BG Rhonda Cornum, USA, speaks at first Master Resilience Training course, Fort Meade, Maryland

U.S. Army (C. Todd Lopez)

Resilience

The Result of a Totally Fit Force

By RHONDA CORNUM, THOMAS D. VAIL, *and* PAUL B. LESTER

As the Nation's war against terror has unfolded over the last decade, each Service has shown evidence of higher levels of stress. Increased operational tempo has been a ubiquitous part of military service thus far in the 21st century. Repeated deployments have required junior Servicemembers to represent the Nation's interests with foreign populations while performing dangerous tasks that extend beyond their training. This has contributed to "stress on the force." Personnel who have not deployed face different stressors, as do family members and civilians remaining in the United States. It is not surprising that all Services have experienced increased negative behavioral outcomes attributable to stress and poor coping. Active surveillance has documented increased rates of obesity; tobacco, drug, and alcohol abuse; family violence; sexual assaults and other felonies; psychological diagnoses; and suicide, especially among junior members of the force.

In response, the Department of Defense (DOD) and Department of Veterans Affairs have dramatically increased assets dedicated to helping Servicemembers who are experiencing negative behavioral health outcomes. These departments will continue this effort as long as there is a need. But as it became clear that the current war was a long-term struggle, DOD increasingly recognized that building and maintaining psychological strength is critical to maintaining the Nation's ability to wage sustained combat and contingency operations. While fully recognizing that treatment of personnel suffering physical and psychological injuries and disease is vital, DOD has also recognized it is at least as important to prevent injury and disease.

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Use of body armor, malarial prophylaxis, and immunizations are all accepted measures to prevent physical illness and injury. Daily physical training (PT) has long been accepted as important to building physical assets including speed, endurance, strength, and flexibility. These physical assets allow better performance on the battlefield. But only in the past few years has DOD recognized that enhancing baseline psychological strength and fitness could improve performance on the battlefield as well, and that it thus might reduce the incidence of negative psychological and behavioral outcomes.

There has been a fortunate collision between the *need* to increase the psychological strength of the force with the *science* allowing that to occur. A significant amount of research has been completed in the past two decades that outlines how to enhance the psychological fitness of a healthy population—that is, personnel without any diagnosis or symptom complex. The discipline of *positive psychology*, defined as "scientific study of the strengths and virtues that enable individuals and communities to thrive," became recognized as a legitimate degree-producing branch of psychology in 2004. This is quite different from traditional clinical psychology, much of which focuses on abnormal behavior and mental illness. At least for the military, whether the issue is physical or psychological health, a mere absence of disease or infirmity is a necessary but insufficient condition; success, as we see it, is making sure that everyone has the education, training, and opportunity to develop and maintain *optimum* health.

In 2009, former Chairman of the Joint Chiefs of Staff Admiral Mike Mullen tasked the Uniformed Services University and Samueli Institute to develop a framework for a more holistic view of "fitness." The concept of Total Force Fitness (TFF, pronounced *tough*)[1] is the result of this work, as shown in figure 1. On September 1, 2011, Admiral Mullen signed Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3405.01, "Chairman's Total Force Fitness Framework," requiring each Service to use the TFF framework to enhance and/or refine its current fitness program. This instruction tasks each Service to provide appropriate medical support, training, equipment, and supplies for implementing the Chairman's policy, allowing the uniformed Services complete flexibility on how these measures are accomplished.

This instruction was not written in a vacuum. Over the same time period, the Services had individually recognized the same need. They were at various stages of designing or implementing fitness plans when the letter of instruction was published. The Army had devoted much of 2008 and 2009 to designing a strategy to improve the psychological fitness of the entire Service. Designated Comprehensive Soldier Fitness (CSF), this strategy was not directed at individuals with behavioral health problems. Rather, the CSF mission was to improve the baseline psychological strength of the force by synchronously developing and deploying psychological skills training and education along three lines of effort: institutional, leader-led, and individual. Simultaneously, CSF was to develop and implement an assessment tool to give individual Soldiers a confidential azimuth check on their own psychological fitness. Moreover, the Army leadership, after removing individual Soldier identification, could use the aggregate results longitudinally to determine the effect of education, training, deployments, and other policy decisions on the psychological health of the force. Army-wide deployment of CSF was launched October 1, 2009.

Figure 1. The Shield of Health: Eight Domains of Fitness

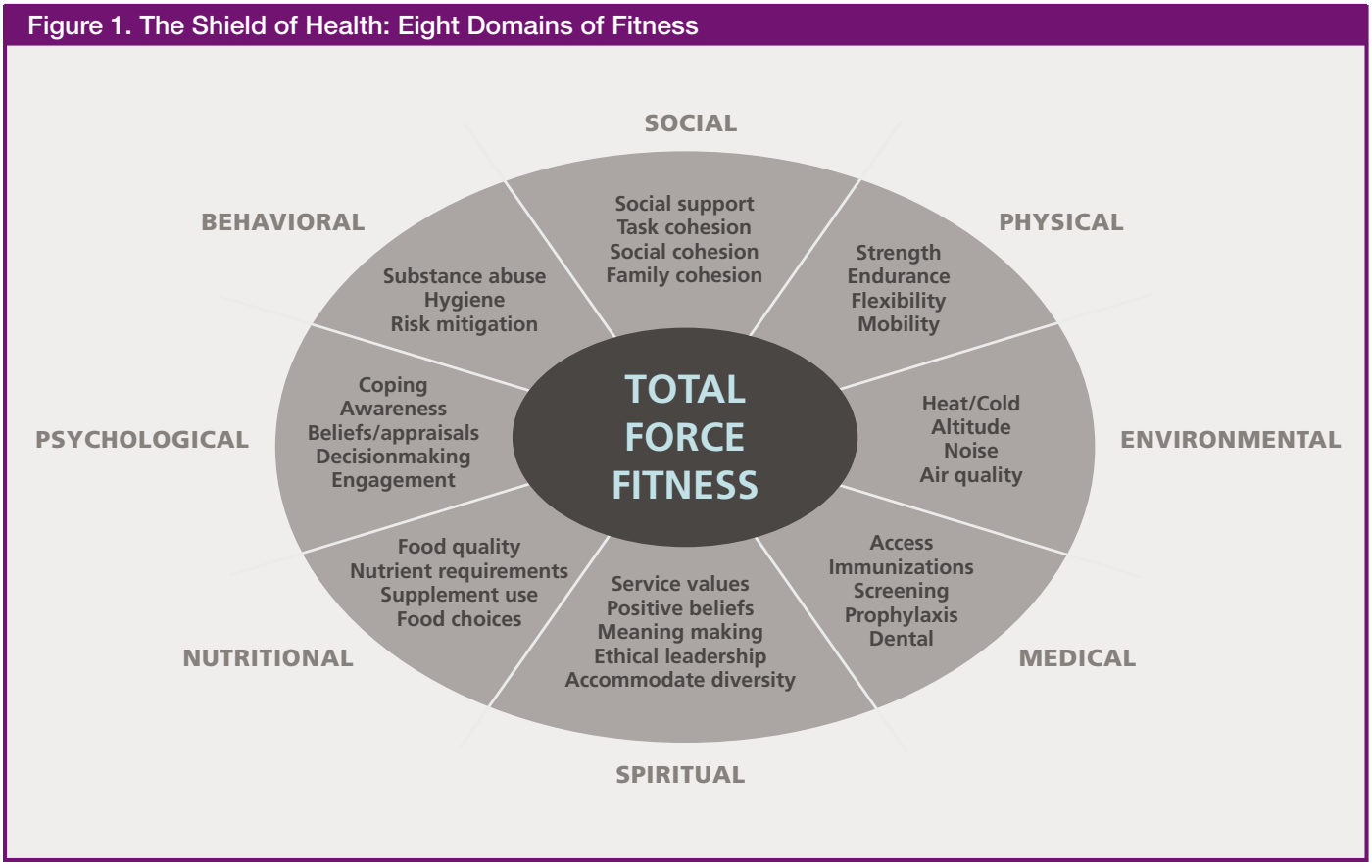
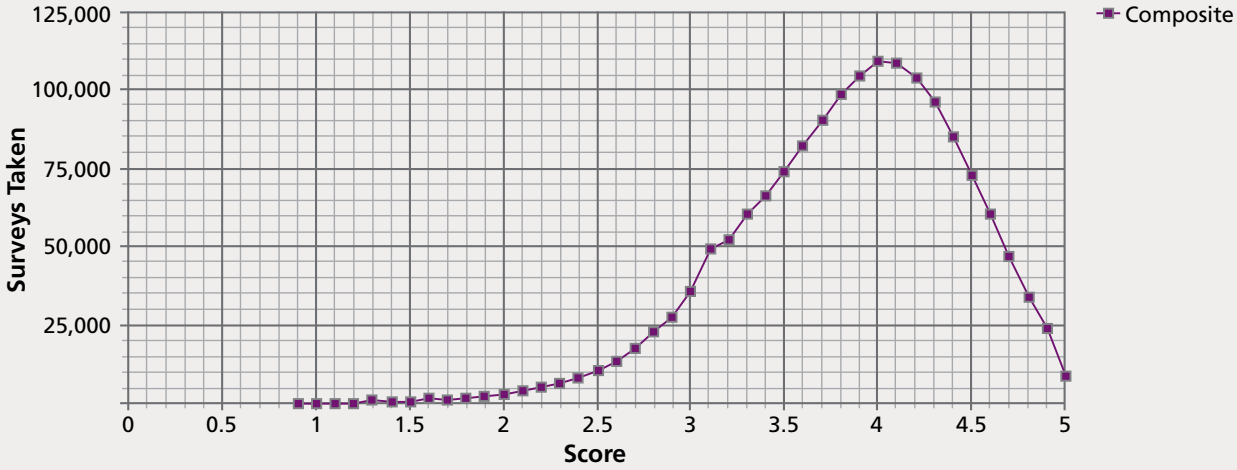


