New Developments in the Treatment of Trauma and PTSD in People with Serious Mental Illness

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“TRAUMATIC” EVENT: DSM-V DEFINITION

An event involving some direct threat of death, severe bodily harm, or psychological injury to the self or another person.
COMMON TRAUMATIC EVENTS

• Rape/ sexual abuse
• Combat
• Accidents
• Crime/assault
• Natural disasters (e.g., earthquake)
• Sudden, unexpected death of a loved one
EPIDEMIOLOGY OF TRAUMA IN GENERAL POPULATION

• 36-81% report experiencing a traumatic event in their lifetime

• National Comorbidity Survey of 6000 between 15-54:
  – 60% men exposed to traumatic event
  – 51% women exposed to traumatic event
  – 17% men & 13% women exposed to 3+ events

• Even higher rates found in special subpopulations (e.g., homeless, serious mental illness, substance use disorders)
IMPORTANCE OF TRAUMA IN SEVERE MENTAL ILLNESS

• Trauma & other adverse events in childhood increase risk of developing SMI
• Multiple traumatization is common
• History of trauma associated with more severe symptoms & distress
• Service users report traumatic experiences are important but neglected in treatment
• Numerous studies show high rates of trauma in SMI, both before & after onset of illness (51-97%)
TRAUMA IN SMI (N=275)

Source: Mueser et al. (1998)
PTSD: WHY FOCUS ON IT?

- Most established psychiatric consequence of trauma exposure
- High prevalence in general population, even higher in vulnerable populations, but often not detected
- Associated with increased distress and acute care service utilization
- Assessment straightforward
- Psychological treatments shown to be effective
- Pharmacological treatments also beneficial
SYMPTOMS OF PTSD

- Exposure to traumatic event

Symptom criteria:

- Intrusion symptoms (e.g., intrusive memories, flashbacks)
- Avoidance of trauma-related stimuli (e.g., avoiding memories, situations related to trauma)
- Over-arousal (e.g., hypervigilance, difficulty sleeping, anger outbursts, exaggerated startle)
- Negative alterations in cognition or mood (e.g., inability to remember parts of event, persistent negative feelings, detachment from others)
OTHER COMMON SYMPTOMS RELATED TO PTSD

- Depression
- Guilt
- Suicidality, self-injurious behavior
- Substance abuse
- Hallucinations
- Mild delusions (e.g., paranoia)
Rates of PTSD in Clients with SMI

Percent with PTSD

Graine 1988 (N=105)
Cascardi 1996 (N=89)
Mueser 1999 (N=275)
Swizer 1999 (N=181)
McFarlane 2001 (N=141)
Mueser 2001 (N=50)
Neria 2002 (N=426)
Resnick 2003 (N=47)
Mueser 2004 (N=782)
Howgego 2005 (N=29)
Strauss 2006 (N=165)
NH-MD PTSD STUDY: PTSD AND DIAGNOSIS (N=275)

Source: Mueser et al. (1998)
TREATMENT OF PTSD IN GENERAL POPULATION

• CBT is most widely studied & replicated intervention, with primary support for:
  – **Exposure therapy (ET):** Prolonged exposure to safe but anxiety-provoking, trauma-related stimuli (imaginal & in vivo) leads to emotional processing of event & habituation of fear
  – **Cognitive restructuring (CR):** Identifying, challenging, & changing upsetting, inaccurate trauma-related thoughts & beliefs underlying PTSD facilitates incorporation of trauma experiences into self
• ET & CR equally effective, as is combination of ET + CR
• Eye Movement Desensitization and Reprocessing (EMDR) also effective; combines exposure and CR components
• Most studies employ exclusion criteria that rule most or all people with SMI & PTSD: psychosis, suicidal ideation, cognitive impairment, recent medication changes, & severe medical problems
PROBLEM OF EXCLUSION CRITERIA IN TREATMENT RESEARCH ON PTSD

• Consensus statement by leaders in trauma research:
  – Simple or “pure” PTSD is unrepresentative of the typical presentation of treatment seeking individuals with trauma histories

