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After the fall of the Berlin Wall in 1989 and the end of the Cold War in 1991, the German military, the “Bundeswehr,” faced major changes in culture and policy. In contrast to solely taking part in disaster relief missions and sending medical aid after natural catastrophes, the German Parliament agreed to start letting their services participate in peacekeeping missions with the United Nations and North Atlantic Treaty Organization (NATO). The occupation of Kosovo (1999), and later Afghanistan (2002), additionally served as the proving grounds for a military that would change dramatically because this was the first time since World War II that German ground troops were deployed facing actual combat. These deployments also required a change in the orientation of German military psychology.

Historically, psychology in the German military focused on personnel selection and therapy. Even before the beginning of World War I, German psychologists tried to select suitable recruits by applying aptitude tests and screening for personality disorders, as well as focusing on the development of assessments for special func-

tions, such as truck drivers, pilots, and radio operators. During the war, German psychiatrists tried to find cures for what we know today as post-traumatic stress disorder (PTSD), calling the symptoms “war trembling” or “war neurosis” (Crocq & Crocq, 2000).

The beginning of World War II fostered a boom in military psychology in Germany, again focusing on diagnostics and selection with an emphasis on officer candidates. Psychologists tried to find the right applicants with the strong character and leadership potential rather than solely focusing on cognitive abilities. This boom of military psychology ended abruptly in 1942 with the dissolution of military psychology in all German branches but the Navy. With the losses of the war and the lack of applicants for officer positions, the need for selection faded (Geuter, 1987).

After the war, the newly founded Bundeswehr integrated psychologists into their personnel assessment process again, focusing on the selection of enlisted, non-commissioned officers (NCOs) and officer candidates. But it was not until 1965 that the psychological selection was extended to all conscripts entering the German armed forces. At about the same time, an extensive psychological screening process was developed for pilots and flying personnel; this was the birth of aviation psychology in the German military (Hansen, 2006).

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A Change in Culture and Needs Addressed

German military psychologists have been sent to missions abroad for more than 20 years. With the war in Afghanistan and a concurrent shift in German security strategy and foreign policy allowing out-of-area missions, the need for proper psychological training, in-theater support, and after-deployment follow-up became more and more evident. At the same time, the need for a thorough selection of officers, NCOs, and enlisted personnel based on state-of-the-art diagnostics became even more crucial because today's complex combat tasks, such as asymmetric warfare, involve dealing with different cultures and handling high-tech equipment. This became even truer when Germany suspended conscription in 2011, facing the challenge of recruiting and selecting the right people for the right jobs in an all-voluntary force.

Therefore, today the major fields of employment in German military psychology are personnel selection and operational psychology, followed by organizational and research psychology, aviation psychology, ergonomics, and education. It is important to note that, unlike in some countries such as the United States, the Psychological Service in the German military does not belong to the medical branch but is rather an independent part of the civilian administration. Almost all psychologists are civil servants and serve as reserve officers when deployed. Psychotherapy, on the other hand, remains a core mission of the Joint Medical Service and is conducted in one of the five military hospitals or by public providers. If therapeutic support is needed during deployment, the soldier would be flown home and treated in a safe environment, although certain stabilization techniques could be applied in-theater if necessary.

The Psychological Service supports the Medical Service by providing clinical psychologists and cooperating closely in research and in the continuous improvement of psychological assistance for service members and their families, for example, in the Center for Psychotraumatology in the German Armed Forces Hospital Berlin

founded in 2010. The center combines both research and therapy and therefore has a unique approach in the German military for understanding post-traumatic stress disorder (PTSD). Cognitive behavioral therapy (CBT) and – if indicated – eye movement desensitization and reprocessing (EMDR) are possible treatments for PTSD in the Bundeswehr.

Current Research and Development

Operational Psychology

As early as 1993, with the first deployments of German troops abroad, operational military psychologists accompanied the soldiers, providing in-theater care and support. The first thoughts and ideas for operational military psychology were often based on experiences and research conducted in the United States and Israel (for early ideas, see Benbenishty & Solomon, 1986; Everly & Mitchell, 2001). Over time, psychological support evolved and adapted more recent developments in science, such as current research on resilience and post-traumatic growth. A close network of support was built across the specialties, including chaplaincies, social services, and the medical branch, with the notion of providing help and support for all aspects of a soldier's life. For example, if a soldier seeks help from the operational psychologist having problems with his family after deployment, he might also admit during the interview that he is drinking too much alcohol and is having problems with paying his bills. With the consent of the service member, the psychologist could give the social worker and the physician on base a call. The social worker then would support the soldier by planning how to cut his debt, the physician would take a deeper look into the alcohol problems and refer him to a psychiatrist for therapy if needed. This network hence supports referrals between the specialties without having to go through the chain of command or a lengthy appointment process.

