The Intersection of Post-Traumatic Stress and Substance Use Disorders

Implications for an emerging integrated treatment approach

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Overview

• PTSD and Substance Use Disorders
• Current Standards of Care
• Integrated Treatment Model
• COPE
  – Existing research
  – RCT in military veterans
  – Additional considerations
  – Future directions
Posttraumatic Stress Disorder (PTSD)

- 55-90% of Americans will be exposed to at least 1 traumatic event in their lifetime (Kilpatrick et al., in press)

- Only 7-9% will develop posttraumatic stress disorder (PTSD) (APA, 2000)

- Women are twice as likely to develop PTSD
  - Less likely to experience trauma overall than men
  - More likely to experience sexual victimization
Posttraumatic Stress Disorder (PTSD)

Re-experiencing

- Unwanted and intrusive memories, nightmares, flashbacks

Avoidance

- Thoughts, feelings, people, places, things

Negative Alterations in Cognition & Mood

- Traumatic amnesia, emotional numbing, persistent negative mood, maladaptive cognitions, self- or other-blame, social isolation

Alterations in Arousal and Reactivity

- Hypervigilance, exaggerated startle, angry outbursts, reckless or self-destructive behavior, sleep problems, concentration difficulties
Psychotherapy for PTSD

Prolonged Exposure (PE)
Cognitive Processing Therapy (CPT)

- Large effect sizes in efficacy trials (Cusack et al., 2016)
- Dropout is high (36%; Imel et al., 2013)
- Barriers to receiving treatment are significant
  - Only 41-52% of returning soldiers with PTSD receive “minimally adequate care” (Hoge et al., 2014)
  - LA County outpatient psychiatry clinic (n=582): Of those with PTSD, 15.8% offered CBT, 1.7% offered exposure therapy
Comorbidity is the rule, not the exception

- Substance use disorders, depression, panic, other anxiety disorders, chronic pain, insomnia, sexual dysfunction...

Among those with PTSD

- Alcohol use disorder (AUD): 36-52%
- Other substance use disorder (SUD): 19-35%

PTSD/SUD vs. SUD patients:

- Incur $6000 per year more in addiction-related treatment costs
- More severe symptoms
- Increased social and occupational impairment
- Poorer treatment outcomes – higher dropout and faster time to relapse

74% of all PTSD RCTs include substance-related exclusion criteria

Brady, 2001; Brown et al., 1996, 1999; Ford et al., 2007; Hien et al., 2000; Leeman et al., 2017; Najavits et al., 2007; Read et al., 2004; Roberts et al., 2015
Why don’t we treat PTSD in substance using populations?

Long-held clinical lore

• These patients are too unstable
• Trauma-focused therapy will lead to worsening of substance use or relapse

Current standard of care

• Substance use treatment first
• PTSD treatment second
• Over 70% of patients prefer simultaneous treatment (Back et al., 2006)
Integrated Models of Treatment

Non Trauma-Focused Therapies
- Coping skills for managing PTSD and SUD Symptoms
- Present-focused
- Does not involve revisiting the trauma memory
- Examples:
  - Seeking Safety

Trauma-Focused Therapies
- Involve recall of traumatic memories
- Processing of trauma-related cognitions
- Exposure to avoided situations
- Examples:
  - Prolonged Exposure
  - Cognitive Processing Therapy
  - COPE
COPE for PTSD and Substance Use Disorders

- **COPE** – Concurrent treatment Of PTSD and Substance Use Disorders Using Prolonged Exposure

- 12-session Integrated treatment for PTSD/SUD comorbidity
  - Combines prolonged exposure therapy for PTSD with CBT for substance abuse
  - Harm reduction vs. abstinence-based
  - 90-minute individual sessions
  - Weekly out of session practice
COPE for PTSD and Substance Use Disorders

• **Session 1** – Overview of treatment
• **Session 2** – Common reactions to trauma and awareness of cravings
• **Session 3** – Developing an in vivo hierarchy and managing cravings
• **Session 4** – Imaginal exposure
• **Session 5** – Imaginal exposure and planning for emergencies
• **Session 6** – Imaginal exposure and awareness of high risk thoughts
COPE for PTSD and Substance Use Disorders

- **Session 7** – Imaginal exposure and managing high risk thoughts
- **Session 8** – Imaginal exposure and refusal skills
- **Session 9** – Imaginal exposure and seemingly irrelevant decisions
- **Session 10** – Imaginal exposure and anger awareness
- **Session 11** – Final imaginal exposure and anger management
- **Session 12** – Review and termination
COPE for PTSD and Substance Use Disorders