• Spinazzola et al. (2005): “True advancement of the field will require a deliberate process of evaluation and adaptation of efficacious treatments with less restricted, more clinically representative PTSD samples.” (p. 427)

• Need for treatment programs for PTSD tailored to accommodate common problems in people with SMI & other vulnerable populations
RATIONALE FOR NON-EXPOSURE BASED TREATMENT OF PTSD

• Some clients refuse exposure therapy: avoidance of trauma-related stimuli is a defining criterion of PTSD
• Exposure therapy less effective when anxiety is not dominant emotion (e.g., guilt/shame, anger, depression)
• Trauma-related schemas predictive of PTSD often don’t revolve around anxiety, but rather other emotions (e.g., shame, mental defeat)
• Concern over “retraumatizing” vulnerable clients through exposure, leading to a worse symptoms and associated problems (e.g., psychosis, suicidality, substance abuse, self-injurious behavior)
• Good experience using cognitive restructuring in wide range of vulnerable populations
FEASIBILITY AND PROMISE OF EXPOSURE THERAPY

- Work by Frueh et al. suggested exposure therapy was feasible when combined with skills training approach for schizophrenia and PTSD
- Further work by van den Berg, van der Gaag and colleagues has recently shown both prolonged exposure therapy and EMDR can be implemented safely and effectively in people with psychotic symptoms
- No prior stabilization period used in RCT by van den Berg (2015)
- Suggests exposure therapy may be viable alternative and supplementary treatment
- Need for replication of effects reported by van den Berg
- Challenges presumed toxicity of exposure therapy with SMI population
GOALS OF COGNITIVE RESTRUCTURING PROGRAM

• Instill hope that symptoms can be improved through treatment
• Teach a practice skill for managing anxiety immediately in person’s day-to-day life
• Educate about trauma and PTSD to normalize reactions, reduce feelings of being alone, and increase motivation for treatment
• Teach cognitive restructuring as skill to cope with and reduce negative feelings
• Help client use cognitive restructuring to challenge and change trauma-related thoughts and beliefs responsible for PTSD symptoms
LOGISTICS

• 12-16 week manualized CBT treatment (depending on population)

• Individual weekly sessions

• Treatment provided at local community mental health centers, addiction settings, schools, or other community locations

• 8 therapy modules for basic program
THERAPY MODULES

1. Overview
2. Distress response plan Breathing retraining
3. Psychoeducation I
4. Psychoeducation II
5. Cognitive restructuring I
6. Cognitive restructuring II
7. Generalization Training & Termination
MODULE 6: COGNITIVE RESTRUCTURING I

- Cognition-emotion model
- Common styles of thinking
  - All or nothing thinking
  - Overgeneralization
  - “Must,” “should,” or “never” statements
  - Catastrophizing
  - Emotional reasoning
• 5 steps of cognitive restructuring:
  – Describe situation
  – Identify strongest emotion
  – Identify strongest thought or belief ("Guide to Thoughts and Feelings")
  – Evaluate the thought
  – Take action: Either change the thought, develop an action plan to deal with the situation, or both
RESEARCH ON CBT FOR PTSD IN SMI MODEL

- 2 open pilot feasibility studies, 1 in NH, 1 in NJ
- RCT comparing CBT for PTSD with treatment as usual (TAU) in rural NH/VT
- RCT comparing CBT for PTSD with Brief program in urban NJ
- Open pilot of Brief program as stand-alone program
- Closed enrollment group format version of program implemented in community mental health center
- Pilot of stepped care program, including Brief program, followed by open-enrollment group format (for clients with persistent PTSD)
RCT OF CBT FOR PTSD IN NH
(Mueser et al., 2008)

