



# Adaptive Disclosure: Theoretical Foundations, Evidence, and Future Directions

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## Abstract

*Purpose of Review* Modern evidence-based practice (EBP) primarily consists of the blanket application of treatment packages to purportedly treat behavioral health syndromes regardless of patient characteristics or context, which may be why current EBPs for post-traumatic stress disorder (PTSD) are less effective for treating veterans and military service members (SMs) than for civilians. Adaptive disclosure is designed to operate within the culture and ethos of the military, and developments since the publication of the original manual reflect further effort to meet the needs of this population. This review presents to providers the rationale and evidence for the original AD manual, as well as an overview of the more recent developments and directions of the literature.

*Recent Findings* The original AD manual has demonstrated efficacy in two clinical trials and noninferiority when compared to another EBP for PTSD. Additional treatment elements and enhancements are based on a rehabilitative model for treatment, primarily targeting functional outcomes over symptom reduction and promoting shared decision-making.

AQ1

AQ2

*Summary* AD and its recent enhancements target symptoms related to PTSD, moral injury, and traumatic loss, but more importantly, they target the functional concerns of veterans and SMs within the military cultural context. Current research is focused on maximizing treatment flexibility to provide clinicians and patients with an adaptable and evidence-based framework for treatment.

## Introduction

Evidence-based practice in trauma-related behavioral health (BH) has been primarily based on therapy manuals created for non-military populations (e.g., prolonged exposure [PE], [1]; cognitive processing therapy [CPT], [2]), and when applied to veterans and service members (SMs), these treatments have shown diminished effects [3–6]. Yet, veterans and SMs make up a substantial portion of BH treatment consumers, specifically for trauma-related concerns like posttraumatic stress disorder (PTSD) and moral injury (MI), between 11.0 and 13.3% of SMs report PTSD post-deployment [7], with up to 25% reporting the experience of a military-related potentially morally injurious event (PMIE) [8]. Furthermore, this population is at increased risk for a lifetime of chronic distress [9] and lower quality of life [6] and often presents with complex presentations of co-occurring problems such as depression, substance abuse, and serious functional impairment [10]. However, relatively few veterans

and SMs who suffer with these conditions receive care; only 38–45% of SMs who meet criteria for PTSD report interest in receiving care, and only 23–40% actually received professional care within the past year [11]. When SMs do seek and receive care, 83% with a primary diagnosis of PTSD do not make clinically significant improvements [12], and between 60 and 90% of SMs drop out of BH treatment in military treatment facilities (MTFs) [13]. Adaptive disclosure (AD) was designed to respond to the lack of effective BH care for this population by providing the first manualized intervention designed specifically to address the needs of SMs in the treatment of PTSD, MI, and traumatic loss (TL) [14•]. The development of AD, both for the published manual and the adaptations it inspired, reflects a focus on providing increasingly personalized and flexible evidence-based care tailored to the military cultural context.

## Adaptive Disclosure

For veterans and SMs, MI and TL may be more distressing than personal life-threats and other dangers [15]. Guilt and shame associated with MI and TL affect SMs' familial relationships and their parenting [16], while related avoidance, emotional numbing, and anger may further impair such relationships as well as work performance and physical health [16–18]. Both MI and TL threaten social esteem, acceptance, and standing, are associated with social withdrawal and low motivation [19] and may interfere with the sharing and processing of traumatic experiences and PMIEs. Current psychotherapies for trauma-related problems identified by the Veterans Health Administration as front-line (e.g., CPT and PE) [20] focus primarily on PTSD and life-threat-related traumas, with little emphasis for survivor guilt [21] and even less for MI [15]. Furthermore, these psychotherapies emphasize certain trauma-related beliefs, such as victimization-based thinking and beliefs about safety,

90 as needing to be challenged or contextualized (e.g., [1, 2]), which does not  
91 fully capture the profiles of MI and TL for SMs, in which responsibility-taking  
92 may be valid given the context of the event and military culture [22•, 23].

