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TECHNICAL REPORT

An Assessment of the Army's Tactical Human Optimization, Rapid Rehabilitation and Reconditioning Program

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Summary

Special operations forces (SOF) are among the most capable in the U.S. Department of Defense (DoD) in terms of both their skills and their physical abilities. To maximize these abilities, help prevent injuries, and increase the length of time these soldiers spend in the force, in 2009, U.S. Special Operations Command (USSOCOM) provided U.S. Army Special Operations Command (USASOC) with funds to establish the Tactical Human Optimization, Rapid Rehabilitation and Reconditioning (THOR^3) program. The program aims to increase the physical and mental capabilities of SOF soldiers, help them more rapidly recover from injuries sustained in combat or in training, and help them stay healthy and able to contribute longer.

The THOR^3 program was implemented in 2010, and there are plans to expand it to all USASOC commands. The program currently has a small headquarters office under the USASOC Deputy Chief of Staff, Surgeon, and unit-level programs in the special forces groups (SFGs), the Ranger Regiment, the 160th Special Operations Aviation Regiment (SOAR), the U.S. Army John F. Kennedy Special Warfare Course and School (SWCS), and battalions of these operational units that are stationed in other locations. Each unit-level program consists of a human performance program coordinator and a given number of strength and conditioning coaches, physical therapists, dietitians, and cognitive enhancement specialists.[1]

In anticipation of the program's expansion, USASOC asked RAND Arroyo Center to determine whether THOR^3 is effectively utilizing the resources provided, with a particular emphasis on military, Army civilian, and contractor staffing. RAND was also asked to identify options for improving the program across the domains of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P).

This study involved extensive interviews with THOR^3 staff and consumers, site visits to several USASOC locations and collegiate sports and U.S. Olympic training facilities, and a review of subject-matter expertise in the fields examined.

General Findings and Recommendations

The following findings and recommendations are of general importance to USASOC, and they concern all elements of the THOR^3 program.

[1] Cognitive enhancement is a formal part of the Army's comprehensive soldier fitness program, which seeks to provide "a systematic way to build mental and emotional strength for Warriors, family members, and DA Civilians" (see Comprehensive Soldier Fitness-Performance and Resilience Enhancement Program, homepage, undated, for details). The THOR^3 program has both adopted this approach and adapted it to the SOF mission and warrior.

The decision about who participates in THOR³ is a command-level issue and affects funding for personnel, facilities, and equipment. There is a difference between how USSOCOM views the decision about which soldiers and units should participate in THOR³ and how that decision is viewed by USASOC leadership and staff. According to USASOC staff, USSOCOM has indicated that the program should be limited to "18-series" soldiers who are in special forces groups, soldiers in Ranger units, and selected personnel from the 160th SOAR. Restricting participation to this level would have a significant effect on personnel and facilities funding in particular. USASOC leaders feel that THOR³ should be open to all USASOC soldiers, and they have prepared personnel requests that reflect this.

The degree of decentralization of THOR³ program execution will affect both staffing and how the program operates. Currently, the program operates in an almost completely decentralized manner. This is appropriate for some functions (e.g., strength and conditioning), but it is less than ideal in other areas (e.g., cognitive enhancement)—at least in the short term. The ability to provide oversight and support, collect and disseminate best practices, develop funding requests for expensive items (such as cognitive enhancement equipment), and conduct assessments will be directly affected by USASOC leadership preferences for how the program is run. Our findings indicate that there are benefits to a decentralized approach if it can be adopted without significant loss of technical functionality. However, the development of program coordinators, oversight of cognitive enhancement (until it is a mature part of THOR³ and accepted by the USASOC community), and, possibly, the performance of certain administrative functions (e.g., best practices and assessments) will require leadership and real capability at the THOR³ headquarters office because USASOC is unlikely to be able to hire fully developed program coordinators.

The current THOR³ headquarters staff will be adequate only if its role is very modest—if it focuses on performing routine administrative tasks and coordinating the program. The headquarters office is not staffed to allow it to perform a substantive oversight role or to provide cross-USASOC management in any significant way (e.g., assessment of unit-level programs, advice or direction on technical matters). USASOC's request for staff includes a THOR³ headquarters office of six: a program manager; subject-matter experts in strength and conditioning, physical therapy, and dietetics; and an administrative specialist (all roles to be filled by Army civilians), as well as a data manager (contractor). This structure is likely adequate, with the possible exception of oversight for cognitive enhancement.

Finally, we note that one important element of USASOC is not included in THOR³ or this analysis: the reserve component. To the extent that reserve SOF soldiers are part of future operational plans, there should be a way to provide them with best practices and lessons learned from THOR³, if not full access to training and facilities.

DOTMLPF-P Findings and Recommendations

The following findings and recommendations address each component across the range of the Army's DOTMLPF-P domains. They are presented in an order that reflects USASOC's primary concerns and the areas that are most important to the program, rather than in the traditional order.

Organization

Findings and recommendations regarding organization address both requirements for personnel of a certain type and the structure of the program. Together, these two components define the program and what it can do.

