Post-traumatic stress disorder and substance use

Promising new treatments for adolescents

Dr Natalie Peach

Katherine L Mills[1], Maree Teesson[1], Sudie Back[2], Emma Barrett[1], Vanessa Cobham[3], Sarah Bendall[4], Sean Perrin[5], Kathleen Brady[2], Joanne Ross[1]

[1] The Matilda Centre for Research in Mental Health and Substance Use, University of Sydney, Australia

[2] Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston, SC, USA

[3] School of Psychology, University of Queensland, Australia

[4] Orygen National Centre of Excellence in Youth Mental Health, Parkville, Australia

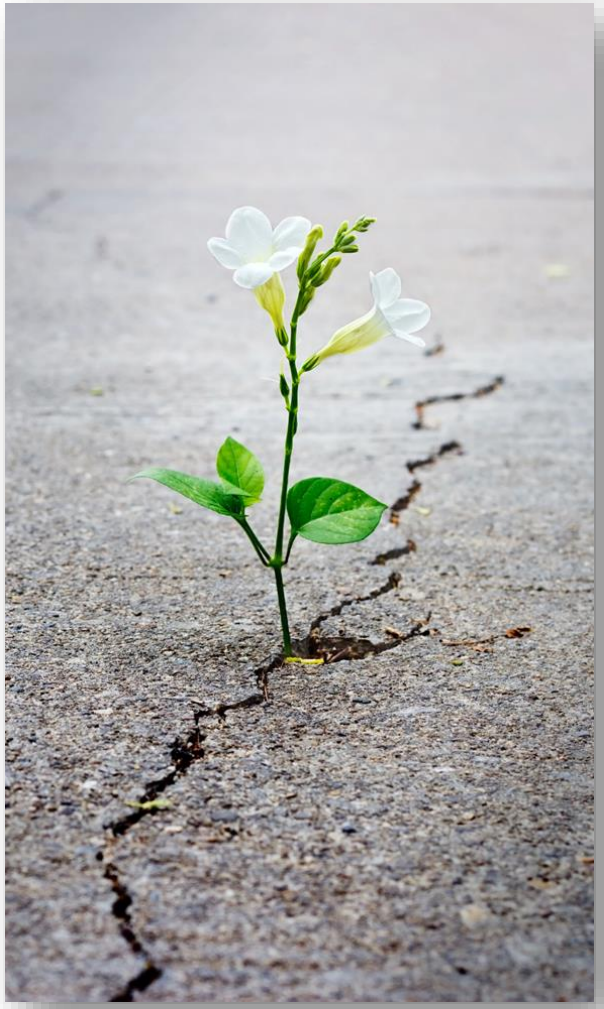
[5] Department of Psychology, Lund University, Sweden

THE UNIVERSITY OF SYDNEY

COPE-A

- NHMRC-funded RCT to examine the efficacy of integrated psychological therapy for co-occurring PTSD + AOD use in adolescents **(COPE-A)**, relative to a supportive counselling control

- Further information: https://www.copea.org.au/



Rates of child and adolescent trauma

- The 'hidden epidemic' of child and adolescent trauma is an issue of significant public health concern (Lanius, et al., 2010)
- Alarmingly high rates of trauma exposure (and repeated exposure) experienced by children and adolescents under the age of 18yrs (70-80%)
- A wide range of terrifying and life-threatening experiences, commonly physical and sexual assault, witnessing violence, accidents and natural disasters

Nooner KB, et al. (2012). Factors related to Posttraumatic Stress Disorder in Adolescence, *Trauma, Violence, & Abuse, 13*(3), 153-166

PTSD in children and adolescents

4 main types of difficulties

- Re-living the trauma
  - memories, nightmares, flashbacks, distress at reminders of the trauma, repetitive play
- Avoidance
  - people, places, activities, thoughts about the trauma
- Negative thoughts and feelings
  - Fear guilt, sadness, shame, time alone, loss of interest
- Hypervigilance
  - Anger, irritability (or temper tantrums), sleep and concentration difficulties, easily startled, increased risk taking

