

# Concept, validation, pilot phase, and evaluation of a resilience training course for leadership personnel in the German military police forces

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Leadership personnel in the German military police are often responsible for units that are frequently exposed to highly stressful situations due to their tasks and skills. As German military leaders are expected to take care of and support their subordinates, they need to know how resilience can be increased and trained. This article presents a resilience training concept for leaders in the German military police. The result is a 1-week resilience training course consisting of psychoeducational knowledge, practical training parts, and measures for sustainability. Subsequently, it was validated and scientifically evaluated with German military police officers ( $n = 19$ ). The high degree of target group orientation was deemed necessary and expedient. Further objectives are to adapt the concept to the needs of other military target groups and to increase its sustainability.

**Keywords:** resilience, leadership, military police, assignment-specific, resilience training

## Introduction

Among other tasks, the German military police forces are responsible for military law enforcement, military traffic control, security issues, and inquiries and investigations. Beside these core tasks, it is also incumbent on the German military police to teach and train personnel with special capabilities such as close protection forces, aviation security personnel, search-and-seize forces, or snipers. These specialized forces typically have highly optimized skills and capabilities (1).

Just like all military personnel, military police forces are exposed to various types of physical and psychological stress regardless of whether they are on a mission abroad or on duty in their home country (2). They may be involved in combat action, witness atrocities, face threats to life and limb, and have the experience of killing, just to mention

some sources of stress (3–5) while being deployed. There is a possible risk that these stressful experiences cannot be coped with successfully, which increases the risk for long-term psychological effects (6). Therefore, it is assumed that the risk of developing a post-traumatic stress disorder is two to four times higher in German soldiers with operational experience (7).

Besides their specialized skills and capabilities, resilience plays a particular role in this. The term resilience, which is also denoted as stress and trauma resistance (Bonanno, 2004, 8), is defined as a form of psychological resistance, which enables the individual to cope with adversities and highly stressful situations either without suffering psychological damage or to return to a state of psychological integrity later on Herrmann et al., (2011).

Many officers in the German military police forces are leaders of military police units with special capabilities (see

above). Therefore, it is important that the superiors acquire detailed knowledge and competencies regarding resilience, in order to make sure that they can take care of their subordinates and prevent, identify, and avoid excessive psychological stress. To this end, leaders must be able to strengthen their own resilience for one thing and assess and promote that of their subordinates for another.

The department for military and operational psychology of the German military police command with its mission-dedicated fields of activity adapted its training concept and practice in response to the growing demands and developed a digitally assisted resilience concept for military police forces (Gorzka and Hannsen, 2021). This modular and manual-based resilience concept aims to further and increase psychologically relevant competencies in the context of training.

Among other measures, the concept has been realized in the form of a resilience training course for leadership personnel, which was tailored to military police officers as the target group and has been implemented as a pilot project. The present article is intended to make a first contribution to the concept, validation, and evaluation of the resilience training course for leadership personnel in the German military police.

## Resilience training for military leaders

The training aims to (1) raise awareness for the topic of resilience in leadership personnel by teaching them techniques and imparting specific knowledge in a sustainable, authentic, and practice-oriented manner. Moreover, the participants ought to acquire basic knowledge about how to (2) assess and (3) promote resilience in their subordinates, as it is presented in the *Master Resilience Training* by Reivich et al. (9). Further specific aims are as follows: (4) imparting knowledge on topical and content-related aspects, so as to raise awareness in the trainees and enable them to assess and promote resilience in their subordinates. (5) Self-reflection is another key component [see also the self-reflective training approach of (10)] that enables the trainees to reflect on and actively deal with the contents and their own level of resilience, and to start a development process if the assessment of their own current situation reveals the need to do so. The (6) transfer from theory into practice—which, according to learning theory, means that the focus is placed on practical application and active reflection of newly acquired skills [see, e.g., (Aebli, 1983)]—and (7) sustainability must not be neglected to ensure that the competencies are retained in the long term.

