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Reserve Soldiers' Psychological Resilience Impact to Sustainable Military Competences: On the Mediating Role of Psychological Skills (Effort, Self-Efficacy, Proactivity)

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Abstract: This research aims to explore an analytical model, gauge the interplay between psychological resilience and achieved military competencies, and examine an intermediary role of effort, proactivity, and self-efficacy. In this study, 337 reserve soldiers from Lithuania were investigated with the Lithuanian Military Training Competences Assessment Scale, Resilience Scale, Self-Efficacy Scale, Short Grit Scale (Grit-S), and Proactivity Scale. Our findings highlighted the importance of the psychological resilience of reserve soldiers due to its positive relationship with the personality traits. Implicit interconnectedness between psychological resilience and psychological skills together with military competences was researched, and it became evident that self-efficacy determined a statistically important mediating role (indirect effect = 0.264 **, $p < 0.05$) between reservists' psychological resilience and perceived military training course results. However, the other components included in the study did not have a mediating effect (effort indirect effect = 0.03, $p > 0.1$; proactivity indirect effect = 0.094, $p > 0.1$). The research findings are important because of greater prominence of the role of reserve troops in military operations around the world and achievements in the domain of security and defense. This study has great theoretical and empirical value in making decisions concerning the psychological resilience of reserve soldiers' promotion and sustainable improvement of military preparedness strategies.

Keywords: reserve soldiers; psychological resilience; military competences; effort; proactivity; self-efficacy; mediation model

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1. Introduction

Sustainable development is a phrase with multiple meanings found throughout our modern culture, but with unambiguous definition for military organizations [1]. Military planners today are focused on sustainable warriors' development, which allows them to ask appropriate questions concerning realistic operational timelines and goals while providing a solid foundation for commanders in the field to assess operations. Additionally, it can be mentioned that military operations currently are focused on achieving a unity of effort across services, agencies, and other entities toward an overarching goal. This harmony of effort requires military leaders to understand the impacts of their decisions and integrate the corresponding actions taken into long-term and strategic goals [1]. Consequently, considering the very nature of warfare operations, military personnel must be ready and resilient when encountering a fraught environment and be able to sustain a high level of cognitive and physical performance indispensable to success [2].

Resilience has received deep interest of scientists during the past three decades, and its pattern has shifted from stability-related toward that of process or results [3]. Because of several unique features in the context of resilience, it may be partially predictable [4].

These features can be generally categorized into both demographic (such as gender) and psychological variables and support (protective factor). However, the main predictor has not been acknowledged to enforce leading effect on resilience development [5]. Accordingly, the representation of resilience as an unchanging characteristic has become less accepted [6]. In addition, the growing understanding of resilience has led to the term being used as endurance, mental hardness, thoroughness, and retention [7]. Despite this overlap, various research concludes that resilience is not only resilience but also a vital means to ensure successful negotiations and adaptation and manage stress [8,9]. Psychological resilience is crucial for military preparedness, inasmuch as it contributes to the way of dealing with emotional stress; a distressed soldier (one who is unable to handle life's stressors) will not conduct military operations effectively, however psychologically strong he/she is [10]. Transformation, intricacy, uncertainty, and ambiguity are among those factors which condition the modern operational military setting [11]; given these reasons, psychological resilience is crucial to military readiness, and military training may contribute greatly to its development.

Today, it is essential to enhance military competence and enlarge the resilience to different soldiers' training processes. Furthermore, it is pivotal for a country—depending on reserve units for its defense or other operational needs—to have a high degree of reserve soldiers' military preparedness [12]. Prior research in the military context decelerated the reasonable concordance between military knowledge and the experience of military personnel [13,14]. Consequently, understanding that military competence is indicative of military activity is considered to be one of the main goals of military education. Previous research has found that soldiers with well-developed psychological abilities accomplished physical assessments better than soldiers with less developed psychological capabilities [15]. However, there appears to be a lack of research on perceived military competence. Therefore, more research is needed into the psychological variables that predict perceived military competence. Additionally, it can be noted that earlier research examining resilience, military competencies, grit, and hardiness generally focused on these constructs separately [16–19].

