CREMS Webinar Series: Welcome!

UPCOMING WEBINARS

Psychosis and other mental health effects of ice
Monday 9th July, 12pm AET
Presented by Dr Rebecca McKetin

Managing the physical health of people with co-occurring mental and substance use disorders
Dr Christina Marel & A/Prof Katherine Mills
Tuesday 5th December, 2017:
7.00pm AEDT Register here

The link between anxiety and alcohol use: Implications for treatment and early intervention
Dr Lexine Stapinski
Tuesday, 27th February, 2018:
1.00pm AEDT Register here

Full details available at:
http://comorbidity.edu.au/training/webinars
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What is CREMS?

CREMS aims to significantly improve

- understanding
- prevention
- treatment

of comorbid mental health disorders and substance use

NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS)
CREMS Team

NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS)
Directed by Prof Maree Teesson
Post-traumatic stress disorder and substance use: Promising new treatments for adults and adolescents

A/Prof Katherine Mills & Dr Natalie Peach
NHMRC Centre of Research Excellence in Mental Health and Substance Use
National Drug and Alcohol Research Centre, University of New South Wales
What we will talk about

- What are trauma and PTSD?
- How common are trauma and PTSD among people with substance use disorders?
- Why are we concerned?
- Why do the co-occur?
- How do the symptoms of each interact?

What are trauma and PTSD?
What we will talk about

How do we best treat?

- Adults
- Adolescents
• NHMRC-funded RCT to examine the efficacy of the COPE-Adolescent treatment in Australian adolescents with co-occurring PTSD + AOD use, relative to a supportive counselling control


• Contact:
  n.peach@unsw.edu.au or
  k.mills@unsw.edu.au
What is trauma?

- An event where a person is exposed to:
  - death
  - threatened death
  - actual or threatened serious injury
  - actual or threatened sexual violence
- The event may be experienced via:
  - direct exposure
  - witnessing, in person
  - indirectly (i.e., learning that a close relative or close friend was exposed to trauma)
  - repeated or extreme indirect exposure to aversive details of events, usually in the course of professional duties
- May be prolonged or one-off event

What is PTSD?

• Most common psychiatric disorder to occur after a traumatic event (conditional probability 1/10)
  
  - **Intrusion/re-experiencing** e.g. nightmares, flashbacks
  - **Avoidance** e.g. avoid trauma-related thoughts, feelings, reminders
  - **Negative alterations in cognitions and mood** e.g. negative thoughts about self and world, self blame, decreased interest in activities and decreased positive affect
  - **Alterations in arousal and reactivity** e.g. irritability or aggression, hypervigilance, difficulty concentrating or sleeping

• Adaptive response to fear that has become maladaptive

Trauma among clients entering AOD treatment

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


Trauma among clients entering AOD treatment

- Most commonly:
  - witnessing serious injury or death,
  - threatened with a weapon, held captive or kidnapped
  - physical or sexual assault

- The vast majority have experienced multiple traumas

- High rates of childhood trauma

<table>
<thead>
<tr>
<th>Event</th>
<th>% Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Witnessed serious injury/death</td>
<td>68</td>
</tr>
<tr>
<td>Threatened with a weapon, held captive, kidnapped</td>
<td>64</td>
</tr>
<tr>
<td>Seriously physically attacked or assaulted</td>
<td>55</td>
</tr>
<tr>
<td>Involved in a life threatening accident</td>
<td>50</td>
</tr>
<tr>
<td>Great shock – other person</td>
<td>42</td>
</tr>
<tr>
<td>Sexually molested</td>
<td>31</td>
</tr>
<tr>
<td>Raped</td>
<td>25</td>
</tr>
<tr>
<td>Involved in a fire, flood, other natural disaster</td>
<td>24</td>
</tr>
<tr>
<td>Other extremely stressful event</td>
<td>21</td>
</tr>
<tr>
<td>Tortured or the victim of terrorists</td>
<td>8</td>
</tr>
<tr>
<td>Direct combat experience in a war</td>
<td>4</td>
</tr>
</tbody>
</table>


High prevalence of PTSD

- Not surprising that **up to two-thirds** of AOD clients have also been found to suffer from post-traumatic stress disorder (PTSD).