In the current structure, a team of three operational psychologists is assigned to each brigade of the German Army. The German Air Force and

Navy and the Joint Logistical Support Service have similar constructs. These psychologists are backed by senior NCOs who are trained in stress management and are able to serve in the role as a psychological first responder if needed. They also assist the psychologists with administrative work and have a mediating function in the battalions and companies, often having served in the same units from which the psychologists' clients come.

The three main missions of the brigade's operational psychologists are coaching leadership on all levels, counseling soldiers (in contrast to therapy in clinics), and managing psychological crisis intervention. Serving as a consultant for leadership is the primary mission of the operational psychologist, first of all for the brigade commander but also for his battalion commanders, company leaders, and senior NCOs. He provides advice and guidance on all psychological matters such as the condition and motivation of the troops or acute situations that could have a negative influence on combat readiness.

If a service member struggles with personal problems (such as stress, sleep disorders, or family issues), the operational psychologists can provide preclinical support and work on behavior changes using concise short-term interventions. If needed, the operational psychologist on deployment could recommend that a soldier be sent home for further care and treatment. Note that the operational psychologist does not provide clinical therapy. The treatment of psychological disorders as defined in the ICD-10 (World Health Organization, 1992) remains the responsibility of the military hospitals and clinics, hence the close cooperation with the medical branch and primary care in the garrison and deployment setting.

Lastly, psychological crisis intervention is an important mission particularly during deployment but also at home where accidents or natural disasters could strike. The German military is slowly but surely distancing itself from Mitchell's approach (Everly & Mitchell, 2001) of critical incident stress debriefing (although some specific techniques might still be applicable) and using a more individual and comprehensive approach,

which stresses a soldier's unique strengths and coping abilities. A proper screening and individually designed post-deployment support program will address each soldier's distinct needs more appropriately in the future.

Providing an outside perspective in a strictly military setting, the operational psychologist is seen as a valuable asset by military leadership and can also be called upon for psychological training of units ready to deploy or any other professional question in his field of expertise. He will provide pre-deployment training and education, in-theater support when deployed with his unit, and post-deployment debriefing and care.

Personnel Psychology

Despite the suspension of compulsory military service, the traditional field of personnel selection and recruitment remains an important area of employment for psychologists in the German military. There are four predominant areas of occupation in the military's personnel selection process: the psychological diagnostic of enlisted and NCO applicants; the testing of officer candidates; the selection of special personnel, such as pilots, divers, and Special Forces; and the assessment of civilian employees.

Typically, the selection criteria are based on systematic work analyses for the specific occupation. The testing procedure is threefold: interviews, group situation methods, and psychological aptitude tests converge to a comprehensive and holistic picture of the candidate. Finally, a psychologist and a recruitment officer, who are trained in assessment center techniques and basic diagnostic principles, review the candidate.

The German military uses state-of-the-art computer-assisted tests (CAT), which are developed and maintained by a department of the Psychological Service and also used in part by the German Federal Agency for Employment and the German Aerospace Center. One component of the CAT is adaptive and examines cognitive abilities in logical thinking, mathematical reasoning, and language proficiency. According to on-the-test scores of the applicant, they will be

placed in a military occupation that meets the needs of the German military. Based on the requirements for the candidate's application, further tests might be administered. For example, all officers are tested on their skills for a variety of master's degree courses at one of the two universities of the German military, the Helmut Schmidt University of the Federal Armed Forces Hamburg and the University of the Federal Armed Forces Munich.

Additional testing might be applicable for candidates, such as pilots, air traffic controllers, and Special Forces operators. In addition to the basic screening, more job-specific testing is a prerequisite. Taking the German Special Forces as an example, the candidates are already selected and trained as NCOs in airborne or long-range reconnaissance units before undergoing a further multi-phased selection process under the oversight of the unit psychologists. This process includes in-depth aptitude and personality tests as well as a gruesome physical selection process in order to simulate a real-life deployment environment (for the future of Special Forces selection, see Beezemer et al., 2012). By passing this selection process, the soldiers have met the minimum requirements for starting their 2-year Special Forces training, after which they will further specialize in weapons, communications, medical aid, or demolitions.

Organizational Psychology

Organizational psychology contributes to assessing the internal and social situation of the German military. For this purpose, efficient and complex analytic tools are developed, made available, and utilized, thus providing significant contributions to the military's internal assessment. These findings from employee surveys, specifically developed for the German military across all services, also deliver continuous feedback to leadership and management controlling, for instance, on job climate or stress factors during deployment.