The present study aimed at scrutinizing and enlightening how psychological resilience leverages perceived military competencies. Given the growing interest in resilience by military organizations, this paper presents a new conceptual framework to introduce the unique importance of resilience predicated upon metasynthesis of the resilience scale chosen and to identify some practical implications for measuring resilience effect on military competences when the mediating role of psychological skills (grit, self-efficacy, and proactivity) are taken into account. Furthermore, the reserve component of Lithuanian armed forces has not yet been studied or researched. We hope our paper will provide valid theoretical starting points for further discussion and research on topics about reservists in Lithuania and other countries that are using reservists for military purposes. The aforementioned analyses oriented toward reinforcing foreseeable capabilities of military identity on functioning, as well as toward exceling future scientific investigations, as appropriate, of this significant construct.

This paper, firstly, in Section 2, focuses on presentation of the theoretical model and developed hypotheses. It introduces the newest understanding of the concept of resilience within the personality traits, which become the foreground in relation to military life variability and adaption in the event of hostile confrontations. Section 3 introduces the methodology used for psychological resilience impact on perceived military competencies assessment using the validated instruments. Results are presented in Section 4 and an in-depth discussion of findings in the light of previous studies is presented in Section 5. Section 6 presents the main study results, paucity, and recommendations for future scholarly work.

2. Literature Review and Hypotheses

In today's dynamic environment, so many repercussions can appear, and to be resilient became highly important for civilians as well as for militaries [20]. Thus, it is noticeable that

resilience grows into a domain of interest in various sciences [21,22] and has been examined in such areas as developmental psychology, sociology, trauma, medical education [23,24], and military training [25–30]. Furthermore, a wide range of scales were developed for resilience evaluation, which are based on several constructs [31–33]. Military professionals are at high-risk, and their experience is higher than average rates of the stress-related conditions while performing their tasks. For experienced resilience evaluation in military area studies, typically a few scales can be used, such as the Brief Resilient Coping Scale (BRCS) [34] and the Connor–Davidson Resilience Scale (CD-RISC) [35–38]. Notably, resilience as a quality can be treated as a psychological characteristic within the personality's nature that expands coping skill and adaptability to stressors. Recent research has shown that resilience is a process-oriented approach or as a process of consistent application of training and progress. It can also be noted that resilience has developed into the result-oriented dimension with emphasis on mental health after a person has experienced stress and suffering. Research concludes that testing different facets of resilience produces different results of a scholarly investigation; therefore, psychological resilience is to be perceived as a multifarious notion. Consequently, we can hypothesize that:

Hypotheses 1 (H1). *Resilience has positive, statistically significant direct impact on reserve soldiers' military performance.*

Furthermore, it can be mentioned that it is difficult to link resilience directly to the results achieved. It happens due to both the shortcomings of resilience theory, its notion and measurement, and the important, reliable proportions of outcomes that can be explicitly attributed to the impact of military training that have not been defined. Previous studies proved that the driving force for military training highlights the intersection between performance attainments and perceived military competence [39], and suggests that persons with high self-efficacy, proactivity, and effort will incline toward being more responsible for obtaining essential military knowledge and aptitudes [34–42].

Thus, based on previous research, we created a hypothetical model that explains through four variables the reservists achievements after receiving military training (MIL): (1) PSR—psychological resilience (referring to the perceived psychological stress), (2) EFF—effort (referring to a reservist's abilities to surmount obstacles and perform well), (3) PRO—proactivity (referring to the proactive personality that can be presented as an individual demonstrating dynamic behaviours to introduce positive situational changes), (4) SEF—decisive personal determinants of academic and military accomplishment (see Figure 1).