## Population prevalence

<table>
<thead>
<tr>
<th></th>
<th>Weighted Mean (SE)</th>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
<td>Total</td>
<td>OR (95%CI)</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime PTSD</td>
<td>4.7 (0.5)</td>
<td>9.7 (0.6)</td>
<td>7.2 (0.3)</td>
<td>2.20 (1.68 – 2.89)</td>
</tr>
<tr>
<td>12 month symptoms</td>
<td>2.8 (0.3)</td>
<td>6.0 (0.5)</td>
<td><strong>4.4 (0.3)</strong></td>
<td>2.20 (1.56 – 3.09)</td>
</tr>
<tr>
<td>30 day symptoms</td>
<td>1.6 (0.3)</td>
<td>3.3 (0.4)</td>
<td>2.5 (0.2)</td>
<td>2.13 (1.28 – 3.55)</td>
</tr>
<tr>
<td><strong>Of those who had experienced trauma</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lifetime PTSD</td>
<td>6.2 (0.6)</td>
<td>13.2 (0.8)</td>
<td>9.6 (0.5)</td>
<td>2.32 (1.77 – 3.04)</td>
</tr>
<tr>
<td>12 month symptoms</td>
<td>3.7 (0.5)</td>
<td>8.5 (0.7)</td>
<td>5.8 (0.4)</td>
<td>2.29 (1.62 – 3.23)</td>
</tr>
<tr>
<td>30 day symptoms</td>
<td>2.1 (0.4)</td>
<td>4.5 (0.5)</td>
<td>3.3 (0.3)</td>
<td>2.21 (1.33 – 3.68)</td>
</tr>
</tbody>
</table>

2007 Australian National Survey of Mental Health and Wellbeing
Harms associated with trauma

- High rates of other comorbidities, complex PTSD
- Traumatic events are often defining, life-changing moments, regardless of whether a person goes on to develop PTSD or any other trauma-related disorder.
- Whether it be a one-off event or more prolonged, trauma can shape or redefine a person’s views about:
  - themselves (e.g. I am weak, bad, worthless)
  - the world around them (e.g. the world is not safe)
  - how they relate to it (e.g. people cannot be trusted)


The need for trauma-informed care

Knowledge and awareness of a client’s trauma history is a crucial piece of the puzzle needed to understand the cause and nature of clients’ presenting problems and inform the development of the most suitable treatment approach.

PTSD among people with SUD

- Severe
- Few access treatment
- Typically has an early age of onset

PTSD and SUD among adolescents

• PTSD and SUD often co-occur among adolescents:
  – 70% of adolescents with SUD have experienced a trauma and up to 35% suffer from concurrent PTSD
  – ~ 50% of adolescents with PTSD also suffer from a co-occurring SUD

(Giaconia et al., 2000; Deykin et al., 1997; Kilpatrick et al., 2003; Lubman et al., 2007; Nooner et al., 2012)
Why do PTSD and SUD develop after early trauma?

• Factors that predispose children/adolescents to developing PTSD and SUD after trauma (e.g. insecure attachment style, internal attributions of blame, avoidant coping strategies) (Barker-Collo & Read, 2003)

• Ability to cope with a trauma is tenuous during childhood/adolescence due to immature nature of cognitive, social, and emotional capacities and less stable social network (APA, Developing Adolescents, 2002)
Adolescence is a vulnerable period

- A developmental period particularly vulnerable to the impact of trauma
- Substantial biological, social, neurological and psychological changes
- Developing a foundation for:
  - Interpersonal relationships and communication
  - Self-awareness and establishing identity
  - Sense of initiative, independence and self-efficacy
  - Self-regulation
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)

Low educational attainment and unemployment

High risk behaviours, aggression, imprisonment, homelessness

Chronic physical health conditions (e.g. cardiovascular disease, diabetes, liver disease)

Mental health disorders, substance use and suicide

High levels of service utilisation across multiple systems (e.g. health services, mental health and substance use services, child welfare, juvenile justice)
Harms associated with PTSD+SUD

Poorer physical health

Poorer psychological health

Poorer psychosocial functioning

More severe clinical profile

More severe clinical profile

Poorer treatment outcomes


Why do SUD+PTSD co-occur?

