





Psychological Flexibility Training to Enhance Resilience in Military Personnel

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ABSTRACT

The U.S. Department of Defense continues to have a significant interest in the development and evaluation of evidence-based programs for enhancing resilience in military personnel. However, few studies have documented evidence-based interventions to maintain or boost performance and enhance resilience among service members. A robust body of literature describes the positive association between psychological flexibility and resilience as well as outcomes including performance, mental health, and social functioning in both healthy and clinical populations. Acceptance and Commitment Therapy (ACT) is an evidence-based intervention that directly targets the enhancement of psychological flexibility. In the current paper, we first describe the association between psychological flexibility and resilience. Then we briefly note the limitations of existing military resilience training programs and outline the relevant evidence in support of an ACT-based resilience training program. Finally, we describe the six psychological flexibility processes that comprise ACT interventions along with the relevance of each process for resilience enhancement in military personnel. We conclude with information about an in-progress study of a novel ACT-based training program targeting resilience enhancement and readiness optimization in active duty service members.

KEYWORDS

Resilience enhancement; military personnel; psychological flexibility; acceptance and commitment therapy

Introduction

Over the past decade, the U.S. Department of Defense (DoD) has had a significant interest in the development and evaluation of evidence-based programs for enhancing resilience in military personnel to help optimize operational readiness and prevent deployment-related psychological health casualties (Peterson et al., 2009). Maintaining health, optimizing performance, and boosting resilience to stressors in harsh combat and operational environments is a momentous challenge (Seligman, 2021; Singal, 2021). Conducting research aimed at enhancing health, performance, and resilience is similarly challenging. As a result, few studies have documented evidence-based interventions to maintain or boost performance and enhance resilience under such harsh conditions (IOM, 2014). Thus, compared to the major scientific and clinical advancements in the assessment and treatment of deployment-related psychological health conditions

in active duty military personnel, little research has been conducted on the prevention of such conditions.

Two major challenges have hindered the development, evaluation, and dissemination of evidence-based resilience enhancement training programs within the DoD. First, there is no scientific consensus definition of resilience or agreement on the processes by which resilience is developed. Additionally, the conceptual variability linked with varying methodological approaches has contributed to disparate empirical findings (Bonanno, 2021; Infurna & Luthar, 2016; Luthar et al., 2000; Masten & Coatsworth, 1998). Second, the development and evaluation of evidence-based resilience enhancement programs have been hindered by the lack of methodologically rigorous research. In fact, most of the resilience enhancement programs developed to date have been universally implemented in ways that prevented rigorous scientific validation of their efficacy (Steenkamp et al., 2013).

Indeed, the lack of a sound theoretical basis for existing resilience programs was highlighted in an IOM report examining the Department of Defense's existing prevention interventions (IOM, 2014). More recently, researchers have worked to address these concerns through the development of military culture-informed theoretical models (Gomes et al., *in press*) as well as the identification of malleable factors related to resilience (Adler et al., 2022; Britt et al., 2021). Despite this, additional work remains. The purpose of this paper is to introduce the theoretical and scientific basis for a novel approach to resilience enhancement focused on bolstering psychological flexibility. We first define resilience and psychological flexibility. Then, we describe two existing military resilience training programs including their limitations as well as the relevant research on interventions targeting psychological flexibility. We conclude by describing how psychological flexibility processes may be engaged to enhance resilience in military personnel.

Definitions of resilience

Broadly, resilience is understood to be the phenomenon in which an individual or group does not experience or only temporarily experiences functionally impairing distress in response to a psychological or physical stressor (Kalisch et al., 2015). The American Psychological Association (2014) has defined resilience as “the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress.” In the current literature, three definitions or conceptualizations of resilience stemming from different theories of the construct are often contrasted with one another, though they may not be mutually exclusive. *Trait* resilience refers to the availability of personal resources or advantageous personality or biological characteristics that predispose one to adaptability to stress (e.g., Block & Kremen, 1996; Wagnild & Young, 1993). Alternatively, resilience defined as an *outcome* (rather than a static trait) characterizes the construct as the successful adaptation to significant stress or trauma (Kalisch et al., 2015). This positive outcome may be partially determined by factors including biological, psychological, social, and environmental factors that may overlap or interact to increase the likelihood and/or quality of the outcome of resilience. Finally, resilience has been defined as a *process* characterized by either a trajectory of undisturbed functioning and well-being during or after adversities or temporary dysfunction followed by successful recovery (Kalisch et al., 2015).

