



Army National Guard soldier Pfc. Fabian Orozco completes an eleven-mile march with a forty-pound rucksack during the Idaho Army National Guard's Best Warrior Competition, held 14–17 September 2023 at Gowen Field and at the Orchard Combat Training Center near Boise, Idaho. For four days, fifteen Idaho National Guard soldiers competed for the title of Best Warrior by participating in multiple intensified tests with little sleep and high stress that challenged candidates both physically and mentally while evaluating their ability to shoot, move, communicate, and survive. (Photo by Master Sgt. Becky Vanshur, U.S. National Guard)

# Prolonged Psychological Endurance and Its Relationship to Increased Resilience

Lt. Cmdr. Adam T. Biggs, PhD, U.S. Navy

**R**esilience is a complicated topic. Everyone seems to agree that resilience is important, yet the consensus often ends there. People debate how to describe resilience, how to measure resilience, and what differentiates resilience from other constructs like grit or hardiness—and these debates happen at a purely theoretical level of psychological scholarship. Practical implementation becomes even more difficult. Developing resilience programs can be challenging enough when tailored to the individual, but when considering force-wide adaptation of large programs like Holistic Health and Fitness, the integration challenges grow exponentially larger.<sup>1</sup> No two service members need the same program. However, individually tailored programs cannot really exist at an organizational level since their efficacy depends on the final integration rather than higher echelon designs. So, how should services approach resilience in the context of this larger problem?

The current discussion will offer some suggestions on teaching and developing resilience when viewing the problem across multiple organizational levels. Specifically, the first question will address whether resilience should be approached as an individual trait, personal strategy, or organizational challenge. This understanding can provide further context into the confusion that often arises when elaborating on resilience-related topics. Next, the topic of “good stress” (or eustress) will be considered as it relates to resilience and how misunderstandings could predispose individuals to higher rates of burnout. Finally, a comprehensive resilience model will be provided that identifies the importance of resilience as a strategy for prolonged psychological endurance. Borrowing from Army doctrine related to sustainment, the intent is to explore how psychological endurance depends upon resilience to provide an individual recharging function that sustains long-term effort. The combined goal is to enhance Army ideas and teachings when addressing resilience to sustain a mentally and physically ready force over their entire career in the Armed Forces.

## Is Resilience a Trait, Strategy, or System?

This question is often asked, yet it is a red herring. Resilience is a multifaceted concept with implications at the individual, team, and organizational levels. There

is no unequivocally “right” answer, as any perspective will capture some element of prolonged endurance in human behavior. That said, some answers provide insight at different levels of the concept, and some answers conflate resilience with other psychological terms, especially at the individual level. The first goal must be to unpack resilience and understand its implications as a multilevel construct with consequences across the individual, teams, and systems levels.

Foremost, resilience can be examined at the individual level. Resilience is commonly defined as bouncing back in some way following adversity.<sup>2</sup> This straightforward definition belies the underlying complications, such as whether resilience is state-based or trait-based.<sup>3</sup> That is, some scholars and practitioners approach resilience as a relatively stable trait over time akin to a dimension of personality. Alternatively, resilience can be deemed state-based and dynamic, changing based on recent physical, psychological, or emotional conditions. Both arguments have merit. Trait-based interpretations can be considered as the individual capacity for resilience, whereas state-based interpretations can be considered as the current levels relative to the overall capacity. From a trait-based perspective, even highly resilient individuals can have low state-based resilience based on recent life events. The first takeaway is therefore that resilience has both stable and dynamic elements when viewed at the individual level.

Another important individual-level consideration is the confusion with related topics. Factors such as hardiness and self-control are often linked to resilience or even described interchangeably as synonyms, yet important differences exist between the concepts. The example considered here involves grit and resilience, which are distinct concepts in psychological science. Grit represents an ability or desire to sustain effort

**Lt. Cmdr. Adam T. Biggs, U.S. Navy**, is a research psychologist in the Medical Service Corps. His primary duties involve conducting translational research to support fleet needs in a variety of human performance, organizational, and medical research areas. In the completion of these duties, he has published numerous research studies while also training on various research ethics topics. He holds a BS from McKendree University, and an MA and PhD from the University of Notre Dame.

and interest when pursuing long-term goals.<sup>4</sup> Passion and perseverance are critical components of grit, although goal orientation is also essential. Adapting common military parlance, grit is “embracing the suck” and persevering despite adversity. Resilience similarly incorporates elements of enduring despite adversity, where perhaps the only common element across resilience definitions involves adapting despite adversity.<sup>5</sup>