- **Self-medication hypothesis**
  - Self-medication of PTSD symptoms plays a significant role in the development and maintenance of AOD use disorders.
  - The onset of trauma exposure and the development of PTSD symptoms predates the onset of an AOD use disorders in at least half of cases.

*Chapman et al. (2012). Remission from post-traumatic stress disorder in the general population. Psychological Medicine, 42, 1695-1703.*
Why do SUD + PTSD co-occur?

- Theories to explain the relationship:
  - Self-medication hypothesis
  - High-risk hypothesis
  - Susceptibility hypothesis
  - Common factors hypothesis

Regardless, once have both disorders each serves to maintain/exacerbate the other
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.


*Read et al. Substance use and PTSD: symptom interplay and effects on outcome. Addict Behav 2004;29:1665–72.*


Treatment Challenges Associated with Comorbid Substance Use and Posttraumatic Stress Disorder: Clinicians’ Perspectives

Sudie E. Back, PhD, Angela E. Waldrop, PhD, Kathleen T. Brady, MD, PhD
Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina, Charleston, South Carolina

A significant proportion of individuals with substance use disorders (SUDs) meet criteria for comorbid posttraumatic stress disorder (PTSD). This comorbidity confers a more complicated clinical presentation that carries with it formidable treatment challenges for practitioners. The current study examined sources of difficulty and gratification among clinicians (N = 423) from four national organizations who completed an anonymous questionnaire. As expected, the findings revealed that comorbid SUD/PTSD was rated as significantly more difficult to treat than either disorder alone. The most common challenges associated with treating SUD/PTSD patients included knowing how to best prioritize and integrate treatment components, patient self-destructiveness and severe symptomatology, and helping patients abstain from substance use. The findings increase understanding of SUD/PTSD treatment challenges, and may be useful for enhancing therapist training programs, supervision effectiveness, and designing optimal SUD/PTSD interventions. (Am J Addict 2009;18:15–20)
How do we best treat co-occurring PTSD and SUD?
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

- **Sequential Model**
  - SUD treated first
  - PTSD treated later
  - Clients prefer this
  - More efficient

- **Parallel Model**
  - SUD treated by Clinician 1
  - PTSD treated by Clinician 2

- **Integrated Model**
  - SUD and PTSD treated at *same time* by *same clinician*
  - More efficient

*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.*
Evidence-based integrated psychotherapies

• A number of integrated psychological therapies have been developed for the treatment of comorbid SUD+PTSD over the two decades

• Existing approaches may be divided into two types:
  - **non trauma-focused therapies** (present-focused)
  - **trauma-focused therapies** (past-focused)


*NDARC* National Drug & Alcohol Research Centre
*NHMRC CENTRE OF RESEARCH EXCELLENCE in MENTAL HEALTH and SUBSTANCE USE*
Evidence-based integrated psychotherapies

• Cochrane review concluded that:

- there is little evidence to support non-trauma/present-focused individual or group-based therapies

- individual trauma-focused therapies delivered alongside AOD treatment can reduce PTSD severity and AOD use

Exposure-based integrated psychotherapies

- Exposure-based therapies = gold standard for PTSD

- Traditionally, considered inappropriate for people with SUD:
  - distressing emotions experienced may be overwhelming (lead to more substance use; put at-risk of self-harm/suicide)
  - cognitive impairment

- Researchers have begun investigating the efficacy of integrated exposure-based programs that address PTSD and AOD use simultaneously.


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.


Exposure-based integrated psychotherapies

- Sannibale et al (2013) compared the efficacy of integrated CBT for PTSD and alcohol use with CBT for alcohol use plus supportive counselling (12 session; n=62). Participants who had received one or more sessions of exposure therapy exhibited a twofold greater rate of clinically significant change in PTSD severity compared to those who received CBT for alcohol use plus supportive counselling.

- 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) among individuals with a range of SUDs (combines CBT for SUD and PTSD, including prolonged exposure), relative to TAU for SUD (n=103).