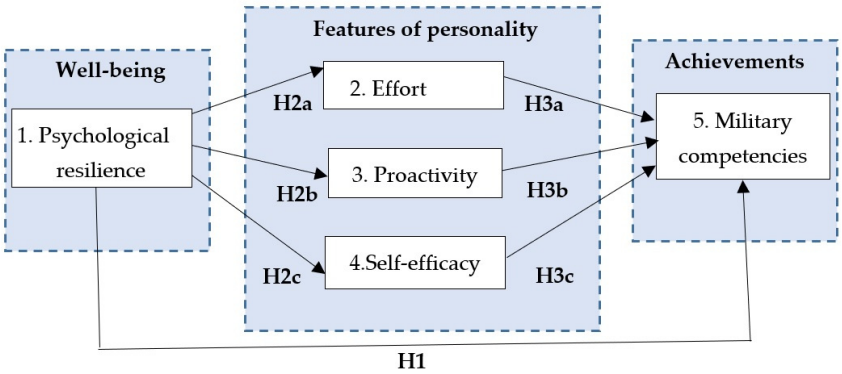


Figure 1. Theoretical mediation model accounting for military competencies.

Accordingly, we developed the few hypotheses to test as direct as indirect impact of psychological resilience to perceived military competencies (see Figure 1):

Hypotheses 2a (H2a). *Resilience has direct, positive, and statistically significant impact on effort.*

Hypotheses 2b (H2b). *Resilience has direct, positive, and statistically significant impact on proactivity.*

Hypotheses 2c (H2c). *Resilience has direct, positive, and statistically significant impact on self-efficacy.*

Hypotheses 3a (H3a). *Effort can be the positive and statistically significant mediator between resilience and military performance.*

Hypotheses 3b (H3b). *Proactivity can be the positive and statistically significant mediator between resilience and military performance.*

Hypotheses 3c (H3c). *Self-efficacy can be the positive and statistically significant mediator between resilience and military performance.*

3. Materials and Methods

The covariance-based structural equation modelling method along with IBM AMOS 26v software that were utilized to test the present study's theoretical model and hypotheses. This method is relevant to examine models with mediating effects and is often applied in research where few constructs are included [33–41]. As for information collection, we conducted a self-assessment survey which includes self-reported information, starting from demographics data and continuing with responses to five investigated constructs included in our model: (1) 10-item Connor–Davidson Resilience Scale (CD-RISC-10) [38]; (2) 8-item Short Grit Scale (Grit-S) [39,42], (3) proactive behavior was assessed by 6 items from Bateman and Crant [40]; (4) 7-item self-efficacy in a military context scale of Buch, Säfvenbom, and Boe [41]; and (5) 14-item Perceived Military Competencies scale.

We present the detailed description concerning data sample collection for this study in Section 3.1, the measurement instrument (measurement scales) used are described in Section 3.2, and the statistical analyses methods conducted are given in Section 3.3.

3.1. Data Collection Procedure and Sample

This study dataset was collected from Active Army Personnel Reserve (AAPR) soldiers who were interviewed and had been called up for a five-week reserve training course. They were involved in military training tasks, which were organized by the Lithuanian Division General Stasys Raštikis Lithuanian Armed Forces School (LAFS) as the platoon-level field tactical exercise "Oak Blossom 2021" from 14 August to 17 September 2021. The exercises took place at the Brigadier General Kazis Veverskis and Gaižiūnai training area. The soldiers, divided into platoons (up to 30 people), were trained in individual warfare skills and teamwork, as well as in the performance of required tasks and operations by professional LAFS instructors according to a pre-planned daily schedule (various classes and exercises). During these five weeks' time, the AAPR soldiers lived in barracks, they were not allowed to go home, and their attendance was restricted due to COVID 19 restrictions.

We used 374 questionnaires and interviewed the Active Army Personnel Reserve (AAPR) soldiers who had been called up for a five-week reserve training course. Collected back were 365 filled questionnaires (98% answer rate). Data quality, checked for quality and missing value analysis, showed that there was 5% missing data in a few of the collected questionnaires, so these questionnaires were removed from the data sample. The 337 questionnaires of Active Army Personnel Reserve soldiers were the final data set which was used for this research investigation. The survey was conducted with men (100%). The demographic self-reported information provided the participants' background. Reserve soldiers' age represented in the sample varied from 21 to 47 years and most were between 21 and 32 years (89.9%). More than half of AAPR soldiers were from private sector organizations (70.3%), and their education varied from basic to university education. For detailed information, it can be mentioned that over 30% had university and higher education, 38.3% vocational training, 29% secondary education, and the remainder of the participants had lower secondary education (2.3%). The AAPR soldiers surveyed were from dissimilar types of organizations and had different positions as managers who

have subordinates (16.1%), as specialists (70.1%), and the remainder was classified as "other" (13.8%).