Against this backdrop, the training was designed as a 1-week course that is divided into phases of imparting knowledge (days 1–4) and a knowledge test (day 5). The focus is on practical elements and aimed at practicing

the resilience-enhancing methods taught during the course. From days 1 to 4, the resilience training is divided into psychoeducational teaching in the morning (40 %), a practical training component in the afternoon (50 %), and exercises to render the learning experience more sustainable (10 %). To increase sustainability, apps are presented that contain breathing exercises and further information on psychological resilience. Aside from psychoeducational theory classes, the present resilience training concept for military leaders focuses on practical exercises that allow delving deeper into the topic, consolidating the acquired knowledge, and putting it into practice for the first time, so as to ensure that the trainees experience the effects of the exercises. The resilience training is complemented by worksheets, slideshows, and digital training aids such as apps. The topics for the resilience training course are based on the psychological components of resilience (PCR) as defined in the resilience concept of Gorzka and Hannsen (11). To maintain a high-quality standard regardless of the trainer conducting the resilience training course, a manual was drafted, which allows for a high degree of objectivity, comparability, and continuous evaluation. The manual encompasses the contents, working materials, and an additional slideshow and provides a timeline for the course [see (12)].

In the future, a handbook, handouts, and guidebook on the psychological elements of the resilience training course will be provided. On top of that, the developers of the course envisage adding digital methods such as virtual reality (VR) to certain stages of the training course.

### Day 1

The trainees are familiarized with the concept of resilience as a psychological foundation that is dynamic and subject to change. The following PCR is *assignment-specific stress management*, the goal of which is to impart basic knowledge in psychophysiology. The focus is on presenting a stress management concept for military police forces with special capabilities (13) and possible techniques for stress prevention and stress management as well as coping mechanisms. In addition to that, the trainees gain psychoeducational knowledge on stress and trauma sequelae (immediate or long-term effects of stress and trauma) and are presented with the topic of disorders related to trauma sequelae. The practical exercise for this PCR is a stress inoculation training session (14), during which the participants can apply and try out the coping techniques they learned.

### Day 2

The PCR of the second day is *adaptation*. Adaptation describes the relevance of resilience against the backdrop of a flexible working environment with quickly changing

requirements and the constant need for adaptation that goes hand in hand with it. The trainees learn what adaptation means and, in particular, how relevant it is for the German military police and soldiers in general (willingness to adapt against the backdrop of obedience to orders, ability to adapt). Furthermore, the trainees are familiarized with six soft skills, which were found to be relevant for adaptation (the ability to work in a team, communication and conflict management skills, assertiveness, the ability to solve problems, and intercultural competence). The exercise is a complex scenario in which the trainees must apply the six soft skills and reflect on their current level of these skills (self-reflection).

### Day 3

The PCR of this day is *potential*, i.e., about assessing the subordinates' potential with a view to assessing and promoting resilience. The trainees learn what potential means and how relevant it is in helping the subordinates to develop their potential. Moreover, the concept of subjective and objective performance limits is presented with a reference to the zone of proximal development model by Vygotsky (15). In this context, the role of over- and underestimators will be discussed. In the practical training of this unit, the trainees will analyze exemplary cases with regard to their potential using the models they were taught and identify possible courses of action. In the next step, the exemplary cases provide the basis for a communication exercise. To this end, some basic principles of communication were presented in the psychoeducational unit earlier in the course.

### Day 4

The PCRs discussed on day 4 are *social environment*, *internal frame of reference*, and *assignment-specific skills*. The *social environment* sheds light on the influence that the digital and real social environments have on a person's resilience; the potential risks and benefits of social media are discussed. The *internal frame of reference* explores personal values and norms as well as changes of attitude, while the unit on *assignment-specific skills* demonstrates the importance of mastering relevant skills in assignment-related activities. In the final exercise, the participants have to combine and apply all the knowledge they have acquired in the course. They are given case studies, which they then analyze from a superior's perspective regarding the various aspects of resilience. Subsequently, they are asked to evaluate their analysis and identify possible courses of action to increase resilience.

The training is concluded with a written test on day 5 to check the participants' knowledge of the training contents and a feedback session.

## Self-reflection

As self-reflection is understood to be the process of becoming aware of one's deficits and thus considered the basis for optimization and growth, it is relevant for all PCRs in that it is a fundamental aspect of resilience and this training course. Self-reflection is the analysis of one's own past and current experiences with the goal of acting more effectively in the future (16, 17). According to Atkins and Murphy (18), it is divided into three stages: (1) awareness of thoughts and emotions; (2) critical analysis of emotions, thoughts, and situations; and (3) development of a new perspective on the situation. Being faced with a challenge stimulates reflective thinking in the sense that the actual state of affairs is different from the one the person had expected (19). Reflective processes are triggered by events that do not comply with a person's expectations (20). The reflection process typically includes the act of self-questioning in order to create meaning in the retrospective and find clarity for future actions (19).

## Validation and pilot phase

After conceptualization, the resilience training course for military leaders was validated by subject-matter experts using the method of communicative validation—i.e., validation based on the feedback of the observed groups [(Lincoln and Guba, 1985), quoted from (Döring and Bortz, 2016)]. The group of subject-matter experts encompassed military psychologists from the German military police forces and two former military close-protection specialists, who assessed the content and structure of the course. Subsequently, the resilience training course for military leaders went into the pilot phase in three turns with two groups (consisting of four or five persons each). The pilot courses were conducted by military psychologists from the German military police, who were each supported by one military assistant instructor. The total duration of one turn was 5 days. The pilot courses were evaluated and validated with the target group. The pilot phase was also used to validate the concept with future instructors.

## Evaluation

The evaluation format included open-ended questions, where participants were asked to indicate which aspects of the training were positive and should remain part of the course, and which aspects needed to be improved. In addition, the results of the course were evaluated at four points in time: before the training week [t0, after the training (t1), 1 month after the training (t2), and 3 months after the training (t3)]. The self-evaluation form (assessment scale in percent) encompassed statements on the participants' (1) theoretical knowledge of resilience, (2) theoretical knowledge

of resilience from a leader's perspective, (3) theoretical knowledge of stress management, (4) practical application skills regarding resilience, (5) practical application skills regarding resilience from a leader's perspective, (6) practical application skills regarding stress management, (7) ability to self-reflect, (8) willingness to self-reflect, and (9) resistance to stress. After the subjective evaluation, the objective amount of knowledge the participants had acquired was tested at t1, t2, and t3 in the form of written test.

## Analytical methods

A qualitative evaluation of the open-ended questions was conducted according to the structuring content analysis method described by Kuckartz (21). To evaluate the results, the topics in question were evaluated individually using a descriptive statistical approach, and a timeline of the various measuring points was presented. After that, it was checked whether the differences between the measuring points were significant. Since the sample group ( $n = 19$ ) was so small that it did not meet the criterion of normal distribution, which is a prerequisite for parametric tests, the authors used the non-parametric Wilcoxon test to check for significance. The evaluation of the knowledge tests was carried out by two independent raters. The result was an interrater reliability of  $k = 0.747$  ( $z = 23.1$ ,  $p < 0.001$ ).

## Results

The pilot project was launched during the third military police officer training course, which marks the last part of the officer training. Apart from very few exceptions, the participants had thus already served for at least 5.6 years. The total sample was  $n = 29$ , but one of the resilience training courses ( $n = 10$ ) had to be suspended after the first day due to the COVID-19 pandemic. It was impossible to continue or repeat the course at a later point in time, so the sample of trainees who participated in the entire resilience training course is  $n = 19$ . Of the 19 trainees, 2 were female and 17 were male. The youngest participant was 21 and the eldest was 35.

### Qualitative analysis

The ratio of theory to practice was listed as positive, and the theoretical knowledge was put into practice in the afternoon. Regarding the contents, the practical implementation of hands-on exercises (stress inoculation training, soft skills training, communication, and case analysis) was mentioned as positive. Another positive aspect was that the contents were built on one another and ended with a final exercise, so that the structure and purpose of the training were very clear. Moreover, the participants stated that their awareness of the

topic had been raised, that they understood its relevance, and that self-awareness and self-reflection were promoted. Furthermore, the concept of conducting the training in small groups was considered pertinent, and the materials provided were marked positive.

One of the potential improvements, according to the trainees, was to increase the proportion of practical elements even further. On top of that, it was suggested to involve more personnel from outside the course to provide first-hand accounts relating to the topic based on their own experiences as military professionals. Moreover, pertinent suggestions were made to improve the practical exercises: exposing the trainees to a higher stress level during the stress inoculation training and forcing them to apply the acquired techniques more rigorously. There was negative criticism concerning the diffuse situation and solution given in the soft skills training session. As to the case studies in general, it was suggested that there should be a greater variation of examples, external personnel who role play the situation, as well as a division of military topics to avoid misunderstandings. Regarding the case studies on day 4, the trainees stated that the examples should not only be dealt with on their own and presented, but also be role played in a communication exercise. To improve the content, it was mentioned that communication skills and the application of soft skills should be treated in greater detail to be better prepared for the exercises in the afternoon. One major point of criticism concerned the design and use of worksheets. The suggestion was to abstain from gap-fill activities and provide a clearer structure when using the worksheets. According to the trainees, filling in the worksheets while trying to listen to the teacher was too much of a distraction.

### Evaluation results

In the self-evaluations concerning the theoretical knowledge about "resilience from a leader's perspective" and "stress management," there is a strong increase in the mean values (see [Table 1](#) and [Figure 1](#)) between times t0 and t1. Between t1 and t2, the mean values stagnated at a constant level or experienced a slight decrease. This trend continued between times t2 and t3.

The self-evaluations concerning practical application in the fields of "resilience from a leader's perspective" and "stress management" also show a strong increase in the mean values (see [Table 1](#) and [Figure 2](#)) between times t0 and t1. Here, too, the values stagnate or decrease slightly between t1 and t2 (see [Figure 2](#)). This trend continued between times t2 and t3.

The average self-evaluation scores relating to the ability and willingness to self-reflect or stress resistance are higher at t0 than those of the variables described above. The self-evaluation scores of stress resistance show a slight increase over the duration of the course, whereas the ability and

**TABLE 1** | Overview of statistical analysis.

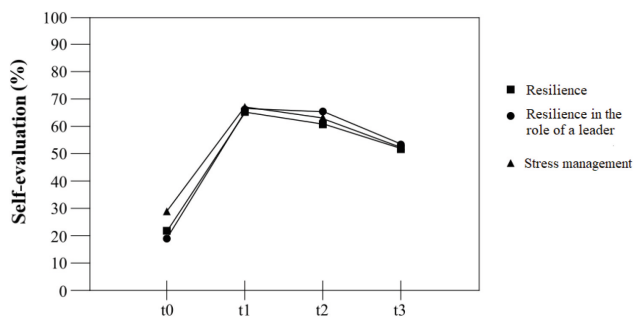
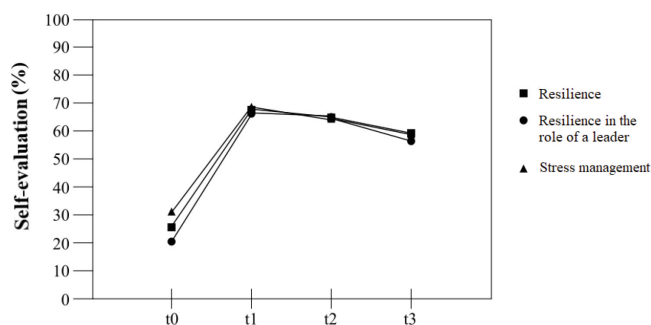
Parameter	Time t0 (n = 19)		Time t1 (n = 19)		Time t2 (n = 18)		Time t3 (n = 19)		Strength of effect r			
	M	SD	M	SD	M	SD	M	SD	t0-t1	t1-t2	t2-t3	t0-t3
TK resilience	22.16	16.62	66.05	16.12	59.72	16.31	55.00	18.92	0.87**	0.47*	0.42	0.83**
TK RIL	18.74	16.68	67.11	14.46	65.83	13.42	56.84	20.15	0.86**	0.14	0.55*	0.85**
TK stress management	28.95	22.02	67.58	19.10	63.06	19.03	56.84	19.93	0.81**	0.31	0.43	0.75**
PAS resilience	23.74	18.85	67.89	17.27	64.72	14.29	60.26	18.89	0.87**	0.26	0.29	0.87**
PAS RIL	18.89	15.81	67.11	16.69	66.11	13.35	57.11	20.84	0.85**	0.08	0.44	0.83**
PAS stress management	31.05	24.47	68.68	14.13	65.00	18.07	60.26	18.37	0.79**	0.28	0.33	0.78**
Ability to self-reflect	65.26	24.12	78.95	14.00	80.28	11.69	75.00	18.86	0.54*	0.08	0.43	0.59**
Willingness to self-reflect	70.26	26.17	81.05	13.70	77.22	14.57	72.89	19.81	0.46*	0.28	0.28	0.17
Stress resistance	63.42	19.44	70.79	12.83	72.22	15.17	72.16	14.93	0.32	0.16	0.06	0.53*
Knowledge test	X	X	38.63	10.14	25.44	15.47	21.63	12.58	X	0.79**	0.54*	0.87**

TK, theoretical knowledge; RIL, resilience in the leadership process; PAS, practical application skill; M, mean value; SD, standard deviation; r, effect size r.

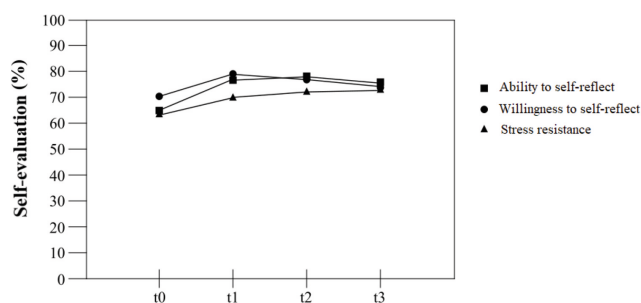
\* $p < 0.01$  (asymptotic Wilcoxon X: no values given).

willingness to self-reflect drop again after an initial increase (see [Figure 3](#)).

As can be seen in [Table 1](#), the differences between the self-evaluation scores at measuring times t0-t1 and t0-t3, i.e., between the point before the training and after 3 months, are significant. The differences between times t1 and t2 as well as t2 and t3 are not significant, apart from a few exceptions. The acquisition of theoretical knowledge was hence sustainable

**FIGURE 1** | Self-evaluation of theoretical knowledge.**FIGURE 2** | Self-evaluation of practical application skills.

(with a slight decrease due to expected memory adaptations). As to the willingness to self-reflect, a significant difference can only be observed between t0 and t1. The one between t0 and t3 is not significant, because the mean self-evaluation score at t3 ( $M = 72.89$ ,  $SD = 19.81$ ) was nearly as low as that of t1 ( $M = 70.26$ ,  $SD = 26.17$ ). Considering this fact, it might be necessary to emphasize the importance of self-reflection even more during the training, in order to achieve long-term sensitization on the topic. Another result is that the increase in the self-evaluation scores relating to stress resistance is not significant between t0 and t1, but is significant between t0 and t3. This phenomenon could be explained by the fact that the participants felt the stress level was too low during the stress inoculation training, and that this is why the subjective evaluation of their stress resistance showed no increase after 1 week of training. Another factor is that 1 week is not enough to increase stress resistance. Between t0 and t3, however, the scores increase significantly. It can thus be said that the stress management techniques, in combination with the advice that an effect can only be achieved if they are practiced on a

**FIGURE 3** | Self-evaluation of the ability and willingness to self-reflect and stress resistance.



regular basis, were heeded and caused a significant increase in the subjective stress resistance of the trainees.

The average result regarding the objective acquisition of theoretical knowledge according to the knowledge test at time t1 was  $M = 38.63$  ( $SD = 10.14$ ,  $min = 20$ ,  $max = 51$ ) out of 63 possible credits. At t2, this score dropped to  $M = 25.44$  ( $SD = 15.47$ ,  $min = 0$ ,  $max = 55$ ) and to  $M = 21.63$  ( $SD = 12.58$ ,  $min = 0$ ,  $max = 46$ ) out of 63 possible credits at t3. The differences between times t1 and t2, t2 and t3, as well as t1 and t3 are significant.

## Discussion

In this article, a newly designed resilience training course for military leaders of the German military police was presented. The training concept was put into practice, validated, and evaluated within the framework of a pilot project. Thanks to the military psychologists involved in the development process, it was possible to attain high quality regarding the contents and practical relevance of the course. The pilot project was suitable for the first validation and evaluation of the training concept. The involvement of subject-matter experts, members of the target group itself, and future instructors in the validation process allowed for a comprehensive collection of opinions. As for the evaluation in particular, we were able to answer the formulated question by means of qualitative and quantitative methods. It was of great importance to collect data at different points in time so as to be able to examine the developments over time and assess the sustainability of the learning process. The result is the draft concept of a manualized 5-day resilience training course for military leaders, which is composed of psychoeducational and practice-oriented elements. It must be emphasized that the course was designed in accordance with the resilience concept developed explicitly for the German military police (Gorzka and Hanssen, 2021).

The training led to a significant increase in the self-evaluation (between t0 and t1 as well as between t0 and t3) of the participants' theoretical knowledge and their practical application skills regarding resilience in general, resilience from a leader's perspective, and stress management. Thus, the objectives of the training have been met. The overall evaluation of the training week by both the trainees and the subject-matter experts (military psychologists and instructors) was positive. The importance of high proportion of practical exercises was emphasized the most. Furthermore, it was stated by the participants that the training course promoted self-reflection and that there is no target group-oriented training of this kind in the current training portfolio of the German armed forces, even though they deem it an urgent necessity. Considering that resilience and stress management are highly relevant for the military and that the trainees had not only just joined the forces, their poor knowledge of resilience and stress management at the

beginning of the course reveals the fact that there is a deficit and measures must be taken.

As the results cannot be generalized due to the small number of trainees ( $n = 19$ ), the study has a limited scope. This was taken into account during the evaluation. In this respect, one must bear in mind that the objective was to design a general training course not for a broad audience, but for military leaders in particular. Nevertheless, it would be advisable to conduct a further evaluation with military leaders from other rank categories (NCOs and staff officers) to confirm the results. Another factor is that the sample consisted of officers who had almost reached the end of officer training. In this case, it would be an option to include more experienced officers in the evaluation process. Another limiting factor is that the knowledge test was used to assess the objective acquisition of knowledge. However, the questions were only aimed at the reproduction of subject-related knowledge and did not allow for an assessment of the ability to transfer or apply the acquired knowledge. This could be optimized by having the trainees work on an example, along the lines of the practical exercise on "resilience from a leader's perspective," where the focus is on the practical application of the acquired knowledge, in particular with a view to the assessment of the situation and possible measures to promote resilience. In addition, the evaluation of the results was only a self-evaluation, not an objective assessment; appropriate assessment scales are to be developed to this end.

## Conclusion

This course provides a basis that is particularly suitable for further optimization, adaptation, and evaluation. The next step must be the realization of optimization demands to tailor the course even more to the needs of the target group and conduct further evaluation and validation studies with different samples (e.g., staff officers, senior NCOs, and more experienced military leaders). In addition, the sustainability must be increased. To this end, the value of the manual, handouts, and psychological guidebook must be assessed as well as the effect of envisaged enhancements of certain training segments by means of digital methods such as VR and biofeedback. The trainees' deficits concerning resilience and stress management that became apparent at the beginning of the course showed that there is a need to adapt the training.

The PCRs can be trained all at once, as in the present training course, or individually. This allows for great flexibility and opens up the possibility of teaching individual training modules that focus only on certain aspects, such as assignment-specific stress management. It ought to be tested whether the concept can be transferred to other branches of service, because other military leaders might profit from the knowledge as well and thus provide the greatest possible

benefit to the German armed forces. Resilience is a topic that is relevant not only for the German military police but also for the entire military. Finally, the special status of the present training is to be emphasized, as it is very closely tailored to the needs of the target group—i.e., military leadership personnel. It is only with a high degree of target group orientation and adaptation to particular needs that the training course can best fulfill its purpose.

## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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