Participants

N = 103

55 Treatment (53%) (receive COPE)
48 Control (47%) (assessment only)

<table>
<thead>
<tr>
<th>Main drug of concern</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>Heroin</td>
<td>21</td>
</tr>
<tr>
<td>Cannabis</td>
<td>19</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>17</td>
</tr>
<tr>
<td>Benzodiazepines</td>
<td>16</td>
</tr>
<tr>
<td>Alcohol</td>
<td>12</td>
</tr>
<tr>
<td>Cocaine</td>
<td>7</td>
</tr>
<tr>
<td>Opiates</td>
<td>7</td>
</tr>
<tr>
<td>Hallucinogens</td>
<td>1</td>
</tr>
</tbody>
</table>

- 100% substance dependent
- Median number of drug classes used = 4.0
- 80% injecting drug users

<table>
<thead>
<tr>
<th>Total (n=103)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Childhood trauma (pre 16 years)</td>
</tr>
<tr>
<td>Median age of first trauma (IQR)</td>
</tr>
<tr>
<td>% CSA</td>
</tr>
<tr>
<td>% Current PTSD</td>
</tr>
<tr>
<td>Median duration (range)</td>
</tr>
<tr>
<td>% Severe depression</td>
</tr>
<tr>
<td>% Screen +ve for BPD</td>
</tr>
<tr>
<td>% Attempted suicide - Lifetime</td>
</tr>
<tr>
<td>- 12 month</td>
</tr>
</tbody>
</table>
What we found

• Across the 9 mth follow-up period both groups evidenced improvements in their:
  - Substance use
  - Severity of dependence
  - PTSD symptoms
  - Depression
  - Anxiety

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

Primary outcomes

**PTSD symptom severity**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 weeks</th>
<th>3 months</th>
<th>9 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPE</td>
<td>91.1</td>
<td>75.9</td>
<td>67.9</td>
<td>67.2</td>
</tr>
<tr>
<td>TAU</td>
<td>89.4</td>
<td>68.9</td>
<td>67.9</td>
<td>52.9</td>
</tr>
</tbody>
</table>

**Severity of SUD**

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>6 weeks</th>
<th>3 months</th>
<th>9 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPE</td>
<td>5.6</td>
<td>3.0</td>
<td>3.4</td>
<td>3.0</td>
</tr>
<tr>
<td>TAU</td>
<td>5.3</td>
<td>2.6</td>
<td>2.5</td>
<td>2.3</td>
</tr>
</tbody>
</table>

PTSD diagnosis

* Controlling for baseline severity of PTSD symptoms
Primary outcomes

Ongoing AOD use may impede therapy, but it is not necessary to achieve abstinence before the commencement of PTSD treatment – improvements can be obtained even with continued AOD use.

Changes in PTSD severity were NOT influenced by presence of other comorbidities (depression, anxiety, BPD), types of traumas experienced, types/number of substances used.


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.”
Factors associated with improvements in PTSD

- Among a range of client characteristics and treatment characteristics, three factors were independently associated with change in PTSD severity:
  - Higher PTSD severity at baseline = more improvement
  - More sessions attended = more improvement
  - More traumas experienced prior to baseline = less improvement (Lengthier treatment?)

- Provides further evidence regarding the safety and applicability of COPE to a broad range of clients with PTSD and AOD disorder

The COPE Treatment manual is published in the Oxford University Press 'Treatments that Work' series and available online.

Further research (COPE)


Ruglass et al (2017) compared the efficacy of COPE and Relapse Prevention Therapy (RPT) for substance use relative to an active monitoring control group (n=110). Both groups demonstrated significantly greater reductions in PTSD and SUD compared to active monitoring. Participants with full PTSD (vs subthreshold) demonstrated significantly greater reductions with COPE relative to RPT.

Back et al (in prep) compared the efficacy of COPE to TAU among military veterans (n=54)... outcomes pending.


Other trauma-focused therapies

Coffey et al (2016) compared the efficacy of a modified version of prolonged exposure (mPE), mPE + trauma-focused motivational enhancement session (mPE+MET-PTSD), to a health information-based control condition (HLS) (n=126). All participants received residential substance abuse treatment-as-usual. Both the mPE and mPE+MET-PTSD conditions achieved significantly better PTSD outcome than the control condition. 75.8 % of mPE participants, and 60.0% of the mPE+MET-PTSD participants experienced clinically significant improvement.