The study was approved by the Vilnius University Research Ethics Committee protocol (No. 35/(1.13E)250000-KT-5). Each participant was provided with information about the study; their voluntary participation and anonymity were ensured. All participants signed an informed consent document prior to any data collection.

3.2. Measurement Instruments

The motivation of reserve soldiers for military competencies achievement was evaluated through three psychological measures: effort (EFF), proactivity (PRO), and self-efficacy (SEF).

Grit includes the continuous, sustainable, and passionate pursuit of a particular interest or goal. It emphasizes long-term perseverance despite failures and disruptions [42]. Thus, effort (EFF) was chosen to explore the consistency of interests and perseverance, and to what degree grit and resilience would be associated with performance, according the novel experience of reserve soldiers at the end of the military training [43].

Proactive individuals are central in terms of their management. They are inclined to do more in their jobs, which makes them work more hours. Furthermore, they can also be more susceptible to burnout and may require additional help in determining priorities and balancing their work and lives. Therefore, the proactivity (PRO) component was included in the model to have a better understanding of the mediating effect of proactivity to the perceived training results.

Self-efficacy (SEF) was chosen to show that the military training, which is socially, physically, and psychologically demanding [44], is also of great importance for the soldiers' psychological growth. We develop new theoretical insights into how psychological resilience can impact the relationship between the reservist's self-efficacy and his/her performance.

The military competences (MIL) grades were collected by a 14-item self-reported questionnaire at the end of the training to identify the reserve soldiers' achievements developed during the five-week military training. Participants were invited to volunteer to take part in the survey; each one completed a consent form; those who did not want to take part in the survey chose other activities.

Psychological resilience (PSR) was chosen because it is of overarching importance to military readiness and is crucial to coping with physiological stressors. Notably, a psychologically stressed soldier will not be able to carry out military operations well, however physically strong he/she is. Some data suggest that a psychologically resilient soldier could deal better with psychological stressors associated with both war exposure and military operations [45]. To measure psychological resilience (PSR), the Connor–Davidson Resilience Scale (CD-RISC-10) was used, which was identified as more robust, more efficient, and parsimonious. The detailed description of psychological measures included in this study are presented in Table 1.

Table 1. Detailed description of psychological measures included in this study.

Code	Variable's Structure	M [1]	SD [1]	Cronbach's Alpha
	Perceived Military Competences	4.054	0.726	0.939
MIL	Perceived competence is seen as a major factor in all types of educational processes. This scale represents the self-reported military competence and demonstrates the effort and expertise of military personal after completed training. A 14-item scale was based on the modules used in the Lithuanian Armed Forces and was measured by a five-point scale: 1—"Unsatisfactory (1–2)", 2—"Weakly (3–4)", 3—"Satisfactory (5–6)", 4—"Well (7–8)", 5—"Very well", and were aggregated. Construct values vary in the interval [1–5], and factor loadings vary in the interval [0.657–0.846].			