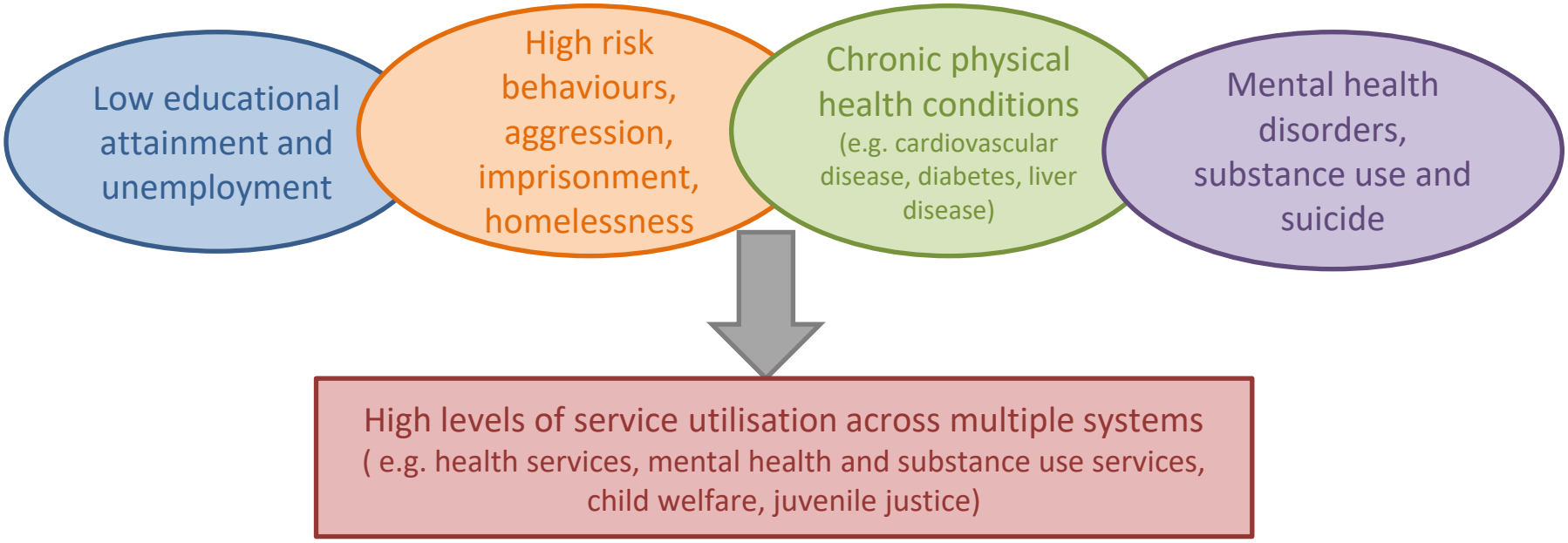
Other signs of child and adolescent trauma

- Development of new fears – either related or un-related to the traumatic event
- Seeming dependent or clingy
- Regression in previously mastered skills – such as speech or toileting, or a return to babyish behaviour
- Depression or anxiety
- General misbehaviour or attention seeking behaviour
- Poor school performance
- Unexplained aches and pains
- Substance use

Phoenix Australia. https://www.phoenixaustralia.org/recovery/fact-sheets-and-booklets/

Trauma and pervasive impairment

- Early trauma is associated with increased risk for serious and disruptive problems that persist into adulthood (Anda et al., 2006; Brady & Back, 2012; Wu et al., 2010)
- Many experience lifetime difficulties in multiple domains of functioning (emotion regulation, interpersonal functioning, cognition and memory) as manifested by:

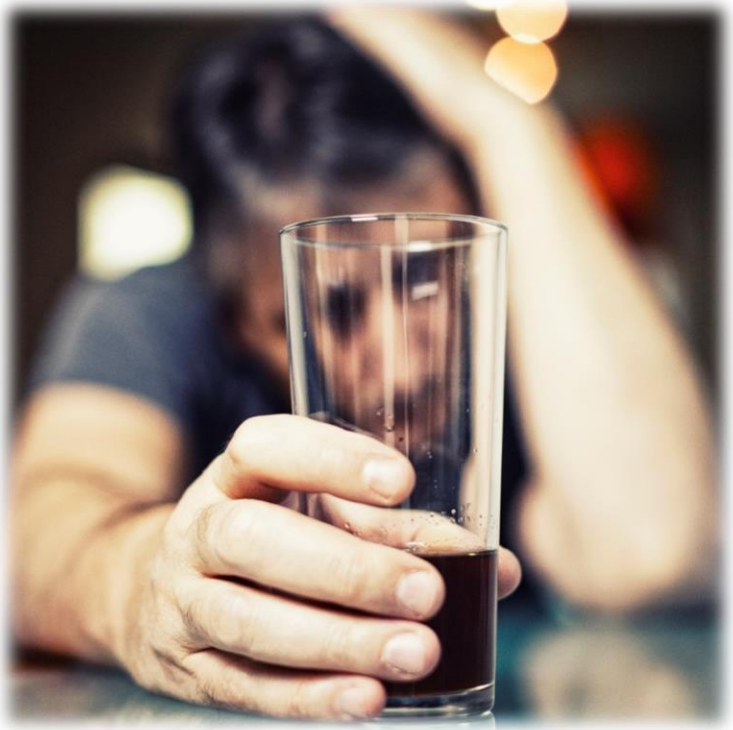


- The earlier the trauma, the greater the risk for these problems (Scott et al., 2011).
- Those exposed to multiple traumas are at increased risk for cumulative impairment (Briggs et al., 2012; Cook et al., 2005; Heim et al., 2010

Trauma among clients entering AOD treatment

- In Australia, >80% of entrants to treatment report having experienced a traumatic event in their lifetime

- Up to two thirds found to have PTSD



Dore et al. Posttraumatic stress disorder, depression and suicidality in inpatients with substance use disorders. Drug Alcohol Rev 2012;31:294–302.
Mills et al. Posttraumatic stress disorder among people with heroin dependence in the Australian treatment outcome study (ATOS): prevalence and correlates. Drug Alcohol Depend 2005;77:243–9.

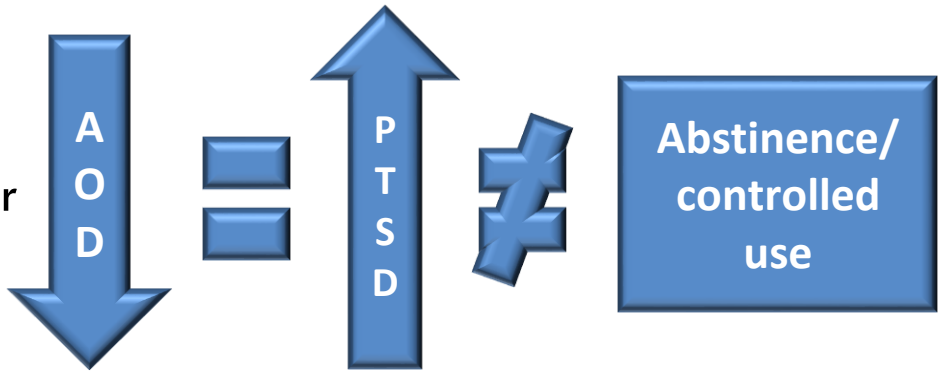
PTSD and SUD among adolescents

- PTSD and SUD often co-occur among adolescents:
  - ~ 50% of adolescents with PTSD also suffer from a co-occurring SUD
- Poorer treatment outcomes
  - Physical, mental, psychosocial
- Self-medication

(Giaconia et al., 2000; Deykin et al., 1997; Kilpatrick et al., 2003; Lubman et al., 2007; Nooner et al., 2012)

Trauma, PTSD and AOD use are integrally related

- Improvements in PTSD lead to improvements in substance use but reciprocal relationship not observed - PTSD symptoms do not remit following improvements in substance use.
- On the contrary, PTSD symptoms may worsen in the absence of substance use, making it difficult for patients to sustain abstinence and increasing their risk of relapse to AOD use
- Highlights the centrality of PTSD improvement in the treatment of SUD+PTSD clients.