93 Notwithstanding the unique needs of veterans and SMs, current front-line  
94 treatments administered in MTFs do not explicitly integrate military culture  
95 into the treatment approach. Despite evidence that the quality of the thera-  
96 peutic relationship is the single best predictor of outcomes in MTF BH clinics  
97 [12], most providers are civilians with limited experience of military culture  
98 and current front-line treatments used in MTFs do not address the unique  
99 context of military-related trauma, such as the deep, interdependent bonds  
100 and kinship within a SM's unit, the emphasis on responsibility for the safety  
101 of others, living by a specific moral code, and stoicism. Current BH treat-  
102 ments used in MTFs do not help providers place their patients' thoughts and  
103 behaviors within this cultural context, which may help explain consistently  
104 smaller effect sizes for these treatments in veteran trials compared to trials  
105 with civilian samples (e.g., [3]). Similarly, SMs who receive these treatments  
106 report feeling that the therapy was not relevant or that their provider did not  
107 understand the context of their trauma [24].

108 AD was designed to address the limitations of current front-line therapies,  
109 namely the over-emphasis on danger- and victimization-based trauma and  
110 the lack of consideration of the military cultural context [25, 26•]. AD is a  
111 hybrid of evidence-based cognitive-behavioral therapy strategies designed  
112 to target not only life-threat and victimization-based traumas but also MI  
113 and TL; treatment is individualized by employing different change agents for  
114 each profile (e.g., PTSD, MI, or TL) [27]. The main goals are to (1) learn to  
115 discuss traumatic experiences and/or PMIEs in a way that facilitates meaning-  
116 making, (2) consider alternate interpretations of the experience(s), and (3)  
117 overcome defining self-identify by the experience(s) by reclaiming the other  
118 facets of oneself [28]. AD further posits that forgiveness, of both the self and  
119 others, is often a necessary part of the recovery process for MI and TL and is  
120 attainable through developing positive relationships and confidence in the  
121 goodness of self and/or others. Thus, AD was designed as an opportunity  
122 for course-correction for veterans and SMs, encouraging patients to become  
123 less self-condemning, more focused on choosing wellness, more confident  
124 in occupational and social settings, and more comfortable with disclosure to  
125 trusted others, to enhance functioning and decrease symptom burden.

126 AD is a fully manualized, six 90-min session intervention [14•]. This is  
127 about half of the time commitment of other trauma-focused psychotherapies  
128 (i.e., PE and CPT), which require veterans and SMs to have the personal and  
129 occupational resources and availability to devote to 10–12 consistent ses-  
130 sions of therapy. The brief nature of AD makes it particularly appealing, as  
131 most BH patients are not able or willing to attend sustained psychotherapy  
132 in MTFs [29, 30]. During the first session of AD, the patient is interviewed to  
133 establish their goals for treatment, and a plan is created to determine how AD  
134 can facilitate those goals. Sessions two through five are devoted to processing  
135 the most challenging experience by determining how the patient has come to  
136 understand the event, exploring alternative ways of thinking, and identifying  
137 how to best encourage healing and recovery. The final session includes review  
138 of lessons learned, feedback, and planning for the future.