The subtle distinction is how grit and resilience differ. Grit describes endurance through goal orientation, whereas resilience involves bouncing back or recharging—ostensibly implying a restorative function. As a metaphor, grit is how well a vehicle performs under intense conditions, while resilience is the maintenance required to keep the vehicle performing well. Each element has a distinct contribution to enduring performance. Moreover, confusing them can lead to problems. Conflating grit and resilience could encourage people to continue performing under high-stress conditions when they truly need the restorative elements associated with resilience. Without them, the individual becomes prone to burnout or other negative consequences. Both are critical components, but if used interchangeably, individuals can become predisposed to burnout as they do not receive the requisite rest needed for prolonged endurance.

A related concept also creates confusion since it describes resilience in a different way. Materials resilience, developed largely from design and engineering fields, generally describes the ability of physical material to absorb changes while retaining the integrity of its surrounding infrastructure.<sup>6</sup> This conglomerate definition of resilience demonstrates its interdisciplinary potential as resilience can apply to fields ranging from construction or ecological applications to the psychological and social dimensions of human behavior. Nevertheless, resilience should not be conflated when applied to materials versus psychology. Materials resilience amounts to how much a certain material can endure while retaining structural integrity—that is, “take a licking and keep on ticking.” The material eventually becomes worn down until it loses integrity and needs to be replaced. This latter element is important for a resilient system, yet problematic if applied to people. A broken-down part can be easily replaced. A broken-down individual suffers a decline in mental health, and even if easily replaced within the organization,

the individual’s mental health damage remains. Any replacement is also likely well aware of what their predecessor suffered, making the position undesirable and diminishing the reputation of the wider organization. In short, resilience cannot mean equating people to easily replaceable materials to be swapped as soon as they break down. Resilience should remain viewed by the organization, from a psychological perspective, as a restorative function to ensure the long-term health and well-being of the individual.

The systems-level implications further demonstrate how resilience should be considered in teams and organizations, not just the individual. Team resilience typically refers to the ability of multiple individuals interacting to achieve continued success despite adversity.<sup>7</sup> At a superficial level, there are few differences between individual resilience and team resilience. Both concepts involve adapting to changing conditions while successfully managing stressors. The difference involves the relative importance of certain concepts due to interpersonal interactions. Psychological safety is a key example, which describes the perception that an individual is free to speak among the team without fear of harm, scorn, or other repercussions.<sup>8</sup> If an individual feels free to speak up, the advantages are numerous. Individual stress will decline as the individual will not persevere on small problems or concerns. Small problems are also less likely to become major issues as they can be brought up and addressed at the lowest possible level, and innovation flourishes in a psychologically safe environment as ideas freely flow between personnel. Of course, the inverse is true as well, where poor team dynamics can exacerbate stressors and reduce team resilience. Psychological safety thus encapsulates interpersonal dynamics that are not present at the individual level. The key implication is that a more complex system, in this case a team rather than an individual, introduces additional components that could either benefit or complicate building resilience.

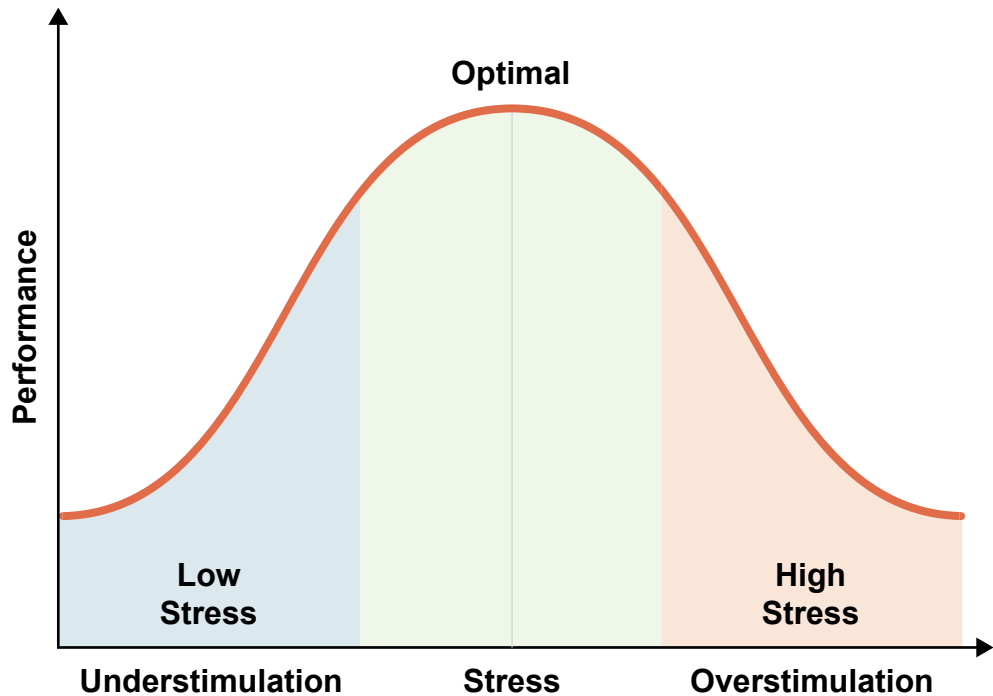
Furthermore, there is the compounding challenge of building a resilient organization. This level often implies organizational climate and culture issues, where the interactions are multifaceted and introduce a host of potential contributing factors.<sup>9</sup> Resilience enables organizational success and prolonged endurance by ensuring the organization can continue to function despite losing people or other resources. In some sense,

there is a parallel between organizational resilience and materials resilience as the organization often views individuals as replaceable components of a larger system, especially at higher echelons. Still, key differences reside in responsibilities and opportunities. An organization must replace personnel when they are lost as a key part of sustainment, which incurs continued responsibility. The opportunity arises because an organization has resources that an individual does not. An

organization can create policies and programs designed to enhance individual endurance through resilience. Underscoring the many efforts available, programs could include anything from morale building to professional development and mental health programs. Thus, organizational resilience is about ensuring subordinate personnel can maximize individual resilience through restorative functions by providing resources to support this optimization.

## Eustress and the Challenges of Teaching “Good Stress”

Stress has long been a favored term to describe psychological and physiological responses to adverse or challenging conditions.<sup>10</sup> The common presumption is that stress negatively impacts mental health and human performance. However, further development would come to differentiate between distress—when the demands placed upon an individual exceed their capacity—and eustress, which is an optimal level of stress



Example of the Yerkes-Dodson law illustrated graphically. Note that there is significant debate regarding where the zones should be differentiated. For example, the green zone could be narrower, or the high stress zone could extend further to the left. The shape of the curve and characteristics associated with “optimal” performance remain subject to debate.

(Figure by author, generated with the support of ChatGPT)

**Figure 1. Example of Yerkes-Dodson Law**

that helps an individual achieve optimal performance.<sup>11</sup> As a concept, eustress emphasizes that some level of arousal can be important to help people perform. There is additional nuance to differentiating between eustress and distress, especially in terms of how the individual responds to stressors, although the central idea is that not all forms of stress or arousal are inherently negative.

In the process of identifying whether the scenario imposes eustress or distress, scholars and practitioners alike often reference the Yerkes-Dodson law.<sup>12</sup> According to this idea, performance is linked to mental or physiological arousal. The relationship presents itself as an inverted U-shaped or bell-shaped curve (see figure 1). Essentially, performance increases along with increased arousal, although this benefit peaks at a moderate level of arousal. Performance thereafter deteriorates as additional stress or arousal only overwhelms the individual. Most descriptions of the Yerkes-Dodson law end with this simplistic interpretation. Nevertheless, the true relationship is more complex.





Spc. Carlos Carreno, assigned to the 7th Transportation Brigade (Expeditionary), provides security during a react-to-fire scenario 16 April 2025 as part of the XVIII Airborne Corps Best Squad Competition at Fort Campbell, Kentucky. The Best Squad Competition tests squads' physical, technical, and tactical abilities under stress and fatigue to determine which squad from the XVIII Airborne Corps will advance to the Forces Command Best Squad Competition later in the year. (Photo by Pfc. Richard Morgan, U.S. Army)

There are many different factors that influence the curve's shape and create a different relationship entirely from the bell-shaped interpretation, including task difficulty, task complexity, and individual familiarity with the task. These multiple conditions imply that the Yerkes-Dodson law may be too simplistic to capture the intricacies of complex cognitive performance and emotional arousal.<sup>13</sup> Some recommendations even call for industrial/organizational psychology to avoid the practice of informing managerial practices by using the Yerkes-Dodson law as a model for manipulating stress to enhance performance.<sup>14</sup>

There are issues with approaching stress, eustress, and the Yerkes-Dodson law without the requisite nuance that should accompany them, yet another problem looms. Specifically, the issue is teaching "good" stress or

increasing stress/arousal without adequate recovery accompanying these ideas. Good stress can be used as a surrogate argument for increasing the workload of personnel or for pushing them harder. If placed within the context of growing and developing future leaders or preparing personnel for stressful situations, there is an element of necessity to this argument. Some training should be intense and exceptionally stressful. Two specific examples come to mind: Survival, Evasion, Resistance, and Escape (SERE) training and Basic Underwater Demolition/SEAL (BUD/S) training.<sup>15</sup> These programs are intentionally grueling because they must be exceptionally intense to meet the training needs. That said, the experience cannot simply be deemed eustress given the beneficial purpose of the training regimen. People often conflate stressful exercises with eustress when it should more accurately be considered a combination of eustress and controlled distress to accomplish a specific objective or organizational need.

Another complication arises when a stressful event becomes deemed eustress. If something is supposedly good stress, it can be deemed beneficial and therefore a positive process. Although there is truth to this point, the process itself remains stressful and requires

recovery. Deeming something eustress can be used as an excuse to increase the stress imposed on an individual or team and a reason, implicitly or explicitly, to eschew adequate recovery time. After all, why would someone need to recover after a positive experience? Do people need recovery time after coming home from vacation? This flawed logic is the implicit problem with eustress. Even if the experience is beneficial for personal or professional development, the experience itself can be exhausting and requires proper recovery. Teaching eustress without linking it to recovery can predispose personnel to burnout since they have neither the time nor the opportunity for rest and adaptation.

A practical example of this problem is taught in the U.S. Army's professional military education.<sup>16</sup> Some leadership courses teach managing organizational resilience by helping personnel achieve the "halo of excellence."<sup>17</sup> According to this idea, leaders intentionally increase stress by creating an environment or conditions for both individuals and the organization where performance peaks at the right time, for the right reasons, and to achieve the right outcome. There is nothing wrong with this interpretation as controlled stress, both eustress and distress, can be managed to achieve personal growth in training environments so that military personnel can achieve optimal performance in combat scenarios. That said, the application of this halo fails without the proper contextual factors related to recovery that ensure sustained performance.

To illustrate the larger issue, consider the following challenges with applying the halo of excellence as currently instructed in military education. Foremost, messaging suggests that increasing stress to optimal levels is a good thing. Complications such as catastrophic failure are acknowledged, but only if the leader pushes too far—without guidance or identification of what might contribute to pushing too far. Teaching eustress without recovery thus predisposes leaders to increasing stress without proportional increases in recovery mechanisms, which can produce individual burnout. Within this same argument, the intended message is that applying this stress motivates personnel at critical points during a performance evolution. This approach only works for short bursts in specific applications for limited periods. These factors—short, specific, and limited—do not subsist in messaging around the halo of excellence. The presumption becomes that increasing

stress helps an individual perform better, and the stress subsequently becomes sustained over time without the recovery message. An individual supposedly adapts to the stress and the halo moves higher, requiring more stress to achieve optimal performance.

There is a truth to the metaphor of growing pains, yet without recovery mechanisms, the practical application for the halo of excellence is to increase stress on underperformers to help them achieve excellence. Unfortunately, the practical result is the burnout of personnel who experience distress as they lack resilience without the time to recover and adapt to changed circumstances. Even the graphical materials used to illustrate the halo support this conclusion. Whereas the halo of excellence, as originally depicted, occurs at the intersection of eustress and distress, the model as taught aligns the halo of excellence past the point of optimal yield strength and squarely with the development of distress.<sup>18</sup> If using this model, then the halo of excellence occurs only in the category of distress.<sup>19</sup> A graphic error in illustration unintentionally demonstrates the implicit problem. Presuming an optimal level of stress only works for short periods and without a recovery mechanism, applying this idea will push the halo of excellence further to the right until it can only be achieved under distress. Eventually, the individual will reach a breaking point of burnout or catastrophic failure.

These implicit problems underscore why managerial psychology identifies that good stress should be rejected as a broad conceptual idea.<sup>20</sup> Stress is unavoidable in military careers, as with virtually all human endeavors, which is why a better counterargument would be appropriately teaching people how to handle stress. One such example would be to replace good stress with the construct of hardiness. As a psychological concept, hardiness is a personality construct that helps protect against the adverse influences of stress.<sup>21</sup> The original concept offered three core components: commitment, control, and challenge. Additional factors have likewise been suggested to supplement these core principles and to expand the larger concept of hardiness.<sup>22</sup> Still, the focus will remain on the original concepts for the current discussion.

Commitment helps motivate people because they have a core reason to engage in particular behaviors; control helps them manage stress because people feel they have some measure of active control over their

circumstances; and challenge represents a balance among resources, skill, and demands that determines whether an individual would become overwhelmed. These three factors present differently when applied to different stressors. For example, the same service member who could excel in combat stress might react poorly to the stress of a romantic breakup or family funeral. Not all stress is equal, and not all stressful situations are equal. As a construct, hardiness allows people to delineate why and how they might be able to manage stressors in some complicated situations but not others.

Increasing stress never represents a positive application in this construct. Instead, an individual might feel increased stress if their control component falls out of balance and they can no longer actively control the circumstances around them. The best way to manage these circumstances is not to increase or decrease stress but rather to help an individual determine what factors would be necessary so that they overcome the sense of powerlessness. Once the individual believes they have a sense of control over their environment again, they will more effectively manage stress within the given situation. Within this context, increasing stress is not the answer—the better solution is to ensure the individual has appropriate tools to manage the stressors around them.

Of course, this example helps demonstrate the importance of individual stress management. Replacing eustress with hardiness could solve some issues, although further problems remain. Hardiness neither addresses recovery itself nor does it account for conflating different psychological concepts. For example, the same text introducing the halo of excellence also describes psychological resiliency as interchangeable with mental toughness and hardiness.<sup>23</sup> These concepts are distinct with important differences in their understanding and application. Accordingly, the Army's teachings about resilience should be updated in a way that addresses both the need for recovery and clarity among different psychological constructs.

## **Prolonged Psychological Endurance Can Align Resilience with Army Sustainment**

Army Doctrine Publication 4-0, *Sustainment*, explains how the strategic purpose of sustainment is to provide freedom of action, prolonged endurance, and operational reach necessary for sustained offensive

and defensive actions.<sup>24</sup> Army Field Manual 4-0, also titled *Sustainment*, further documents operational energy as the energy required for training, moving, and sustaining military forces.<sup>25</sup> Energy is ostensibly construed here in terms of fuel or other consumables necessary to sustain a military force, yet there is also a psychological parallel. These concepts can apply at an individual or psychological level with the same underlying implications for individual sustainment as with force sustainment. Whereas prolonged endurance requires reconstitution through reorganization and regeneration at an organizational level, prolonged psychological endurance requires adaptation through rest and recharging.<sup>26</sup> The purpose remains the same—only the procedures change.

To better integrate the psychological concepts with military doctrine, there is a conceptual framework known as the psychological endurance model that could be applied.<sup>27</sup> Although not originally designed for Army use, the framework could adapt exceptionally well to Army sustainment doctrine to become prolonged psychological endurance. It offers several critical advantages for Army applications. First, the model utilizes existing definitions from the current psychological literature while appropriately distinguishing roles for factors such as grit, hardiness, self-control, and resilience. Many holistic performance models conflate these terms, whereas the psychological endurance model partitions them in ways directed by empirical evidence. Second, the model addresses both energy expenditure and energy restoration. These combined functions allow the model to describe operational energy as a psychological concept well-aligned with Army sustainment principles. Third, the model is relatively straightforward as a concept, often explainable in as little as sixty seconds. Ease of explainability and a straightforward metaphorical concept help enhance retainability and make the model ideal for use in holistic Army readiness programs.

The psychological endurance model operates around the metaphor of a central psychological battery (see figure 2). Psychological and physiological stressors require energy expenditure while restorative processes recharge the battery. Prolonged psychological endurance is thus a product of energy expenditure, the specific rate depending on the scenario, along with conditions that permit recharging at various intervals. Grit and

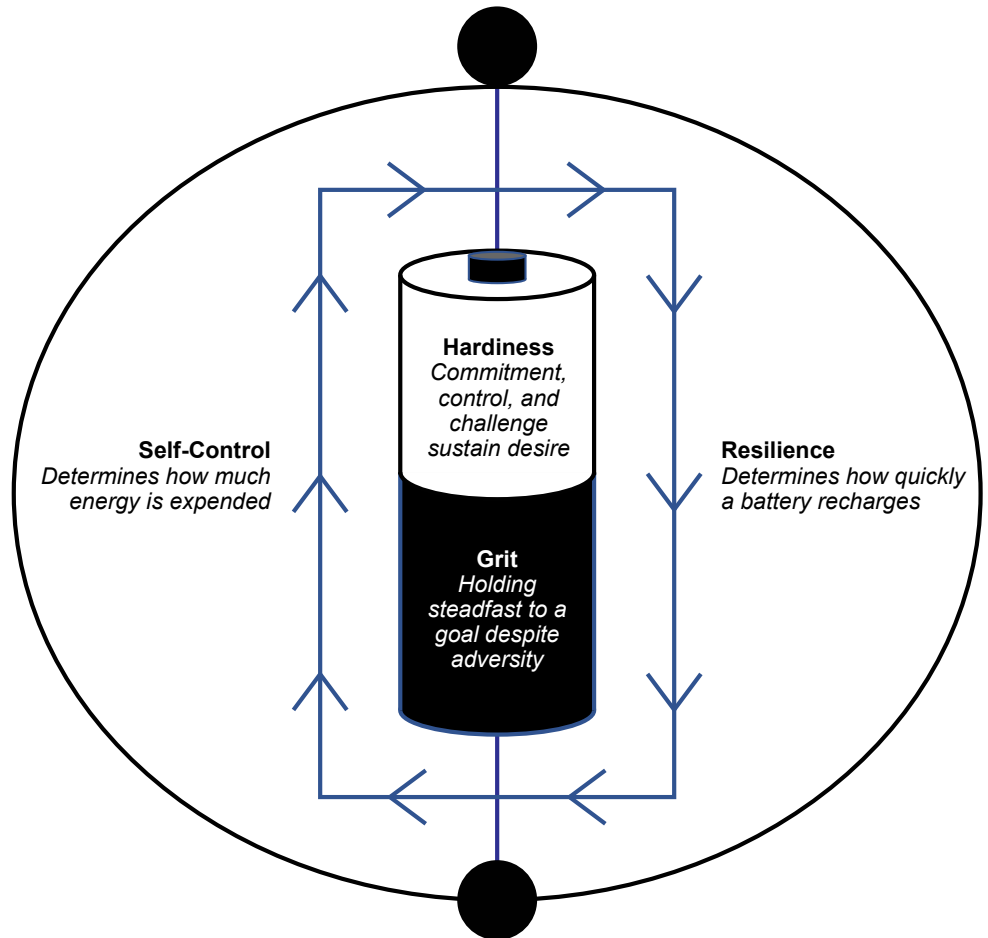


hardiness represent personality constructs that potentiate the maximum charge of the battery. Grit describes factors that help people endure despite adversity, whereas hardiness describes positive factors that motivate people to sustain performance. As largely personality traits, these factors change slowly over time, if at all, and make poor candidates to alter through short-term training programs. These personality factors are better if consciously engaged based on the individual rather than developed through some organizational program. Meanwhile, self-control and resilience affect energy expenditure. Self-control allows the individual to modulate how much energy is spent on a given situation, whereas resilience represents the restoration strategies an individual uses to recharge the battery and adapt. Prolonged psychological endurance occurs as people deplete the energy in their batteries, restore their charge as available, and continue performance without leading to burnout, which occurs if the battery charge hits zero.

The conceptual model is novel only as it organizes existing concepts around the battery metaphor—intentionally so. Its purpose involves aligning doctrinally adaptable material with empirical literature. In this framework, factors such as hardiness and resilience have distinct meanings. Hardiness is a personality construct that helps people enhance their psychological

#### Psychological Stressors

*Drain the battery through stress, anxiety, or mental health issues*



**Physiological Stressors**  
*Drain the battery through lack of sleep, physical exertion, or general health issues*

(Figure by author)

**Figure 2. The Psychological Battery and How Its Components Function to Support Prolonged Psychological Endurance**

endurance if appropriately engaged, which might mean helping individuals align their performance with commitment, control, and challenge. Conversely, resilience is a strategy for recovery that can be taught and adapted. A common example among service members might be playing video games to relax. Although this process can have a restorative function, there is a key difference between relaxing with friends and playing ranked video games online with strangers that induces stress. This example highlights how a seemingly restful



or relaxing hobby can impair resilience—that is, a stressful hobby might drain the psychological battery while recharging it, akin to watching movies on your phone while it charges. Resilience further differentiates energy restoration from the energy expenditure regulated by self-control. An individual can accelerate energy expenditure as needed with good self-control, although they might persevere on negative thoughts, which leads to unnecessary energy expenditure that depletes the psychological battery.