- RCT of CBT vs. TAU (N = 108)
- Exposure to CBT: 81%
- Conducted at 4 local CMHCs in NH & VT
- CBT provided by 6 Ph.D. & 1 M.A. clinician
- Assessments conducted at baseline, post-treatment, 3-months, 6-months
- Primary focus on PTSD knowledge, trauma-related beliefs, PTSD, other symptoms
Mean capss_m scores for both cbt and tau groups

capss_m

80
70
60
50
0
1
2
3
time

group
CBT
TAU
HOMEWORK ANALYSES

• Homework completion rate (%) as rated by therapists included in analyses for treatment exposed group

• Significant effects for CAPS-tot (d = .93), CAPS diagnosis (.47), BDI (.97), BAI (.65), SF-12 Mental Component (.68), & PTCI (.44), but not BPRS, SF-12 Physical, Knowledge, WAI
# MEDIATION ANALYSIS

Baseline, post-treatment, 3-, and 6-month follow-ups*

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* Treatment effect is measured by group-time interaction or difference in change between 2 groups over time
LIMITATIONS OF NH/VT RCT

- Lack of ethnic/racial heterogeneity
- Rural setting
- Most clinicians academically trained
- Lack of data on impact of program on functional outcomes & service utilization
- Limited diagnostic heterogeneity, especially for schizophrenia-spectrum disorders
- CBT compared to TAU, not active control
NJ CBT FOR PTSD RCT

- Collaboration with UNDMJ/UBHC in New Jersey
- Conducted at 5 sites in urban settings, more minority clients
- Evaluation of CBT for PTSD when delivered by frontline clinicians
- Comparison of CBT to Brief Treatment
- Assessment of longer-term functional outcomes, services, & costs
- Larger sample: N = 201
- Funded by NIMH
- Pilot study conducted in NJ to establish feasibility of implementing program at study sites (Lu et al., 2011)
RCT STUDY DETAILS

- Adults with SMI & severe PTSD at 5 mental health clinics in NJ
- Randomized to either CBT or Brief intervention, stratified by site, SMI diagnosis, and gender
- Assessed at BL, Post-treatment, 6 month, & 1 year follow-up
- Treatment delivered by trained frontline clinicians
ELIGIBILITY CRITERIA

- SMI according to state of NJ
- Axis I diagnosis of schizophrenia, schizoaffective, bipolar, or major depression (borderline PD accepted)
- Current diagnosis of severe PTSD (CAPS Total 65 or higher)
- No hospitalization or suicide attempt past 3 months
- Not dependent on substances
- Receiving mental health services
- Willing and able provide informed consent
BRIEF TREATMENT INTERVENTION

- 3 weekly individual sessions
- 2 main components:
  1) Breathing retraining skill
  2) Psychoeducation about PTSD
- Use of manual, client worksheets, plus a DVD for psychoeducation piece
TRAINING IN 2007-2009

- 25 frontline clinicians at UMDNJ-UBHC were trained. 2 clinicians dropped out (leaving agency or excessive work)
- Primary clinicians referred PTSD cases as practice cases
- CBT for PTSD program fully integrated
TRAINING MODEL

• Initial 2-day training with the frontline clinicians (didactic presentations, directed reading, watching videotapes of treatment cases, and role-playing)
• Then, each clinician engaged and treated at least 1 practice client
• Sessions audio-taped digitally and reviewed by clinical supervisors for quality and fidelity
• On-site weekly group supervision at each site provided by site clinical supervisors, with Mueser, Gottlieb, or Rosenberg joining by telephone
• Digital tapes and notes collected at weekly supervision
• Clinicians received fidelity ratings (and narrative feedback) on sessions within 2 weeks of each session
TREATMENT FIDELITY SCALE

• 17 items covering core components of program (e.g., breathing retraining, education, cognitive restructuring)
• Each item rated 1-5 Likert scales
• Criterion for certification: Average rating of 3.5 or higher for sessions #4-16
• Clinicians took on second practice case if they did not meet certification criteria on their first
• Clinic administrators ensured that time was reserved in clinicians’ schedules for the CBT sessions, supervision., and attendance at the training
CLIENT OUTCOME (CBT COMPLETERS; N=26)