Requirements Validation and Articulation

Properly articulated and validated requirements define the capabilities of the program, provide clear guidance on the roles of all players, help with hiring and retaining the right people, and provide needed information for the administration of the program. Interviews with ten THOR^3 program staff in units at the O-6 and O-5 levels identified disconnects between the conceptual design of the program and its implementation. This finding may indicate a lack of knowledge of cognitive enhancement on the part of the unit-level human performance program coordinators. Some of these disconnects could be addressed by better statements of requirements.

Findings and recommendations that should help USASOC and the THOR^3 headquarters office in this area are as follows:

- The THOR^3 headquarters staff should clearly and carefully validate and articulate requirements for the unit-level program offices, which will assist it in more effectively administering the program. These requirements should be meaningful to those administering program at the unit level and based on detailed job analyses.
- Requirements for the THOR^3 headquarters office should be tied to the USASOC leadership's expectations for THOR^3 and the implied role of the headquarters office (e.g., the program's level of decentralization, the ability to share best practices across the command).
- At the unit level, the need for well-defined requirements is most evident with respect to cognitive enhancement specialists; program coordinators' perceptions of the need for these specialists are very different from those of the headquarters office.
- Requirements must be periodically reviewed and updated.

Structure

Along with validated requirements, the structure of the program is critical to determining its capabilities. Key findings and recommendations in this area include the following:

- The THOR^3 headquarters office is understructured for all but the most minimum functions and should be expanded as planned if the USASOC leadership expects it to provide direction and oversight for the program.
- We recommend a thorough manpower analysis to forecast expected workloads and thus inform structure and staffing requirements.

Personnel

Given an adequate structure, the next question is whether THOR^3 can attract and retain the right people to run the program in the right numbers. This includes the ability to define positions in ways that will permit USASOC's human resource managers to attract high-quality applicants and screen out inadequate ones. Hiring human performance program coordinators (whose specialty is strength training and conditioning) has been problematic due, in part, to the lack of a specified job series for this specialty and inadequately defined job criteria. One

option for solving the problem of inadequate job candidates being nominated for positions is direct hiring authority—that is, authority that would permit USASOC to hire personnel outside the typical practice in which the personnel system advertises a job, screens applicants based on specified criteria, and nominates the candidate who is "best qualified" for the job. Also important to USASOC is whether THOR^3 personnel should be Army civilians or contractors. In our interviews, USASOC THOR^3 personnel at the headquarters and program levels indicated a strong preference for Army civilians because they can be expected to stay with the units they support longer and may be more committed to those units. However, the experiences of similar programs indicate that contractors have also worked out well. Finally, all four of the specialties in THOR^3 (strength and conditioning, physical therapy, performance dietetics, and cognitive enhancement) are expected to be in high demand nationally. THOR^3 will have to compete to attract and retain these specialists in a competitive job market.

Our findings and recommendations in this area are as follows:

- The total number of personnel that the THOR^3 program has requested appears adequate.
- Each specialty area in each supported O-6–level unit should have at least one Army civilian to provide continuity and understanding of the supported unit.
- THOR^3 should have a personnel services contract that permits it to hire additional specialists to accommodate fluctuations in demand, as well as for special and temporary training or other needs.
- The mix of Army civilians to contractors should balance the command's preference for a stable, permanent workforce with flexibility in staffing levels (which is useful for controlling personnel costs—a necessity given the fluctuating client base in these units as a result of frequent deployments).
- USASOC should work with USSOCOM to perform a detailed job analysis of program coordinator and strength and conditioning coach positions to better categorize requirements under the existing job series in the short term, and it should pursue a new job series for these specialties in the long term.
- USASOC should not rush to request direct hiring authority; it does not meet the requirements, and creating a special job series for human performance coordinators and strength and conditioning coaches may solve the problem in the long term.
- USASOC should monitor the labor market for all THOR^3 specialties and consider hiring and retention bonuses for fields in which staff have multiple, lucrative options.

Leader Development and Education

This research found some actual and potential gaps in the skills of program coordinators that the THOR^3 program will need to address. In particular, current job descriptions do not indicate the need to manage moderately sized programs spread across multiple locations (in some cases), and our interviews found a lack of understanding of cognitive enhancement, generally. Furthermore, program coordinators must supervise staffs made up of medical and nonmedical personnel.

The THOR^3 program currently has no formal ability to develop its leaders or provide education for its staff. The responsibility is left to the individual staff member and the unit-level program coordinator to ensure that staff members stay technically proficient and develop appropriately. This is common practice for medical personnel who must keep current on their

technical skills. However, it does not prepare program coordinators and other staff for supervisory positions.