These combined ideas represent only a few ways to integrate the psychological endurance model to become prolonged psychological endurance. Compared to other conceptual models, the advantage is not only an alignment with existing Army sustainment but also the inclusion of restorative measures that emphasize a need to avoid burnout. Eustress or good stress could still apply in this model, albeit eustress would drain the battery and allow the individual a chance to permanently adapt to changes during the recharging phase. In this sense, recharging is both restorative and transformative. Eustress and other stress continue to deplete energy with the understanding that some restful period is required again before the individual can integrate the changes into their system and continue pursuing maximum performance.

## Summary

Resilience is a complex and multifaceted concept. As taught throughout military services, the implication is that resilience helps a force sustain superior performance. This interpretation has some truth, although the problem is often how the concepts are handed down during instruction. Many practitioners conflate psychological concepts like resilience, grit, hardiness, and self-control. They are not interchangeable in empirical literature, and describing them interchangeably can have adverse consequences. For example, teaching

someone to improve their hardiness might be counterproductive since the instruction essentially tries to change their personality. This change would happen very slowly over time rather than creating adaptation through a series of lectures. Holistic human performance programs thus have a key need to clarify whether resilience is a skill, trait, or system.

As a concept, prolonged psychological endurance provides several advantages that can address some problems related to confusion. Foremost, resilience should be considered a multilevel construct with different implications at the individual, team, and organizational levels. The individual level should address concepts such as eustress or stressful activities with the potential for individual growth, yet these concepts should be taught in the proper context. Burnout is a critical issue at the individual level and requires restorative or regenerative functions. If resilience instructions are taught at any level without considering burnout alongside the same information, the consequence can be a false presumption that increased good stress will help the individual achieve better performance. Without restoration, this approach is a recipe for individuals burning out and causing retention problems. The prolonged psychological endurance model provides an opportunity for the Army to integrate current psychological theory into Army doctrine in a way that can enhance holistic human performance without disrupting existing teachings. ■

*The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the U.S. Army Command and General Staff College, Department of the Navy, Department of Defense, or the U.S. government. The author is a military service member or employee of the U.S. government. This work was prepared as part of his official duties. The author has no financial or nonfinancial competing interests in this manuscript.*

---

## Notes

1. Field Manual (FM) 7-22, *Holistic Health and Fitness* (U.S. Government Publishing Office [GPO], 2020).

2. David Fletcher and Mustafa Sarkar, "Psychological Resilience: A Review and Critique of Definitions, Concepts, and Theory," *European Psychologist* 18, no. 1 (2013): 12–23, <https://doi.org/10.1027/1016-9040/a000124>.

3. Seffetullah Kuldass and Mairéad Foody, "Neither Resiliency-Trait nor Resilience-State: Transactional Resiliency," *Youth & Society* 54, no. 8 (2022): 1352–76, <https://doi.org/10.1177/0044118X211029309>.

4. Angela L. Duckworth et al., "Grit: Perseverance and Passion for Long-Term Goals," *Journal of Personality and*

*Social Psychology* 92, no. 6 (2007): 1087–101, <https://doi.org/10.1037/0022-3514.92.6.1087>.

5. Helen Herrman et al., "What Is Resilience?," *The Canadian Journal of Psychiatry* 56, no. 5 (2011): 258–65, <https://doi.org/10.1177/070674371105600504>.

6. Uta Hassler and Niklaus Kohler, "Resilience in the Built Environment," *Building Research & Information* 42, no. 2 (2014): 119–29, <https://doi.org/10.1080/09613218.2014.873593>.

7. Angelique Hartwig et al., "Workplace Team Resilience: A Systematic Review and Conceptual Development," *Organizational Psychology Review* 10, no. 3–4 (2020): 169–200, <https://doi.org/10.1177/2041386620919476>.