139 The AD manual employs both PE and CPT strategies but makes distinct  
140 departures from these therapies to best meet the needs of military-related  
141 stress. Imaginal emotional processing, specifically through disclosure and  
142 forming a narrative of the event, is employed to (1) disprove the common  
143 misconception that fully remembering and disclosing the event may lead to  
144 negative repercussions, such as losing control or being judged and (2) elicit  
145 potentially maladaptive emotions and beliefs about the event that can be  
146 processed moving forward. However, contrary to imaginal exposure in PE  
147 [1], the goal of processing in AD is not to extinguish fear, except in cases of  
148 purely life-threat trauma. Given the complex nature of military trauma, AD  
149 does not expect patients to be able to fully disclose the event immediately, as  
150 in PE and CPT, but hopes to encourage increasing disclosure over time. After  
151 recounting the experience in AD, cognitive interventions are used to process  
152 the thoughts that occur while the patient is experiencing great emotional  
153 intensity, as opposed to letting the emotions dissipate or extinguish before  
154 intervening, as in other trauma-focused therapies. This helps patients learn  
155 to retrieve alternative thoughts in moments of high distress. Furthermore,  
156 challenging beliefs in AD do not rely solely on Socratic questioning, as in  
157 CPT, but include experiential strategies such as an imagined conversation with  
158 another person to elicit alternative beliefs from the patient's own experience  
159 or the imagined experience of a relevant other. Finally, AD is distinct from  
160 other trauma-focused therapies by targeting MI, in which beliefs about the  
161 transgressive event may be accurate and appropriate, and TL through the use  
162 of optional breakout sessions; MI is targeted through imagined conversations  
163 designed to promote forgiveness and TL through a similar experiential exer-  
164 cise in which patients converse with the deceased. Homework assignments  
165 depend on the nature of the patient's problem; hypervigilance is addressed  
166 through exposure to avoided stimuli, grief is addressed through activities  
167 to honor the fallen, and guilt/shame is addressed through ways of making  
168 amends through reparative actions.

169 A practical overview of the intricacies of combat and operational trauma,  
170 and the context of military culture and values, is provided for clinicians  
171 within the AD manual. There is relevant information on the nature of mili-  
172 tary-related traumas and the military ethos, and a stated emphasis on return-  
173 ing to normal role functioning at work and at home; the latter being espe-  
174 cially well-suited for the military cultural value of service and may be a less  
175 stigmatizing focus for such an action-oriented population. AD encourages  
176 veterans and SMs to embrace growth that they may have experienced during  
177 their military career and to develop the skills to leave behind problematic  
178 beliefs and behaviors.

## 179 Clinical Efficacy and Effectiveness of Adaptive Disclosure

180 The efficacy of AD has been tested in several clinical contexts. The first clini-  
181 cal trial of AD was an open, uncontrolled trial investigating whether AD is  
182 associated with symptom improvement for PTSD and related symptomatol-  
183 ogy (e.g., depression) in 44 previously deployed active-duty Marines and  
184 Navy Corps personnel who reported symptoms consistent with a DSM-IV

185 PTSD diagnosis [31]. This trial followed the original AD manual, which was  
186 used to train the study therapists (i.e., two licensed clinical psychologists  
187 and two postdoctoral fellows), who all had extensive experience treating  
188 military populations. While fidelity to the model was not assessed, the  
189 therapists had weekly phone calls with AD developers for clinical supervi-  
190 sion and consultation and were supervised in-person by an AD developer  
191 once a week. Investigators also examined whether AD was well accepted  
192 and tolerated by SMs, and if it could be implemented in garrison. Results  
193 indicated statistically significant changes from pre- to post-treatment on  
194 measures of PTSD, depression, posttraumatic cognitions, and posttrau-  
195 matic growth. There were large effect sizes for PTSD, depression, and post-  
196 traumatic cognitions (Cohen's  $d = 0.79$ ,  $0.71$ , and  $0.64$ , respectively) and a  
197 small-to-medium effect size for posttraumatic growth (Cohen's  $d = 0.33$ ).  
198 Seventy-five percent of SMs who were initially referred to AD completed  
199 treatment, and SMs considered AD an overall positive experience, with  
200 the highest mean satisfaction item rating being for recommending AD to  
201 other Marines [31].

202 Although the AD open trial demonstrated that AD is tolerable for SMs,  
203 able to be implemented in garrison, and associated with large effects for  
204 decreasing relevant symptoms, the lack of a comparator arm precludes  
205 conclusions regarding treatment efficacy [31]. To evaluate AD's efficacy,  
206 a noninferiority trial was conducted [32•] in which AD was compared to  
207 *Cognitive Processing Therapy – Cognitive Only* (CPT-C) to examine change  
208 in PTSD symptoms and related outcomes (i.e., depression, functioning) in  
209 122 active-duty Marines and Sailors with a *DSM-IV* PTSD diagnosis (the  
210 trial began prior to the *DSM-5*). Given that manualized CPT-C is admin-  
211 istered over 12 60-min sessions (720 total minutes of therapy), AD in this  
212 trial utilized the original manual with the additional expansion to eight,  
213 90-min sessions (720 total minutes of therapy) to eliminate the possibil-  
214 ity of treatment length as a confounding variable during analyses. The  
215 therapists for this trial were three postdoctoral psychologists, all without  
216 extensive experience treating combat-related trauma. Treatment fidelity was  
217 assessed by an independent AD clinician and a treatment developer, both  
218 of whom blindly rated a random sample of 40 treatment sessions on a  
219 7-point scale, with 7 being excellent. The average overall session quality  
220 rating was 6.08 ( $SD = 1.14$ ) [32•]. The authors conducted linear regression  
221 analyses to examine mean change scores from pre- to post-treatment and  
222 followed Jacobson and Truax's [33] recommendations to benchmark clini-  
223 cally significant change of PTSD symptom severity (see [32•] supplemental  
224 materials for further explanation). Clinically significant change has been  
225 defined as the extent to which a therapy or treatment moves an individual  
226 within the range of the functional population or outside the range of the  
227 dysfunctional population [34]. Analysis of mean change scores signified  
228 that AD was non-inferior to CPT-C in influencing PTSD ( $p$ 's =  $0.57$  and  
229  $0.79$  for treatment outcome measured by Clinician Administered PTSD  
230 Scale for *DSM-IV* and PTSD Checklist – Military Version, respectively),  
231 depression symptom severity ( $p = 0.54$ ), and physical and mental health  
232 functioning ( $p$ 's =  $0.46$  and  $0.37$ , respectively). About 63% of patients in

233 the AD arm and 58% of those in the CPT-C arm completed treatment.  
234 Furthermore, both psychotherapies led to equal proportions of patients  
235 demonstrating positive clinically significant change in PTSD symptoms;  
236 for those who completed all eight sessions of AD, 41% either improved  
237 (i.e., demonstrated clinically significant change) or recovered (i.e., demon-  
238 strated clinically significant change out of the dysfunctional range for the  
239 sample) and no participants deteriorated (45% of treatment completers  
240 improved or recovered for CPT and 0 deteriorated). This study's power was  
241 lower than planned (i.e., the study  $n = 122$  when power analysis suggested  
242  $n = 200$  to ensure power = 0.80), suggesting that estimated standard errors  
243 are likely larger than they would be in an adequately powered study. Yet,  
244 in this case, low power does not affect the interpretation of study results,  
245 as a larger sample size (and thus smaller estimated standard errors) would  
246 be expected to result in tighter confidence intervals around the estimated  
247 differences in outcomes between AD and CPT, and therefore, stronger evi-  
248 dence of noninferiority.

249 Finally, a single case study by Laifer and colleagues [28] described the  
250 therapeutic process and outcome of a veteran receiving eight 90-min ses-  
251 sions of AD after being involved in a PMIE while deployed. Although the  
252 veteran still fell within the range of clinically significant symptoms at the  
253 end of treatment, their presentation and functioning differed drastically from  
254 baseline. At the first session, the veteran was physically anxious (i.e., shaky  
255 hands, difficulty maintaining eye contact) and reported depressive symptoms  
256 (i.e., diminished interest, feelings of isolation) that were negatively affecting  
257 schoolwork and interpersonal relationships. At the last session, they pre-  
258 sented with decreased anxiety, appeared more mindful in their actions, and  
259 expressed a shift in beliefs about themselves. They also reported feeling less  
260 depressed and more motivated and described having a better understanding  
261 of their emotional triggers, their actions within the climate of war, and the  
262 sadness relating to the loss of a friend. Furthermore, they were more willing to  
263 engage socially and in public and began researching different career avenues,  
264 thus approaching their therapy goals. This case study demonstrates the ulti-  
265 mate goal of AD's design; although improvements in PTSD symptom sever-  
266 ity did not eliminate symptoms, improvements across functional domains  
267 (especially regarding the veteran's identified goals) are consistent with AD's  
268 focus on returning to normal role functioning. This focus on functioning has  
269 become central to efforts to enhance AD, and significant changes are being  
270 made to the protocol to further address the complexities involved in military  
271 BH treatment for PTSD, MI, and TL.