Figure 2. Actual Distribution of Global Assessment Tool Scores for Army Population



Development of the assessment tool, content of the material to be taught, and the method of delivery was informed by many of the leading psychological experts in the Nation. A special issue of *American Psychologist* in January 2011 was devoted to the science behind the development of the entire CSF initiative.[2] The present article is in no way intended to repeat that scholarly work. Instead, it discusses the results after 2 years of CSF implementation, what has been learned about the fitness of Army personnel, and the effectiveness of education and training to enhance psychological fitness. Lastly, the potential for further application of psychological assessment and strength training in the Army and in the rest of DOD is discussed.

Major Components of CSF

First, a self-assessment devise known as the Global Assessment Tool (GAT) was developed and tested. Comprising 105 questions, it takes 15 minutes to complete. At this time, the GAT has been completed more than 2.1 million times by over 1.5 million users, and over 700,000 Soldiers have taken it more than once. The GAT measures psychological assets (rather than psychological symptoms or deficiencies) in four important domains: emotional, social, family, and spiritual. The results have an expected distribution; that is, few people score low, making it a fairly typical bell-shaped curve with the greatest number of those surveyed achieving about 75 percent of the maximum possible score (figure 2). We know that most Soldiers (86 percent) take it seriously (that is, no "left or right justified" response patterns). Furthermore, there are few differences across demographics (for example, rank, gender, and education). Additionally, GAT scores across the Army Components (Active, National Guard, and Reserve) are also similar. In short, there is a normal distribution of resilience and psychological health across the Army when the entire population is analyzed.

However, the distribution of scores changes when we look at special populations. Using data culled from a hypermassive database known as the Person-Event Data Environment (PDE), which connects data together from across DOD, we found that GAT results are strongly related to both positive and negative behavioral outcomes of interest to the military. For example, we learned that Soldiers who are caught using illicit drugs, committing violent crimes, or committing suicide are—not surprisingly—concentrated at the bottom of the psychological fitness curve.

Conversely, personnel selected for below-the-zone promotions, command sergeant major, and command are overrepresented in the upper 25 percent of psychological health. Moreover, we used the PDE to learn that attrition from basic training is 3 times higher for Soldiers who enter the Army in the bottom 10 percent of psychological fitness compared to the top 90 percent. We also found that Soldiers in the upper 90 percent of psychological health have approximately one-third the rate of post-traumatic stress disorder (PTSD) symptoms as Soldiers in the bottom 10 percent when they return from deployment. This clearly underscores the importance of entering combat with a strong baseline of psychological health; not doing so will have an effect on Soldiers when they return from deployment. When taken together, we now know the GAT is in fact measuring psychological assets that relate to success or failure in the military.

In parallel with releasing the GAT for Army-wide usage, CSF also launched the Master Resilience Trainer (MRT) course. This 10-day in-residence course gives first-line supervisors, primarily noncommissioned officers (NCOs), the opportunity to both learn and learn to teach proven resilient thinking skills that are validated by social scientists as being effective. The MRT course employs a train-the-trainer format. Here, our master resilience trainers learn the resilience skills and then fan back out across the Army to teach them to the Soldiers they lead. This train-the-trainer methodology is important for two reasons. First, a train-the-trainer format is cost-effective given that it does not add to the Army's total force structure (that is, the Army does not have to hire 5,000 new trainers). Second, this format embeds the training within the backbone of our Army—the NCO corps—the very leaders who understand Soldiers best and are responsible for training them.

Our MRTs learn 13 critical resilience skills. One of the first lessons taught is the "ATC" model. This model teaches that behavior is based on a sequence of events: there is an *A*ctivating event, which leads to a *T*hought, which then leads to *C*onsequences. Consequences can be emotions or behaviors,

which can be managed. This model, which is based on extensive experimental and clinical work, explains how two individuals can experience the exact same event but manifest different emotions and behaviors. Once they understand the sequence, people can learn to reframe how they think using more accurate assumptions and beliefs.

As a real world example, imagine a combat medic giving aid to a badly wounded Soldier, yet the Soldier ultimately dies. The activating event is the Soldier dying of wounds whose severity the medic had no control over. Yet if the medic's thought is "It's my fault he died—I don't know what I'm doing—I cost that guy his life," then the likely consequence of his thinking is guilt, shame, and perhaps, depression. The medic may then "self-medicate" with drugs or alcohol to assuage these negative emotions, leading to a downward spiral of thoughts with negative consequences. If, on the other hand, the medic thinks "I did everything I knew to do, and sometimes an injury is so severe I cannot save the guy," the consequence is likely to be sorrow, but not guilt or shame.

Moreover, while the short-term behavioral consequence of sorrow may be tears, the long-term consequence will be the understanding that he did his best and that he can continue to do "good" by getting back out and using his skills. The event itself was the same: there was a severely wounded patient, a medic rendered aid, and the patient died. But the consequences were different. Of course, this same scenario is played out at every level of care. But physicians, especially surgeons, typically spend a decade in training before they are faced with the absolute responsibility of a seriously wounded Soldier's life. Asking a 20-year-old medic within 2 years of graduating from high school to have the same level of objectivity and maturity as a 30-year-old surgeon is perhaps an unrealistic expectation—but it is an expectation that is inherent in combat. It is therefore our responsibility to teach these skills deliberately and preventively before Soldiers are faced with these challenges.

It is important to recognize that the value of competence with these skills is in no way unique to the military context; they apply equally whether the person is a secretary or a sniper, and whether the challenge is professional or personal. One colonel at Fort Bragg told us, "As a father with a 20-year-old son and 19-year-old stepson, I think the program would be valuable for all teenagers." In reality, the basis for the thinking skills taught by MRTs is the same as the basis of Cognitive Behavioral Therapy, a well-recognized technique for combating depression, anxiety, and PTSD. That basis is simple: it is "the idea that our *thoughts* cause our feelings and behaviors, not external things, like people, situations, and events."[3] The guiding principle at CSF is that the time to learn something new is not in the midst of a crisis. The Army now understands that the time to learn these skills is beforehand, and therefore Soldiers should learn and practice these "thinking skills" during their normal lives and while facing smaller challenges. It will then be easier to draw on them during a truly significant challenge. This is exactly in line with what Soldiers frequently say in combat: "The shooting started, and my training just kicked in." In the Army, we now recognize how important it is that Soldiers have *all* the training needed to be more successful both in combat and in life, not just the tactical and technical skills.

Certainly, many people learn these things without formal education. They learn from the examples of parents, grandparents, and experiences, and this is likely a significant factor in why we see a wide spectrum of resilience in our data. But regardless of

U.S. Army (Jason Fetterolf)

Soldiers perform four-count flutter kicks during physical training, Fort Bliss, Texas

U.S. Army (Kimberly K. Fritz)

Fort Lee senior chaplain teaches resiliency during new 9-week course using biblical principles

the level of competence with these skills on entry into the military, the training is nevertheless valuable. First, it allows Soldiers who already have skills to recognize when to use them and to capitalize on them, which reinforces their use. Second, Soldiers who already have the skills learn to teach them, resulting in a more successful team rather than just successful individuals. Third, this training gives everyone in the Army a common vocabulary with which to discuss emotionally significant issues and may help to destigmatize the entire concept of psychological health.

Some Lessons Learned on Implementation

How the program is implemented in the field is probably the most important matter to examine. We are all familiar with things that seemed to work well when a professional did them, but the results were quite different when we tried them at home. In most cases, the outcome is better when the task is performed by a professional. As Comprehensive Soldier Fitness rolled out across the Army, we had to accept that a suboptimal solution in some areas would have to be acceptable in the short term in order to get the training to those needing it most. For example, we recognized that Master Resilience Training would be taught by leaders who likely had little training in psychology. Therefore, it was vital to ensure that the training could work in the average operational unit without causing harm. Given that, we stood up a robust data analysis cell that provided CSF with evidence of the program's effectiveness. Constant data analysis allowed CSF to make minor program changes as required. Another challenge facing us was local training management. Initially, as MRTs were trained and returned to their units, we recognized that many of them were not formally trained in how to properly plan, schedule, and implement a program such as CSF. Given that, CSF published clear training guidance that helped the MRTs implement the program within battalions and brigades.

Yet even from the beginning, pockets of light began to emerge. For example, in units where resilience training was instituted as a regular, habitual event that was on the training calendar and had proper command emphasis, commanders reported that Soldier behavior gradually improved. One unit at Ft. Leonard Wood required 2 hours of training per week and witnessed a marked reduction in Soldier attrition. The Eighth United States Army in Korea sent MRTs as a mobile training team to reach the entire force in small groups and showed a sharp drop in discipline issues. Elsewhere, one brigade commander went from 10 days of physical training every 2 weeks to 9, with 1 day devoted to the other "PT," which they refer to as psychological training. The staff at CSF collects these best practices and distributes both a printed and virtual implementation guide for unit leadership. Additionally, MRTs going through the course now spend more time on proper program implementation.

A vital commonality in units successfully implementing resilience training is that the training is led by recognized unit leaders. In parallel with this, we recommend that MRTs talk to their commanders and training planners as soon as they graduate to get the resilience course on the training calendar. But a second, equally important aspect of successful implementation is co-opting the first-line supervisor level of leadership because those leaders are our best way of diffusing the resilience lexicon. They are also likely the best suited leaders for describing to junior enlisted Soldiers how to make meaning of the training and incorporate the skills into daily life. That is usually done by first teaching the skills to the first sergeants and platoon sergeants of the unit, making "Resilience Teaching Assistants," or RTAs, out of the senior enlisted leadership of each small unit. These RTAs are helpful when the MRT is leading small group training because they serve as a bridge for the MRTs to Soldiers who are new to resilience training. These Soldiers then see that the leadership has a basic understanding of, and has bought into, resilience training. This helps to enhance the training experience during practical exercises and role-playing assignments.

Using Science to Evaluate the Program

At the same time the program was instituted across the Army, a parallel initiative of program evaluation was launched. The Army was committed to ensuring the program was effective and was prepared to modify it. One challenge was that CSF could not train enough MRTs fast enough to meet the Army's demand. While this was initially seen as a threat to the program, it became an opportunity to apply science to determine the program's effectiveness. Quite simply, the throughput constraints of the MRT course naturally created a wait list control group to be compared against units who had MRTs. By deliberately tracking where MRTs were assigned, and comparing the subsequent GAT scores of the brigades who had MRTs embedded in them with brigades that did not yet have them, the potential effect of the training on psychological health was measurable. Initially, the evaluation was planned to continue for 3 years, but it was ultimately shortened to 15 months. Subsequently, those brigades on the wait list were moved up in priority at the conclusion of the evaluation. We felt compelled to end the evaluation because, as commanders shared the value of having MRTs with other commanders who did not have them, demand for MRTs grew dramatically, and it became obvious that we needed to "surge" MRT production to get the trainers spread across the force more rapidly. To answer the demand, an aggressive mobile training team method was initiated.

For a variety of reasons, all data analyses were done by independent scientists who had no vested interest in seeing Comprehensive Soldier Fitness succeed, but this situation parallels a critical cultural norm within the Army—when it comes to training evaluations, units do not formally assess themselves. What can be said about the effect of having MRTs doing psychological fitness training in an operational environment? First, we can say that the skills taught by MRTs have a measurable positive effect on some of the most important characteristics of psychological fitness of the force. Units that conducted MRT skill training saw their resilience and psychological health scores—as measured by the GAT—improve significantly more than units that did not have MRTs. Specifically, units with MRTs witnessed improved Soldier-reported emotional fitness, coping characteristics, quality of friendships, and character strengths, while catastrophic thinking was significantly reduced.

When the analysis was confined to younger Soldiers (18–24 years old), the effects were three to four times larger than seen in older Soldiers, and improvements were seen in more areas measured by the GAT. Specifically, the younger cohort showed increased optimism, organizational trust, adaptability, family fitness, and family satisfaction in the units that had MRTs. This suggests that MRT skills accelerate the development and maintenance of psychological health in younger people and bring them closer in line with the psychological health of those who are older and more experienced. As previously noted, we also witnessed greater effects in units that regularly did the training, selected confident leaders to deliver it, and had command emphasis on MRT skill training. Because some of these brigades are still deployed, determining the effect on postdeployment and reintegration is still in the future. Nevertheless, it is noteworthy that using the scientific method allowed CSF to determine that the improvements were due to the MRT skill training and not to organizational factors such as quality of unit leadership and unit cohesion.

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Taking CSF Purple

Does Comprehensive Soldier Fitness nest within the CJCS instruction for developing Total Force Fitness? There are obvious links between the eight domains of fitness embraced by the CJCSI and the five dimensions of CSF. While the CSF program was developed by and for the Army, there is nothing Service specific about it. For example, the GAT only references "the Army" and "units" a few times, so it could easily be adapted to the other Services. While the training modules and videos use actors in Army uniforms who use Army lexicon, those could easily be converted for use by other Services. The coping, communication, and decisionmaking skills taught by MRTs are all equally applicable whether the individual is military or civilian, and without regard to Service affiliation. These are, after all, commonly needed life skills that help us all regardless of the uniform we each wear.

