Evidence Compass

Summary Report

What are the effective psychological interventions for veterans with problematic anger and aggression?

Summary of the Rapid Evidence Assessment

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Department of Veterans' Affairs

Disclaimer

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Please forward any comments or queries about this report to at-ease@dva.gov.au

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Executive Summary

- Problematic anger is commonly reported in veterans, can persist for many years, is often associated with high levels of distress, can have detrimental effects on interpersonal relationships, general functioning and is associated with interpersonal violence. Problematic anger and aggression are also commonly associated with the experience of mental health conditions, such as posttraumatic stress disorder (PTSD).
- The aim of this rapid evidence assessment (REA) was to review effective psychological interventions for problematic anger and aggression in veterans.
- Literature searches were conducted to collect studies published from 2004-2014 that investigated interventions that targeted anger and/or aggression as a primary or secondary outcome in veterans. Studies were excluded if the paper: was not published in English, was published prior to 2004, full-text versions were not readily available, consisted of an animal or validation study, qualified as grey literature or if the sample was not adults (mean age of sample ≤ 17 years of age). All included studies were assessed for quality of methodology, risk of bias, and quantity of evidence. In addition, all studies were rated on consistency, generalisability and applicability of the findings to the population of interest. These assessments were then collated to determine an overall ranking of level of evidence support.
- The ranking categories were ‘Supported’ –clear, consistent evidence of beneficial effect; ‘Promising’ – evidence suggestive of beneficial effect but further research required; ‘Unknown’ – insufficient evidence of beneficial effect; ‘Not supported’ – Clear, consistent evidence of no effect or negative/harmful effect.
- Thirteen studies met the inclusion criteria for review. Of the thirteen studies, 77% (n=10) originated from the USA. A further two studies (15%) were sourced from Australia, and the final study came from Germany with a sample from the Democratic Republic of Congo (8%). There is a notable increase in the number of studies meeting inclusion criteria in 2013.
- The thirteen studies were divided into two groups: those which directly targeted anger in veterans (i.e. the primary focus of this REA); or those involving veteran samples where anger was not the target of the intervention, but where anger was measured as a secondary outcome e.g. PTSD treatment studies (these studies were captured as a by-product of this REA).

- In regards to studies of interventions targeting anger in veterans, one study was CBT-based individual therapy and three studies were of CBT-based group therapy.
- In terms of studies involving veteran populations, where anger was a secondary outcome, one study was of CBT-based individual therapy, three CBT-based combined group and individual therapy, three alternative group therapy, one an alternative therapy with a combined format, and one study was an alternative therapy where the format was not specified.

  Ratings of the evidence for interventions targeting anger in veterans key findings:

  - The evidence for CBT-based group therapy received an 'Unknown' rating.
  - The evidence for CBT-based individual therapy received a 'Promising' rating.

  Ratings of the evidence for interventions for veterans where anger was a secondary outcome key findings:

  - The evidence for CBT-based individual therapy (CPT) received a 'Promising' rating
  - The evidence for CBT-based combined group and individual therapy received an 'Unknown' rating
  - The evidence for alternative individual therapy received an 'Unknown' rating
  - The evidence for alternative group therapy received an 'Unknown' rating
  - The evidence for alternative combined format therapy received an 'Unknown' rating
- CBT-based therapies targeting anger in veterans were ranked as Promising, which provides hope that effective interventions can be found. Further well conducted, rigorous trials are required to refine and test the efficacy of interventions for anger and maximise clinical gains for veterans.

Background

Anger is a multi-faceted primary human emotion that serves a variety of adaptive functions[1] and has been hypothesised to have evolutionary value for promoting survival in the context of threat or provocation. Aggression constitutes specific behaviours that are performed with the intention to threaten or harm another [2]. Anger is one of the most common problems reported by veterans, and its experience can have devastating effects on the ability to return to civilian life. Similarly, aggression is estimated to be a problem for up to 1/3 of recent veterans[3-5]. Research has noted that veterans report experiencing problematic anger as being one of the most distressing aspects of returning to civilian life[6], and it can have detrimental effects on social relationships and family functioning[7]. Anger is often reported co-morbidly with post-traumatic stress disorder (PTSD), and experiencing anger has been associated with poorer response to treatment among veterans[8, 9]. Some findings prior to the REA cut-off date (2004) support the use of anger treatments for adults in the community[10], but reports of findings for interventions which specifically target anger in the treatment of veterans are scarce[11].

The aim of the current review was to examine the scientific literature for evidence of effective interventions for veterans with problematic anger and aggression. The experiences of anger and traumatic stress/PTSD have a strong association, and many effective and empirically-validated treatments and interventions exist that target PTSD in veteran and military populations. A meta-analysis of anger and PTSD in trauma-exposed adults found that the strength of association between anger and PTSD was even stronger in samples with military war experience compared to samples who had experienced other types of trauma[12]. For this reason, many PTSD treatments, especially those tailored to military and veteran populations include some type of anger management. A brief overview of the current interventions used for the treatment of anger and aggression in veterans is presented below. The focus of this review was on interventions targeted at anger and aggression in veteran samples, but due to the small number of studies that were located on this topic, interventions that evaluated anger as a secondary outcome (i.e. anger was not the target of the intervention) were also considered.