## 272 Adaptive Disclosure — Enhanced (AD-E)

273 During the AD clinical trials, discussions with end-users (i.e., patients and  
274 providers) provided insight into the real-world applicability of AD and ways  
275 in which the protocol could be modified to potentially improve reach and  
276 effectiveness [35•]. First, veterans and SMs who engaged and experimented  
277 with out-of-session activities to improve functioning and quality of life as a

278 means to rehabilitate from trauma were often the most successful cases, com-  
279 pared to those who focused solely on in-session experiential work and symp-  
280 tom management/reduction. Second, the use of a structured, serially arranged  
281 package of in-session change agents across cases regardless of individual dif-  
282 ferences often led to treatment failure or drop-out for patients with difficulty  
283 or reluctance complying. Last, virtually all cases presenting for treatment  
284 did not match the patient population typical for treatment efficacy studies;  
285 namely, cases were far more complex with multiple co-occurring conditions,  
286 pressing problems, barriers to treatment, and primary concerns other than  
287 PTSD, MI, or TL. These observations are unsurprising for practitioners; clini-  
288 cian concerns about the limitations of similarly structured EBPs in real-world  
289 application are familiar and well-documented (e.g., [36]). AD was designed to  
290 be a treatment that was sensitive to the context in which it would be applied  
291 (i.e., the military environment and culture). To accomplish this goal in-full,  
292 the limitations inherent in the traditional EBP treatment package approach  
293 needed to be addressed, and a more flexible and rehabilitative AD designed  
294 and tested (i.e., *Adaptive Disclosure-Enhanced* [AD-E], [35•]).

## 295 The Rehabilitative Model for PTSD Treatment

296 The rehabilitative model for treatment is not new, although it has been pri-  
297 marily applied in the context of serious mental illness (SMI), such as schizo-  
298 phrenia and bipolar spectrum disorders [37]. Unlike models focused pri-  
299 marily on symptom reduction for a discreet disease entity, the rehabilitative  
300 model places the emphasis on patient functioning and quality of life across  
301 domains, in line with the focus of AD. In this model, symptoms are assumed  
302 to wax and wane over the lifespan, and the goal of treatment is therefore to  
303 facilitate adjustment and improved functioning when faced with life's chal-  
304 lenges [38]. Change agents are chosen for a given patient's treatment plan  
305 according to the individual needs of that patient. As such, treatment targets  
306 and approaches may vary from case to case, or within case over the course  
307 of treatment, regardless of the patient's diagnostic category. This approach  
308 allows for the development of highly individualized and culturally sensitive  
309 treatment plans that are psychosocially holistic and collaborative between  
310 patient and provider. Although symptom management/reduction may still be  
311 a goal of treatment, it is but one of many potential target domains that may  
312 be addressed in or out of therapy, and treatment success is not dependent on  
313 symptom change alone.

314 The applicability of the rehabilitative model to military trauma-focused  
315 specialty care is apparent. PTSD for veterans and SMs is associated with  
316 chronic, debilitating psychosocial deficits including poor physical health,  
317 work impairment or unemployment, marital problems or divorce, reduced  
318 intimacy in relationships, violent behavior, reduced problem-solving abil-  
319 ity, poor parenting efficacy and satisfaction, and poor quality of life and  
320 life satisfaction [6, 17, 39–43]. These deficits may have a ripple effect that  
321 negatively impacts the family members of these individuals along the same

domains [44]. Yet, evidence suggests that focusing on PTSD symptom reduction in treatment, as do the current front-line EBPs may not lead to the generalized improvement in functioning and quality of life that proponents of EBPs expect [45] and as such, several studies have examined rehabilitative elements in PTSD populations or adjunctive to traditional trauma-focused therapy, with positive results (e.g., social skills training [46]; peer support [47]; vocational training [48]).