• Persson et al., 2017
  – 22 Swedish women with PTSD and AUD (open trial)
    • 68.2% completed 12 sessions
    • Participants attended 9.9 sessions on average (SD = 3.4)
    • No adverse events
    • No reported relapse to baseline alcohol levels
    • Large effect for PTSD symptoms \( (d = 1.16 – 1.19) \), 66.7% diagnostic remission among completers
    • Depression also reduced \( (d = 0.96) \)
    • Alcohol consumption, impairment craving, and heavy drinking days all improved \( (d = 0.66 – 0.79) \)
COPE for PTSD and Substance Use Disorders

- Mills et al., 2012
  - 103 Australian adults with PTSD and Substance Dependence enrolled in COPE + usual treatment or usual treatment only
- From baseline to 9-month follow-up
  - PTSD and SUD symptoms improved in both conditions
  - Greater PTSD symptom improvement in COPE
COPE for PTSD and Substance Use Disorders

• Ruglass et al., 2017
  – 119 adults with PTSD (or subclinical PTSD) and SUD completed COPE, Relapse Prevention (RP), or symptom monitoring (SM)

  • PTSD symptoms
    – COPE and RP were superior to SM
    – COPE was superior to RP for participants with clinical PTSD

  • Substance use
    – COPE and RP resulted in similar improvement compared to SM
COPE for PTSD and Substance Use Disorders

• **Summary of key findings**
  – Trauma-focused exposure can be safely conducted among individuals with COPE
    • Does not result in worsening of SUD symptoms
  – COPE appears to be similarly efficacious to SUD treatment alone in reducing substance use
  – COPE appears to yield better outcomes in terms of PTSD
Evaluating COPE in Military Veterans with PTSD and SUD
COPE RCT in Veterans

• Rates of PTSD and SUD are 2-4 times higher among U.S. military personnel and veterans compared to the general population

• Military veterans tend to have poorer treatment outcomes for PTSD than civilian populations

• Unique barriers to mental health care among veterans

Creamer & Forbes, 2004; Reisman, 2016; Stein et al., 2017;
COPE RCT in Veterans

- 81 US military veterans (COPE = 54, RP = 27)
  - 90.1% male
  - 60.5% Caucasian, 37.0% African American, 3.7% Hispanic, 2.5% Other
  - 64.7% served in OEF/OIF ($M_{age} = 40.4$ years, $SD = 10.7$)
  - Substance use
    - AUD only – 63.0%
    - AUD and other SUD – 27.2%
    - Only SUD – 9.9%

- Participants attended an average of 8.4 sessions ($SD = 4.5$)
- 63% attended at least 8 sessions (minimal dose)
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COPE RCT in Veterans

- **Substance use:**
  - Harm reduction vs. abstinence-based model
    - 83% of participants reported a reduction in frequency of use at the end of treatment
    - More than 1/3 were abstinent at the end of treatment (53.3% in COPE, 35.7% in RP)
  - No difference in substance use outcomes
    - ***trauma-focused treatment did not lead to increased substance use***
COPE RCT in Veterans

PTSD Symptoms:

• PTSD diagnostic remission:
  • 83.3% of COPE vs. 35.7% of RP completers
Additional Clinical Implications/Considerations
• Can COPE be safely implemented via telehealth?
  – Home-based tele-mental health
  – Logistical challenges
  – Safety precautions
• How does mild TBI impact COPE treatment outcome?
  – 30 mild TBI vs 21 control participants
    • PTSD, depression, and alcohol use frequency improved across both groups
    • PTSD and depression symptoms improved more in control participants
• Could briefer imaginal exposures be effective?
  – 45 minutes of 90 minute PE session devoted to imaginal exposure
  – Length of imaginal exposure in COPE ranged from 17.8 – 41.84 minutes
    • Length was unrelated to treatment outcome
  – Briefer in-session exposure might make treatment easier to implement
• Are subjective distress and substance craving important indices of improvement during treatment?
  – SUDs and Craving craving ratings were assessed during each imaginal exposure
    • Reduction in SUDS within a session was unrelated to treatment outcome
    • Reduction in Peak SUDS and post-imaginal exposure craving across sessions was associated with greater PTSD symptom improvement
Future Directions

UK Igniting Research Collaborations Pilot Grant

– Improving the effectiveness of COPE
  • Pilot variable-length treatment trial
  • Number of sessions ranging from 6 – 20 based on treatment response
  • Daily tracking of symptoms and treatment compliance