Review Article

Personal resilience and coping with implications for work. Part I: A review

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Abstract.

BACKGROUND: Interest in resilience has increased in recent years. The U.S. military focus is on personal health and adaptation following exposure to battle, while the civilian interest centers on adjustments subsequent to disastrous events. Coping skills are also relevant, yet the relationships between coping and resilience are unclear.

OBJECTIVE: This brief review examines personal resilience and individual coping strategies, exploring definitions of each, along with their potential relationships to one another. Their potential contributions within a work setting are described.

METHODS: A literature review was conducted using search terms of resilience, resiliency, personal resilience, coping and resilient coping.

RESULTS: Coping refers to one's using purposeful actions to handle life situations. Coping techniques can be functional or dysfunctional and the situations one copes with may be acute or long term, severe or minor. Resilience refers to positive and functional handling of oneself and ones' life, referring to the ability to recover, recuperate, and regenerate following tragic events.

CONCLUSIONS: While coping and resilience are related to one another, they are distinct concepts. Positive coping techniques may contribute to resilience. However, which coping techniques improve resilience, and in what circumstances, are questions for future research.

Keywords: Trauma, active duty, veteran, training

1. Introduction

Increasing interest in personal resilience has followed catastrophic events and environmental disasters, such as U.S. troop involvement in Iraq and Afghanistan; the 9/11 attack in New York City, NY; recent bombings in Paris; shootings in San Bernardino, CA; and extreme storms, earthquakes, and floods. Articles abound regarding individuals, businesses, schools, communities, and countries seeking to increase their resilience. Individuals and groups want to improve their ability to withstand, recover, return, and thrive. That is, they want to withstand adversity, recover from calamity, return to normalcy, and continue to grow and prosper, while simultaneously acknowledging the severity of the situation they have experienced.

In the open literature, it is not always clear whether the constructs of resilience and coping are same, similar, different from one another, how they

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might overlap, or whether one "feeds into" the other. Depending on which articles one reads, coping may be considered a subcomponent of resilience or vice versa; positive coping may refer to the actions taken by a resilient person; or the concepts within each may differ from one another.

Within the U.S. military, the stress of combat is considered an occupational hazard [1] and can be debilitating [2]. Soldier resilience is of utmost importance [3] and U.S. soldiers receive resiliency training (see http://www.army.mil/readyandresilient/). However, specific methods of coping are not necessarily taught as part of resilience training and the relationship between ones' coping strategies and their resilience is not well understood.

Understanding coping and resilience will benefit both the civilian and military sectors and impact training provided in each. This brief review examines personal resilience and individual coping strategies, exploring each and their potential relationship to one another, and probing their potential contributions within a work setting.

2. Literature review

2.1. Resilience

Resilience is the ability to encounter and move through significant hardship [4], while continuing to function effectively in basic life tasks, such as continuing to work, interacting with and maintaining relationships with friends and relatives, and remaining interested and involved in leisure pursuits. For individuals, this process of positive adaptation [5] includes maintaining a "stable trajectory of healthy functioning across time" [6] (p. 21).

While the definition of resilience refers to moving through and recovering from adversity, this does not imply that resilience is short-lived – occurring only in the face of a singular hardship. Some research has shown that individuals who are resilient tend to show healthy, long-term psychological functioning [7]. Other findings show that resilience is not predictably stable over time, as resilience is influenced by internal and external factors and life experiences [8]. Resilience is also differentially defined and influenced by culture [9]. Thus, resilience is an on-going process [10, 11] and individuals may be more resilient during one period of their lives than another. Rather than being a singular quality that one is born with, resilience develops over time and is influenced by

perceptions, culture, family, experiences, and training [12–16].

The characteristics described as associated with resilience are similar among those who study and write about the topic (Table 1). As an example, Antonovsky [32, 33] wrote of Sense of Coherence (SOC) as a conceptual explanation of overcoming adversity. SOC contains three components: comprehensibility, manageability and meaningfulness. Comprehensibility refers to recognizing both the world and the hardship one is facing as explicable. Manageability suggests a conviction regarding the capability to handle the situation(s) oneself or with the help of others. Meaningfulness denotes identifying sense and value in overcoming hardship. Similar characteristics, with slightly different names and/or descriptions can be seen in Table 1. Meaningfulness as described within the SOC framework is similar to 'meaning making', and manageability might include concepts of a 'can do' attitude, commitment and active involvement, mastery and problem solving.