In modifying AD to conform to a rehabilitative model and address the varied and complex needs of veterans and SMs, the focus of treatment was further shifted from symptom management/reduction to be entrenched in enhancing functioning and quality of life. To accomplish this shift, a systematized Healing and Repair Plan (HRP) protocol was created and added to the treatment manual. The HRP is a shared-decision-making (SDM) approach to treatment planning, in which the provider and patient dynamically generate a list of activities that the patient is willing to try outside of therapy to promote functional rehabilitation (e.g., improved relationships, increased job satisfaction) and corrective experience through wellness and leisure. This plan is highly individualized to the specific problem areas of the patient and the goals they generate for recovery, and as such, the plan may contain a variety of change agents whose sequence is determined collaboratively. AD-E now contains an expanded set of empirically supported change agents, over an extended treatment of up to 12 90-min sessions that may be selected to suit a patient's individual needs including the following: (1) previous elements used in AD in-session or for homework assignments, such as cognitive therapy, the break-out experiential exercises, valued activity scheduling and behavioral activation, in vivo and imaginal exposure, and symbolic reparative action; and (2) the additional elements of mindfulness and compassion training [49•] and structured letter writing [50]. A multi-site comparative efficacy trial of AD-E, compared to Person-Centered Therapy, is currently underway across VA sites in Minneapolis, MN; San Diego, CA; San Francisco, CA; Waco, TX; and Boston, MA [35•]. The primary outcomes for this trial are social, educational, and occupational functioning and quality of life, with secondary outcomes of PTSD, depressive symptoms, and shame and guilt. This study will be the first to examine the relative efficacy of this new enhanced, flexible, and rehabilitation-focused version of AD (i.e., AD-E).

## Mindfulness and Compassion Training

The relationship between mindfulness and PTSD has been well-documented in the literature, with mindfulness demonstrating a negative effect on symptoms [51, 52] and a positive effect on functional outcomes [53]. Mindfulness-based interventions have shown efficacy in targeting trauma-related symptoms and functional outcomes as both stand-alone treatments and adjuncts [54, 55], and in both civilian and veteran populations (see [56] for a veteran-specific meta-analysis of mindfulness-based interventions). Similarly, compassion training, which may include specific mindfulness meditations like loving-kindness (LKM) [57] and compassion meditation [58],



367 has demonstrated efficacy for targeting PTSD symptoms and a wide range  
368 of functional outcomes in civilian [58, 59] and military [53] samples (for  
369 reviews of compassion and LKM-based intervention RCTs and of mindfulness  
370 and compassion's relationship with PTSD see [60] and [61], respectively). The  
371 range of functional outcomes that may benefit from mindfulness and com-  
372 passion training speaks to their broad applicability to multiple domains of  
373 functioning, but their positive effects on well-being [58], shame [59, 62, 63],  
374 guilt [63], suicidality [60], chronic pain and anger [64], sense of purpose [65],  
375 and social support and connectedness [65–67] may be especially relevant  
376 for those suffering from PTSD, MI, or TL. Furthermore, LKM specifically has  
377 demonstrated non-inferiority in treating PTSD in veterans and superiority in  
378 treating depression when compared to CPT-C [68], as well as positive effects  
379 on broad functional outcomes like personal growth, environmental mastery,  
380 purpose, and acceptance [69]. This broad applicability across domains for  
381 mindfulness and compassion training, and their demonstrated efficacy and  
382 tolerability in military populations makes these change agents remarkably  
383 suitable additions for AD-E.

384 Incorporation of compassion training and mindfulness into AD-E  
385 involved three additions to the AD protocol: a compassion-based interview,  
386 in-session compassion training, and between-session practice assignments.  
387 The compassion-based interview is conducted as part of the initial psycho-  
388 social and diagnostic assessment and is designed to gather preparatory his-  
389 torical information regarding kind and loving figures and experiences, which  
390 are used throughout treatment to aid in compassion training and experiential  
391 processing. Compassion training, and LKM specifically, is introduced in  
392 session 1 and is the focus of at least three later sessions, as determined on  
393 a case-by-case basis [35•]. Depending on the patient, mindfulness practice  
394 and/or compassion-based exercises are provided as homework for at least  
395 two sessions.

## 396 Structured Letter Writing

397 To further expand the available repertoire of change agents in AD-E, several  
398 variations of a structured letter-writing task were designed to facilitate expe-  
399 riential processing of trauma, MI, and TL. Letter-writing tasks have demon-  
400 strated effectiveness as an adjunctive treatment targeting PTSD symptoms  
401 [70], grief [71, 72], and MI-related attachment [50]. The specifics of the letter-  
402 writing tasks that were designed for AD-E match the foci of the experiential  
403 exercises in the AD breakout sessions: for processing MI, the letters may  
404 model correspondence with a moral authority to promote forgiveness; for  
405 TL, they may be correspondence with the deceased. Letter writing for PTSD  
406 may look like the exercises for either MI or TL. The aims of the letter writing  
407 elements are to provide alternative methods of disclosure, increase patient  
408 self-efficacy in processing, and relieve some of the burden on therapists. These  
409 letters are assigned between most of sessions 2–10 (except after sessions 4  
410 and 9, which are the two focused on compassion training and LKM). The  
411 elements may be used to continue outside of therapy the processing initiated

412 in the exposure and experiential in-session components, or they may act as  
413 stand-alone elements for disclosure and meaning making.

## 414 Comparison with Other Interventions

415 Thanks in large part to a growing recognition of the limitations of exist-  
416 ing trauma-focused EBPs for addressing the mental and behavioral health  
417 needs of veterans and SMs with PTSD, several interventions have also been  
418 developed to target putative MI (AD/AD-E treats MI, traumatic loss, and  
419 threat-based traumas — it is not just a MI therapy). These include the fol-  
420 lowing: (1) Building Spiritual Strength (BSS; [73, 74]), which was designed  
421 to use chaplains to address spiritual conflicts that may arise from exposure  
422 to warzone stressors; (2) the Impact of Killing module (IOK; [75]), which  
423 is intended to augment cognitive-behavioral therapy to address the specific  
424 potential psychological sequelae of a highly specific form of PMIE in the form  
425 of killing; and (3) Trauma-informed Guilt Reduction (TriGR; [76–78]), a  
426 cognitive therapy to address putatively excessive guilt and shame. BSS, IOK,  
427 and TriGR have each been evaluated using randomized controlled trials to  
428 examine treatment efficacy; IOK was evaluated relative to a waitlist control  
429 [75], TriGR was evaluated relative to a comparison treatment [78], and BSS  
430 was evaluated relative to both a waitlist control [73] and a comparison treat-  
431 ment [74].

432 The BSS approach assumes that PTSD and putative MI are caused by defi-  
433 cits or conflicts in faith or spirituality that affect functioning after exposure to  
434 military stressors and traumas [73, 74]. It makes sense to leverage the chap-  
435 lain community to provide this type of care given that spiritual counseling is  
436 their bread and butter. There is no doubt that certain military and warzone  
437 stressors either exacerbate existing spirituality deficits or disengagements from  
438 faith communities or can create new onset problems in these areas. However,  
439 given the multifarious causes and manifestations of trauma-related problems,  
440 and the problems that comprise the putative MI syndrome (via transgressions  
441 of the self or others), perhaps this kind of approach would be best for SMs  
442 and veterans who have faith and spirituality deficits and conflicts (this is an  
443 empirical question).

444 IOK is not a stand-alone intervention, but rather a module that is designed  
445 as an add-on *after successful cognitive-behavioral treatment* for PTSD [75]. The  
446 addition of this module to an existing treatment thus requires veterans to  
447 commit to up to 20 total sessions of contiguous therapy. If the most haunting  
448 and currently distressing military experience is killing and that is the target of  
449 an intensive trauma-focused psychotherapy, and at the end of treatment this  
450 remains unaddressed or the sequelae are not sufficiently changed, IOK seems  
451 like an excellent option for SMs and veterans who can commit to multisession  
452 contiguous and demanding treatment. As an aside, it would be concerning if  
453 trauma focused evidence-based treatments cannot address killing as the pri-  
454 mary haunting and distressing stressor. If that is true, perhaps the IOK model  
455 needs to be a standalone treatment offered in the first place.

456 Finally, TrIGR is a structured sequence of modules starting with psychoedu-  
457 cation about guilt versus shame, followed by cognitive therapy sessions to target  
458 four putative common “cognitive errors” that contribute to guilt and shame,  
459 with the addition of values identification and goal setting, a key component of  
460 acceptance and commitment therapy [76–78]. TrIGR is limited to targeting guilt  
461 and shame resulting from these four presumed cognitive distortions, and little  
462 information is provided regarding targeting or adapting treatment to account  
463 for the myriad of functional problems that may co-occur with guilt or shame.  
464 TrIGR and other cognitive therapy approaches to trauma leverage moral relativ-  
465 ism (that the moral harms are pliable by perspective taking and contextualizing) **AQ4**  
466 and may be best for cases where there is a clear culturally resonant distortion  
467 of personal responsibility for personal transgressive harms (e.g., when service  
468 members are raped in the military and leadership is unresponsive and blam-  
469 ing of the person). It is unclear how TrIGR can help when moral absolutism  
470 is a phenomenological reality for the person based on the synergy of the type  
471 of moral harm with the culture and context in which it occurs; therefore, it is  
472 not a distortion but an existential truth. The latter would shift the therapeutic  
473 challenge from helping someone change the way they construe the aftermath,  
474 to how to help someone to reclaim “goodness” in light of “badness.” Further-  
475 more, TrIGR and IOK both limit their interventions to putative MI from *personal*  
476 *or witnessed transgressions*, which excludes one of the most prevalent types of  
477 PMIE among SMs and veterans: being the direct victim of transgressive behav-  
478 ior (e.g., being hazed and assaulted in boot camp and leadership ignoring the  
479 crime [8]). Finally, all three of these interventions use a serially ordered set of  
480 session content that may not be useful for complex cases that require a flexible  
481 ideographic approach.

## 482 Implementation

483 Implementation requires a formal, replicable, and programmatic process of  
484 training and dissemination, and a formal iterative real-world evaluation of effec-  
485 tiveness using implementation science methods. Unfortunately, there are no  
486 projects underway currently to formalize and scale the training, dissemination,  
487 and implementation of AD or AD-E. If the results of the recently completed  
488 clinical trial of AD-E are positive, we will work on creating an AD-E manual for  
489 the public (the current manual is for the clinical trial only) following publica-  
490 tion of those results. Providers who are interested in using AD, learning more  
491 about experiential methods to heal and repair TL and MI, and/or integrating  
492 various elements of AD into their modal approach to PTSD should read Litz  
493 et al. (2017; [14•]), which is the published AD therapy manual.

## Conclusion

AD represents a novel approach to BH treatment that is both flexible and context specific. Its initial design and subsequent empirical support have led to the publication and dissemination of a treatment manual [14•] that can be currently used by clinicians to target PTSD, MI, and TL for veterans and SMs. Beyond this manual, research has continued to improve and expand AD to better match its intended purpose: to provide a flexible, rehabilitative, evidence-based, and patient-centered approach to the treatment of military-related BH problems. Thus far, this research as culminated in the development of AD-E [35•], which is currently in clinical trials. AD and its iterations are unique among EBPs in its abandonment of the one-size-fits all approach in favor of a flexible and personalized treatment plan that was designed with its specific end-users in mind. This personalized approach is already practiced by clinicians when EBPs alone prove insufficient; AD and its enhancements support and build upon this observation by providing a practical, context sensitive, and evidence-based framework for the rehabilitation of veterans and SMs suffering from PTSD, MI, and TL.

## Declarations

### Conflict of Interest

The authors declare no competing interests.

### Human and Animal Rights

All reported studies/experiments with human or animal subjects performed by the authors have been previously published and complied with all applicable ethical standards (including the Helsinki Declaration and its amendments, institutional/national research committee standards, and international/national/institutional guidelines).

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