More recently, literature has worked to integrate the varied aspects of resilience. For example, Stainton et al. (2019) synthesized several definitions to conclude that resilience is a *dynamic process* by which individuals utilize protective factors and resources (including *traits*) to achieve an advantageous *outcome* amidst stress. Such a definition acknowledges the utility of assets and resources (internal and external) while conceptualizing resilience as the process by which resources and skills are adeptly applied across contexts to achieve the most advantageous outcome. We largely subscribe to this definition, as two important considerations arise from this conceptualization of resilience—modifiability (i.e., resilience enhancement) and context sensitivity. In Table 1, we highlight how the psychological flexibility model maps onto the dynamic process conceptualization of resilience.

Stainton et al. (2019) note that resilience can vary within one individual, fluctuating across circumstances and as a function of time. Moreover, not all assets or strategies will be equally useful in every context (Rutter, 1985). Bonanno (2021) highlights context-sensitivity as a part of the “flexibility sequence” underpinning resilience. This step provides the context-specific information required to guide all subsequent responses (Bonanno, 2021). Resilience may perhaps be bolstered (modified) by refining an individual's ability to select the most adaptive behavior for task completion from a large, contextually sensitive behavioral repertoire (Evans & Santanello, 2020). If individuals are enabled to enhance the primary components of resilience, they will be better equipped to deal with new problems *via* a range of strategies for different problems across their lifespan. In light of this, we consider resilience through the lens of psychological flexibility, a theory-based and cohesively defined construct, that has been associated with resilience using various methodological approaches.

Psychological flexibility

Psychological flexibility has been described as the ability to contact the present moment more fully *via* greater conscious awareness and intention and to change or persist in behavior in a way that is consistent with personally chosen values (Hayes et al., 1999). More succinctly, it has been defined as the pursuit of valued goals despite the presence of distress (Kashdan & Rottenberg, 2010). Psychological flexibility has been associated with the range of biopsychosocial outcomes thought to be supported by resilience and has been identified as the primary target for an intervention approach with the potential for enhancing resilience (Hayes et al., 2012). Six putative processes

Table 1. Psychological (In)flexibility Process Impact on Resilience

Psychological inflexibility process	Psychological flexibility process	Impact on resilience enhancement	Relevance to dynamic process definition of resilience (Stainton et al., 2019)
Rigid attention to past, future, or non-relevant aspects of the present moment	Intentional contact with the present moment	<ul style="list-style-type: none"> • Enhance environmental awareness • Increase intentional responding • Decrease ineffective reactivity 	Enhances context sensitivity
Experiential avoidance	Acceptance/Willingness	<ul style="list-style-type: none"> • Reduce disabling effects of unwanted internal experiences (i.e., thoughts, emotions, physical sensations). • Promote access to full behavioral repertoire • Increase flexibility and effectiveness in selecting the most adaptive behavioral response 	Skill
Cognitive fusion	Cognitive de-fusion	<ul style="list-style-type: none"> • Counter negative effects of “buying into” unhelpful/automatic thoughts • Increase psychological resource availability by reducing mental struggle associated with attempts to control unwanted thoughts 	Skill
Overidentification with a conceptualized self	Self-as-context	<ul style="list-style-type: none"> • Enhance context sensitivity by decreasing over identification with specific roles, identities, or judgments about the self • Decrease deleterious impact of stressful events on sense of self 	Skill
Lack of values clarity	Values	<ul style="list-style-type: none"> • Orient actions across contexts toward effectiveness, fulfillment, enrichment, meaning, and purpose • Provide teams and communities with shared framework for decision making and behavioral responding 	Resource and/or protective factor
Inaction/impulsivity	Committed action	<ul style="list-style-type: none"> • Ground behaviors in values approach (rather than experiential avoidance) • Continuously increase behavioral repertoire • Decrease dysfunction resulting from impulsivity or inaction 	Skill

support psychological flexibility and represent the targets of such an intervention. The processes of psychological flexibility and the inverse, inflexibility processes are summarized in Table 1. In addition, based on the abovementioned theories, we identify essential outcomes of process engagement relevant to resilience enhancement.

An effective response to challenges and stressors varies depending on fluctuating situational contingencies and, in the absence of resilience, can be easily thwarted by distress (Kashdan et al., 2020). Psychological flexibility enables action motivated by an individual's enduring values rather than by transient (even if distressing) internal experiences including thoughts, emotions, sensations, and urges. Moreover, psychological flexibility processes are inherently contextually sensitive. As noted by Kashdan and Rottenberg (2010), instead of a single optimal regulatory strategy across space and time, recent literature advocates a framework of optimal stress responding that defines this process in terms of contextually sensitive response selection based on the pursuit of meaningful goals. Indeed, this is reflected in the recent work of resilience scholar Bonanno (2021) in which he clarifies that context sensitivity is a fundamental component of the process underpinning resilience. Psychological flexibility as a process model provides such a framework for intervening on resilience by augmenting both coping repertoire and response selection skills.

Before describing how training focused on psychological flexibility may be well suited to enhance resilience, we briefly summarize some of the existing training models. In doing so, we will highlight, when available, the theoretical and empirical basis of the approaches.

Traditional models of military resilience training

A full review of the U.S. Army's efforts to enhance resilience in the past 20 years is beyond the scope of this review. Considering this, we present perhaps the two largest resilience programs in the U.S. Army in the past 20 years, namely Battlemind (see Castro et al., 2006; 2012) and Master Resilience Training (MRT; Casey, 2011). Underlying each of these is the concept of peer leadership and engagement. In Battlemind training, service members were provided pre-deployment training that was largely focused on how to be resilient in the deployed environment, and how these strategies no longer work and need to be adapted upon returning home. In this training, modules focused on psychological preparation for combat and were tailored for leaders, soldiers, and healthcare professionals. The second portion of Battlemind training was focused on “returning home” and encouraged service members to identify behaviors in themselves and others that were adaptive in the deployed combat environment but are counterproductive in non-deployed

settings. Specifically, service members were encouraged to hold themselves (and others) accountable and to be vigilant for service members who may be withdrawing from others as well as experiencing maladaptive behaviors surrounding their combat experiences (for a complete list see Castro et al., 2006). When used, Battlemind training was delivered to Platoon size elements (~25–60 persons) *via* a series of PowerPoint presentations (Castro et al., 2006). Due in part to its focus on combat experiences in the deployed environment, Battlemind training fell out of favor following the end of combat operations in Iraq.

The Army's current resilience enhancement and training program is the Master Resilience Trainer (MRT) course, nested within the Comprehensive Soldier Fitness Program (Casey, 2011). MRT is a module-based program that was developed as a "train-the-trainer" program and focuses on training noncommissioned officers and soldiers to recognize maladaptive cognitions (i.e., catastrophizing or overgeneralizing) and how to change them. The initial expectations of the MRT program were to prevent depression, anxiety, and PTSD (Reivich et al., 2011). Although Soldiers who undergo MRT training describe the training as useful (Griffith & West, 2013; Reivich et al., 2011) limited evidence (effect sizes ranging between .000 and .002) has emerged for the utility of the MRT program to enhance positive cognitions or reduce negative cognitions (Lester et al., 2011). Indeed, a report by the U.S. Army stated a key finding of the MRT program is that "there is no evidence that Soldier R/PH [resilience/psychological health] scores decrease or that Soldiers 'get worse' due to training provided by MRTs" (Lester et al., 2011). In the context of these findings, coupled with recent epidemiologic evidence that has shown increased diagnoses of PTSD in the military since 2009 (Judkins et al., 2020), it is clear that additional work remains.

Acceptance and commitment training to promote resilience by bolstering psychological flexibility

Among the most comprehensive recent summaries of the science of resilience is the Cochrane Report titled *Psychological Interventions for Resilience Enhancement in Adults* (Helmreich et al., 2017). The results of this report indicate that Acceptance and Commitment Therapy (ACT; Hayes et al., 2012) is among the evidence-based psychological interventions with the strongest scientific evidence supporting its potential adaptation for use in training to enhance resilience in adults. ACT is an evidence-based, cognitive behavioral approach to improving functioning, performance,

and well-being across a vast range of populations (clinical and non-clinical) by bolstering psychological flexibility (Hayes et al., 2004).

According to the ACT model, suffering and impairment are primarily the consequence of psychological inflexibility or the inability to persist in or change behavior according to situational or contextual factors and personally chosen values due to problematic, inflexible reactions to negatively evaluated internal experiences. Psychological inflexibility may be particularly detrimental when an individual is confronted with stress or adversity (Hayes et al., 2006). In ACT, the broad goal is to help individuals identify their values and to align their actions with those values even amidst pain or discomfort by engaging psychological flexibility more consistently across situations (Hayes et al., 2004). Thus, interventions that bolster psychological flexibility—ACT being the foremost in this field—have the potential to facilitate recovery following exposure to traumatic stress and for enhancing resilience (e.g., Elliott et al., 2019; Helmreich et al., 2017; Meyer, Kotte, et al., 2019).

ACT is rooted in a well-established theory of human language and cognition, Relational Frame Theory (Levin & Hayes, 2009), which describes how internal experiences (e.g., thoughts, emotions, sensations, and urges) are viewed as behaviors that can be predicted and influenced. Through ACT, these internal events are characterized as temporary phenomena, rather than as permanent states or qualities of the individual. ACT facilitates the development of a stance characterized by active acceptance and willingness to remain in contact with these transient experiences rather than allocating attention and energy to attempts to control, reduce, or eliminate these unwanted experiences. This has broad implications for psychological functioning due to the bi-directional links among cognitions, emotions, and physiological sensations.

Examples of aversive internal experiences that may be targeted in ACT-based training include painful sensations associated with lack of oxygen, emotions, such as fear, and thoughts, such as "I can't stand it" or "It's not worth it." Under most conditions, attempts to consistently control, suppress, or eliminate these common physical and psychological reactions will be unsuccessful. Thus, a behavioral stance characterized by active acceptance of these aversive internal experiences is more adaptive, as it increases the availability of personal resources for optimizing volitional control over one's behavior. This behavioral control may then be optimally applied toward goal attainment.

Consistent with the ACT model, the recent Cochrane report listed psychological flexibility, the

central target of ACT, as having the highest tier of evidence support for promoting resilience (Helmreich et al., 2017). Specifically, more systematic reviews and meta-analyses were included in the report for psychological flexibility than any other single factor. The report delineated how ACT is likely to enhance resilience by bolstering psychological flexibility specifically through teaching mindfulness and acceptance skills (e.g., contacting the present moment, cognitive defusion, acceptance of transient emotional distress) along with behavior-change skills (e.g., committed action). In this way, the report authors posit several resilience factors will be fostered in ACT-based resilience interventions (e.g., cognitive flexibility, purpose in life). In particular, based on the available evidence, the report emphasized that acceptance of the full range of emotions, particularly those that are uncomfortable and that are often associated with behavioral avoidance, likely promotes successful adaptation to stressful conditions (i.e., resilience; Helmreich et al., 2017).

Evidence base for ACT for resilience enhancement

As of September 2021, there were 838 published or in press randomized controlled trials demonstrating the efficacy of ACT for improving functioning among people living with a wide range of psychological and physical conditions, syndromes, and injuries (ACBS, 2021). ACT has been found to improve well-being and functioning across a range of conditions, including those involving intense physical and emotional distress. A smaller but compelling body of literature demonstrates the effectiveness of ACT for optimizing functional outcomes in diverse domains under stressful conditions (Finnes et al., 2019; Moran, 2015), completing physical exercise regimens (Ivanova et al., 2016), improving parenting skills (Meyer et al., 2018), adhering to dietary restrictions (Levin et al., 2021), and improving family reintegration following military deployment (Sandoz et al., 2015). A few areas of study demonstrate the potential of ACT-based training for enhancing resilience and optimizing readiness among military personnel

ACT for promoting resilience

ACT-based group interventions targeting resilience have demonstrated feasibility and yielded positive changes across a range of indices of resilience in adults both with and without existing behavioral health diagnoses (Burton et al., 2010; Ryan et al., 2020). In an ACT-based psychosocial resilience training piloted in a (non-military) workplace setting, there was a significant

improvement between baseline and post-intervention scores on measures of mastery, positive emotions, personal growth, mindfulness, acceptance, stress, self-acceptance, engagement in behaviors consistent with participants' personal values, and autonomy (Burton et al., 2010). Many of these factors have been implicated as facilitators or components of resilience (Helmreich et al., 2017). Participants in this program rated it and its component materials very positively. These results indicate that an ACT-based program for resilience enhancement is feasible to implement as a group training program.

ACT in workplace settings

Research into the application of ACT-based interventions in (non-military) workplace settings suggests that greater psychological flexibility is a mechanism that improves work performance, job satisfaction, training outcomes, and mental health while reducing work stress, absenteeism, burnout, and job-related errors (Bond & Flaxman, 2006; Moran, 2015). When employed as an organizational training model, ACT is often referred to as Acceptance and Commitment Training (ACTraining) because it is not functioning as a therapy or treatment. ACTraining has demonstrated effectiveness in increasing work performance (Moran, 2015), reducing work stress (Bond & Bunce, 2003; Flaxman & Bond, 2010), increasing innovation (Bond et al., 2011), and reducing work errors (Bond & Bunce, 2003). These effects remain significant even when controlling for well-established predictors of work performance (i.e., emotional intelligence, Big Five personality traits; Bond et al., 2006).

ACT to increase pain tolerance

Core components of ACT have been shown to increase pain tolerance, operationalized as increasing the amount of time spent on the task before quitting. Participants exposed to a cold pressor pain task were randomly assigned to take one of three approaches to deal with pain: acceptance-based, suppression-based, or spontaneous coping (Masedo & Rosa Esteve, 2007). The acceptance-based group reported the longest pain tolerance time, as well as lower subjective pain and distress ratings than the other two groups, which did not differ. Moreover, the acceptance group reported less of a pain "rebound" effect during a recovery period, suggesting that the salutary benefits of acceptance are stable. More recently, those randomized to a brief values-based intervention that was based on the ACT model demonstrated substantially increased tolerance during a cold pressor pain task compared to a control

condition (Smith et al., 2019). Specifically, compared to a pre-intervention trial, the values-based intervention led to a 55% increase in pain tolerance, whereas the control condition reported a 12% decrease in pain tolerance at follow-up. Taken together, these studies indicate that ACT-based processes promote task persistence under stressful conditions including physical pain. By contrast, coping methods that people use on their own without instruction often lead to a paradoxical reduction in pain tolerance. These findings point toward the potential of an ACT-based resilience enhancement program to promote success during military training and operations, which include exposure to a range of highly aversive physiological stimuli including pain.

ACT for performance enhancement

The field of performance psychology has incorporated ACT-based interventions, particularly to enhance athletic performance. For example, García et al. (2004) designed an ACT intervention for elite athletes that led to higher levels of performance on physical exercise tasks compared to an active control intervention. A similar study examined the effectiveness of ACT for young, elite golfers (Bernier et al., 2009). Results indicated that, after one year, all participants in the ACT program improved their national ranking, whereas only 33% in the control condition increased their ranking. Other studies have also demonstrated positive outcomes of ACT-based interventions for performance enhancement (e.g., Gardner & Moore, 2004; Wolanin, 2004).

ACT for team building and leadership strategies

The burgeoning research on ACT training provides an early indication of the potential of ACT-based training for improving group functioning in the military workplace (e.g., Bond & Flaxman, 2006; Moran, 2015). Specifically, ACT training has been found to enhance functioning in collaborative workplace settings. ACT training has also been applied to develop “crisis-resilient change managers” (Moran, 2010). In the military context, implementation of such training may be useful in enhancing unit and group cohesion/efficacy as well as allowing military leaders to feel more prepared to engage in shared leadership practices (Gomes et al., *in press*).

ACT for resilience enhancement in military personnel

The following sections briefly describe how each of the six core processes of ACT may be applied to

enhance resilience in military personnel. These sections are written with consideration of the limitations of existing resilience enhancement interventions. We include recommendations for adapting the unique language and exercises central to ACT to best resonate with military populations, as well as in training (as opposed to treatment) settings more broadly.

Present moment contact

Zinn (1994) defined the process of mindfulness as paying attention to purpose in the present moment, non-judgmentally. Indeed, ongoing, non-judgmental awareness of psychological and environmental events allows for a more direct experience of the world and environment. This direct and descriptive (rather than evaluative) relationship with each unfolding moment provides the foundational psychological stance from which optimal behavioral responses can be chosen and enacted. Meditation practices, as well as strategies for imbuing mindfulness into daily life, are a cornerstone of ACT-based interventions. When seeking to alleviate suffering stemming from attentional rigidity, interventionists cultivate intentionality in orienting attention to the present moment with a less critical and more curious perspective.

This orientation and posture represent constituent parts of *situational awareness* and are essential for the subsequent components of situational awareness, including comprehension of meaning and projection of status in the near future. Conversely, rigidity in attentional focus and reactivity to stimuli inhibit situational awareness and decrease adaptability across contexts. Importantly, this is not to say that selective attentional focus, intentional evaluation of the past or possible future circumstances, and rapid reaction to life-threatening circumstances are universally detrimental. Rather, in high-threat and high-tempo military combat environments, these behaviors are likely essential to survival. However, in other important, less volatile contexts (i.e., family life, community activities, “everyday” work demands) where objectives extend far beyond survival and task completion, intentional orientation to the present moment, a non-defensive posture toward experiences, and nonreactivity to (even aversive) internal and external stimuli are often beneficial. These different approaches to situational awareness highlight the importance of taking a functionally and contextually based approach to resilience training.

Even inside operational contexts, mindfulness and other centering strategies have been employed to decrease attrition resulting from training injuries (Udell et al., 2018) and decrease attentional lapses over high-demand

intervals (Jha et al., 2015). Outside the scope of this summary is a lengthy list of the tasks that may be enhanced through intentional, non-judgmental, and non-defensive contact with the present moment. This process is foundational to environmental and psychological situational awareness and to cultivate an ability to orient intentionally, adopt a curious posture, especially toward internal experiences, and moderate the level of reactivity to the context and task.

Acceptance

Acceptance, synonymously referred to as willingness, is introduced in ACT as a workable alternative to largely unworkable attempts to control internal experiences (i.e., thoughts, emotions, physiological sensations). This openness involves actively and intentionally acknowledging and even embracing negatively evaluated internal experiences without engaging in unnecessary and ineffective efforts to alter their form, frequency, or intensity. This approach is advocated when internal experiences are not under one's direct control, when control attempts may amplify the experience (e.g., when attempts to suppress an unwanted thought lead to a rebound effect), or when the long-term costs of prioritizing control are disproportionately high.

For resilience enhancement, acceptance is an essential and powerful behavioral response and one that represents a more workable strategy in a range of contexts and for several objectives. That said, acceptance may be misunderstood as representing concession, weakness, laziness, and lack of skill or perseverance. Acceptance may be particularly susceptible to being misconstrued within the military culture. In our experience in clinical and training contexts with service members and veterans, phrases, such as “embrace the suck,” that may align well with the ACT model, may also be misinterpreted to mean suppress feelings, banish thoughts, and be tougher/stronger/better in the face of adversity, which stands in opposition to the notion of acceptance or willingness from an ACT perspective. There are times when attempting to suppress unhelpful emotions and thoughts is an appropriate strategy in the short-term; however, these circumstances are likely limited to those in which survival is the primary if not the sole objective. This sort of avoidance is best thought of as a short-term solution, whereas the long-term consequences of rigidly engaging such avoidant coping strategies are evident in the literature describing predictors of PTSD, depression, substance use, and suicidality in service members and veterans (e.g., DeBeer et al., 2018; Elliott et al., 2019; Meyer, Kotte, et al., 2019; Meyer, La Bash, et al., 2019; Meyer et al., 2018).

ACT practitioners and trainers routinely teach clients and trainees that unworkable control attempts are problematic and suggest acceptance as a more workable alternative in many contexts. However, given the utility of short-term emotional control in highly specific, high-stakes situations (i.e., when survival is at stake), this aspect of the psychological flexibility model requires some translation to be an impactful element of military resilience training. Specifically, we suggest that acceptance be integrated into teaching that it is the rigid application of control-based strategies across contexts (e.g., applying a “combat mindset” to a non-combat situation) that hinders performance and causes unnecessary suffering. Flexibility in selecting and executing coping strategies across contexts is proposed as a more effective alternative and more conducive to promoting resilience. Trainees may be taught that inflexible application of even “positive” approaches or skills (e.g., stoicism, meticulousness, alertness, preparedness, uniformity, strength) can lead to suffering and limit effectiveness when that rigidity hinders awareness of or access to alternatives that may be more workable in a given situation. Agility as an alternative to rigidity entails dexterity in orienting to the intended target (i.e., to what matters most) across situations and then selecting the most effective response. This requires practice, particularly when service members have engaged in extensive training in certain response styles or when more workable responses are less familiar or comfortable to the service member. The benefits of acceptance for resilience enhancement are likely apparent in terms of fostering one's ability to “hold” emergent emotional distress without devoting undue energy to ineffective attempts to eliminate the distress.

Defusion

ACT (and all contextual behavioral approaches) departs from other cognitive-behavioral interventions in terms of responding to unhelpful thoughts. Rather than teaching strategies for critically evaluating and changing the form of unwanted thoughts, defusion involves (1) cultivating the ability to observe the transient nature of thoughts; (2) gaining perspective by stepping back from thoughts to see them as ongoing, internal processes rather than as literal truths about oneself, others, or the world; and (3) disentangling (i.e., defusing) from thoughts rather than automatically buying into them (i.e., fusion) and/or struggling against them. In short, ACT interventionists seek to alter the *function* rather than the form of thoughts and, in doing so, increase the likelihood that service members will act meaningfully and effectively amid unhelpful thoughts.

Defusion is likely to represent the most crucial process for enhancing resilience in military personnel for several reasons. Rigidity around rules (especially those about toughness and performance) is characteristic of military culture. Thoughts, when rigidly “bought into,” are often transformed into rules or, in the military context, orders. In many contexts, both within and outside of military life, inflexibility in one’s relationship with thoughts-as-rules hinders resilience, narrowing one’s field of vision from broadly focusing on values to specific tasks. Such narrow focus also limits the development and implementation of a broader range of behavioral responses (i.e., growth). Cognitive fusion limits performance and well-being by hindering context sensitivity. It should be noted, too, that current military resilience training programs are largely comprised of cognitive interventions that may perpetuate another toxic quality of fusion with thoughts—the belief/rule that one must defeat or at least distract oneself from unhelpful thoughts to perform and live well. Defusion as an intervention is not predicated on the notion that “bad” thoughts need to be banished or controlled or that individuals should seek to replace such thoughts with “good” thoughts. In fact, defusion does not require that individuals change anything about their thoughts, but rather fosters an alternative to and freedom from that often fruitless endeavor. Defusion practices encourage trainees to notice their thoughts and to gain skills in which thoughts to “buy in to” vs. those that are better left “on the shelf,” depending on the situation. Thus, the process of defusion is far more flexible than alternative approaches, such as cognitive restructuring or positive thinking. This flexible application renders cognitive defusion interventions well-suited as an element of resilience enhancement by teaching skills for detaching from thoughts associated with emotional distress.

Self (as context)

Contacting one’s self-as-*context* refers to connecting with the sense of self that is the observer of one’s experiences. This supports awareness of the ongoing flow of internal experiences without unhelpful attachment to them or over-investment in which experiences (i.e., “good” or “bad” experiences) occur. This is contrasted with self-as-*content* in which one’s identity becomes entangled with internal experiences. Engaging in this process enables service members to observe (rather than react to) their experiences, step outside of rigid rules, attachments, and expectations to more consciously decide how to respond in the moment. More broadly, engaging self-as-context increases one’s sense of self as more than any particular identity, role,

or event. ACT practitioners employ metaphors to support comprehension of and connection with this sense of self. Common metaphors used in ACT to illustrate this concept include viewing the self as (1) the stage on wherein actors represent one’s internal experiences and may come and go; (2) a chessboard that holds and makes contact with the opposing pieces that represent both wanted and unwanted internal experiences but is not invested in the outcome of the game; (3) or an author who composes stories rather than the characters who are bound to the story arc.

Adopting and continuously engaging or re-engaging life from this perspective, is necessary for resilience inasmuch as it frees service members from the limitations imposed by engaging from the perspective of self-as-content (i.e., overidentification with experiences, expectations, evaluations, labels). This sense of self grounds individuals in the awareness of self as continuous and complete and offers a vantage point from which situational or contextual clarity and, thus, behavioral flexibility is more likely to occur. In the context of military resilience enhancement training, self-as-context work should entail (1) increasing experiential contact with this perspective through experiential exercises, and (2) encouraging service members to engage fully from the perspective of a certain role/identity in certain contexts (i.e., fully embodying the warrior role in a combat situation) and then moving freely and intentionally into a new role/identity or re-contacting self-as-context as necessary to “reset” in another situation. Engaging with the self-as-context perspective is a powerful tool for gaining perspective in relation to maladaptive narratives that frequently emerge following extreme stress and trauma and that often impede recovery following such experiences.

Values

Each of the aforementioned processes, while on their own are intended to relieve suffering, is largely engaged in the service of creating the conditions necessary for values-aligned living. Values are personally chosen qualities of purposive action that reflect the guiding principles for how one most deeply desires to engage in the world and the virtues one stands for in life. ACT interventionists often begin a course of care with a values clarification exercise. Often those suffering have lost sight of (or have never clearly defined) their core values. This exercise orients or reorients them in the direction of their values, motivating attitudinal and behavioral change. Engaging the abovementioned processes supports effective responses to internal and external stressors so that life’s journey may be

motivated and dignified, to the greatest extent possible, by the continuous pursuit of values rather than by avoidance of discomfort (Gloster et al., 2017).

While not necessarily permanent, values are often enduring and deeply rooted in one's upbringing and ongoing development. Multiple, powerful cultural influences inform personal values. For example, families, teachers, coaches, faith communities, friends, and military culture individually and dynamically influence the development of individuals' personal values. Similarly, each branch of the military seeks to indoctrinate personnel in a set of core values. Understanding values as ongoing *qualities* of purposive action—rather than discrete actions or goals—becomes essential for long-term planning and optimizing performance. Connecting discrete actions with broader values imbues action with deep purpose and establishes a framework for understanding and relating to tasks and requirements, especially those experienced as aversive. In the military context, values indoctrination establishes a shared framework to promote cohesion. Resilience may be enhanced through individual and collective identification of values *via* the orienting function of values as guideposts for selecting the most effective behaviors for continually moving toward these values. Continually connecting and re-connecting with values as guides for behavioral choices thus promotes effectiveness, fulfillment, enrichment, meaning, and purpose. Importantly, as contrasted with goals, values represent life directions that may not be achieved in any permanent sense—they may only be continuously pursued. Where this becomes tangible is through consistent, committed, values-oriented action. In the context of resilience enhancement, maintaining or re-engaging with a values-based orientation clarifies and deepens one's connection with “the mission” while increasing awareness of how emotional distress may be impeding values-consistent behavior.

