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Anger and aggression treatments: a review of meta-analyses

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In the last several decades, researchers have begun to recognize dysregulated anger as a common and debilitating psychological problem among various psychiatric populations. Accordingly, the treatment of anger and aggression has received increasing attention in the literature. The current article reviews existing meta-analyses of psychosocial intervention for anger and aggression with the aims of (1) synthesizing current research evidence for these interventions, and (2) identifying interventions characteristics associated with effectiveness in specific populations of interest. Results demonstrate that cognitive behavioral treatments are the most commonly disseminated intervention for both anger and aggression. Anger treatments have consistently demonstrated at least moderate effectiveness among both non-clinical and psychiatric populations, whereas aggression treatment results have been less consistent. We discuss the implication of these findings and provide directions for future research in the treatment of anger and aggression.

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Introduction

The phrase *anger management* has become commonplace in the Western culture. In the U.S., the term has been used in the media and was the title of a 2003 movie and a television series. A recent Google search resulted in approximately 30 000 web pages (February 27, 2017). Those arrested for assault or domestic violence in the U.S. and other countries are frequently referred for anger management classes as a condition of their release, plea, or probation. Given the widespread use of anger management and the mandate for such treatments in legal systems, knowledge about the effectiveness of these interventions is much needed.

Most mandates for anger management assume that a direct relationship exists between anger and aggression, and that targeting anger would reduce or eliminate the aggression. While the number of studies on this relationship is remarkably small [1•], the limited literature suggests that anger does not always lead to aggression, nor is anger a necessary cause of aggression. A recent meta-analytic review, however, found a robust relationship between anger and violent behavior [2], and a recent evaluation of an individually-delivered anger treatment found that reductions in aggressive behaviors were associated with decreases in anger [30]. This emerging literature provides support to the supposition that treatment of anger will result in reduction of aggression. However, some anger management interventions have failed to produce positive effects in prison samples [3]. Given the context in which most people are referred or mandated to such interventions, both anger and aggression serve as related yet distinct outcomes of interest.

We reviewed the literature on anger and aggression interventions to shed light on the effectiveness of anger management programs. Not long ago, the amount of literature on this topic was thin. However, in preparation for this review, we uncovered a large number of studies. As reviewing them all would be beyond the length of this article, we focused our attention on meta-analytic reviews of anger and aggression treatments. A literature search revealed 21 such meta-analyses, most of which focused on specific populations. These meta-analyses represent a substantial database from which to assess whether such treatments work and which treatments appear to be most successful.

Methods

Search strategy and study selection

We searched *PsycINFO* and *PubMed* for meta-analytic reviews published between the earliest available year and February 23, 2017. We used the keywords 'anger' or 'aggression' AND 'treatment' or 'therapy' AND 'meta-analy*' in the title. Our search yielded 76 articles published between 1998 and January 2017, and 75 articles published between 1992 and 2016 from PsycINFO and PubMed, respectively. After removing duplicates, we inspected the remaining articles for meta-analytic reviews of non-psychopharmacological treatments targeting primarily anger or aggression. We identified 13 meta-analyses of treatments targeting anger and 8 meta-analyses of treatments targeting aggression, which are included in this review.

Results

Treatments targeting anger

Table 1 summarizes the results of the 13 meta-analyses on treatments of anger.

Table 1

Characteristics of meta-analyses of treatments targeting anger (in chronological order)

Study	Years of publication	No. of studies (*k*)	No. of participants (*N*)	Sample characteristics	Treatment type(s)	Treatment setting/modality	Treatment components	Outcome variable(s)	Effect size(s)
Henwood *et al.* [4]	Prior to June 2014	14	3226	Adult male offenders	CBT-based anger treatments	Prison or community/Group	Self-management, challenging dysfunctional thinking, and relapse prevention; arousal and anger control training and moral reasoning; arousal reduction, communication skills, relationships, addressing cognitive distortions, and problem solving	General and violent recidivism	**.77 overall**, .72 for violent recidivism
Hamelin *et al.* [5••]	2002–2005	8	336	Adults with intellectual disabilities	CBT	Not reported/ Individual and group	Discussion of causes, appropriate expression of anger, cognitive restructuring, role play, relaxation and problem solving	Anger	**1.52overall** for RCTs (unweighted); .89 within-group for pretest-posttest (unweighted)
Nicoll *et al.* [6]	1999–2011	9	302	Adults with intellectual disabilities	Treatments with cognitive behavioral framework	Community, institutional/Most delivered in groups	Psychoeducation, self-monitoring, cognitive restructuring, relaxation, self-instruction, role-play and problem solving	Anger	**.88 overall**; .84 for group treatments, 1.01 for individual
Kusmierska* [7]	Prior to 2010	17	Not reported	Varied	CBT combined (37 studies) or Novaco's multicomponent anger treatment model (19 studies); non-CBT (16 studies)	Not reported/ Individual and group	CBT: Relaxation, exposure, cognitive restructuring, social skills, systematic desensitization, problem solving, self-instruction training, and education. Non CBT: meditation, forgiveness, use of humor, acceptance and commitment therapy (ACT), the process group	Anger	**.58 overall**