Markus et al (2015) comparing EMDR for trauma and SUD + TAU (EMDR+TAU) to TAU for substance use alone (target n=100)... Underway

Tapia et al (2017) conducted a pilot study of schema therapy + EMDR for PTSD and SUD (n=15) found reductions in PTSD symptoms, the number of early maladaptive schemas, addiction severity and depressive symptoms.

Vujanovic et al (2018) conducted a pilot study comparing cognitive processing therapy for trauma + CBT for SUD with CBT for SUD alone... Results pending.


## Therapies for adolescent PTSD+SUD

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Approach</th>
<th>Evidence?</th>
<th>Exposure?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bounce Back Now</td>
<td>Disaster focused, population level, web-based</td>
<td>Protocol paper (Ruggiero et al., 2015)</td>
<td>No</td>
</tr>
<tr>
<td>Seeking Safety</td>
<td>CBT-based coping skills therapy</td>
<td>One pilot study (N=33) (Najavits et al., 2006)</td>
<td>No</td>
</tr>
<tr>
<td>MBCT-Dual</td>
<td>Mindfulness-based cognitive therapy</td>
<td>One pilot study (N=37) (Fortuna et al., 2017)</td>
<td>No</td>
</tr>
<tr>
<td>Risk Reduction through Family Therapy (RRFT)</td>
<td>Family-based (MST) and gradual exposure (TF-CBT)</td>
<td>Two pilot studies (N=10; N=30) (Danielson et al., 2010; 2012)</td>
<td>Gradual exposure</td>
</tr>
</tbody>
</table>

- Four integrated treatments developed, show some promise
- Only pilot studies to date
- One incorporates exposure therapy
- We still don’t know what works!
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 to examine the efficacy of the COPE-Adolescent treatment in Australian adolescents with co-occurring PTSD + AOD use, relative to a supportive counselling control
- Further information: http://www.copea.org.au/
- Contact: n.peach@unsw.edu.au or k.mills@unsw.edu.au
Currently recruiting from greater Sydney region

Inclusion criteria:
- Age 12-18 years
- Lifetime exposure to at least one traumatic event
- Full or subthreshold PTSD diagnosis (DSM-5)
- Used alcohol or other drugs in past month and have history of problematic use
- Fluent in English

Both treatments: 16 sessions with psychologist
Four optional caregiver sessions
Free of charge
Can continue seeing current clinician
Contact: n.peach@unsw.edu.au or k.mills@unsw.edu.au
Summary

• Trauma exposure and PTSD + AOD commonly co-occur associated with significant harm and poorer treatment outcomes

• BUT.. there is hope

• Growing evidence demonstrating the safety and efficacy of trauma-focused treatments

• Participants in these studies did not demonstrate a worsening of symptoms or high rates of relapse; on the contrary, they demonstrated improvements in relation to both AOD use and PTSD outcomes.

• Challenge: How do we incorporate evidence based treatments into practice? Trauma informed → trauma focused
Where to next: COPE-A

- Currently recruiting from the greater Sydney region
- We are looking for 12-18 year olds who-
  - Exposure to at least one traumatic event
  - DSM-5 full or subthreshold PTSD diagnosis
  - Have used alcohol or other drugs in past month and have history of problematic use
  - Fluent in English
- Both treatments: 16 sessions with psychologist
- Four optional caregiver sessions
- Free of charge
- Contact: n.peach@unsw.edu.au or k.mills@unsw.edu.au
Thanks for being part of the CREMS Webinar Series!

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We’d love to hear you feedback! Please complete our survey at the end of the session

Join us again: Psychosis and other mental health effects of ice
Monday 9th July, 12pm AET
Presented by Dr Rebecca McKetin

Example past webinars:

Effects of ice on the brain and body, and implications for responding
A/Prof Nicole Lee
Thursday 16th November, 2017:

Managing and treating co-occurring mental and substance use disorders
Dr Christina Marel & A/Prof Katherine Mills
Tuesday 21st November, 2017: