
Assessment for the U.S. Army Comprehensive Soldier Fitness Program

The Global Assessment Tool

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Psychology and the U.S. military have a long history of collaboration. The U.S. Army Comprehensive Soldier Fitness (CSF) program aims to measure the psychosocial strengths and assets of soldiers as well as their problems, to identify those in need of basic training in a given domain as well as those who would benefit from advanced training, and then to provide that training. The goals of the CSF program include the promotion of well-being as well as the prevention of problems. Assessment is the linchpin of the CSF program, and the Global Assessment Tool (GAT) is a self-report survey that measures psychosocial fitness in emotional, social, family, and spiritual domains. We review the history of psychological assessment in the military and the lessons taught by this history. Then we describe the process by which the GAT was developed and evaluated. We conclude with a discussion of pending next steps in the development and use of the GAT.

Keywords: psychological fitness, assessment, military

Currently, there are 700,000 men and women serving on active duty in the U.S. Army. The Army and we the people need all of our soldiers to be fit for duty. In light of the ever-growing complexity of the world, the role of the Army is more critical than ever, whether the country is at peace or at war. The Army today is involved in combat missions as well as cultural and peacekeeping missions such as policing, providing medical care and public health services, opening schools, and building or rebuilding community infrastructure.

Having our soldiers be at their very best is essential for successful completion of the various Army missions. To this end, physical fitness is measured and monitored (Sackett & Mavor, 2006). At least twice a year, all soldiers are required to take a physical fitness test consisting of three events: push-ups, sit-ups, and a timed two-mile run. They are required to meet or exceed age- and gender-normed minimum scores on each event to graduate from Army Basic Training, to attend Army courses, and to be eligible for promotion, reenlistment, or enlistment extension. Failure to meet these standards requires that the physical fitness test be retaken within three months. As needed, physical fitness training is undertaken until the test is passed or separation from the service occurs.

Physical fitness is necessary but not sufficient for soldiers to be regarded as fit. Forms of psychosocial fitness—for example, psychological vigor and good social relationships—are just as important but have not been systematically measured and monitored in the Army (Sackett & Mavor, 2006). Despite occasional efforts to measure psychosocial fitness, the Army has paid more attention to negative indicators of psychosocial well-being, such as suicide, posttraumatic stress disorder (PTSD), drug and alcohol use, child abuse and neglect, domestic violence, and divorce (Wright, Bliese, Thomas, Adler, & Eckford, 2007; Wright, Huffman, Adler, & Castro, 2002; Wright et al., 2005). However, the mere absence of problems in these areas is not equivalent to being psychologically fit. Needed is a comprehensive approach to soldier fitness that addresses psychosocial fitness and assesses strengths and assets as well as problems.

Psychological problems exist and of course deserve attention. They may be exacerbated or even created by features of military life such as modest pay, frequent relocations, separation from family, and deployment to combat zones with ongoing threats of injury and death (Hoge et al., 2004). Indeed, psychological problems are one of the strongest medical correlates of military attrition, and they can continue to take a toll on veterans and their families long after soldiers leave the service, taxing the Department of Veterans Affairs and other institutions (Hoge et al., 2002).

But a sole focus on what goes wrong with people results in a myopic view of human nature (Seligman & Csikszentmihalyi, 2000). In the case of soldiers, it leads to a misleading depiction of them as wounded and troubled (e.g., Lagrone, 1978). In recent years, reports have abounded in the popular media about ostensibly alarming rates of PTSD, suicide, and divorce among U.S. soldiers. However, the fine detail of these statistics is more nuanced.

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(From left to right)

Perhaps the most frequently discussed problem of today's soldier is PTSD. Most studies suggest that 13%–25% of soldiers returning from combat zones experience symptoms of PTSD (Milliken, Auchterlonie, & Hoge, 2007; Seal, Bertenthal, Miner, Saunak, & Marmar, 2007). Even the most liberal estimates of the frequency of PTSD rarely exceed 30%. We want to emphasize that the typical response to combat of today's soldier is *not* PTSD, no more than it was the typical response of a soldier deployed in Vietnam or the Persian Gulf War (Kulka et al., 1990; Stretch et al., 1996).

Along these lines, the suicide rate in today's Army, although higher than in the past, has matched but not exceeded that of U.S. civilians with similar demographic characteristics: in recent years, about 20 suicides per 100,000 individuals (Kuehn, 2009). Further, the divorce rate among soldiers, despite increasing in recent years to about 3% annually, has remained lower than that of the general U.S. population, in which about half of all marriages eventually dissolve (Karney & Crown, 2007).

Every case of PTSD among soldiers deserves concern and intervention; every single suicide is a tragedy; and every divorce is a cause for sadness. Still, the larger view suggests that most soldiers do well despite the obvious challenges posed by their occupation. Given these challenges—such as deployments that are repeated, extended, and at fast tempo and the associated stresses for soldiers

and their families—it is crucial to promote and sustain the psychosocial fitness of all soldiers regardless of how well or poorly they may be doing at a given point in time. Psychosocial fitness buffers against the negative impacts of adverse events and, moreover, allows soldiers to perform their duties well. Traditional approaches to psychosocial fitness often overlook the importance of sustaining and indeed bolstering existing strengths and assets (Park & Peterson, 2009).

As detailed elsewhere in this special issue, the Comprehensive Soldier Fitness (CSF) program of the U.S. Army aims to do for psychosocial fitness what has long been done for physical fitness: measure the strengths and assets of soldiers as well as their problems, use the results to identify appropriate training for a given soldier in a given area, and then provide that training (Cornum, Matthews, & Seligman, 2011, this issue). Assessment is the linchpin of the CSF program. It has been said that we measure what we value and value what we measure (Prescott-Allen, 2001). What this means in the context of the CSF program is that by assessing the strengths and assets of all soldiers on an ongoing basis, we will not only obtain important information about psychosocial fitness but also underscore its importance.

To build resilient and fit soldiers, we need to start by identifying important psychosocial domains in which fitness matters. Our particular role in the CSF program has

been to develop a way to measure emotional, social, family, and spiritual fitness. The Global Assessment Tool (GAT) is a work in progress, but we have already learned a great deal from our initial efforts. In the present article, we provide a context for the GAT by reviewing the history of psychological assessment in the military and the lessons taught by this history. Then we describe the process by which the GAT was developed and preliminary evidence for its reliability and validity. Pending next steps in the development and use of the GAT are also described.

A Brief History of Psychological Assessment in the Military

Throughout the 20th century, psychologists worked within and with the U.S. Armed Forces, and assessment has always been among the major contributions of psychology to the military (Jones, 2007). We tried to learn lessons from this history. The GAT is intended to be a different sort of mousetrap but a mousetrap nonetheless.

World War I saw the development of group-administered intelligence tests, the Army Alpha for literate soldiers and the Army Beta for nonliterate soldiers. Two million soldiers completed one or the other of these tests (Yerkes, 1921). The goals of the World War I intelligence testing program foreshadowed those of today's CSF program, although the focus then was on higher intelligence as "the" indicator of psychological fitness (and lower intelligence as "the" indicator of incompetence) as opposed to the multi-dimensional focus of today's CSF program:

The purposes of psychological testing are (a) to aid in segregating the mentally incompetent, (b) to classify men according to their mental capacity, and (c) to assist in selecting competent men for responsible positions [and] . . . to [form] special training groups within the regiment or battery in order that each man may receive instruction suited to his ability to learn. (Yoakum, 1920, pp. xi–xiii)

This program was controversial at the time (see Lippmann, 1922a, 1922b, 1922c, 1922d, 1922e, and 1922f vs. Terman, 1922) and remains so today, with some critics concluding that the Army Alpha and the Army Beta had little to do with winning the war (Gould, 1981). Regardless, group intelligence testing spread throughout civilian sectors following World War I and almost a century later remains very much a part of the contemporary world.

During World War II, interest in the attitudes of soldiers led to the development and administration of several hundred different surveys to almost half a million soldiers. These surveys went beyond the World War I interest in intelligence to ask about adjustment to Army life, job satisfaction, feelings about military leadership, locus of social control, combat experiences, and beliefs about personnel policies (Stouffer, Lumsdaine, et al., 1949; Stouffer, Suchman, DeVinney, Star, & Williams, 1949). Results of these surveys informed not only the conduct of the war but also its aftermath, specifically, the ways in which soldiers were discharged.

Less publicized at the time was a World War II assessment project coordinated by General William Dono-

van, Director of the Office of Strategic Services (OSS), the forerunner of today's Central Intelligence Agency. The OSS project enlisted the help of a veritable who's who of psychologists and other social scientists whose names are still familiar to psychologists today (e.g., Hadley Cantril, Clyde Coombs, John Dollard, Donald Fiske, John Gardner, Louis Guttman, Carl Hovland, Irving Janis, Kurt Lewin, Robert Merton, Henry Murray, Theodore Newcomb, Nevitt Sanford, Edwin Tolman, and William Tryon, among others). The goal of the project was to devise strategies for selecting OSS agents—that is, spies (OSS Assessment Staff, 1948). The validity evidence for these procedures was less than impressive and may have led subsequent academic psychologists to look down on "applied" research (Jones, 2007), skepticism still apparent in some quarters today (Park & Peterson, 2009).

A more successful World War II assessment project was the Aviation Psychology Program, which developed new procedures for selecting and classifying flying personnel (Flanagan, 1948). Again, this program was staffed by psychologists whose names are still familiar today (e.g., Sidney Bijou, Stuart Cook, John French, James Gibson, J. P. Guilford, John Holland, Lloyd Humphries, Neal Miller, Milton Rokeach, John Thibaut, Robert Thorndike, and Urie Bronfenbrenner). Previous selection criteria for pilots relied on formal educational attainment, but these requirements proved too stringent given the aviation needs during World War II. Accordingly, a comprehensive battery of psychological measures was developed, including paper-and-pencil intelligence tests; personality, interest, and biographical inventories; and laboratory tests of alertness, observational acuity, perceptual speed, coordination, and visual-motor skills.

This battery was able to predict actual instances of subsequent pilot error, although it was not as useful in identifying pilots who carried out their missions in exemplary fashion. In part, the inability of the battery to predict success as robustly as failure can be attributed to incomplete records (Jones, 2007). However, the possibility should also be considered—especially by those of us involved in the CSF program and its assessment—that doing well may be a more elusive construct than doing poorly.

The Aviation Psychology Program relied not just on a quantitative approach but also on detailed examinations of specific cases of mission failure, navigation error, and pilot error. After World War II, these latter methods moved into the civilian realm, and the critical incident approach pioneered by the Aviation Psychology Program sees widespread use today. An interesting note is that the leader of the World War II Aviation Psychology Program—John Flanagan—subsequently negotiated agreements with commercial airlines allowing pilots to file "near-accident" reports anonymously and without fear of punishment (Jones, 2007). This procedure is credited with greatly improving airline safety and has been used to similar effect in other venues, such as hospitals. Again, we suspect that there is a lesson here to be heeded by today's Army.

Psychology contributed in other ways to World War II, and the role of military efforts in spurring the growth of

engineering psychology, and in particular clinical psychology, is well-known (Fitts, 1947; Hilgard, 1987; Korchin, 1976). Indeed, World War II and its immediate aftermath literally created clinical psychology as its own field. However, an unintended consequence of the enormous growth of clinical psychology in the United States was that psychology as a field increasingly focused its attention on what goes wrong with people. Recent assessment strategies, in and out of the military, have reflected this problem-oriented focus, one that the CSF program intends to correct.

What are the larger lessons of the history of psychological assessment in the military? First, assessment on a large scale can be done. Indeed, from an assessment point of view, large scale—meaning enormous samples of individuals—is a boon rather than a drawback. When the sample in effect *is* the population, issues of selection, insufficient variation, and generalization do not arise.

Second, validation is feasible as well as necessary. Face validity of measures may be important in winning initial acceptance of an assessment strategy, but it is just a first step. The real issue is whether measures robustly predict outcomes that matter. In the military, such outcomes are consensual and already ascertained on a regular basis. From an assessment point of view, this again is a boon. Psychological research in the civilian sector often relies on proxy or analogue measures, from which psychologists generalize—sometimes heroically—to “real” outcomes that were unmeasured (cf. Baumeister, Vohs, & Funder, 2007).

Third, theoretical grounding of assessment is critical. Some of the previous assessment projects in the U.S. military have been criticized as overly pragmatic, a feature that may have led some of the luminary psychologists involved in wartime assessment to turn their attention to more basic—that is, explicitly theory-based—research when they later took jobs at civilian universities (Jones, 2007). In the contemporary case of the GAT, a theoretical vision of what it means to live well psychologically guided the creation of the tool.

When done well, basic research and applied research are symbiotic (Garner, 1972). Perhaps not coincidentally, psychology per se showed great growth spurts after both World War I and World War II (Seligman & Fowler, 2011, this issue). As described, assessment during World War I focused on *abilities*, and assessment during World War II focused on *attitudes*. The CSF program focuses on *assets*, and perhaps a similar spurt will be encouraged if this program succeeds in focusing the attention of psychology on people doing well, on assessing what doing well means, and then on cultivating excellence on an extremely large scale.

The study of U.S. soldiers is an ideal place to start if our concern is with people doing well. Despite handwringing in the popular media about the relaxing of standards to meet current enlistment goals, the fact remains that the typical soldier today is healthier, fitter, better educated, and more resilient than the typical civilian. Indeed, only 25% of the young adults in the United States would make the grade

were they inclined to volunteer for the Army (Christeson, Taggart, & Messner-Zidell, 2009).

Development of the Global Assessment Tool

The GAT is a self-report questionnaire designed to measure the psychosocial well-being of soldiers of all ranks and experience in four domains identified as important in the CSF program: emotional fitness, social fitness, family fitness, and spiritual fitness. The GAT is an integral part of the CSF program and will be used as a means of directing soldiers into different training programs—basic or advanced—as well as a way of evaluating the success of these programs (Lester, McBride, Bliese, & Adler, 2011, this issue). The GAT will also provide a way to gauge the psychosocial fitness of the Army as a whole.

The GAT is notable for several reasons. First, it is an inventory, a systematic and comprehensive measure that allows the psychosocial fitness of soldiers to be described in multidimensional terms. Psychosocial well-being is defined not simply by the absence of problems but also by the presence of well-developed clusters of assets, dispositions, and resources. Although these clusters are not independent of one another, neither are they redundant. It is important to take a comprehensive approach and describe psychosocial fitness in terms of a profile of a soldier’s characteristics.

Second, the GAT introduces a common vocabulary for describing what is right about soldiers, and as this vocabulary becomes familiar, it will provide a way to articulate the strengths and assets of an individual soldier’s own self as well as those with whom he or she works (cf. Resnick & Rosenheck, 2006). A personal and collective identity explicitly framed in terms of psychosocial strengths should sustain and build morale (Peterson, Park, & Sweeney, 2008).

Third, when a soldier completes the GAT, immediate feedback about his or her profile of strengths is provided. Feedback can be a critical component of behavior change, especially when it is immediate and tailored to the individual (DiClemente, Marinilli, Singh, & Bellino, 2001).

Fourth, because all soldiers will take the GAT, stigma surrounding “mental health” assessment and services may be reduced (cf. Hoge et al., 2006). No soldier will feel singled out; all soldiers will receive feedback phrased in terms of strengths; and no soldier will be left behind.

Finally, the GAT will be used to refer soldiers to programs tailored to their profile of greater and lesser strengths. There is no shortage of existing programs in the Army, formal and informal, that attempt to enhance the psychosocial fitness of soldiers. However, most programs take a one-size-fits-all approach and target only selected groups (perhaps increasing the stigma of participation). In contrast, individually tailored training for all soldiers is likely to be more effective than current training models (cf. Prochaska, DiClemente, & Norcross, 1992).

Emotional fitness reflects one’s positive mood, life satisfaction, freedom from depression, optimism, character

strengths, active coping styles, and personal resilience (e.g., “All things considered, during the past four weeks, I have been satisfied with my life”; see Algoe & Fredrickson, 2011, this issue). *Social fitness* indicates how one feels about the Army, one’s particular unit, and one’s fellow soldiers; it is a measure of trust in fellow soldiers and leaders and overall morale (e.g., “My leaders respect and value me”; see Cacioppo, Reis, & Zautra, 2011, this issue). *Family fitness* refers to how one is faring in personal and familial relationships (e.g., “I have a best friend”; see Gottman, Gottman, & Atkins, 2011, this issue). *Spiritual fitness* reflects whether one has a sense of meaning, purpose, and accomplishment in life that extends beyond the self (e.g., “I believe there is a purpose for my life”; see Pargament & Sweeney, 2011, this issue).

A comment on spiritual fitness is in order. The U.S. Army, for reasons based in the First Amendment to the U.S. Constitution, does not want to measure or encourage religiousness. Given that the psychosocial and indeed physical health benefits of a sense of purpose and meaning are well established (Boyle, Barnes, Buchman, & Bennett, 2009; Miller & Thoreson, 2003; Peterson, Park, & Seligman, 2005; Sone et al., 2008), it was important to measure meaning and purpose but without reference to their possible basis in specific religious beliefs and practices (cf. Fetzer Institute, 1999). The GAT therefore includes questions about meaning and purpose (also known as core values and beliefs), recognizing that for some soldiers, their—unassessed—religious faith provides these, whereas for others, there are secular roots (Peterson & Seligman, 2004). *Spiritual* was deemed an acceptable word although an imperfect one because of possible but unintended New Age connotations.

A guiding principle in the creation of the GAT was wherever possible to adapt items from publicly available and well-established psychological surveys with good reliability and validity evidence, in particular, those with strong associations with psychosocial fitness broadly construed. Items needed to be understandable to adults in general; it is estimated that the typical U.S. citizen reads at an eighth-grade level and that the typical soldier reads at a somewhat higher level (Henry & Raymond, 1982; Oxford-Carpenter & Schulz-Shiner, 1984). If items had been previously used with military samples, so much the better. Also, the assessment had to be efficient and not impose a burden on participating soldiers.

Civilian and U.S. Army experts were asked to suggest measures meeting these criteria. Most of these experts¹ then convened in Philadelphia on December 19, 2008, to discuss the nominated measures and to identify additional measures. We were charged with (a) winnowing the very large list of possible measures to a set of surveys that could be completed by most soldiers in less than one hour, (b) rewording questions as needed, (c) writing new items to fill gaps, and (d) creating wherever possible uniform answer options. Army lawyers and chaplains were subsequently consulted about the suitability of questions, especially those pertaining to spirituality and to possible illegal acts.

To avoid legal issues, we did not include questions asking explicitly about suicidal or violent thoughts and actions.

The resulting GAT draft contained about 180 items. It was prepared for computer administration and was completed online on a password-protected website by a large and diverse group of soldiers, from privates through generals ($N = \sim 8000$; see Fravell, Nasser, & Cornum, 2011, this issue). Most soldiers completed the GAT in less than 45 minutes, although a shorter—more efficient—survey remained a goal. Feedback was provided immediately after completion of the GAT and included the relative (ipsative) ordering of the respondent’s scores from the four domains and explanations of what each domain score reflected. The feedback was explicit that these scores were tentative and that the GAT needed to be validated further.

In almost all cases, items derived from a given scale converged with one another, with alpha coefficients for scales exceeding .80, showing that the items survived well as indicators of a given construct—for example, optimism, unit trust, social engagement, family satisfaction, and spirituality—even after modification.

How were these items related to one another? We performed a variety of exploratory factor analyses. In all cases, items cohered as intended into the domains of concern to the CSF program. Spiritual fitness items (e.g., “My life has a lasting meaning”) and family fitness items (e.g., “My family supports my decision to serve in the Army”) respectively loaded on and indeed defined their own separate factors.

Social fitness items also loaded together, although a distinction was possible between items measuring trust in one’s fellow soldiers and leaders (e.g., “I trust my fellow soldiers in my unit to look out for my welfare and safety”) and items measuring friendship (e.g., “I have at least one friend to whom I feel very close”) and social engagement (e.g., “How often do you feel part of a group?”).

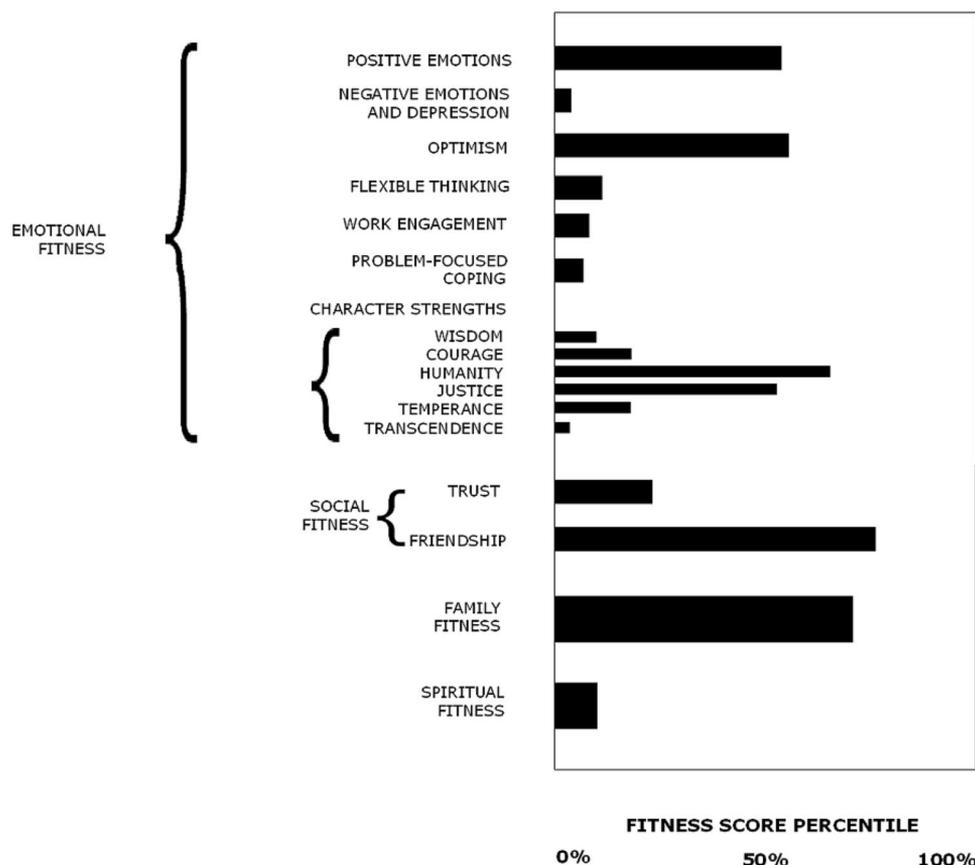
Emotional fitness items also converged with one another, although again, it was possible to discern distinctions among items reflecting positive versus negative feelings, optimistic versus catastrophic thinking, strengths of character, and active problem-focused versus passive emotion-focused coping.

The internal consistencies of the domain and subdomain scores exceeded .80 in all cases. These results verify the positive psychology premises that most people present a mix of greater versus lesser assets and that distinctions among these are possible and potentially useful.

Figure 1 shows the GAT scores for a male lieutenant and how his scores compare with the norms from the initial sample. As can be seen, he is (relatively) a cheerful and optimistic individual, strongly oriented to friends and family. Those are his notable assets. However, when compared with other soldiers, he is not strongly engaged in his work

¹ Those in attendance included O. Wayne Boyd, Carl A. Castro, Denise Clegg, Angela Duckworth, Stephen Lewandowski, Michael Matthews, Sharon McBride, Stephanie Muraca, Nansook Park, Christopher Peterson, Barry Schwartz, Martin E. P. Seligman, and Patrick M. Sweeney.

Figure 1
Global Assessment Tool (GAT) Results for a Male Lieutenant Compared With Army-Wide Norms



in the Army, and he seems to lack a strong sense of meaning and purpose. He is not active in his coping, and by his own report, he is not a flexible thinker. These characteristics may limit his ability to handle adversity effectively if and when encountered.

We know nothing else about this soldier and caution readers about the danger of extrapolating from psychological assessment results that are not checked against other sources of information. But taking his GAT results at face value, they suggest that this soldier might benefit from training that encourages flexible thinking and active problem solving as well as training that helps him see the larger significance of his work and life. Given his already strong relationships with friends and family, he might further benefit from advanced training in these areas, with an eye to using these assets to enhance his fitness in other domains (Park, 2011, this issue).

With the goal of making the GAT as efficient as possible, we shortened it by identifying the “best” (most predictive) items in each domain and subdomain, those that had the highest independent correlations with the total score, after controlling for the other items. Items were

retained that together predicted at least 95% of variance in the total scale score. The shortened GAT consisted of about 110 items. This item-reduction strategy ran the risk of reducing the internal consistencies of domain and subdomain scores, but all of the shortened scales had alphas that exceeded .80. The fine tuning of the GAT will continue.

Here is what we learned from our preliminary work. All psychosocial fitness indices were skewed in the direction of good functioning, a psychometric annoyance trumped by the theoretical point that most soldiers—as expected—were doing well.

About 20% of the respondents were women, and there were few gender differences of note on any of the psychosocial fitness scores except that female soldiers—across ranks—tended to score lower on trust than did male soldiers. These findings are important. On the positive side, they suggest that female soldiers are as “fit” as male soldiers. On the negative side, these data also suggest that female soldiers do not feel as fully at ease in the Army as do male soldiers. Further research is needed to understand the needs and challenges of female soldiers and to help

them attain the same morale as male soldiers, which perhaps would reduce attrition among them.

With increasing military rank, all indices of psychosocial fitness were higher. Whether this reflects maturation or the “up-or-out policy” of promotion in the U.S. military is unclear. It should be emphasized, however, that variation existed at each rank, which means that the CSF program should be helpful for all soldiers, from the youngest private to the most seasoned general.

Preliminary validation entailed relating GAT scores to existing screening instruments administered by the Army for posttraumatic stress disorder, depression, and alcohol abuse as well as to global self-ratings of how individuals were doing in each of the four CSF domains of concern. The GAT performed as intended.

Conclusions

The Global Assessment Tool (GAT) represents an ambitious collaboration between psychology and the U.S. Army. It is intended to measure comprehensively the strengths and assets of *all* soldiers. The GAT is an integral part of a program to promote the well-being of soldiers by recognizing and building their psychosocial fitness, thereby bolstering their well-being while reducing their problems.

The next step in the development of the GAT, currently in progress, is to use the shortened version of the tool to undertake serious validation of domain and subdomain scores against “objective” indices of doing well and doing poorly in each area as well as against ratings by a soldier’s immediate commanding officer and other knowledgeable informants of whether that soldier’s fitness in that area is exemplary, satisfactory, or problematic (i.e., a cause for concern).

Cutoffs will be established for each domain by determining the specificity and sensitivity of GAT scores vis-à-vis the validity criteria. Soldiers scoring below the problematic cutoff will be assessed more extensively and, as indicated, referred to basic training in the domain of concern. Soldiers scoring above the exemplary cutoff will, again, be assessed more extensively and, as indicated, referred to advanced training to build their assets further and position them to be expert trainers of their comrades.

Once validated, the GAT may have value in gauging unit-level effectiveness. If one of several possible units being considered for a difficult assignment has especially high psychosocial fitness scores in the aggregate, it may be the best choice for that assignment. Lower scoring units may best be directed elsewhere and provided additional training in the psychosocial domains of special concern.

Using what we have learned to date from the development of the GAT for soldiers, we have created an analogous but not identical measure of psychosocial fitness for the spouses and partners of soldiers—the Family GAT (Park, 2011). Again, the measure will be available on a password-protected Internet site. Feedback will be provided to those who choose to complete the measure, along with advice about possible resources for building assets. A soldier is only as fit as his or her loved ones, and the Family GAT will assess their existing strengths and help bolster

them further. Finally, we plan as well to create and make available a GAT-like measure for civilian employees of the Army.

We offer several caveats about the tool we have developed. As a self-report survey that aims to assess briefly the range of psychosocial functioning, it has the same limitations as any self-report inventory. Aspects of good functioning not amenable to self-report are obviously not measured. Along these lines, the GAT is an instance of *tonic assessment*, measuring a soldier’s at ease psychosocial fitness. The real value of fitness is during challenge and crisis and would require *phasic assessment*, measuring a soldier’s assets in actual use. In the ideal assessment world, a multimethod strategy would have been followed, as done during World War II by the Aviation Psychology Program. However, considering the size of today’s Army, this is not practical. Our necessary compromise will be to use objective indices and a 360° approach to validate the GAT.

The GAT is transparent, and its results may be distorted by self-presentation biases, positive or negative, deliberate or inadvertent. Our preliminary testing showed that soldiers are willing to describe their assets in a nuanced way; that is, no one scored at the very top (or the very bottom) of all the domains or subdomains. Critical here is the understanding established with respondents that the results will be used to help them and the Army as a whole and not to demote or promote soldiers simply on the basis of what they say about themselves.

History teaches us that assessment developed in the military does not just stay in the military. Consider how group intelligence testing from World War I and critical incident analysis from World War II moved into the civilian world. There is every reason to believe that CSF-like programs and GAT-like assessment would be useful to other large groups and organizations such as schools, businesses, police and fire departments, hospitals, community mental health centers, and the like—any and all settings where doing well is recognized, celebrated, and encouraged (Peterson & Park, 2003). Within each of these settings, there already exist good examples of promotion programs and strengths-based assessment tools. However, the programs and assessment tools typically differ across settings, segregating our knowledge of what works best. The CSF program and the GAT may provide common language, goals, intervention strategies, and measures. What we will eventually learn from this project may someday help us provide population-based assessment and programs that will promote the health and well-being of all people.

REFERENCES

- Algoe, S. B., & Fredrickson, B. L. (2011). Emotional fitness and the movement of affective science from lab to field. *American Psychologist, 66*, 35–42. doi:10.1037/a0021720
- Baumeister, R. F., Vohs, K. D., & Funder, D. C. (2007). Psychology as the science of self-reports and finger movements: Whatever happened to actual behavior? *Perspectives on Psychological Science, 2*, 396–403. doi:10.1111/j.1745-6916.2007.00051.x
- Boyle, P. A., Barnes, L. L., Buchman, A. S., & Bennett, D. A. (2009). Purpose in life is associated with mortality among community-dwelling

- older persons. *Psychosomatic Medicine*, 71, 574–579. doi:10.1097/PSY.0b013e3181a5a7c0
- Cacioppo, J. T., Reis, H. T., & Zautra, A. J. (2011). Social resilience: The value of social fitness with an application to the military. *American Psychologist*, 66, 43–51. doi:10.1037/0021419
- Christeson, W., Taggart, A. D., & Messner-Zidell, S. (2009). *Ready, willing, and unable to serve: 75 percent of young adults cannot join the military*. Washington, DC: Mission Readiness: Military Leaders for Kids. Retrieved from <http://cdn.missionreadiness.org/NATEE1109.pdf>
- Cornum, R., Matthews, M. D., & Seligman, M. E. P. (2011). Comprehensive Soldier Fitness: Building resilience in a challenging institutional context. *American Psychologist*, 66, 4–9. doi:10.1037/a0021420
- DiClemente, C. C., Marinilli, A. S., Singh, M., & Bellino, L. E. (2001). The role of feedback in the process of health behavior change. *American Journal of Health Behavior*, 25, 217–227.
- Fetzer Institute. (1999). *Multidimensional measurement of religiousness/spirituality for use in health research*. Kalamazoo, MI: Author.
- Fitts, P. M. (1947). Psychological research on equipment design in the AAF. *American Psychologist*, 2, 93–98. doi:10.1037/h0053785
- Flanagan, J. C. (Ed.). (1948). *The aviation psychology program of the Army Air Forces, Report No. 1*. Washington, DC: U.S. Government Printing Office.
- Fravell, M., Nasser, K., & Cornum, R. (2011). The Soldier Fitness Tracker: Global delivery of Comprehensive Soldier Fitness. *American Psychologist*, 66, 73–76. doi:10.1037/a0021632
- Garner, W. R. (1972). The acquisition and application of knowledge: A symbiotic relation. *American Psychologist*, 27, 941–946. doi:10.1037/h0033452.
- Gottman, J. M., Gottman, J. S., & Atkins, C. (2011). The Comprehensive Soldier Fitness program: Family skills component. *American Psychologist*, 66, 52–57. doi:10.1037/a0021706
- Gould, S. J. (1981). *The mismeasure of man*. New York, NY: Norton.
- Henry, J. F., & Raymond, S. (1982). *Basic skills in the U.S. work force*. New York, NY: Center for Public Resources.
- Hilgard, E. R. (1987). *Psychology in America: A historical survey*. San Diego, CA: Harcourt Brace Jovanovich.
- Hoge, C. W., Auchterlonie, J. L., & Milliken, C. S. (2006). Mental health problems, use of mental health services, and attrition from military service after returning from deployment to Iraq or Afghanistan. *Journal of the American Medical Association*, 295, 1023–1032. doi:10.1001/jama.295.9.1023
- Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351, 13–22. doi:10.1056/NEJMoa040603
- Hoge, C. W., Lesikar, S. E., Guevara, R., Lange, J., Brundage, J. F., Engel, C. C., . . . Orman, D. T. (2002). Mental disorders among U.S. military personnel in the 1990s: Association with high levels of health care utilization and early military attrition. *American Journal of Psychiatry*, 159, 1576–1583. doi:10.1176/appi.ajp.159.9.1576
- Jones, L. V. (2007). Some lasting consequences of US psychology programs in World Wars I and II. *Multivariate Behavioral Research*, 42, 593–608.
- Karney, B. R., & Crown, J. S. (2007). *Families under stress: An assessment of data, theory, and research on marriage and divorce in the military*. Santa Monica, CA: Rand Corporation.
- Korchin, S. J. (1976). *Modern clinical psychology*. New York, NY: Basic Books.
- Kuehn, B. M. (2009). Soldier suicide rates continue to rise. *Journal of the American Medical Association*, 301, 1111–1113. doi:10.1001/jama.2009.342
- Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., & Weiss, D. S. (1990). *Trauma and the Vietnam War generation: Report of findings from the National Vietnam Veterans Readjustment Study*. New York, NY: Brunner/Mazel.
- Lagrone, D. M. (1978). The military family syndrome. *American Journal of Psychiatry*, 135, 1040–1043.
- Lester, P. B., McBride, S., Bliese, P. D., & Adler, A. B. (2011). Bringing science to bear: An empirical assessment of the Comprehensive Soldier Fitness program. *American Psychologist*, 66, 77–81. doi:10.1037/a0022083
- Lippmann, W. (1922a, October 25). The mental age of Americans (Part 1). *The New Republic*, pp. 213–215.
- Lippmann, W. (1922b, November 1). The mental age of Americans (Part 2). *The New Republic*, pp. 246–248.
- Lippmann, W. (1922c, November 8). The mental age of Americans (Part 3). *The New Republic*, pp. 275–277.
- Lippmann, W. (1922d, November 15). The mental age of Americans (Part 4). *The New Republic*, pp. 297–298.
- Lippmann, W. (1922e, November 22). The mental age of Americans (Part 5). *The New Republic*, pp. 328–330.
- Lippmann, W. (1922f, November 29). The mental age of Americans (Part 6). *The New Republic*, pp. 9–11.
- Miller, W. R., & Thoreson, C. (2003). Spirituality, religion, and health: An emerging research field. *American Psychologist*, 58, 24–35. doi:10.1037/0003-066X.58.1.24
- Milliken, C. S., Auchterlonie, J. L., & Hoge, C. W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association*, 298, 2141–2148. doi:10.1001/jama.298.18.2141
- OSS Assessment Staff. (1948). *Assessment of men*. New York, NY: Rinehart.
- Oxford-Carpenter, R. L., & Schulz-Shiner, L. J. (1984). *A theory-based approach to reading assessment in the Army*. Alexandria, VA: Manpower and Personnel Research Laboratory, U.S. Army Research Institute for the Behavioral and Social Sciences.
- Pargament, K. I., & Sweeney, P. J. (2011). Building spiritual fitness in the Army: An innovative approach to a vital aspect of human development. *American Psychologist*, 66, 58–64. doi:10.1037/a0021657
- Park, N. (2011). Military children and families: Strengths and challenges during peace and war. *American Psychologist*, 66, 65–72. doi:10.1037/a0021249
- Park, N., & Peterson, C. (2009). Achieving and sustaining a good life. *Perspectives on Psychological Science*, 4, 422–428. doi:10.1111/j.1745-6924.2009.01149.x
- Peterson, C., & Park, N. (2003). Positive psychology as the evenhanded positive psychologist views it. *Psychological Inquiry*, 14, 143–147.
- Peterson, C., Park, N., & Seligman, M. E. P. (2005). Orientations to happiness and life satisfaction: The full life versus the empty life. *Journal of Happiness Studies*, 6, 25–41. doi:10.1007/s10902-004-1278-z
- Peterson, C., Park, N., & Sweeney, P. J. (2008). Group well-being: Morale from a positive psychology perspective. *Applied Psychology: An International Review*, 57, 19–36. doi:10.1111/j.1464-0597.2008.00352.x
- Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A handbook and classification*. New York, NY: Oxford University Press/Washington, DC: American Psychological Association.
- Prescott-Allen, R. (2001). *The well-being of nations: A country-by-country index of quality of life and the environment*. Washington, DC: Island Press.
- Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist*, 47, 1102–1114. doi:10.1037/0003-066X.47.9.1102
- Resnick, S. G., & Rosenheck, R. A. (2006). Recovery and positive psychology: Parallel themes and potential synergies. *Psychiatric Services*, 57, 120–122. doi:10.1176/appi.ps.57.1.120
- Sackett, P. R., & Mavor, A. S. (Eds.). (2006). *Assessing fitness for military enlistment: Physical, medical, and mental health standards*. Washington, DC: National Academies Press.
- Seal, K. H., Bertenthal, D., Miner, C. R., Saunak, S., & Marmar, C. (2007). Bringing the war back home. *Archives of Internal Medicine*, 167, 476–482. doi:10.1001/archinte.167.5.476
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5–14. doi:10.1037/0003-066X.55.1.5
- Seligman, M. E. P., & Fowler, R. D. (2011). Comprehensive Soldier Fitness and the future of psychology. *American Psychologist*, 66, 82–86. doi:10.1037/a0021898
- Sone, T., Nakaya, N., Ohmori, K., Shimazu, T., Higashiguchi, M., Kakizaki, M., . . . Tsuji, I. (2008). Sense of life worth living (ikigai) and mortality in Japan: Ohsaki Study. *Psychosomatic Medicine*, 70, 709–715. doi:10.1097/PSY.0b013e31817e7e64
- Stouffer, S. A., Lumsdaine, A. A., Williams, R. B., Jr., Smith, M. B.,

- Janis, I. L., Star, S. A., & Cottrell, L. S., Jr. (1949). *The American soldier: Combat and the aftermath*. Princeton, NJ: Princeton University Press.
- Stouffer, S. A., Suchman, E. A., DeVinney, L. C., Star, S. A., & Williams, R. B., Jr. (1949). *The American soldier: Adjustment during military life*. Princeton, NJ: Princeton University Press.
- Stretch, R. H., Marlowe, D. H., Wright, K. M., Bliese, P. D., Knudson, K. H., & Hoover, C. H. (1996). Post-traumatic stress disorder symptoms among Gulf War veterans. *Military Medicine, 161*, 407–410.
- Terman, L. M. (1922, December 27). The great conspiracy or the impulse imperious of intelligence testers, psychoanalyzed and exposed by Mr. Lippmann. *The New Republic*, pp. 116–120.
- Wright, K. M., Bliese, P. D., Thomas, J. L., Adler, A. B., & Eckford, R. D. (2007). Contrasting approaches to psychological screening with U.S. combat soldiers. *Journal of Traumatic Stress, 20*, 965–975. doi: 10.1002/jts.20279
- Wright, K. M., Huffman, A. H., Adler, A. B., & Castro, C. A. (2002). Psychological screening program overview. *Military Medicine, 167*, 853–861.
- Wright, K. M., Thomas, J. L., Adler, A. B., Ness, J. W., Hoge, C. W., & Castro, C. A. (2005). Psychological screening procedures for deploying U.S. forces. *Military Medicine, 170*, 555–562.
- Yerkes, R. M. (1921). Psychological examining in the United States Army. In R. M. Yerkes (Ed.), *Memoirs of the National Academy of Sciences* (Vol. 15, pp. 1–180). Washington, DC: U.S. Government Printing Office.
- Yoakum, R. M. (1920). Introduction. In C. S. Yoakum & R. M. Yerkes (Eds.), *Army mental tests* (pp. vii-xiii). New York, NY: Holt. doi: 10.1037/11054-000