The characteristics associated with resilience may exist prior to facing adversity, and as such may be considered to enhance or promote resilience, or perhaps be preventative in nature. However, according to some researchers, these same characteristics may develop after exposure to trauma, as part of a post-traumatic growth (PTG) process [22, 34]. Post-traumatic growth refers to the process during which one's struggles lead to positive psychological development, often deeply meaningful for the individual. However, post-traumatic growth does not occur for everyone [22, 34]. It is not known for certain whether those who were considered to be resilient before exposure to trauma or tragedy are more likely to benefit from PTG than those who were not resilient [34], and research is ongoing in this area [35].

Of particular relevance to businesses, companies, and the military are findings that resilience is related to workplace performance [13, 15, 17, 36–38]. In a workplace context, resilience has been re-defined as the "positive psychological capacity to rebound, or 'bounce back' from adversity, uncertainty, conflict, failure or even positive change, progress, and increased responsibility" [39] (p. 702). Note that resilience is mentioned in terms of 'bouncing back' from both negative and positive situations and experiences in this context. Individuals who are more resilient are considered to be more adaptive within the perpetually changing workplace [40, 41] and may contribute to a more resilient organization. Resilience is positively related to job satisfaction, work happi-

Table 1
Characteristics of resilience

- Accept reality/face facts - accept what they cannot change [17–21]
- Appreciation of life/gratitude [19, 22]
- "Can Do" attitude – initiative taking and tenacity [23–25]
  - Pragmatic coping "whatever it takes"
- Cognitive/Brain Fitness [19, 21, 26, 27]
  - Ability to attend on demand, including reducing distractions
  - Cognitive reappraisal
  - Cognitive flexibility
- Commitment & active involvement [14, 28]
- Confront (face) their fears [19]
- Control – a determination to influence outcomes [14, 28, 29]
- Emotional Fitness [19, 21]
  - Self-regulation (adjusting emotions & behavior to fit internal and external social constraints)
  - Stability
  - Take responsibility for their own emotional well being
  - Emotional flexibility
- Flexibility – ability to improvise, and possess a 'challenge orientation' [14, 17, 29, 24]
- Hardiness [24]
- Humor [19, 20, 27]
- Mastery - steering oneself in a goal-directed manner and experiencing success en route [21]
- Meaning making - making meaningful sense of hardship and looking for opportunity in adversity [17, 19, 23]
- Moral Imperative/Moral Compass [19]
  - Altruism/give back
- Optimism, hope, seeing new possibilities while remaining realistic [19, 22, 24, 30]
  - Dispositional optimism
- Personal Strength [22]
- Physical Fitness (& exercise) [19, 21, 30],
- Problem solving [19, 20, 31]
  - Active
  - Approach based
  - Problem-focused/goal directed (constructive use of resources to identify and act on solutions)
- Religion/Spirituality [19, 22]
- Role Models - have and imitate sturdy role models [19]
- Self-care [19]
  - They take care of themselves, health, well-being and fitness
  - Physical, Brain/Cognitive, Emotional
- Social Support [19, 20, 22, 25, 27, 30]
  - Constructive Attachments (bonding with supportive others)
  - Being able to ask for, receive, and use social support
  - Relating to others
  - Reaching out to other survivors

NOTE: This is not an all-inclusive list, as many other authors and papers have contributed to this body of knowledge.

ness and organizational commitment [37]. Personal resilience can contribute to employees' commitment to change by engendering positive emotions during organizational transformation [40]. Table 2 shows the components of resilience from one measure of resilience, the Resilience Scale [42] and their potential impact on the workplace. Developing work-related personal resilience does not happen in a vocational vacuum, as one's family [43, 44] and other factors influence resilience building. Moreover, individual resilience is only one part of developing team, organization, or community resilience [45].

Studies have discussed the factors that promote resilience beyond the individual level, such as within families, organizations, or communities [21, 46]. In a team setting, leaders' confidence, intellectual stimulation, individualized consideration, and contingent award systems have been positively associated with subordinate resilience [36]. In a workplace, support from peers, team members, managers, and company culture are all factors that contribute to employee resilience [47]. Examples of workplace or company resilience, both of individuals and of a company as a whole, are exemplified by the recovery of Reuters America [48] and Southwest Airlines [49] following the terrorist attacks in the U.S. on 9/11. Kimhi and Shamai [50] describe community resilience as containing three elements: resistance, recovery, and creativity. Creativity addresses the community's ability to originate and recreate opportunities for growth

Table 2
Five essential components of the Resilience Scale and their possible work relevance*

