. As such, the nature of the traumatic event is highly variable (from repeated childhood sexual abuse (CSA) to a discrete adult rape) and the posttraumatic mental health sequelae are consequently also highly variable. The Guidelines are applicable to survivors of sexual assault with PTSD, with or without comorbid disorders.

Background issues

The mental health practitioner treating survivors of sexual assault should be aware of several important background issues. Sexual assault is a unique crime in that it is most often carried out in private, is shrouded in secrecy and involves a victim who often blames herself or himself. In children, the majority of sexual abuse is perpetrated by a family member or person known to the child. As a consequence, many children who have experienced abuse, and adult survivors of child sexual abuse, may still have contact with their abuser.

Sexual assault was rarely discussed in Australia until the 1970s and childhood sexual assault was almost never disclosed. Unfortunately, when childhood sexual abuse *was* disclosed, the victim risked being accused of fantasising, lying, seeking attention or seeking revenge. In the past 30 years survivors of sexual assault have increasingly reported the assault, but there is still considerable societal, familial and individual pressure to remain silent. People alleging sexual assault are the least likely of all crime victims to report the offence to the police. Further, of those reported, only a small proportion are prosecuted – one in six rapes and less than one in seven reports of incest/sexual penetration of a child. These conviction rates are substantially lower than rates for other offences and there is no trend towards successful convictions over time.

Negative stereotypes that portray sexual assault survivors as unworthy or undeserving continue to prevail in both the legal system and broader society. These stereotypes inevitably impact on the individual, creating additional distress beyond the traumatic experience itself.

Given the 'hidden' nature of sexual assault and low reporting and conviction rates, it is perhaps not surprising that there is little reliable information on the prevalence of sexual assault or childhood sexual assault in the Australian population. Existing data is based on police statistics, and victimisation surveys such as the Australian Institute of Criminology's studies on sexual assault and the Australian Bureau of Statistics Women's Safety Survey. To date there has been no large-scale national population survey that includes childhood violence against boys. As a result, current knowledge about childhood sexual assault on boys is dependent on reports made to statutory child protection agencies. It is estimated that the prevalence of sexual assault before the age of 18 years in the Australian community ranges between 7–36 per cent for females, and between 4–16 per cent for males.[121] As adults, those at greater risk of sexual assault are female, young and single, have a prior history of sexual assault, and have existing relationships with offenders. In an Australian representative sample, it was found that 8.1 per cent of women and 2.2 per cent of men reported experiencing a rape; 14.7 per cent of women and 4.5 per cent of men endorsed the broader category of sexual assault.[122] Of women who reported that the most traumatic event they had experienced was rape, 9.2 per cent met criteria for PTSD in the past 12 months.[123] Males who are raped or molested appear to report a higher prevalence rate of PTSD.

It is important to acknowledge the intergenerational transmission of abuse. Women abused as children may repeatedly form relationships with abusive, violent partners who may, in turn, sexually and/or physically abuse her children. Additionally, if female caregivers are experiencing the psychological impact of abuse (e.g., depressed, anxious, withdrawn), children may receive little protection and/or no positive parenting guidance or strategies. Alternatively, children may be overprotected and taught that the world is a dangerous place, impeding the development of resilience.

Presentation

For adults with PTSD following sexual assault, the trauma may range from a discrete adult trauma of rape to repeated sexual abuse during childhood, or a combination of both. The nature of childhood sexual abuse itself is highly variable. Sexual abuse involving penetration (digital or otherwise) as opposed to touching or fondling has been found to be the most harmful of the abuse experience/s. This is also true of sexual abuse involving degradation and violence. Not surprisingly, typical presenting problems differ according to the type and number of sexual assaults experienced. The clinician should be aware of these typical presentations (outlined below) and ensure a comprehensive assessment, especially if a prior history of assault or sexual abuse is suspected. In some cases, the individual who has been sexually abused as a child will present for treatment of PTSD for the first time as an adult.

Common presenting problems in survivors of adult sexual assault:

- recurrent daytime intrusive memories/flashbacks and distressing dreams
- physical symptoms of hyperarousal such as palpitations, sweating, breathing difficulties
- hypervigilance (e.g., fear of going out)
- sleep problems
- eating difficulties
- mistrust of males/females, affecting the formation of relationships
- loss of interest in usual activities
- shame/guilt associated with memories of assault
- depression and PTSD are commonly diagnosed following adult sexual assault.

Common presenting problems in adult survivors of childhood sexual assault:

1. PTSD symptoms are often part of the client's presentation with prominent avoidance/numbing symptoms. Depressive and anxiety symptoms are also common.
2. Childhood sexual abuse can also lead to persistent self-regulation issues including:
    - affect regulation and impulse control (self-harming, acting out sexually)
    - attention (regular dissociative episodes)
    - self-perception (identity disturbance)
    - relationships (attachment, sexual difficulties, parenting problems).