A decline of 4.05 pts & 5.02 pts (BDI & PCL respectively), per assessment ($p < .0001$)
RESULTS OF TRAINING

- 285 CBT sessions from 25 clinicians were rated for fidelity
- On avg, 11 sessions per clinician were rated
- Among the 23 clinicians who completed the training
  - 21 (91%) met certification criterion with 1st first completed practice case
  - 2 (9%) met certification criterion with 2nd practice case
ENGAGEMENT AND EXPOSURE

• Engagement = 1 or more protocol sessions
• Exposure to CBT = 6 or more protocol sessions
• Exposure to Brief = 2 or 3 protocol sessions
PRIMARY (PTSD) OUTCOMES

• Significant differences favoring CBT over Brief found in:
  – PTSD symptom severity (CAPS Total & subscales)
  – PTSD diagnosis
  – Knowledge of PTSD
  – Social functioning affected by PTSD
SECONDARY OUTCOMES

• Significant differences favoring CBT over Brief for global functioning (GAF)

• Significant group X time interactions for social functioning and BDI
  – More rapid improvement for CBT than Brief

• No group differences in:
  – Depression or other symptoms
  – Post-traumatic cognitions
  – Overall quality of life
COMPARISON OF NH & NJ STUDIES

- Is Brief intervention delivering a treatment benefit?
- Focus on NH sample with severe PTSD (75% of total sample)
- Examination of CAPS Total, PTSD Knowledge, BDI, and PTCI
- CAPS change:
  - CBT in NH = 20 points
  - CBT in NJ = 23 points
  - TAU in NH = 9 points
  - Brief in NJ = 15 points
CONCLUSIONS

• CBT for PTSD program effective in treating PTSD and related outcomes in people with SMI

• NJ study showed:
  – Predominantly minority clients living in poor, urban areas benefit from CBT for PTSD program
  – Frontline clinicians can implement program with good fidelity
  – Effects sustained for 1 year
  – Cognitive restructuring component of CBT program most critical to improving PTSD in SMI
  – Brief program appeared to produce benefit in PTSD and other symptoms

• First and only intervention shown to improve PTSD in SMI in RCTs
CONCLUSIONS

• About 25% of both NH and NJ studies included people with SMI, PTSD, and borderline personality disorder (BPD)
• High rates of trauma and PTSD in BPD
• Clients with BPD and PTSD tend to have more severe PTSD symptoms
• Suicidal ideation common in this population
• In both studies, clients with BPD improved as much as those without BPD
• No untoward effects of treatment of PTSD with cognitive restructuring
• Alternative to presumed need for phased treatment of PTSD in BPD
FUTURE DIRECTIONS

• Group CBT for PTSD in SMI
• 21 week program: Trauma Recovery Group
• 4-8 clients/group, co-facilitated by male & female therapists
• Weekly 1.5 hour sessions
• 7 therapy modules: Orientation, Breathing Retraining, Education, Cognitive Restructuring, Coping Skills for Persistent Symptoms, Making Recovery Plan
• Treatment provided at local community mental health center (MH Center of Greater Manchester)
PILOT STUDY (Mueser et al., 2007)

- Conducted at Mental Health Center of Greater Manchester
- Clients with SMI
- Assessments at pre-tx., post-tx., 3 month follow-up
- 9 cohorts of groups completed
- Retention (attend >10 sessions) good: 65%
- Analyses compared treatment “completers” with “dropouts”
NEW QUESTIONS AND NEXT STEPS

• Apparent effectiveness of Brief program raises question: should treatment of PTSD in SMI be provided in a stepped fashion, with Brief first?
• Can treatment of PTSD in SMI be provided more efficiently in group format?
• Prior pilot research suggests group treatment in closed-format is feasible (21 sessions)
• However, closed-group format has limitations in terms of clients having to wait for new group
• Stepped care approach: combine Brief program with open-enrollment group program for clients with persistent PTSD
• Increased training, dissemination, implementation, and sustainability at community mental health agencies nationwide