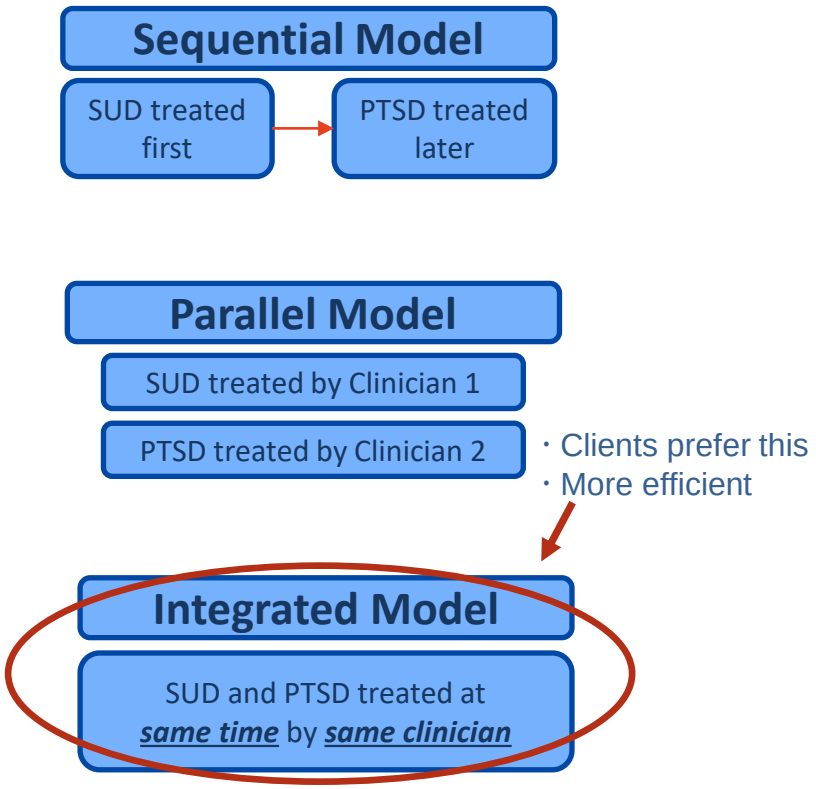


Back et al. Cocaine dependence and PTSD: A pilot study of symptom interplay and treatment preferences. Addict Behav 2006;31:351–4.
Hien et al. Do treatment improvements in PTSD severity affect substance use outcomes? A secondary analysis from a randomized clinical trial in NIDA's clinical trials network. Am J Psychiatry 2010;167:95–101.
Read et al. Substance use and PTSD: symptom interplay and effects on outcome. Addict Behav 2004;29:1665–72.
Myrick & Brady. Current review of the comorbidity of affective, anxiety and substance use disorders. Curr Opin Psychiatry 2003;16:261–70.
Sharkansky et al. Substance abuse patients with PTSD: identifying specific triggers of substance use and their associations with PTSD symptoms. Psychol Addict Behav 1999;13:89–97.
Dansky et al Untreated symptoms of PTSD among cocaine-dependent individuals. Changes over time. J Subst Abuse Treat 1998;15:499–504.

How do we best treat PTSD+SUD?

- Reluctance to address PTSD among AOD clients:
  - too vulnerable
  - need to address AOD use first
- Clients being passed between services with little coordination of care