Survey Items	Work relevance
Self-Reliance	
• I usually manage one way or another	• "Can do" attitude
• I feel that I can handle many things at a time	• Able to supervise or participate in multiple projects at once
• I can get through difficult times because I've experienced difficulty before	• Self-confidence about handling work
• In an emergency, I'm someone people can generally rely on	• Being reflective of one's capabilities and limitations at work
• When I'm in a difficult situation, I can usually find my way out of it	• Learns from past experiences, building problem-solving skills
	• Trustworthy – has "co-workers back"
	• Innovative with problem solving
Meaning	
• I feel proud that I have accomplished things in life	• Takes pride in work and achievements
• I keep interested in things	• Open-minded
• My life has meaning	• Understands the purpose of one's work and how it benefits the society
Equanimity	
• I usually take things in stride	• Can regulate emotions
• I can usually find something to laugh about	• Adaptive, flexible
	• Optimistic, uses humor
	• Uses positive emotions to deal with stress
Perseverance	
• I am determined	• Sets goals and is persistent in achieving them, motivated
• I have self-discipline	• Can manage own time, stay on task
Existential Aloneness	
• I am friends with myself	• Offers compassion to oneself, takes care of one's needs, good at working alone, may decrease burnout
• My belief in myself gets me through hard times	• Aware of own unique contribution to the work place
	• Confident in one's own skills and abilities

*It might also be expected that an individual who is more resilient would have a more balanced perspective of their work and a better work-life balance.

and revival after encountering disaster [51]. Amit and Fleischer [52] have published on the concept of national resilience in terms of sustainability and strength. National resilience is thought to be influenced by patriotism, optimism, social integration and trust [53].

2.2. Coping

Coping per se is not typically considered a characteristic of resilience (Table 1). Coping has been described as "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" [54] (p. 141). These 'demands' vary from day-to-day problems [31, 54–56] to serious trauma [57]. While everyone uses coping skills, not everyone who uses coping

skills is resilient, as explained in the following paragraphs.

Not all coping approaches are helpful. Unlike resilience, which is defined as positive adaptation to change, coping techniques may be helpful or harmful in regard to both the immediate situation, as well as to the psychological health of the individual. One's understandings of life situations and their coping responses can either result in additional suffering or contribute to assuaging the problem [58]. Two positive coping styles are problem-focused coping and emotion-focused coping [59–62]. For example, the COPE Inventory (Coping Operations Preference Enquiry) identifies three primary coping styles: problem-focused coping, emotion-focused coping, and dysfunctional coping [61]. These categories are further divided into 14 subcategories. These subcategories are described, and their likely

relationships to work settings are shown in Table 3. For example, *active coping* is a type of problem-focused coping, referring to one's attempts to regulate or control the stressor. *Active coping*, along with good mental and physical health, is related to successful aging and a person's ability to work [62]. Meanwhile, another coping style - *avoidant coping* – is a technique in which one attempts to avoid the stressor and its consequences and it is negatively related to work ability [63]. Successful coping is considered to be adaptive and can include self-reflection, planning, dynamism and multidimensional thinking [64, 65]. One's coping strategy can ultimately influence their physical [66, 67] and emotional health [68].

The development of appropriate coping mechanisms is thought to be part of a healthy growth process and fundamental to social-emotional functioning [68] and overall well-being [68–70]. Like resilience, coping changes developmentally and experientially across one's lifespan [71]. Also, like resilience, coping is related to one's perceptions. Individuals' coping abilities are instrumental in their appraisal of situations and key in their adaptation [69, 72]. Again, coping refers to encounters in everyday life, as well as with great distress, while resilience refers to dealing with adversity and trauma rather than with commonplace circumstances.

Coping strategies can be learned and therefore can be trained. In an investigation of cognitive-behavioral training of Australian Army recruits, the intervention group received specific instruction on coping strategies [73]. At the end of basic training, recruits receiving the instruction reported less use of negative coping strategies, more positive states of mind, and less psychological distress than the control group [73].

Ineffective coping can also be learned, potentially developing through repetition [73]. That is, if a person experiences an untoward event and responds in a protective, yet ineffective manner a few times, then a conditioned response can begin to develop. In the future, a situational trigger is likely to yield similar results. This conditioned response may need to be deconditioned. Ledoux and Gorman [74] suggested those with Post Traumatic Stress Disorder have incurred such persistent emotional conditioning in the form of "memories that seize control of mental life and behavior" (p. 1955), but they submit these responses can be rerouted through the learning of adaptive coping. Organizations may need to train employees on how *not* to use dysfunctional coping during challenging situations, instead engaging in positive coping strategies [66].

Van den Heuvel and colleagues suggest that promoting positive coping styles and health can sustain employability [63]. However, individuals high in *active coping*, but without an option for having control over their work, can become frustrated and emotionally exhausted [75]. Coping skills have been found to be important influences on work engagement in a wide range of fields such as police recruits [76] and among nurses and midwives [77]. More specifically, *problem-focused coping*, low use of *avoidance coping*, and low use of *venting of emotions* (as a coping strategy) predicted work engagement among nurses [78]. It can be seen from these examples that while coping skills are related to one's abilities in the workplace, the relationship can be complex and differ per occupation or set of job requirements.