Our specific findings and recommendations for leader development and education are as follows:

- THOR^3 needs to develop its program coordinators in three critical ways:
  - Ensure that they understand the purpose for and how best to use the four types of specialists who make up their teams; this should be a priority. USASOC's Special Operations Center for Enhanced Performance (SOCEP) can help THOR^3 headquarters develop such a program.
  - Ensure that they are able to supervise a multifunctional team that includes individuals who deliver medical care with support and supervision from unit medical personnel and the medical treatment facility. USASOC medical personnel in the Office of the Deputy Chief of Staff, Surgeon, and at the unit level can help develop and implement such training.
  - Ensure that they are able to supervise much larger staffs than they currently have—in some cases, in more than one location. This is a standard supervisory capability that THOR^3 headquarters and supported unit personnel can assist in developing.
- THOR^3 program coordinators should monitor the currency of the professional credentials of their strength and conditioning staff, and THOR^3 headquarters staff should monitor the currency of the program coordinators.

Facilities

USSOCOM has determined (though not published) criteria for human performance program facilities. None of USASOC's facilities currently meet this standard, though the 1st Special Forces Group facility comes close. To address this shortfall, we offer the following findings and recommendations:

- Each USASOC unit that has been authorized a THOR^3 program should have a training facility that meets USSOCOM standards, and, accordingly, USASOC should submit military construction requests to USSOCOM.
- SFGs, Ranger Regiment units, and the 160th SOAR should be given top priority for THOR^3 facilities, with the 160th first in line due to the tornado damage its facilities sustained in 2011.
- Facilities for the U.S. Army Special Forces Command, 4th Military Information Support Group, 95th Civil Affairs Brigade, 528th Sustainment Brigade, and 112th Signal Battalion should be built to coincide with the creation of their THOR^3 programs.
- A new facility for SWCS should be built after all unit facilities are in place.
- While USASOC requests military construction funds to build new facilities, it also should examine the use of temporary facilities to fill shortfalls.
- USASOC should adopt a unit status report–like assessment framework to track the adequacy of its facilities and make their status known to USSOCOM.

Materiel

Of the areas examined in this research, materiel considerations pose the fewest problems for USASOC. The current decentralized approach, in which USASOC units purchase equipment

out of their operating budgets, seems to work well. The one potential concern, due to its cost (approximately $400,000 per SFG), is cognitive enhancement equipment, which is not yet fielded at the unit level. The following findings and recommendations address the THOR^3 program's materiel needs:

- USASOC should continue to let subordinate units enjoy autonomy when it comes to materiel identification and acquisition for the physical side of THOR^3.
- For the mental side of human optimization (cognitive enhancement), the THOR^3 headquarters office should provide subordinate units with assistance in equipment selection.
- Lessons from SOCEP and USSOCOM guidelines should be used in developing cognitive enhancement equipment requirements.
- THOR^3 headquarters should help units develop funding requests for cognitive enhancement equipment in tandem with fielding cognitive enhancement specialists at the unit level; the equipment and specialists are quite expensive, and supported units may need assistance to pay for them.
- No formal assessments of materiel are needed.

Training Assessment

The USSOCOM initial capabilities document that stipulates the requirements for and goals of THOR^3 articulates a target of 20-percent improvement in all aspects of human performance, rehabilitation, and recovery. According to the experts interviewed for this study, as well as USSOCOM staff responsible for overseeing THOR^3 and similar programs in other USSOCOM commands, these expectations are unrealistic; because these soldiers already maintain a high level of fitness, such large improvements are impossible. Consequently, developing assessment protocols to demonstrate that THOR^3 is meeting these expectations is not in the best interest of USASOC. Furthermore, there are no well-defined assessment tools for cognitive capability, which makes measurements in this field problematic. Our specific recommendations are as follows:

- USSOCOM should revise the assessment criteria, and develop appropriate metrics, so that they correspond to best practices in high-level sports and are useful to commanders. USSOCOM should also ensure that it is not too labor-intensive for the units running these programs to easily collect the appropriate data.
- Progress should be monitored at the individual and small team levels, not across USASOC or the THOR^3 program as a whole. Program- or command-wide progress assessment would require significant resources to do well, and soldiers in different units have different needs, further complicating such a task.
- Unit-level programs should share best practices and analyses with headquarters and other unit programs.
- THOR^3 should work with SOCEP to develop assessment protocols as cognitive enhancement specialists are fielded to units.
- USASOC should periodically ask an external organization in DoD or under contract to conduct independent assessments of the THOR^3 program; this organization could also assist in updating or developing new criteria and metrics. This would provide USASOC with an objective assessment of THOR^3's efforts that would be impossible for the program to provide by itself.

Doctrine and Policy

Little can be said about the doctrine or policies that THOR^3 could affect. However, if it did have such an impact, it would most likely be in the way that the Army conducts physical fitness training overall. Good practices from THOR^3 should be replicated throughout the Army to the extent that this can be done safely without a large, professional coaching staff to supervise physical training.

Final Observations

THOR^3 is an innovative program that is intended to support the development and maintenance of USASOC's most important—and hard-to-create—asset: SOF soldiers. Despite the absence of adequate data to quantitatively demonstrate that its goals are being achieved, the logic behind the program's design appears sound. The Army should consider conducting further research into a THOR^3-like program for reserve-component forces, along with longitudinal research and assessments of how such an initiative could be more useful to broader communities of interest (such as the military medical community and the U.S. Army in general).