Committed action

Committed action entails establishing goals and enacting behaviors that are rooted in and motivated by personally chosen values. Each of the aforementioned processes is engaged in the service of overcoming psychological barriers that impede committed action. Over time and with consistent engagement, this facilitates the expansion of behavioral repertoires to meet context- and task-sensitive challenges. In other words, if values are the compass and the openness/awareness processes provide the necessary tools for navigation, committed actions represent each step on the journey. That said, flexibility in the *form* of each action is key.

While values do tend to be enduring, the *ways* in which values are most effectively instantiated varies across contexts. A limited repertoire of values-consistent actions leads to context insensitivity and myopic focus on short-term goals disconnected from the pursuit of broader, enduring values. For military personnel, a value of integrity may be engaged differently in garrison, in a firefight, in traffic, and at the dinner table with family. Optimal functioning across contexts requires awareness of this need for behavioral flexibility and the long-term outcomes of behaviors in each setting. Resilience is then engaged *via* the willingness and agility to change tacks while maintaining the values-aligned course. Resilience training from a contextual behavioral framework then prepares personnel to clarify core values (personal and those of their branch of service) and to engage those values with conscious awareness, an enhanced sense of commitment, and greater context sensitivity.

Discussion

We posit that bolstering psychological flexibility *via* ACT-based training has the potential to enhance resilience in military personnel. Further, as compared with the varying conceptualizations of resilience, the theory-based and cohesively defined construct of psychological flexibility likely represents a useful target in the pursuit of enhancing what has traditionally been termed as resilience. ACT was originally developed as a psychological intervention to promote functioning and well-being in the face of mental health challenges (Hayes et al., 1999). Included among the more than 800 randomized clinical trials examining ACT are numerous trials that have reported long-term maintenance of gains. In the over 20 years since its original development, the ACT model has been extended well beyond the boundaries of mental health treatment into such realms as physical health promotion, modifying the practices of health professionals, performance enhancement in diverse settings, and promotion of prosocial behavior.

A review of the first decade of ACT-oriented research concluded that the explicit intervention target of ACT, psychological flexibility, is a “fundamental aspect of health” (Kashdan & Rottenberg, 2010). Thus, ACT has a high potential to promote both immediate and long-term psychological health and well-being in service members. The broad nature of ACT, both as a transdiagnostic approach to mental health intervention and as a training method, underscores the ability of the intervention to address diverse goals and populations. ACT has been employed worldwide to

support optimal functioning for individuals in a vast range of settings, with diverse backgrounds in terms of culture, education, occupation, adverse experiences, and prior experience with psychological interventions. The literature also highlights that ACT is an acceptable intervention that is associated with high participant satisfaction, including numerous trials with military veterans (Afari et al., 2019; Lang et al., 2017; Phillips et al., 2020; Reyes et al., 2022; Roddy et al., 2020; Walser et al., 2015) and a smaller number of trials with active duty military personnel (Lang et al., 2017; Ramirez et al., 2021).

The authors of this current manuscript are testing the efficacy of an ACT-based psychological flexibility training program as compared to resilience training as usual in active duty military personnel. The project is titled *Enhancing Resiliency and Optimizing Readiness in Military Personnel*, and it is funded by the Department of Defense's Military Operational Medicine Research Program and the Psychological Health and Traumatic Brain Injury Research Program (W81XWH-19-1-0628; Principal Investigator: Alan Peterson). The study is a randomized clinical trial and the ACT-based psychological flexibility training program includes many of the constructs outlined in this manuscript. The comparison training program is the Army's Master Resilience Training program, which is part of the Comprehensive Soldier Fitness Program (Casey, 2011; Griffith & West, 2013; Lester et al., 2011; Reivich et al., 2011). The results of this study are anticipated to provide novel data on the potential for utilization of an ACT-based, evidence-informed intervention to enhance resilience and optimize readiness in military personnel.

Transparency statement

Discussion of ACT processes and practices as tailored to active duty service members' needs and experiences and recommendations for targeting processes and procedures to resilience enhancement are drawn from the scientific evidence base as well as the authors' knowledge base of ACT and psychological flexibility including extensive experience working with military personnel, veterans, and healthcare providers serving these populations.

Disclaimer

The views expressed herein are solely those of the authors and do not reflect an endorsement by or the official policy or position of the Department of Defense, the Department of Veterans Affairs, the U.S. Government, or the authors' universities.

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