Additionally, CSF has already reached out to other Services and offered them training opportunities. For example, the Air Force's Air Combat Command has participated almost since CSF's inception, and to date CSF has trained 110 Air Force MRTs and 22 higher level training facilitators, and it has trained Navy and Marine Corps personnel as well. The GAT and resilience modules are offered free of charge and are available to anyone who is part of the Defense Enrollment Eligibility Reporting System regardless of Service affiliation.

Lastly, an opportunity exists within the fact that the Army is rapidly becoming self-sufficient in training resilience. Over the next few years, the CSF directorate will offramp much of the external support the Army needed to successfully stand up a force-wide resilience development program, and it will soon take full operational control of training MRTs. Army culture has steadily accepted the importance of resilience training, and the CSF lexicon is rapidly diffusing across Army units. Likewise, the Army is investing in other smaller programs endorsed by other Services, such as mindfulness training used by the Marine Corps, and this is also being done under the banner of CSF. Other training development continues in additional domains of psychological health. Accordingly, CSF was intentionally positioned to serve as a catalyst of change within the Army. Much has been learned, the sunk cost has largely been paid, and CSF is poised to transfer this knowledge to other Services if the desire exists.

Conclusions

Comprehensive Soldier Fitness is, as it was intended to be, a continuously evolving strategy. For example, an assessment of the individual's physical health is being added to the feedback everyone gets on the GAT this year. Taken together, a matrix of health indicators including percent body fat, PT test score, blood pressure, lipid profile, sleep and smoking habits, and the number of chronic

U.S. Air Force (D. Myles Cullen)

Soldiers review Master Resilience Trainer course curriculum at University of Pennsylvania

medications and diagnoses give a rough estimate of how physically healthy a person actually is. This "score" is then compared to how healthy the person could be if all the parameters were optimized. The person gets individualized feedback indicating what he or she can do to sustain the factors that are good and improve the factors that are not. Comprehensive Soldier Fitness is in the process of establishing online links between the individual factors comprising the physical domain and the real experts in each area in order to give each Soldier the best information to effect change.

Developing additional training for the future should be informed by what we see in the force today. Surveillance of the physical and psychological strengths and vulnerabilities within the entering cohorts is constantly being analyzed to determine which factors are associated with attrition, retention, and performance. When the psychological strengths and vulnerabilities of Soldiers who manifest a specific outcome (positive or negative) are compared with the rest of the force, the results should be used to inform where resources should be concentrated to best effect change in the desired direction. An example is our finding that social isolation and loneliness are two individual factors that were most divergent between Soldiers who subsequently functioned well and those who did not. Other factors such as organizational trust were identical between these two populations. When taken together, knowing this served as the impetus to fund research on training interventions aimed at building the skills to make and maintain healthy relationships, rather than how to enhance organizational trust. We describe this as data-driven decisionmaking, and the science supporting such decisionmaking should be used to help all of DOD to assist senior leaders in focusing resources where they are most needed.

As resources dwindle, greater reliance must be placed on using the behavioral sciences to determine resource allocations—to place a spotlight on where efficiencies exist and where the Services might get their greatest return on development. The joint force cannot afford to solve problems that do not exist or simply observe problems that do while taking no action; rather, it must focus on problems that really do exist and be willing to take action when it can. There are plenty of problems needing attention, and programs focused on preventive health strategies such as Comprehensive Soldier Fitness have demonstrated that such problems are actionable. **JFQ**

NOTES

[1] Wayne B. Jonas et al., "Why Total Force Fitness?" *Military Medicine*, vol. 175 (August 2010), 6–13, available at <www.siib.org/news/1099-SIIB/version/default/part/AttachmentData/data/Total%20Force%20Fitness%20for%20the%2021st%20Century--A%20New%20Paradigm.pdf>.

[2] *American Psychologist* 66, no. 1 (January 2011).

[3] Albert Ellis, *Reason and Emotion in Psychotherapy* (Secaucus, NJ: Citadel Press, 1962).