Further roles and responsibilities of organizational military psychology include the continuous quality assurance of psychological procedures

and programs as part of internal quality control as well as reviewing job requirements and conducting test analyses.

Psychological norms such as reliability, validity, objectivity, and acceptance of the implemented diagnostic methods are measured on a regular basis, as required by both national and international standards such as the International Organization for Standardization's standards for quality management (ISO, 2011).

Future Development

To maintain and increase the psychological fitness of servicemen and women, the Inspector General of the German military adopted a new conceptual framework in 2012 in order to maintain and improve personnel readiness and prevent stress-related disorders. This framework of "Psychological Balance and Consolidation Elements" introduces activities in the field of psychological screening, the trainability of mental fitness, the balance of psycho-reactive consequences of deployment, and the improvement of psychological resilience.

Major components of this framework are as follows (for more background information, see Kowalski et al., 2014):

- Development and implementation of a system for the screening of psychological fitness (care-based screening) at various times throughout a soldier's military life cycle to initiate supportive measures when personal resources are insufficient
- Development and implementation of a joint training capability to increase a soldier's personal resources for coping with stressful situations during deployment
- Improvement of the documentation of stressful and traumatic events during deployment
- Improvement of post-deployment follow-up and care to cope with deployment-related stress
- Development and implementation of a program for psychological balance and

consolidation as an additional method to improve personal resources and resilience

This program entails a variety of modules and seminars, teaching soldiers relaxation techniques and communication skills, and involving recreational sport. The program can also accommodate the soldier's spouses and family members, who can take part in special seminars and courses on a voluntary basis. Each program is specifically tailored to the individual, based on their experiences during deployment and their psychodiagnostic screening results. These results provide the baseline for further post-deployment support such as workshops, supplementary recovery, and preventive programs or physiotherapy. Special programs for soldiers, who were wounded in action, including their families, have been developed and are currently being evaluated by the Center for Psychotraumatology in the German Armed Forces Hospital Berlin.

The goal of the psychological screening is to focus on psychological fitness and its three underlying psychological constructs – resilience, post-traumatic growth, and quality of life – instead of just treating symptoms after deployment (Jacobs, 2012). This newly developed set of screening instruments includes interviews and standardized tests, which help to look at different dimensions of psychological fitness, such as coherence, personal strengths, beliefs, and social relationships. These “care-based” screenings will accompany a soldier recurrently throughout his military life and differ significantly from screenings used for selection.

The pre-deployment training will also become more focused on stress management techniques and self-awareness, thus enabling the individual soldier to draw from his own set of coping skills and strengthening his psychological fitness. An example of this new approach is the implementation of Chaos Driven Situations Management Retrieval System (CHARLY), an interactive multimedia training program that was rolled out to the services last year. CHARLY will become part of the mandatory pre-deployment training to improve self-awareness and teach self-calming techniques via psychoeducation and biofeed-

back. First studies show positive results in the change of attitude of soldiers toward psychiatric disorders (Wesemann et al., 2016).

In the program, a virtual coach guides the service member using interactive dialogue, role-play, and computer games to induce stress. This allows soldiers to learn about one's own behavior and regulate symptoms of tension or anxiety. This computer program will only be adjunctive to already existing training programs in the German military, including classical classroom education and in-the-field exercises to “train as you fight.” However, it might very well shape the future of resilience training and our understanding of psychological fitness.

Conclusion

The military often leads the way in innovative research and creative use of technology out of a need for effectiveness. The focus in military psychology is globally shifting from the classical approach of merely treating illness and psychological stress to a more holistic and comprehensive methodology, viewing a service member's health as a combination of physical and psychological well-being (see also Bowles et al., Chap. 14, this volume). Consistently, German military psychology is recognizing that psychological fitness and mental illness are different entities of a continuum; a soldier suffering from mental health issues might still be able to do his job but will need individually tailored support to strengthen his mental resources and skills.

With the suspension of conscription in Germany and a shift in German foreign policy to a broader global defense strategy with its allies, the need for personnel development and retention becomes more and more evident. The military has a responsibility not only to provide the best care available for its service members but also to avert and counter the development of mental health issues whenever possible with a preventive approach. This will not only take better care of the needs of the service members and their families, but it will also prove more cost-effective over time.

Understanding the concept of psychological fitness and integrating technology into training and psychological support therefore has the potential to consequently change the face of military psychology in Germany and in other NATO countries in the near future toward a more proactive and integrative approach, thereby meeting the challenges of today's battlefield.

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