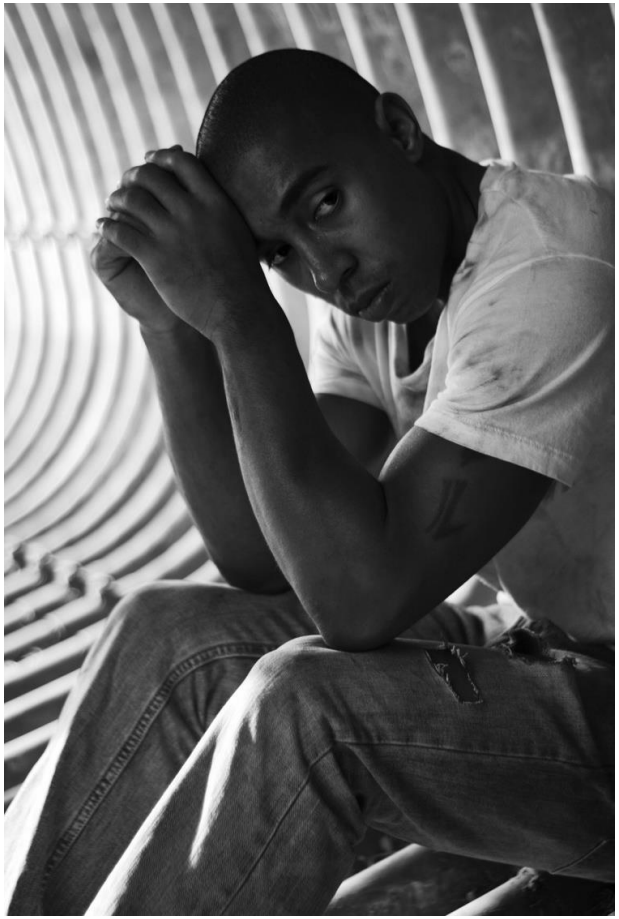
Treatment models for PTSD+SUD



Marel et al (2016). Guidelines on the management of co-occurring alcohol and other drug and mental health conditions in alcohol and other drug treatment settings. NDARC.

Exposure-based integrated psychotherapies

- Exposure-based therapies = gold standard for PTSD
  - In vivo and imaginal exposure
- Traditionally, considered inappropriate for people with SUD
- Researchers have begun investigating the efficacy of integrated exposure-based programs that address PTSD and AOD use simultaneously.



Foa et al. (2013). Concurrent naltrexone and prolonged exposure therapy for patients with comorbid alcohol dependence and PTSD: A randomized clinical trial. Journal of the American Medical Association, 310(5), 488-495

Roberts et al. (2016). Psychological therapies for post-traumatic stress disorder and comorbid substance use disorder. Cochrane Database of Systematic Reviews, Issue 4. Art. No.: CD010204

Exposure-based integrated psychotherapies

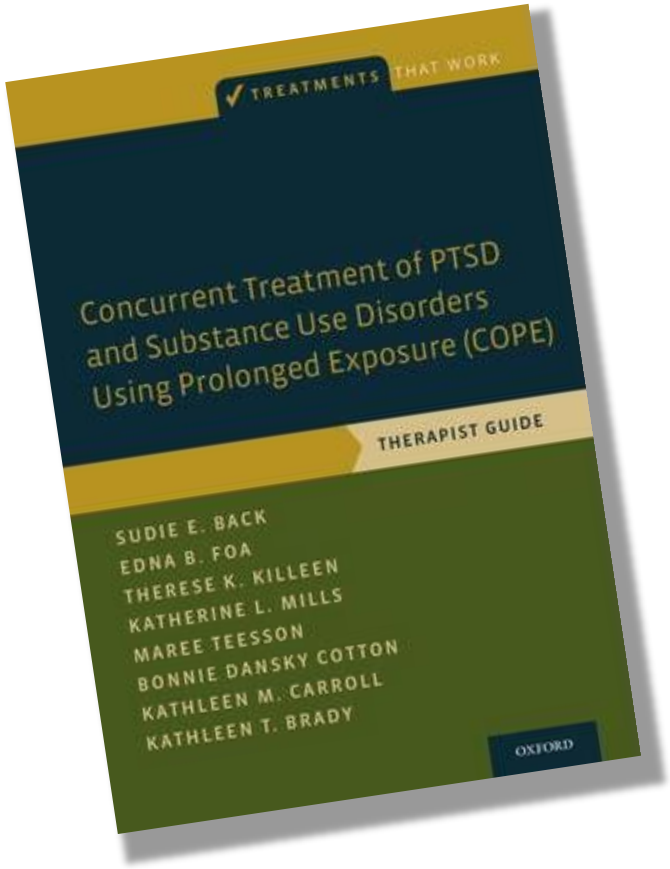
- Support for these programs is growing, with an increasing number of studies providing evidence for their safety and efficacy
- Two large RCTs conducted in Australia.

