Treating Anger and Aggression in Populations with PTSD

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Funding Information

- Men’s Cognitive Processing Therapy (CPT) and Women’s CPT RCTs
  - HSR&D DHI 07-259 and DoD CDMRP PT074516
  - DoD CDMRP Grant PT090552 and W81XW4-10-1-1037

- Anger Management Treatment (AMT) Trial
  - VA HSR&D TEL 03-080-3

- RELAX: Mobile App-Enhanced Anger Management Trial
  - DoD DHP SBIR: W81XWH-12-C-0067

- OMHS: Anger and Irritability Management System (AIMS)

- Additional support: National Center for PTSD
Background
Anger and PTSD

- Anger, aggressive behaviors and violence are prominent issues among Veterans with PTSD.

(Chemtob et al., 1994; Morland et al., 2012; Morland et al., 2016).
Anger and PTSD

- Given that 10%-20% of Veterans of previous and current war eras meet criteria for PTSD, understanding the relationship between anger and PTSD is critical to the assessment & treatment of Veterans.

- In PTSD treatment seeking veteran samples about 75% of males and 45% of females reported clinically significant anger symptoms.

(Dohrenwend et al., 2006; Hoge, Auchterlonie, & Milliken, 2006; Thomas et al., 2010; Wilk et al., 2015; Mackintosh, 2015).
Anger and PTSD

- Two decades of research on Veterans have found a robust relationship between PTSD and anger, aggression, and violence with higher incidence rates of aggressive behaviors than comparison groups of non-PTSD Veterans and traumatized civilians.

- Although dysregulated anger and PTSD have been observed across a wide range of trauma types, occupations, and cultures the strongest associations are found within military Veterans.

(Chemtob, Hamada, Roitblat, & Muraoka, 1994; Jakupcak et al., 2007; Orth & Wieland, 2006; Kulka et al., 1990; Taft, Monson, Hebenstreit, King, & King, 2009; MacManus et al., 2013).
Important to Note: The Role of Anger

- Anger in the combat zone is **adaptive and promotes survival**

- Anger is a “**healthy**” emotion that cues us to possible threat

- However, excessive anger - too intense, too frequent, results in aggression - is considered problematic or dysregulated anger

(McHugh et al., 2012)
Anger and PTSD: Mechanisms

- The hyperarousal symptom cluster of PTSD (which includes anger) has been found to be a significant predictor of PTSD severity as well as of aggressive behavior.

- PTSD symptom clusters of numbing and arousal, associated with the symptom of anger, have been found to be predictive of family impairment for combat Veterans.

(Galovski & Lyons, 2004; Kulkarni, Porter, & Rauch, 2012; MacManus et al., 2013; Savarese, Suvak, King, & King, 2001; Taft, Kaloupek, et al. 2007).
Theory
Anger and PTSD: Theory

- Understanding Unique Aspects of Anger in PTSD theory

  - **Survival Mode/Anger Regulation Deficits** (Chemtob et al., 1997; Novaco & Chemtob, 2002)
  - **Traumatic Memory/Fear-Avoidance** (Foa et al., 1996)
  - **Visual Imagery** (McHugh et al., 2014)
Theory: Survival Mode Model

- According to this theory, following life-threatening combat, a person shifts into an adaptive state of functioning in which they become highly sensitive and attuned to the environment and threat schemas are easily triggered.

- The *survival mode* model posits that Veterans with PTSD fail to shift out of survival mode functioning after they are no longer at imminent risk of harm.

(Chen et al., 1997).
Theory: Model of Traumatic Memory

- Foa et al. (1989) conceptualized traumatic memories as a fear structure that includes representations of trauma related stimuli, responses to these stimuli, and the perceived meaning of these stimuli.

- In a pathological trauma structure, there are a large number of trauma-related stimuli that become associated with danger, and the subsequent responses to these stimuli are particularly strong and can be anger or fear based responses.
Theory: Visual Imagery

- More recently, McHugh et al. (2012) have proposed that anger-inducing visual imagery may be an important factor in the maintenance of anger in PTSD, which may not be adequately considered in current models of treatment.
Why Does It Matter?
Impact: Impairment

- Excessive anger can persist and cause problems:
  - OEF/OIF Veterans seeking VA care were surveyed about community reintegration problems (Sayer et al., 2010)
    - 57% reported problems controlling anger
  - Male Veterans entering PTSD treatment asked to identify top three treatment priorities (Rosen et al., 2013)
    - 33.7% of outpatients listed anger as primary area of clinical concern
    - 39.6% of residential patients listed anger as concern
  - For outpatients and residential patients, anger was the 2nd most frequently reported concern after PTSD, and was listed ahead of anxiety, depression and sleep problems
Impact: Anger and PTSD