These self-regulation issues can lead to a range of diagnoses including personality disorders (e.g., borderline personality disorder) and attachment disorders. Substance use problems and eating disorders are also common. Comorbid presentations are the norm for this group.

Behavioural difficulties and disorders (e.g., oppositional defiant disorder) can also be associated with abuse, particularly when dealing with boys. Anxiety, depression and PTSD can also be seen amongst children who have been sexually abused with comorbidity not being uncommon.

Note that interactions with the medical or legal systems may parallel abuse scenarios for many survivors of sexual assault. Some medical procedures, for example, or requests for the removal of clothing by authority figures, may trigger re-experiencing symptoms.[124]

Assessment

As noted above, many survivors of sexual assault have experienced prior assault in adulthood or as children. It can be difficult in some cases to assess whether the most recent assault is the cause of PTSD or whether it is the result of previous or repeat assault/s. Consistent with the assessment recommendation in Chapter 2, a comprehensive assessment should include a detailed lifetime history of sexual assault and other trauma, as well as the psychological sequelae of any previous trauma. Practitioners should bear in mind the potential for the assessment process to be highly distressing for some clients. A 'thumbnail' sketch may be sufficient in the first instance to provide an indication of the client's trauma history and likely physical and psychological health sequelae, with a more comprehensive assessment conducted once trust and safety has been established. In addition, with survivors of childhood sexual assault it is important to gain an understanding of their family background and developmental milestones. Sexual assault can have a significant impact on a child's development and attachment, particularly if it occurs during early childhood. In addition, children's responses to traumatic experiences are influenced by their parent's attachment style and parenting capacity.

While many survivors feel comfortable disclosing their assault history, some will be reluctant to do so and will require extra time and sensitivity from the practitioner conducting the assessment. Some survivors prefer direct questioning, while others find this too intrusive and favour indirect methods. Some will feel more comfortable if the practitioner maintains a professional distance, while others interpret this as the practitioner ignoring their emotional wellbeing.[125] Sensitivity to the individual's needs is therefore essential in promoting a sense of safety and allowing a more effective assessment. While a comprehensive assessment is important, the process should not be so difficult for the client that he or she drops out of therapy.

Given the societal context of sexual assault, it is essential that the practitioner accept the person's account of their traumatic experience for the purposes of treatment without seeking to investigate the authenticity of their claims. Victims/survivors have often had negative responses to their disclosures from friends, family or the criminal justice system and may anticipate disbelief and denial from the clinician.

The gender of the practitioner needs to be given due consideration in working with survivors of sexual assault. It cannot be assumed that a female or male will prefer to work with a practitioner of either the same or the opposite gender. This matter needs to be discussed and if possible, the person given the choice of therapist gender.

Treatment

Recommended treatments for PTSD outlined in Chapter 5 apply to survivors of sexual assault – indeed, many of the treatments were developed, refined and evaluated with rape victims. Of course, as noted in Chapter 1, these Guidelines are not a substitute for clinical judgement; the suitability and acceptability of recommended treatments need to be determined in each case. The recommendation to allow more time for establishing a therapeutic relationship and teaching emotional regulation skills in those with prolonged and/or repeated traumatic experiences is generally relevant to survivors of childhood sexual assault. In addition, the following specific considerations apply to sexual assault survivors with PTSD.

Given the broader legal context, practitioners working with survivors of sexual assault should have knowledge of relevant reporting, compensation and restorative justice approaches in order to provide the person with appropriate support and advice.

If the person has ongoing involvement with the criminal justice system there is a high risk of additional distress from a variety of sources, including contact with the alleged offender, cross examination, and the general experience of the court system, which may be perceived as unfair and irrational. This will inevitably impact on treatment and should be taken into consideration in treatment planning. In general terms, it would not be reasonable to postpone treatment until the end of (often lengthy) legal proceedings, but the clinician and person with PTSD should give careful consideration to the appropriate timing of trauma-focussed work in this context. In circumstances when the decision is made to defer treatment, the practitioner should consider referring the person to a specialist sexual assault service for support during legal proceedings. Services such as these are able to assist a sexual assault survivor with the wide range of issues related to the court case much more easily than a single practitioner. Workers at these specialist services have an understanding of the criminal justice system and can provide support and advocacy to clients during legal proceedings.

In cases of complex PTSD, expert opinion suggests a sequential treatment approach, with the use of multiple interventions targeting the most prominent symptoms.[126] Following an initial period of stabilisation and ensuring patient safety, providing education about trauma, narration of the trauma memory, cognitive restructuring, and emotion regulation interventions are viewed as effective first-line interventions for complex PTSD.[126]

Working with children

A child's response to sexual assault will be influenced by age and level of development. It is important to note that ongoing sexual abuse, particularly during early childhood, can alter the child's developmental trajectory. Common symptoms include:

- nightmares
- sleeping difficulties
- withdrawn behaviour
- aggressive behaviour
- in younger children, sexual knowledge or behaviours that are inappropriate for the child's age (for example, explicit drawings or simulations with toys or other children)
- affect dysregulation
- in adolescents, sexual promiscuity
- in adolescents, substance use
- in adolescents, self-destructive/impulsive behaviours.

Children and young people with PTSD, including those who have been sexually abused, should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

Research suggests that health professionals often use overly complex language when discussing sexual abuse with children. It is important to keep questions simple and concrete, avoiding abstract questions such as asking about 'bad things' that happened. Allowing time for neutral discussion before focussing on the abuse can help the child to feel more at ease and provides the practitioner with an idea of the child's language ability/level.[127]

Particular issues arise when sexual abuse has occurred within a family. There are often significant losses in terms of familial relationships after a disclosure, which can compound the difficulties children are experiencing. In addition, it may be helpful to teach some protective behaviours to try and give children some control over their environment, particularly if the offender is still present or other relatives are not being supportive. This is particularly important when sexual abuse occurs in the context of neglect, poor attachment or disorganised family functioning.

Directions for future research

A victim rights model that involves therapy, advocacy, groups and support is widely used in specialist sexual assault services. Future research should evaluate the effectiveness of this model.

Recommended reading

Cohen, J. A., Deblinger, E., Mannarino, A. P., & Steer, R. A. (2004). A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*(4), 393-402.

Foa, E. B., & Rothbaum, B. O. (1998). *Treating the trauma of rape: Cognitive-behavioral therapy for PTSD.* New York: Guilford Press.

Natural disasters

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although a few studies identified in the systematic review included participants who were victims of natural disaster, there was no evidence to suggest that different treatment approaches are required. Rather, it is a question of adapting the Guidelines recommendations to the specific needs of this population. Note that this section does not provide detailed guidelines for disaster response more broadly, and interventions for the whole population, such as psychological first aid, are discussed only briefly. Rather, the primary focus is issues affecting the minority who go on to develop long-term mental health problems. Under the auspice of the Australian Government Department of Health and Ageing, the National Mental Health Disaster Response Committee has been established to inform planning, preparation, rescue and response as well as the recovery period in terms of mental health.

Background issues

Disasters, by their nature, are large-scale events that impact upon significant groups within the community. There are a variety of natural and other types of disasters. Some, such as earthquakes and bushfires, affect a local community and impact on a relatively well-defined geographical region. Others may have a wider area of impact. The question of whether long-term natural disasters, such as severe drought or other climate change, can be considered a Criterion A event for PTSD is a matter of some debate. Most would agree that, while such events may have devastating psychological impacts on those directly affected, they do not involve the acute threat to life that characterises Criterion A events and which is a prerequisite in fear conditioning models. Individuals whose home community is affected are likely to experience multiple secondary stressors, particularly in the case of destruction of home, livelihood, infrastructure, and so on. For others, the traumatic experience will be limited to the disaster itself, for example, the thousands of tourists repatriated after the 2004 tsunami in South-East Asia. The nature of exposure to trauma in disasters varies considerably according to the type of disaster and the proximity of the individual to the causal agent. In addition, disasters are likely to have different effects upon the primary victims, compared with the impact on secondary victims (e.g., emergency services personnel who are required to become engaged in the search and rescue).

Issues for service planners

Given the number of individuals affected, over a potentially vast geographic area, natural disasters pose a unique challenge to service planners. For natural disasters, there is some support for the utility of generic, community-based low level services as preferred sources of support that underpin the identification of needs and uptake of more specialist mental health interventions. The size of the population affected by a natural disaster is critical in determining the structure of the treatment services required to deal with the aftermath. Optimally, any treatment services should be linked to the existing health services in which disaster victims have confidence prior to the event. A frequent mistake is that planners presume there will be an early need for services when in fact there tends to be low rates of uptake of services in the immediate aftermath of the disaster, with a progressive increase in need over a period of approximately two years after the event. In the aftermath of the disaster, particularly in light of the evidence about debriefing, those responsible for disaster management should attempt to limit (or, at least, coordinate and control) the many volunteers who have emerged to provide 'post-disaster counselling' in the aftermath of such an event. These individuals and their desire to assist can at times become a major issue in terms of the logistics and management of the large number of people converging on the disaster zone. It is important that the evidence about debriefing and acute treatments is provided to those involved in policymaking to ensure that the structure and nature of the services provide evidence-based interventions.

In the acute aftermath, psychological first aid is optimally provided in conjunction with the acute welfare needs of the population. Also, a decision should be made in the early recovery phase as to whether a systematic outreach, with an emphasis on screening, is to be instigated. If such a program is to be implemented, the high-risk groups should be identified and targeted rather than assuming that all those in the geographic area should be screened. High-risk groups will be those who have lost family or suffered major property destruction or sustained injury.

Disasters are an opportunity to address many longstanding deficiencies in the provision of mental healthcare in the affected populations. Therefore, these events are of considerable importance in ensuring that high quality evidence-based care programs are put in place. They provide an opportunity for upgrading and improving the quality of clinical care for the broader population. Individuals who have been previously traumatised may first present for treatment in the aftermath of a disaster. Therefore, the skill base of the clinicians intervening with a disaster-affected population should be capable of dealing with the broad range of traumatic events.

In disasters involving the loss of a large number of lives, specific consideration needs to be given to the issue of traumatic bereavement. In such instances, treating PTSD alone will not address the full extent of the person's predicament. The interaction between an individual's traumatic memories and the grief process needs to be addressed. Also, in large mass casualty situations, providing basic skills and training to the surgeons, doctors and nurses involved in care can be a method of disseminating information and basic principles to a large number of people.

Media coverage of disasters provides an opportunity to provide information to a large number of people. Thus, it is important to have information resources that can be made available to various organisations that have ongoing contact with those affected by the disaster. Such information sheets can assist in facilitating the linking of those in need with appropriate treatment services.

Personnel involved in rescue and recovery efforts, many of whom are likely to be members of the affected community, may also be distressed by their experiences during and after the disaster. See section on "Emergency services personnel" above for more information on the issues specific to this population. Volunteers may be called upon to help in the disaster recovery, most of whom will lack the experience and training of professional emergency services personnel. This group tends to have mental health outcomes more similar to direct disaster survivors than professional response personnel,[128] and may not have access to organisational support in the event that they develop PTSD or related symptoms as a result of their experiences. In planning for mental health services in the aftermath of a disaster, the needs of the volunteer responders should therefore be taken into account.

Issues for service providers

Presentation

The immediate aftermath of a disaster involves a dramatic period where there is an attempt to mitigate the immediate physical threats and take steps to ensure the physical safety and wellbeing of the affected population. This involves the provision of emergency food and shelter and securing people's possessions if their homes have been destroyed. There is also the need to document and take stock of the losses incurred. In the immediate aftermath of these events there is a small group of people who become acutely distressed (and may even develop an acute distress disorder). However, the majority of people rise to the practical demands of the situation and their psychological distress is not an immediate issue.

There is often a long window of presentation to health services following such events. There is an expectation within communities that people who have sustained significant losses will experience a degree of enduring distress. However, once there is a relative degree of normality returning within a community, the experience of distress for some individuals will remain and may even intensify. It is at such times that presentations for care often increase in frequency. In other words, once the external demands begin to decrease and the obvious causes of distress lessen, individuals begin to acknowledge the possibility that their distress is out of keeping with the reality of their circumstances and may seek care.

Psychological distress in the aftermath of disasters can emerge in the form of family dysfunction, substance abuse, and conflict within the affected community. Due to higher levels of trauma exposure, individuals who are displaced by disaster may experience more significant distress.[129] Disasters not only trigger PTSD but a range of other possible presentations, such as adjustment disorders, major depressive disorder, and substance abuse. Some survivors will be affected by physical injury, and a range of non-specific somatic symptoms is common. The perception of life threat has been found to increase risk for physical symptoms over a year after a disaster.[130] Physical complaints may occur with or without comorbid psychological symptoms.

One of the more characteristic presentations of PTSD in this setting is the considerable anxiety that the individuals will demonstrate if the threat of a similar event begins to emerge. Their triggered pattern of distress is a matter that is readily observed. Prominent hyperarousal symptoms after a disaster may be associated with greater functional impairment, more sick leave, and reporting of related issues such as social withdrawal, feelings of guilt, and lower life satisfaction.[131]

Assessment

Unless the entire infrastructure of a community is destroyed, most disaster victims prefer to utilise the care networks that they are familiar with, focussing primarily on the local general practitioners. Given the delay in help-seeking, an opportunity exists for training local general practitioners, community health staff, and other primary care providers in the diagnosis and assessment of PTSD and other psychiatric conditions which are likely to emerge. It should also be recognised that some people would rather not seek care locally, fearing issues such as confidentiality and stigma in a small community. Thus, providers some distance from the area of destruction should also be aware of the potential for an increase in help-seeking.

Given the predictability of disorder, if the affected population can be well circumscribed, an outreach program involving screening should be considered for high-risk individuals. Such an approach should only be contemplated if the appropriate clinical services are in place to provide care to those who are identified. Simple brief screening measures, followed up with standard diagnostic tools such as the PCL, PTSD Symptom Scale Interview (PSS-I), and the Clinician Administered PTSD Scale (CAPS) for those who screen positive (see Table 2.3), are appropriate for use in this setting.

The assessments conducted in these populations should consider the fact that there will be a background pool of psychiatric morbidity within the affected community. The challenge is to define those individuals who have had an exacerbation or modification of existing symptom patterns, as opposed to the emergence of a new condition. This is relevant to the provision of treatment.

Treatment

As noted above, various forms of psychological distress are seen in survivors of natural disasters and there is likely to be a wide range of clinical needs. For those who develop PTSD, the recommended treatments generally apply. There are however, a number of specific challenges, which include:

- Large numbers of people potentially requiring access to treatment over a prolonged period of time. It is important that evidence-based treatments for PTSD are available to these affected communities. This is a particular challenge in rural and remote communities where there is often a paucity of appropriately trained practitioners. However, distance need not necessarily be a barrier to care, with growing evidence suggesting that telehealth services can provide effective treatment for PTSD and other common mental health problems.[132-134] While still in their infancy, some internet-based treatments show promise, particularly if supported by low-level clinical care.
- Multiple members of the same family may be affected simultaneously, possibly impacting upon the pattern of symptomatic distress, for example, if both a husband and wife are suffering. Indeed, the reactions of other adults in the household may be more influential in the maintenance of PTSD symptoms than the impact of the disaster itself.[135] Treatment may need to address these relationship dimensions because they can serve to influence the patterns of withdrawal and avoidance.
- In cases where the individual with PTSD has suffered economic and social disadvantage as a result of the disaster, the circumstances in which they find themselves can serve as a constant reminder of their traumatic experience and thus complicate the treatment.
- Chronic PTSD has been associated with an increase in the perception of life threat at the time of the disaster. Cognitive therapy addressing realistic threat evaluation may be helpful for individuals whose perception of threat intensity is amplified over time.[136]

Working with children

A range of factors influences the development of posttraumatic stress symptoms in children following a disaster, including gender, extent of destruction, perceived threat, and the loss of a friend or loved one. On the other hand, age has not been found to be associated with disaster-related posttraumatic stress.[137] However, age may influence children's understanding of disasters; for example, younger children may hold magical beliefs about disasters, such as storms having intentions.[138] Age may also influence children's understanding of their symptoms, with older children more able to identify disaster-related thoughts as unwanted and intrusive.[139]

School-based interventions are effective in facilitating children's recovery following a disaster. Usual school activities should be resumed as soon as possible; in addition to the benefits of the re-establishment of routine, the school community encourages engagement in appropriate memorial rituals and pro-social activities.[140] School-based interventions are also well placed to promote social connectedness, low levels of which are associated with more severe PTSD symptoms in children following a disaster.[141]

Natural disasters are somewhat unusual in that they are experienced by all members of the family. In addition to their experiences during the disaster itself, children are also affected by their parents' response to disasters.[142] Thus, it is important to consider the family unit as well as the individual when assessing and treating mental health problems. There is some evidence to suggest that mothers' and fathers' psychopathology may play differential roles in influencing their children's mental health; children's depression and posttraumatic stress symptoms may be more closely related to their mother's depression and father's posttraumatic stress symptoms respectively.[143]

Children and young people with PTSD resulting from a natural disaster should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

Recommended reading

Drabek, T. E. (1986). *Human system responses to disaster: An inventory of sociological findings.* New York: Springer-Verlag.

Journal of Clinical Psychiatry, 67(Supplement 2). (2006). *After the Tsunami: Mental health challenges to the community for today and tomorrow.*

Kaniasty, K., & F., N. (1999). The experience of disaster: Individuals and communities sharing trauma. In R. Gist & B. Lubin (Eds.), *Response to disaster: Psychosocial, community, and ecological approaches.* Ann Arbor: Brunner/Mazel.

Norris, F. H., Friedman, M. J., & Watson, P. J. (2002). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. *Psychiatry, 65*(3), 240-260.

Ursano, R., Fullerton, C., Weisaeth, L., & Raphael, B. (2011). *Textbook of disaster psychiatry.* New York: Cambridge University Press.

Although not a focus of these Guidelines, in the context of disaster recovery readers may be interested in the following resources that are oriented towards psychological first aid:

- Australian Psychological Society/Red Cross: *PFA – An Australian Guide* (available from www.psychology.org.au) National Center for PTSD: *PFA Field Operations Guide* (available from www.ptsd.va.gov)
    - Note that both the above sites have links to an online training program in PFA developed by the US National Center for PTSD.
- Australian Psychological Society: Psychosocial Support in Disasters (www.psid.org.au)
- World Health Organisation: *PFA Guide for Field Workers* (available from www.who.int/publications)

Terrorism

As stated in the introduction to this chapter, the information provided in this section is derived primarily from expert opinion regarding the application of the Guidelines for this population, rather than from the empirical literature. Although very few studies identified in the systematic review included participants that were victims of terrorism, there was no evidence to suggest that different treatment approaches are required. Rather, it is a question of adapting the Guidelines recommendations to the specific needs of this population.

Note that this section does not provide detailed guidelines for disaster response more broadly in the context of a major terrorist event (e.g., a bombing affecting large numbers of people), and interventions for the whole population, such as psychological first aid, are discussed only briefly. Rather, the primary focus is issues affecting the minority who go on to develop long-term mental health problems. Under the auspice of the Australian Government Department of Health and Ageing, the National Mental Health Disaster Response Committee has been established to inform planning, preparation, rescue and response as well as the recovery period in terms of mental health.

Background

There have been several attempts to develop precise working definitions of terrorism.[144] A proposal to the United Nations provided the following brief legal definition: *"[an act of terrorism is] the peacetime equivalent of a war crime"*.* More precise definitions of terrorism tend to be relative, because judgments about acts of political violence are often subjective. For example, the United States Department of Defence[145] defines terrorism as: *"The unlawful use of violence or threat of violence to instil fear and coerce governments or societies. Terrorism is often motivated by religious, political, or other ideological beliefs and committed in the pursuit of goals that are usually political".* Although more comprehensive, this definition is problematic because it relies on vague terms which are left open to interpretation (such as "unlawful violence" or "the pursuit of goals..."). Put simply, one person's terrorist is another's freedom fighter. In some cases, this ambiguity can make it more difficult for survivors to understand and find meaning in the experience.

Terrorist acts usually involve the threat of (and sometimes actual) high levels of destruction to property and, more importantly, to people. There is likely to be widespread threat to life and actual loss of life. There may well be exposure to gruesome sights for those involved, including the death and suffering of others; this may include close family members and friends. Difficulty (or inability) in helping others in the aftermath of the attack may precipitate feelings of helplessness and guilt.

The fear generated by terrorist attacks is unsurprising; they are characterised by many features typical of high severity traumatic events. Terrorist acts are generally unpredictable in terms of place, timing, and potential victims; as such, they are completely uncontrollable (at least for the general population), increasing the risk of perpetual hypervigilance. Bioterrorism carries added threat since it is so poorly understood and is, effectively, 'invisible'. It is hard to be definite about whether an individual or group has been 'contaminated' and, even if individuals have clearly been exposed to pathogens, the likely health effects are rarely clear.

It is important to remember that the main goal of terrorism is exactly that – to generate feelings of terror in the community. Acts of terrorism are extremely rare (particularly in Australia) and the effects of fear and hypervigilance are often well in excess of the actual damage posed by, or caused by, the terrorist act.

In short, terrorist acts are generally high magnitude traumatic events, of very rare occurrence, capable of generating widespread fear and hypervigilance. For mental health professionals, this raises questions as to the best way to prepare for such attacks and the best way to manage the mental health consequences.

Issues for service planners

Preparing for the threat of terrorism

Reactions to terrorism can be made worse by sensational media reports and by poor communication by public officials. Thus, a key role for mental health professionals is often that of working with the media and public officials to ensure that appropriate messages are disseminated. Communications to the general population should be informed by the following recommendations adapted from Foa et al.[146]

- Provide realistic information on the likelihood of a terrorist attack and possible impact.
- Communicate that the individual risk is quite low.
- Explain that negative health behaviours which may increase during times of stress (e.g., smoking, unhealthy eating, substance use) constitute a greater health hazard than the hazards likely to stem from terrorism.
- Emphasise that the only action required on the individual level is increased vigilance of suspicious actions, which should be reported to authorities.
- Clearly communicate the meaning of different levels of warning systems.
- When issuing a warning, specify the type of threat, the type of place threatened, and indicate specific actions to be taken.
- Make the public aware of steps being taken to prevent terrorism without inundating people with unnecessary information.
- Provide the public with follow-up information after periods of heightened alert.

Communications by the media and public officials should also include simple information about resilience and expectations of recovery. Many simple fact sheets on resilience in the face of terrorism are available on the internet. (See, for example, www.phoenixaustralia.org; www.ncptsd.org; www.centerforthestudyoftraumaticstress.org/)

Responding to an attack

It is important to remember that most people will recover without any mental health assistance; thus, interventions in the early aftermath of a terrorist attack should be based around providing information and activating community support:

- Support the work of the emergency services.
- Activate and facilitate community support networks.
- Provide accurate information about the event and its consequences.
- Facilitate accurate and balanced communication by the media, schools, workplaces, etc.
- Establish information and drop-in centres to provide information, support, contacts, etc.
- Promote opportunities for mutual support through education and information, as well as by facilitating appropriate social activities through workplaces, schools, sports clubs, churches, and other community agencies.

Although debate exists in this area, it seems reasonable to implement some kind of low-key screening to facilitate identification of those individuals who are not showing the normal recovery trajectory and who are developing identifiable mental health problems. This might be done as part of a public health approach *("…if you are experiencing several of these symptoms, we suggest you visit your local GP")* or in a more restricted manner (such as through advertising telephone numbers for trained personnel to conduct screening). (See Brewin et al.[147] for an example following the 2005 London bombings.) The key point is that secondary prevention – early intervention for individuals with mental health problems following trauma – is demonstrably effective, *if* they can be identified. This approach requires that educational material is made available to general practitioners to ensure that appropriate assessment, education and advice is forthcoming.

*Proposed by A. P. Schmid to the United Nations Crime Branch (1992); see Siegel, L. J. (2009). *Criminology* (10th ed.). Belmont, CA: Thomson Wadsworth.

Issues for service providers

Presentation

An attack of small to moderate impact is likely to generate moderate to major psychological and behavioural reactions in the short term, and the greater the harmful impact of the attack, the greater the likely reaction. Proximity to the attack and number of attacks will influence the severity of individual reactions. There is no reason to assume that the nature of clinical reactions, when they occur, would be significantly different to those seen following other types of traumatic events.

Immediate reactions are likely to include heightened anxiety, panic attacks, sleep and substance use problems, absenteeism from work, and retaliatory reactions against minorities identified with the terrorists. Reactions are likely to subside over the medium term (days to weeks), although repeated attacks and/or widespread loss of life and/or significant damage to infrastructure may result in increased psychological and behavioural reactions.

Significant longer term mental health reactions are likely to be limited to a relatively small proportion of the population. These reactions may include traumatic stress symptoms, other anxiety disorders, depression, and substance use, all of which may be associated with impaired functioning and increased distress. The ongoing fear of another attack is likely to pervade all reactions to a greater or lesser extent.

Assessment

Standard approaches to assessment as outlined in other parts of these Guidelines, including the victims of crime and sexual assault sections above, should be applied when assessing people presenting for treatment following a terrorist attack.

Treatment

Several 'real world' effectiveness trials of PTSD treatment following terrorist acts have appeared in the literature, including programs in Northern Ireland, the United States, and the United Kingdom.[e.g.,147,148,149] Each of those programs utilised cognitive behavioural approaches, training local clinicians in the delivery of evidence-based PTSD treatment. In each case, the outcomes were impressive. Thus, there is no reason to assume that interventions for those developing PTSD and related conditions following terrorism should be any different to those recommended for other trauma survivors. The recommendations provided in these Guidelines should be considered as the starting point.

Working with children

As with adults, the range of children's responses to terrorism is highly variable and psychological reactions will be strongly influenced by the behaviour and reactions of primary caregivers.[149] Also consistent with adults, there is no reason to assume that treatment should be any different to those applied for PTSD of other origins. It is, of course, vital that clinicians are competent and experienced in working with the particular age group, and close attention should be paid to advice regarding treatment of children provided in the earlier chapters of these Guidelines.

With that caveat, children and young people with PTSD following terrorism should be offered a course of trauma-focussed cognitive behavioural therapy adapted appropriately to suit their age, circumstances and level of development.

Recommended reading

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Glossary of Terms

Carer – A person not employed as a health practitioner who provides care for another individual with a long-term medical condition

Comorbidity – The occurrence of more than one mental health disorder at the same time

Consumer – A person who has experienced mental health problems following a traumatic event and has used or required health services

Case-controlled study – A study conducted in a naturalistic setting, which compares people who show improvement on the outcome/s of interest with those who do not

Clinician/health professional or provider – A professional such a doctor, nurse, psychologist or psychiatrist employed in clinical practice

Cohort study – A study in which subjects who have a certain condition and/or receive a particular treatment are followed over time and have measures taken at two or more points in time

Collaborative care – The practice of health professionals working together to provide care to patients and families. Also known as multidisciplinary or interdisciplinary care

Comparator – The comparison treatment or condition (e.g., waitlist) used to measure the effectiveness of the treatment under investigation

Completer data – Outcome data that is based only on those who completed treatment, rather than also including those who dropped out of treatment

Confidence interval – The probability that a population parameter will lie within an estimated range of values

Cost-effectiveness – The relative costs and benefits of a range of intervention options

Differential diagnosis – An alternative diagnosis that could be made on the basis of observed signs and reported symptoms

Early intervention – Interventions within the first month of the traumatic event including those that target all adults exposed to the event, and those that target only those with symptoms of ASD or early PTSD

Efficacy – The degree to which a particular intervention produces beneficial outcomes under ideal research conditions

Effectiveness – The degree to which a particular intervention produces beneficial outcomes in everyday settings

Epidemiological study – A study that investigates the incidence and prevalence of a particular disorder across the population

Expert consensus – The agreed position of experts in the field – relied upon only in the absence of research evidence on the issue

Fixed-effects model – A fixed-effects model of meta-analysis is based on a mathematical assumption that every study is evaluating a common treatment effect. That means the effect of treatment, allowing for chance, was the same in all studies. Another way of explaining this is to imagine that if all the studies were infinitely large they would give identical results

Functional improvement – Outcomes that indicate a higher degree of social, occupational and/or psychological functioning

Grading scheme – A set of criteria used to rate the strength of research evidence.

Heterogeneity in studies – Different outcomes for the same interventions across studies

Historically controlled study – A study in which a group receiving an intervention is compared to another group who has received the same intervention in the past

Intent-to-treat – Outcome data includes all subjects randomised to receive a treatment in a randomised controlled trial, regardless of whether they complete treatment

Internal validity – The extent to which the outcomes of the study are due to the effects of the variable under investigation and not other, extraneous variables

Interpersonal trauma – Traumatic experience that involves intentional threat or injury caused by another person such as physical or sexual assault

Interrupted time series – A study in which participants are assessed before and after an intervention on multiple occasions. The trends found in multiple pre-tests are then compared to trends in multiple post-tests. The study may or may not contain a control group

Meta-analysis – A statistical analysis that combines the results of a number of studies that have investigated the same research question

Monitoring – Systematic, repeated assessment of symptoms or functioning in order to ascertain an individual's improvement or deterioration over time

Observational study – Studies in which investigators observe patients in natural settings

Outcomes of interest – The specific aspects of functioning, including psychological, social and occupational, changes within which are used to evaluate the effects of an intervention

Peer review – A process by which research is reviewed by experts in the same field to determine whether it meets specific criteria for approval.

Posttraumatic growth – Positive psychological change experienced as a result of the struggle with traumatic experiences

Pseudo-randomised controlled trial – A study that includes both an intervention and control condition to which participants are allocated on the basis of pre-existing characteristics

Publication bias – The greater likelihood for studies with positive findings to be submitted and/or published compared to those with negative or null findings

Qualitative synthesis – A summary of research evidence that is based on a subjective analysis of the data rather than statistical analysis

Quality of life (health-related quality of life) – A multidimensional concept that encompasses the social, occupational, psychological and physical aspects of a person's functioning and enjoyment of life

Random effects model – A random effects model of meta-analysis assumes that the true treatment effects in the individual studies may be different from each other. That means there is no single number to estimate in the meta-analysis, but a distribution of numbers. The most common random effects model also assumes that these different true effects are normally distributed. The meta-analysis therefore estimates the mean and standard deviation of the different effects

Randomised control trial – A clinical trial in which participants have the same likelihood of being allocated to a treatment or control condition. Both control and intervention groups are reassessed post-treatment to investigate differences in outcomes

Recovery – includes reduction in PTSD symptoms and achieving optimal psychosocial functioning across social, occupational and/or personal settings. Recovery can be an outcome of treatment or occur as a result of a person's existing internal and external resources

Relative risk – The probability of an event occurring (or disorder developing) in one group (exposed) compared to another (non-exposed) group

Research question – Specific and clearly defined questions concerning key areas of interest which are addressed in the systematic review of the literature

Secondary prevention – Early intervention for individuals who have developed mental health problems following trauma, designed to prevent more severe or protracted mental health problems

Screening – Assessment process that aims to identify individuals who are experiencing mental health problems and/or are not showing the normal recovery trajectory following the experience of a traumatic event

Single arm study – A study designed to investigate participants receiving one type of treatment at a particular time, often in order to compare outcomes with those of another treatment at a later date

Stakeholders – Parties with a specific interest in the area under investigation

Standardised mean difference – A statistical method used to combine the outcomes of studies, including those utilising different measures, in order to examine the effect of an intervention

Stepped care – The practice of offering the least expensive and least intrusive intervention first, and then increasing the intensity (and therefore cost) of intervention as is necessary to achieve a desired therapeutic outcome

Systematic review – A process by which specific, well-defined research questions are investigated according to a predetermined protocol that outlines explicit methods for searching literature, evaluating studies and collating findings

Therapeutic alliance – working relationship between health practitioner and person receiving treatment

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