Mills et al. Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. Journal of the American Medical Association, 2012; 308, 690-699.

Sannibale et al. Randomized controlled trial of cognitive behaviour therapy for comorbid post-traumatic stress disorder and alcohol use disorders. Addiction, 2013; 108, 1397-1410.

Exposure-based integrated psychotherapies

- Mills et al (2012) examined the efficacy of a 13 session integrated therapy called **Concurrent Treatment of PTSD and Substance Use Disorders Using Prolonged Exposure (COPE)**
- Combines CBT for SUD and PTSD, including prolonged exposure
- Relative to TAU for SUD
- Adults with PTSD + a range of SUDs (n=103)



Mills et al. Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. Journal of the American Medical Association, 2012; 308, 690-699.

What they found

- Across the 9 mth follow-up period both groups evidenced improvements in their:

  - ✓ Substance use
  - ✓ Severity of dependence
  - ✓ PTSD symptoms
  - ✓ Depression
  - ✓ Anxiety

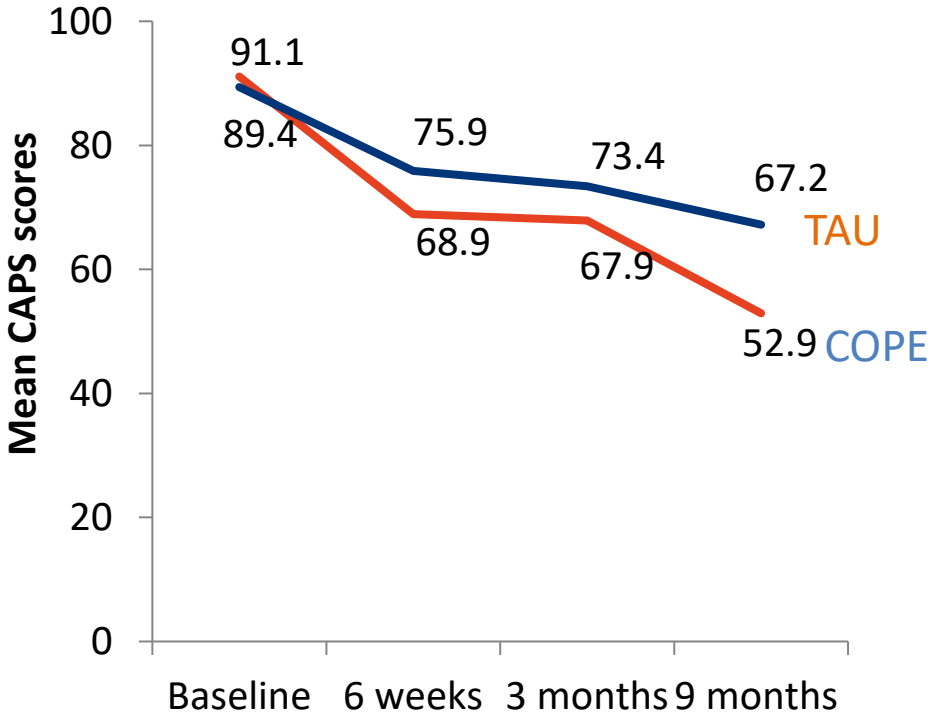
THEY DID NOT GET WORSE!

- Participants randomised to **COPE** demonstrated significantly greater improvements in relation to their PTSD symptoms