- Co-Occurring Anger & PTSD associated with:
  - More chronic and severe PTSD
  - Risk factor for aggression
  - Interference with interpersonal relationships
  - Increased incidence of intimate partner violence (IPV)
  - Increased legal problems
  - Interference with PTSD treatment process and outcome

(Andrews, 2000; Frueh, 1997; Forbes et al., 2003; Novaco et al., 2012; Novaco & Chemtob, 2015; Orth & Maercher, 2009; Orth & Weiland, 2006; Wilk et al., 2015)
Impact: Interpersonal

- Dysregulated anger has a significant negative impact on relationship functioning, including increased rates of *partner-directed verbal, physical and sexual* violence.

- A meta-analysis of 31 studies examining the relationship between PTSD and IPV *found medium-size associations between PTSD and perpetration of interpersonal aggression* (i.e., psychological and physical) that *were mediated by trait anger and stronger in military samples*.

- In particular, the *PTSD symptom clusters of numbing and arousal*, associated with the symptom of anger, have been found to be predictive of family impairment for combat Veterans.

- Reduces social support for Veteran

(Evans, McHugh, Hopwood, & Watt, 2003; Galovski & Lyons, 2004; Marshall, Panuzio, & Taft, 2005; O'Donnell, Cook, Thompson, Riley, & Neria, 2006; O'Donnell et al., 2006; Savarese, Suvak, King, & King, 2001; Taft, Kaloupek, et al. 2007; Taft, Street, Marshall, Dowdall, & Riggs, 2007; Taft, Watkins, Stafford, Street, & Monson, 2011; Teten et al., 2010; Teten, Schumacher, Bailey, & Kent, 2009).
Impact: Society

- Large national examinations of criminal justice data have found that Iraq and Afghanistan Veterans have notable rates of arrest, particularly for violent behaviors such as **property destruction and threats of violence**.

- Anger and impatience while driving are commonly reported among returning Veterans with PTSD, and **specific concerns related to driving and “road rage”** have been raised, especially for returning Iraq and Afghanistan Veterans who may have encountered roadside improvised explosive devices (IEDs) in combat.

(Elbogen et al., 2012; Lew et al., 2011; Kuhn, Drescher, Ruzek, & Rosen, 2010; Kulka et al., 1990; MacManus et al., 2013; McFall, Fontana, Raskind, & Rosenheck, 1999).
Impact: Society

- Public concern about the needs of Veterans with mental health issues has increased in recent years leading to public health efforts including the national development of Veterans Treatment Courts.

- New Veteran jail diversion programs provide opportunities for treatment and rehabilitation to Veterans as an alternative to the incarceration in the criminal justice system.

(Elbogen et al., 2010).
Impact: PTSD Treatment

- Prevents Veteran from seeking care
- Early drop-out from PTSD Care
- Interferes with PTSD Care

(Foa, 1995; Forbes, 2006; 2013).
What Can We Do?
Anger Treatment

• Numerous treatment interventions targeting anger directly and/or indirectly have been developed.

• Protocols target dysregulated anger generally or in the context of an intimate relationship (e.g. Strength at Home (SAH), trauma-informed protocols that include components to address sources of anger or aggression (e.g., Forbes), and specialty protocols focused on a specific target problem (e.g., road rage).

• Treatment varies focus (e.g., anger, interpersonal aggression, trauma) and format (group, individual, dyad) but many are grounded in cognitive-behavioral principles although therapies from other orientations are also available.

(Feindler, 2006; Kassinove & Tafrate, 2002; McHugh et al., 2012; Morland et al., 2012).
Anger Treatment

- Cognitive Behavioral Therapy for anger has largest evidence base.
- Adults receiving CBT for anger experience
  - Moderate to significant reductions in the frequency and intensity of anger and aggression
  - Increase in positive coping
  - Increase in anger control

(DiGiuseppe & Tafrate, 2003; Novaco, 1994; Taft, Creech & Kachadourian, 2012)
CBT Treatment for Anger

CBT for general anger routinely consist of psychoeducation about patterns or cycles to anger and identifying how anger is experienced and identifying triggers.