Table 1. *Cont.*

Code	Variable's Structure	M [1]	SD [1]	Cronbach's Alpha
	Psychological measures:			
	Resilience	3.904	0.604	0.912
PSR	Resilience is seen as measure that can be used to assess the capability of the person to overcome misfortune and capability to bounce back. Connor–Davidson Resilience Scale (CD-RISC-10) that has the finest psychometric ratings from previous studies was chosen. The responses were measured by ten items, unidimensional, 5-point Likert scale (from 0—"Not true at all" to 4—"True nearly all the time"). Construct values vary in the interval [0–4] and factor loadings vary in the interval [0.628–0.816].			
	Effort	3.798	0.649	0.707
EFF	Grit scale is the psychological construct of diligence that includes extensive features of personality characters encompassing many other aspects (e.g., self-discipline, duty, aspiration to achieve). Typically, this construct measures the attitude to follow long-term goals with continued attention and effort over time. The Short Grit Scale (Grit -S) scale [46] with eight items, assessed by a 5-point Likert scale (from 1—"Not like me at all" to 5—"Very much like me", with reverse scores for questions 1, 3, 5, and 6) describes participants "Interests" (questions 1, 3, 5, and 6) and "Effort" (questions 2, 4, 7, and 8). We included in this study only "Effort", which values vary in the interval [1–5], and factor loadings differ in the interval [0.603–0.800].			
	Proactivity	3.920	0.613	0.863
PRO	The proactive personality style was assessed using a shortened, six-item scale version of Bateman and Crant's [47] original scale described in Claes et al. [48]. Proactive individuals tend to do more in their jobs and subsequently work more hours; they may be more susceptible to burnout and may require additional help in determining priorities and balancing their work and lives. Thus, their management is important. We used a scale of six-items, measured by a 5-point Likert scale (from 1—"Strongly disagree" to 5—"Strongly agree"). Construct values vary in the interval [1–5], and factor loadings vary in the interval [0.628–0.816].			
	Self-Efficacy	4.383	0.731	0.914
SEF	Self-efficacy is the person's capability to harness the circumstances influencing his/her life. Possessing a higher level of self-efficacy, individuals have more confidence in their ability to surmount obstacles and perform well. It regulates the way individuals' function through cognitive, motivational, emotional, and decisive processes. We used a self-efficacy scale with six items [49], measured by a 5-point Likert scale (from 1—"Strongly disagree" to 5—"Strongly agree"). Construct values vary in the interval [1–5], and factor loadings vary in the interval [0.810–0.856].			

[1] Notes: N = 337 for all items; M—mean; DS—standard deviation.

3.3. Method for Data Analysis

The preliminary data assessment started from the descriptive statistics of all study variables and demographic data. Pearson's bivariate correlation was conducted to measure the relations between variables, and the coefficients' strength was classified according Cohen's [50] standard: relationships around 0.10 are "small", relationships near 0.30 are "medium", and 0.50 or higher coefficients are "large".

The research model was assessed by structural equation modelling technique (SEMT) tests. Before modelling, we conducted a factor analysis to assess the latent constructs and variables. Only then was the modelling process continued with theoretical causal model path analysis [51]. Causative relationships were established by SEMT among five factors that all together cover 9 variables in designed model: 4 observed, endogenous (MIL, EFF, PRO, SEF) variables; 1 observed, exogenous (PSR) variable; and 4 unobserved, exogenous variables. The structural model was specifically constructed to measure the relationships among the model's constructs by the coefficients' weight.

We started investigations from the verification of our hypothetical model. Firstly, we evaluated the reliability and stability of the designed theoretical model. Convergent validity of model was assessed by conducting confirmatory factor analysis (CFA). According to the CFA procedure [51], convergent validity of each construct was measured by factor-loading values, Cronbach's alpha (CA). Accordingly, factor-loading values were tested to determine

if they satisfied the well-known rule, that the path coefficient had to be above 0.5 [52]. Then the model stability was estimated by composite reliability (CR) and average variance extracted (AVE) [53,54]. The confidence intervals were used to disclose the evidence of discriminant validity [55,56], and bootstrap was applied to evaluate a 95% level confidence interval on a correlation coefficient with 2000 bootstrap samples [57], and to test indirect effects. For these tests, two available methods were used for bootstrapping in IBM SPSS AMOS 26v: the bias-corrected percentile method and the percentile method [57–59].

Following the scholars' recommendations [50–60], the goodness-of-fit of the designed model was verified to demonstrate that the matrix of the constructed model was close to the matrix of the collected data sample [61]. The main goodness-of-fit test values were carefully chosen and include: χ^2 test, the ratio of χ^2 to degree of freedom, the root mean square error of approximation (RMSEA), the "*p* value" for testing the null hypothesis that RMSEA is less than 0.05 (PCLOSE), the normed fit index (NFI), the incremental fit index (IFI), and the comparative fit index (CFI). Because we constructed two models, additionally, we measured the Akaike information criterion (AIC), the Browne–Cudeck criterion (BC), and the expected cross-validation index (ECVI).