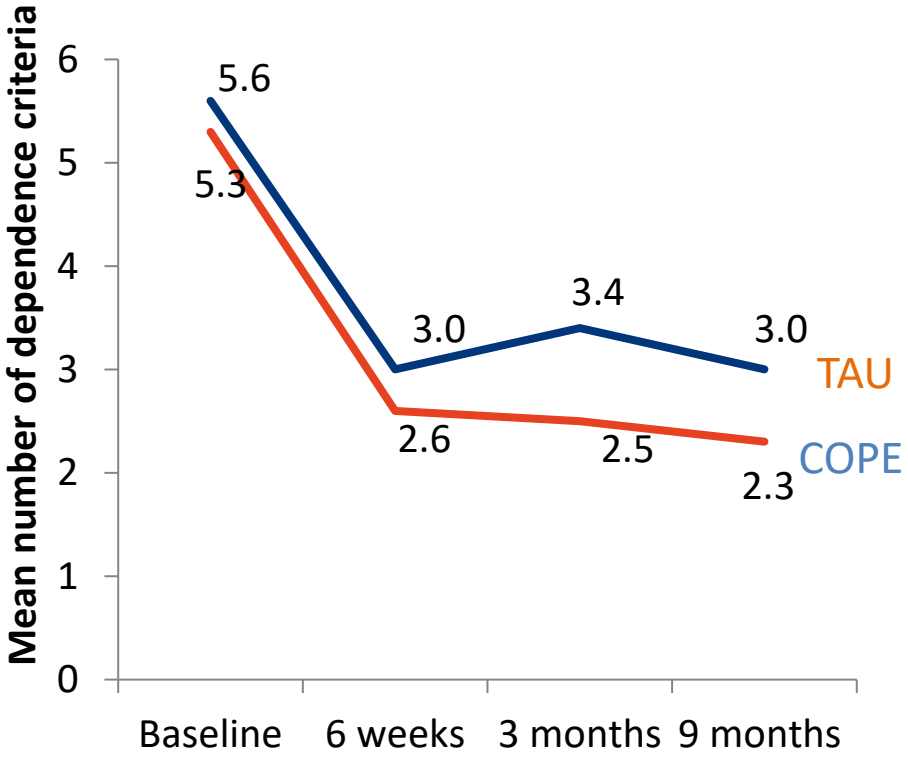
Mills KL et al (2012). Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. JAMA; 308: 690-699.

Primary outcomes

PTSD symptom severity



Severity of SUD



Mills KL et al (2012). Integrated exposure-based therapy for co-occurring posttraumatic stress disorder and substance dependence: A randomized controlled trial. JAMA; 308: 690-699.

Participant feedback

*"**The best thing I have done for myself in years**.*

I hadn't ever spoken about this stuff so it was really helpful"

*"It **helped me realise how much my addiction is linked to the trauma**.*

I can now talk about the incident without freaking out"

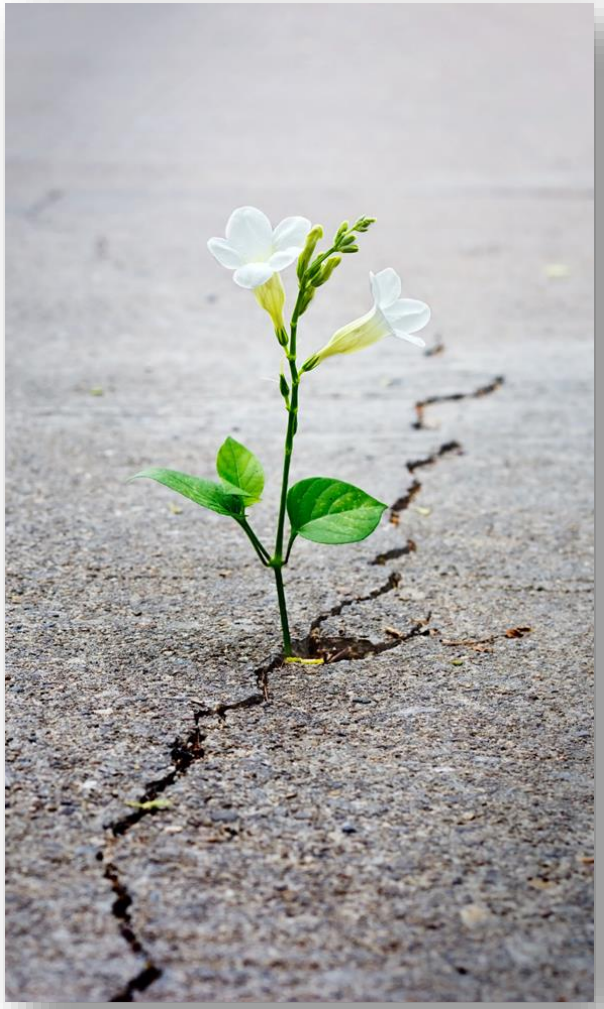
*"**No one had ever talked to me about my trauma before**.*

It was good to put a name to my symptoms"

*"The imaginal exposure was the **hardest part but also the most useful**."*

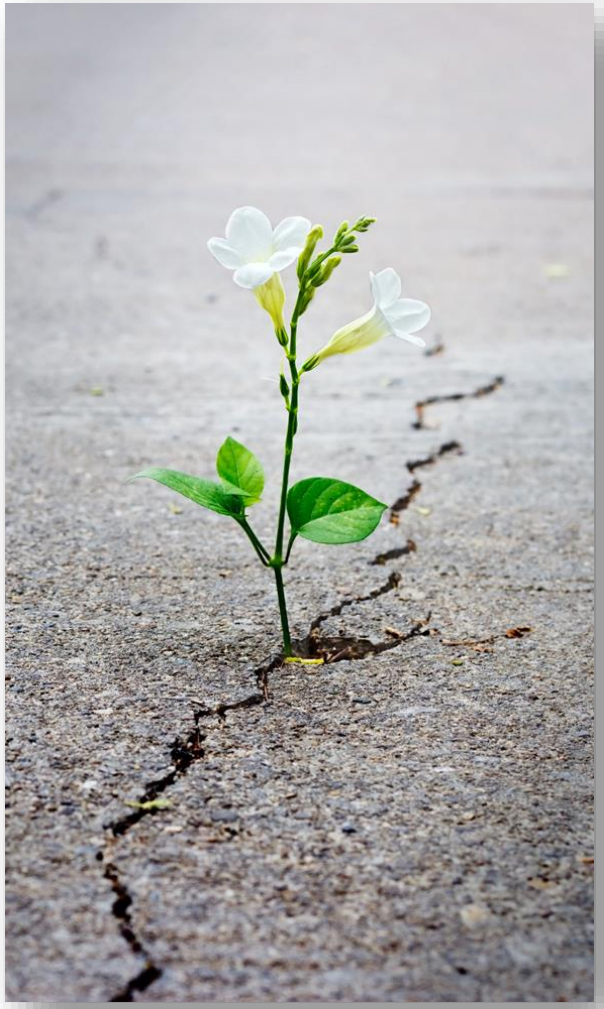
Where to next: COPE-A

- Treating substance use and traumatic stress among adolescents
- There is a critical need to intervene early before PTSD and SUD develop into chronic, relapsing conditions in adulthood
- Lack of empirically validated treatments for adolescents with PTSD and AOD
- NHMRC-funded RCT
- Examining efficacy of **COPE-Adolescent** treatment in adolescents with co-occurring PTSD + AOD use, relative to a supportive counselling control



Where to next: COPE-A

- Currently recruiting from the greater Sydney region
- We are looking for 12-25 year olds with-
  - Exposure to at least one traumatic event
  - DSM-5 full or subthreshold PTSD diagnosis
  - Use of alcohol or other drugs in past month and history of problematic use
  - Fluency in English
- Both treatments: 16 sessions with psychologist, free of charge
- Four optional caregiver sessions
- Can continue seeing regular clinician



Complex Participants

- Vulnerable, high risk young people difficult to treat
- Young age of first trauma and substance use
- Number of traumas
- Polysubstance use
- Severity of PTSD and SUD
- Chaotic circumstances

Co-occurring:

- Mood disorders
- Psychotic symptoms
- Anxiety disorders
- Physical health problems
- Disordered eating

Complex Participants

- Social workers
- Government/child protection
- Case managers
- Psychologists
- Paediatricians
- Psychiatrists
- School counsellors
- GPs
- Juvenile justice workers
- Lawyers
- Youth workers
- Youth refuge/housing staff

Summary & Conclusions

- Despite challenges, they are not insurmountable
- These young people often don't access treatment
- Will improve our understanding of how to treat PTSD+SUD - critical developmental period
- Intervening early reduces long-lasting burden across lifespan
- Further information: https://www.copea.org.au/
  - natalie.peach@sydney.edu.au