2.3. Resilience and coping

While information on the relationship between resilience and coping can seem ambiguous, according to Glennie [57] (p. 169), "Although coping and resilience are related constructs, they are distinct in that coping refers to a wide set of skills and purposeful responses to stress, whereas resilience refers to positive adaptation in response to serious adversity." Coping refers to actions taken to deal with any type of stressors (large or small, daily or long-term), while resilience refers to the result of positive coping strategies following significant tragic events. Coping skills can be positive, negative, or dysfunctional, thus not necessarily leading to improved functioning, while resilience denotes beneficial adaptation only. A number of questions arise from this brief review, some of which will be addressed in the recommendations.

3. Recommendations

The recommendations from this review include use of the terms resilience and coping in publications, as well as suggestions for future research.

Publications on resilience and coping should refrain from using the terms interchangeably, as this confuses the issues for readers. For example, some articles refer to their outcome measurements as assessing both resilience and coping; however in reading the articles, testing includes coping scales, interpersonal skills, social impact measures, or interviews, but no specific measures of resilience

Table 3
Brief COPE subscales, definitions and work relevance

Subscales	Definitions	Work relevance
Emotion-Focused Coping		
Acceptance	Accepting the reality that the stressor happened and learning to live with it	Accepts work place situations that are out of one's control and focuses on examining possible solutions
Emotional Support	Getting moral support from others	Willing to receive or seek support, sympathy from coworkers
Humor	Using humor and making fun of the stressor	Humor can engender positive emotions and laughter, buffer against depression, and reduce stress, and therefore yield a more positive workplace
Positive Reframing	Viewing a stressor in positive terms that should lead to active, problem-focused coping	Seeing things in positive perspectives and promoting a positive working environment
Religion	Using one's religion as a source of emotional support and an active coping	Religious beliefs can encourage a positive attitude, positive reinterpretation, and individual growth in workplace
Problem-Focused Strategies		
Active Coping	Taking steps to remove or ameliorate the stressor	Takes active steps to solve problems Takes the initiative
Planning	Thinking out a systematic method to cope with a stressor	Thoughtful at work with decision making or actions Systematic in approach
Instrumental Support	Asking for help and advice from others, seeking advice	Willing to ask for help when needed, good at delegation of tasks
Dysfunctional Coping Strategies		
Denial	Refusal to believe the stressor exists	Deny real work-related problems, and if denial cannot be used, one's stress may increase
Self-Distraction	Focusing on other things to take one's mind off the stressor	May put work effort on those projects that are less stressful or be less productive during stress
Substance Abuse	Use of alcohol or drugs	May have absences from work or difficulty performing duties
Behavioral Disengagement	Giving up trying to manage the stress	Separate themselves from situations they perceive as outside their control or beyond their abilities by not fully participating, refusing involvement, or giving up
Self-Blame	Criticizing one's self, blaming one's self for what happened	Blame themselves for perceived work-related failures, possibly creating a blaming and depressed atmosphere for themselves and others in the workplace
Venting	Focusing on and verbalizing negative feelings	Consistently focus on distress negatively. Can create an unhappy, dissatisfied work atmosphere for self and others. May distract workforce from active, positive problem solving

[79, 80]. Thus, leaving readers to the idea that coping and resilience are the same. The reverse can also occur where authors refer to their measures as including both resilience and coping, yet their measurement section contains characteristics associated with resilience (such as the SOC), symptoms of stress, and exposure to war, but no measures of coping [81]. While such articles provide valuable information regarding their research, using the terms interchangeably is misleading.

Research recommendations include:

- Investigating the relationship between coping and resiliency.
- Identifying the coping mechanisms of highly resilient vs. less resilient individuals.
- Detecting whether the coping mechanisms of highly resilient individuals differ per environment or job (such as military, business, police, etc.).

- Exploring whether training in specific coping skills contributes to overall resiliency.
- Developing a resilience questionnaire or measurement for military personnel to help the placement for specific military positions.
- Investigating long term outcomes to determine whether training in coping skills or resiliency are preventative.

4. Conclusions

Resilience and coping are related to one another, and yet remain distinct concepts. Understanding both is important to assisting individuals deal with adversity, teaching resiliency, and conducting research on resilience. Research opportunities abound for exploring each and for examining the associations between the two concepts.

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Disclaimer

The views expressed in this article are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

Conflict of interest

The authors have no conflict of interest to report.

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