Types of psychological interventions

Cognitive behavioural therapy (CBT) is a type of psychological therapy which focuses on the relationship between cognitions, behaviours, and emotional responses. CBT-based therapies are the most common interventions used for anger interventions in other

populations such as community members, inmates and inpatients[13-17]. CBT-based therapies are well established in the treatment of PTSD[18] and other psychiatric disorders[19], and many anger interventions consist of, or include, CBT-based elements. Such elements include behavioural coping strategies, cognitive restructuring as well as some kind of *in vivo* (i.e. in real life situations) and imagery exposure. CBT treatments also often include homework assignments.

Alternative therapies to CBT have also been used to treat anger, aggression and anger-related problems. Each of the alternative therapies which are reported on in this review are outlined briefly below:

Narrative Exposure Therapy (NET) is designed to be a short-term therapy for trauma-spectrum disorders suitable to be delivered in regions of conflict. The number of sessions can vary (some research suggests NET can be effective within four to six sessions[20, 21]), and frequency of sessions is adaptable to the target group. The therapy begins with a "lifeline" exercise, followed by sessions focused on learning to unconditionally accept every emotion, and talking about the lifeline chronologically (from birth to present time).

Multifamily group treatment consists of several group sessions that involve the family members of the individual. Several families are usually included in one group, and group sessions can vary in number and frequency. Multifamily group treatment may include additional sessions such as sessions focused on psycho-education.

Yoga interventions typically include content on self-awareness, breathing exercises, and yoga postures and movements with a specific meditative focus. These interventions are conducted over a range of sessions, and can be done in an individual or group format. Yoga interventions can be based on a range of schools and traditions of yogic practice.

Mantram repetition interventions specifically aim to include spirituality as an important component of the treatment process. Mantram repetition involves participants choosing a meaningful mantram, or word or phrase with spiritual or personal meaning that is brought to mind silently, and then using and tracking their mantram practice. Mantram repetition can also be combined with other meditation techniques, such as teaching "one-pointed attention" and "slowing down".

Trauma Management Therapy (TMT) is designed to consist of a total of 29 sessions delivered over four months in both group and individual sessions. The intervention starts with an education session, followed by individual exposure sessions, as well as sessions focused on social and emotional rehabilitation. Exposure sessions can be done with imaginal exposure (IE), and more recently Visual Reality (VR) is being trialled for use in TMT.

Accelerated Resolution Therapy (ART), comprises imaginal exposure (IE) and imagery rescripting (IR), and was designed as a short and low intensity alternative for PTSD treatment. ART is delivered in one to five sessions, each lasting about 60-90 minutes. All sessions include IE and IR and the use of bilateral eye movements.

Assessment of the evidence was based on the following criteria:

- The **strength of the evidence base** which incorporated the quality and risk of bias, quantity of the evidence (number of studies), and level of the evidence (study design)
- The **consistency** across studies
- The **generalisability** of the studies to the target population
- The **applicability** to an Australian context.

Ranking the evidence

After the evidence was evaluated, the studies were ranked as follows:

SUPPORTED	PROMISING	UNKNOWN	NOT SUPPORTED
	Interventions targeting anger:	Interventions targeting anger:	
	CBT-based group therapy	CBT-based individual therapy	
	Studies where anger is a secondary outcome:	Studies where anger is a secondary outcome:	
	CBT-based individual therapy	CBT-based combined format therapy	
		Alternative individual therapy	
		Alternative group therapy	
		Alternative combined format therapy	

'**Supported**' means there was clear and consistent evidence of a beneficial effect of the intervention; '**Promising**' means the evidence was suggestive of beneficial effect, but requires confirmation with additional evidence/research; '**Unknown**' is defined as insufficient evidence at present on whether or not to support the use of this intervention, or additional evidence is required to determine efficacy of intervention; **'Not supported'** is defined as evidence suggesting that the intervention does not have an effect, or produces a harmful effect when implemented.

Implications for policy makers and service delivery

The reviewed interventions comprised a broad range of approaches for dealing with the psychological consequences of trauma and the associated experience of anger or aggression. Encouragingly, group CBT-based therapies targeting anger in veterans was ranked as 'Promising'. When this is combined with evidence for the effectiveness of CBT-based anger treatments for other populations[10], the evidence for CBT-based anger treatments shows significant promise. Further research into CBT-based treatments for veterans have potential to improve the rankings for both group and individual based treatments, and provide clear guidance to the DVA regarding the planning, purchasing and/or delivery of optimal interventions for anger in veterans. Importantly however, there remains a need to refine these existing interventions to improve rates of engagement and retention. There is also a need to examine treatments that target aggression either in isolation, or in conjunction with anger, as only one study was identified which examined effective treatment for aggression in veterans. The successful use of different treatment delivery formats (e.g. video-teleconferencing) also holds promise to improve access to treatment for veterans in regional, rural and remote areas.

While the alternative approaches reviewed here were categorised as 'Unknown', future research has the capacity to strengthen the evidence base for these interventions. Alternative approaches may be a more preferable option for some veterans and would provide veterans with a wider range of treatment options. Ultimately this may assist funders and services to meet the needs of the broader audience of Australian veterans.

Finally, for those with PTSD-related anger problems, future studies should also consider the timing of the intervention in relation to the occurrence of trauma. It is possible that anger may

be more resistant to treatment or change for those with persistent anger in comparison to those with more recent onset.

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