8. Amy C. Edmondson and Zhike Lei, "Psychological Safety: The History, Renaissance, and Future of an Interpersonal Construct," *Annual Review of Organizational Psychology and Organizational Behavior* 1, no. 1 (2014): 23–43, <https://doi.org/10.1146/annurev-orgpsych-031413-091305>.

9. Benjamin Schneider, Mark G. Ehrhart, and William H. Macey, "Organizational Climate and Culture," *Annual Review of Psychology* 64, no. 1 (2013): 361–88, <https://doi.org/10.1146/annurev-psych-113011-143809>.

10. Hans Selye, *From Dream to Discovery* (McGraw-Hill, 1964).

11. Hans Selye, "Stress and Distress," *Comprehensive Therapy* 1, no. 8 (1975): 9–13.

12. Robert Mearns Yerkes and John D. Dodson, "The Relation of Strength of Stimulus to Rapidity of Habit Formation," *Journal of Comparative Neurology and Psychology* 18, no. 5 (1908): 459–82, <https://doi.org/10.1002/cne.920180503>.

13. Yaniv Hanoch and Oliver Vitouch, "When Less Is More: Information, Emotional Arousal and the Ecological Reframing of the Yerkes-Dodson Law," *Theory & Psychology* 14, no. 4 (2004): 427–52, <https://doi.org/10.1177/0959354304044918>.

14. Martin Corbett, "From Law to Folklore: Work Stress and the Yerkes-Dodson Law," *Journal of Managerial Psychology* 30, no. 6 (2015): 741–52, <https://doi.org/10.1108/JMP-03-2013-0085>.

15. For more information about SERE training, see "East SERE," All Hands Magazine, accessed 1 May 2025, <https://allhands.navy.mil/Features/East-SERE/>; for more information about BUD/S, see "Nothing Basic About Basic Underwater Demolition/SEAL Training," Navy Seal Museum, accessed 1 May 2025, <https://navysealmuseumsd.org/buds/>.

16. "L108 Organizational Stress and Resilience," slides, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2024.

17. Bill McCollum and Matthew W. Broadbush, "Leader-Imposed Stress," *Small Wars Journal*, 25 June 2013, <https://archive.smallwarsjournal.com/jrnl/art/leader-imposed-stress>.

18. "L108 Organizational Stress and Resilience," slides.

19. Note that the specific graph comes from the L108 slides. The illustration has a significant gap between eustress, as presented in green, and distress, as presented in red. There is a dotted line presumably connecting eustress, distress, and mapping them onto a performance curve. The halo is centered upon a peak shifted well to the right of the green eustress and squarely over where the curve peaks past the yellow/orange dashes and into the full red of distress.

20. Mark Le Fevre, Jonathan Matheny, and Gregory S. Kolt, "Eustress, Distress, and Interpretation in Occupational Stress," *Journal of Managerial Psychology* 18, no. 7 (2003): 726–44, <https://doi.org/10.1108/02683940310502412>.

21. Suzanne C. Kobasa, "Stressful Life Events, Personality, and Health: An Inquiry into Hardiness," *Journal of Personality and Social Psychology* 37, no. 1 (1979): 1–11, <https://doi.org/10.1037/0022-3514.37.1.1>.

22. Salvatore R. Maddi and Deborah M. Khoshaba, *Resilience at Work: How to Succeed No Matter What Life Throws at You* (American Management Association, 2005); Pallabi Mund, "Hardiness and Culture: A Study with Reference to 3 Cs of Kobasa," *International Research Journal of Management, IT and Social Sciences* 4, no. 2 (2017): 152–59, <https://sloap.org/journals/index.php/irjmis/article/view/456>. Note that the original model also had 3Cs, but additional components were added later. Connection is a fourth possible factor, and culture is a possible fifth factor. These ideas are included here only to emphasize that a full accounting of hardiness requires more attention and detail than an individual paragraph could provide.

23. McCollum and Broadbush, "Leader-Imposed Stress."

24. Army Doctrine Publication (ADP) 4-0, *Sustainment* (U.S. GPO, 2019), para. 3-4.

25. FM 4-0, *Sustainment* (U.S. GPO, 2024), para. 7-43.

26. ADP 4-0, *Sustainment*, para. 3-93.

27. Adam T. Biggs et al., "Psychological Endurance: How Grit, Resilience, and Related Factors Contribute to Sustained Effort Despite Adversity," *The Journal of General Psychology* 151, no. 3 (2024): 271–313, <https://doi.org/10.1080/00221309.2023.2253955>.