Skill-building includes:

- **Behavioral techniques** to reduce physiological arousal (deep breathing, relaxation), behavioral responses (e.g., time out, distraction) that de-escalate anger;
- **Cognitive strategies** (e.g., cognitive restructuring, cognitive disputation, self-instructional training);
- **Communication skills** (e.g., social skills training, conflict resolution).
CBT Treatment for Anger

- Development and practice of *calming skills* identified as a mechanism of action in AMT for Veterans with PTSD

- *Peeking into the black box: Mechanisms of action for anger management treatment*

(Mackintosh et al., 2014).
Anger resolution in the context of PTSD Treatment

- Anger resolution as part of PTSD-focused treatment
  - When treating PTSD using evidence-based PTSD treatments such as Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE) therapy there are significant reductions in anger symptoms reported Pre- to post-treatment with standardized effect size differences ranging from $d = .06 - .66$; mean = .31.
  - However this is compared to effect sizes closer to $d = .9$ when treating anger directing using CBT anger treatment.

(Foa et al., 1995; Galovski et al., 2014; Stapleton et al., 2006; Mackintosh, 2015)
Comparing Treatment Types

- CPT: Women's
- CPT: Men's
- CPT: Galovski et al.
- 2 AMT Trials

Bar chart showing comparison of treatment types with 'Small', 'Medium', and 'Large' categories.
Anger Protocols

- SAMSHA Anger Management CBT
  - 12 sessions of Anger Management Treatment
    - Events and cues
    - Anger control plans
    - Aggression cycle
    - Cognitive restructuring
    - Assertiveness and conflict resolution model
    - Anger and the family

- Anger Treatment for PTSD (NCPTSD)
  - 12 sessions of Anger Management Treatment
    - Trauma informed
    - Psychoeducation
    - CBT
Challenges in Anger Treatment

- Assessment and Risk Prediction
- Motivation and Engagement
- Access to and Utility of Anger Treatment
Assessment and Risk Prediction

- Predicting violence among psychiatric populations has been difficult and met with limited success.

- Assessing risk for violence is important when treating Veterans with PTSD.
  - Routine assessment of anger and different manifestations of aggression including self-directed aggression (i.e., self-harm, suicidal ideation/intent), is an important component to successfully identifying and treating in-need Veterans.
  - Risk determination among Veterans should include collateral assessment to avoid underreporting of previously documented violent behavior.

(Elbogen et al., 2013).
Assessment and Risk Prediction

- Recent research with non-Veterans and Veterans suggests that single-item self-report measures of risk for violence (e.g., frequency of “wanting to harm someone”) perform well in predicting future aggression.

- Based on associated risk factors for violent behavior (e.g., arrests, financial instability, combat experience, alcohol misuse, PTSD), the Violence Screening and Assessment of Needs (VIO-SCAN) measure was recently developed to screen Veterans for long-term risk of violence.

(Elbogen et al., 2014; Gonzalez, Novaco, Reger, & Gahm, 2012; Skeem, Manchak, Lidz, & Mulvey, 2014).
Motivation and Engagement

- Motivation to engage and continue treatment can be problematic in treatment for both dysregulated anger and PTSD.

- Motivational Interviewing (MI) techniques are considered to be one of the key elements in anger treatment.

- Establishing strong therapeutic alliance is important to countering mistrust and processing biases associated with dysregulated anger within PTSD as well as potential stigma and avoidance behaviors.

- Research has demonstrated that higher levels of therapeutic alliance were important in helping Veterans to develop physiological arousal modulation skills.

(Deffenbacher, 201; Forbes et al., 2013; Kassinove & Tafrate, 2002; Mackintosh, Morland, Frueh, Greene, & Rosen, 2014).
Military Culture

- Important to understand and be sensitive to the unique military cultural factors when treating anger in the context of PTSD among military populations.
  - For example, engagement in combat requires some level of aggression for survival.
  - Military training conditions soldiers to respond to challenging and ambiguous situations with anger, to confront sources of threat rather than retreat, and make split-second decisions to respond often aggressively.

- These responses are often viewed as strengths in conflict situations and the Veteran may be ambivalent about changing these once highly valued behaviors.

(Morland et al., 2012; Reilly & Shopshire, 2002).
Access and Utility of Anger Treatment

- Barriers to access, engagement, and retention in CBT for anger
  - Limited time to receive therapist feedback to practice skills (60-90 mins/week for 12-15 weeks)
  - Reliance on self-report and between-session practice
  - Challenges to using skills in real-time when triggered
  - Frustration/discouragement with progress
  - Under-utilization/lack of skill practice/development

- Need for on-going/timely feedback in order to develop effective anger management strategies during treatment and as a part of follow-up.
New Models of Care

The newest cohort of Veterans increasingly expects “on-demand” services. By placing self-help resources on the web, or the use of mobile app we allow Veterans greater accessibility, flexibility, and privacy.
Anger and Irritability Management Skills (AIMS)

The Anger and Irritability Management Skills (AIMS) course offers a wide range of practical skills and tools to help Veterans manage their anger. It helps them understand their anger triggers and teaches specific things they can do to better handle difficult situations.
Anger and Irritability Management Skills (AIMS)

AIMS is based on the highly effective SAMHSA Anger Management Therapy protocol. Dr. Patrick Reilly developed that intervention and was the Lead Subject Matter Expert for AIMS.

AIMS uses Cognitive Behavioral Therapy techniques and is based on 20+ years of work with male and female Veterans from all eras. The course is designed to address the unique needs of Veterans and their families. AIMS contains videos from Veteran Mentors who generously share their experiences with anger and how they’ve benefited from Anger Management training.
Anger and Irritability Management Skills (AIMS)

AIMS features eight modules, each containing videos and interactive exercises.

Veterans can go through the course at their own pace, but we recommend doing one module a week to practice the skills learned and apply them to real-life situations.

By the end of the course, Veterans will develop a personal Anger Control plan to help them prepare for and handle difficult situations.

AIMS Modules

1: Getting Started Managing Your Anger
2: Understanding Your Anger
3: Breaking the Aggression Cycle
4: Behavioral Tools to Manage Your Anger
5: Cognitive Tools to Manage Your Anger
6: Conflicts and Communication
7: Your Anger Control Plan
8: Making it Work
Anger and Irritability Management Skills (AIMS)

AIMS teaches skills and tools that can be used to prevent an anger outburst that would lead to negative consequences.

Behavioral tools, such as deep breathing or time-out, focus on tasks you can do to lower your anger arousal and/or remove yourself from a dangerous situation.

Cognitive tools emphasize the relationship between thoughts and feelings. These tools provide alternate ways to think about situations so that they are less anger-provoking.
Clinician Involvement

Providing Information
- Send a link to the course
- Hand patient a Flyer
- Read through a Fact Sheet

Basic Support
- Check to see if pt. was able to start course
- Help troubleshoot obstacles
- Check on progress

Content Support
- Teach or review course content
- Review or demonstrate exercises
- Assign or discuss practice assignments
"There are no secrets to success. It is the result of preparation, hard work, and learning from failure."
- General Colin Powell (Ret.)
US Army

"The true hero is one who conquers his anger."
- Dalai Lama

AIMS is a free confidential online course that teaches skills and tools to get along better with people and control your reactions to irritating events. It is based on a highly effective in-person course that has been used by thousands of Veterans.

www.VeteranTraining.va.gov/AIMS/
Summary of Anger & PTSD

- Dysregulated anger with PTSD is an important problem recognized by Veterans, families, and providers.
- About 75% of males and 45% of females reported clinically significant anger symptoms.
- Current EBTs for PTSD provide some relief for problematic anger but impact is limited in effect size and a majority of clients’ anger remains problematic.
- Variations by client characteristics.
- Current treatment protocol for anger are available and can be effective.
Future Directions

● Research Needs
  ● Establish treatment efficacy of anger protocols
  ● Tailoring to clinical presentations and Veteran needs
  ● Timing and length of anger invention

● Clinical Needs
  ● Increasing availability of services
  ● Increasing treatment motivation
  ● Increasing treatment engagement
Many Thanks to . . .

- Our Veteran and civilian participants!
- Co-Investigators
  - Drs. Mackintosh, Resick, Aosved, Chard, Foy, Frueh, Greene, Knapp, Niehaus, Reilly, Rosen, and Schnurr
- Research Team Members:
  - Drs. Birks, Cha, Durso, Grubbs, Hilmes, J’Anthony, Lo, Love, Menez, Mualuko, Raab, Schneider, Strom, Wong, Yoneda
  - S. Wells, G. Isherwood & E. Willis; T. Buckley, K. Chaplan, K. Johnson, J. Lee, K. Morita, K. Powell, M. Price, M. Raab
Please enter your questions in the Q&A box and be sure to include your email address.

The lines are muted to avoid background noise.
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Print certificate from the “Completed Work” section of TMS.
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**UPCOMING TOPICS**

*SAVE THE DATE: Third Wednesday of the Month from 2-3PM (ET)*

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