Lastly, the direct and indirect associations of multiple mediation [62] were judged. The direct relationships between constructs, according to the hypotheses, were investigated considering the first as the independent variable and the second as the dependent variable, without considering the possible effects of indirect relationships between constructs.

All analyses briefly presented in this subsection were completed by using IBM SPSS Statistics 27v, and IBM SPSS AMOS 26v was chosen to estimate the factor loadings for all five constructs (MIL, EFF, PRO, SEF, and PSR).

4. Results

The analysis results presented below were achieved by a two-step process assessment of full models following scholars' recommendations on structural equation modelling. The measurement model fit and construct validity results are in Section 4.1, and the model structure and hypotheses testing outcomes are described in detail in Section 4.2. The ML (maximum likelihood) procedure was used for both steps in the analysis.

4.1. Theoretical Model Validity Results

The theoretical model was tested at the first step and its acceptability was assessed. There were calculated correlation measures between all variables of the hypothetical model; additionally, the convergent and discriminant validity were assessed (see Table 2).

Table 2. The descriptive statistics and convergent and discriminant validities calculated for the study constructs.

Construct	Descriptive		Convergent			Discriminant Validities				
	Me	**StD**	**CA**	**CR**	**AVE**	**1**	**2**	**3**	**4**	**5**
1. PSR	3.904	0.604	0.912	0.929	0.567	0.753				
2. MIL	4.054	0.726	0.939	0.950	0.515	0.502 ***	0.717			
3. EFF	3.798	0.649	0.707	0.800	0.503	0.642 ***	0.412 ***	0.709		
4. PRO	3.920	0.613	0.863	0.888	0.511	0.722 ***	0.466 ***	0.649 ***	0.715	
5. SEF	4.383	0.731	0.914	0.928	0.601	0.621 ***	0.561 ***	0.500 ***	0.578 ***	0.775

Note: *** $p < 0.001$. Mean = Me, standard deviation = StD; CA = Cronbach's alphas; CR = construct reliability; AVE = average variance extracted; on diagonal is the square root of AVE for each construct.

The absolute measures of kurtosis and skewness were investigated and the univariate normality was satisfactory (for all constructs were less than 3 and 7, respectively) [55]. The multicollinearity judgment indicated no multicollinearity. The calculated values of tolerance were larger than 0.20, demonstrating no indication of multicollinearity. The confirmatory factor analysis (CFA) showed that there were no items to be eliminated [53–59].

The statistical analysis conducted on construct convergent validity was achieved [54]. The evaluated criteria confirmed that factor weights were significant (p-value < 0.01) and standardized weights were greater than 0.50. The convergent validity measures for all construct reliability (CR, from 0.80 to 0.95, see Table 2) and Cronbach's alphas (CA, from 0.71 to 0.94, see Table 2) are more than 0.70 and average variance extracted (AVE, from 0.503 to 0.601) estimates are all higher than 0.50 and also by the rule [54] smaller than CR values (see Table 2). The calculated square root of AVE measures for each construct let us identify that the correlation coefficients among the constructs were smaller than any AVE (square root) measure (Table 2). Thus, the results provided evidence of discriminant validity [55].

Consequently, we continued with hypothesized model evaluation procedure and designed two structural models: Model 1 to identify the direct influence of the psychological resilience and Model 2 to confirm the indirect relationships and effect. We evaluated the goodness-of-fit for the designed models using the chi-square statistic, the root mean square error of approximation (RMSEA) and other suitable test values. The models appear to fit the empirical data well. The results are presented below.

4.2. Comparable Information between Overall Fit of Designed Models

Model 1 and Model 2 were estimated by testing their goodness-of-fit test outcomes. Both models are statistically significant, but it can be seen in Table 3 that calculated test values (χ^2, ECVI, AIC, and BCC) for Model 2 demonstrated a somewhat better model fit when compared to Model 1 test values. In general, should be noted that the RMSEA value above 0.08 is acceptable, but for the models presented, this value is below 0.08, proving that the fit guides meet the necessities for SEM [63,64].

Table 3. Overall goodness-of-fit for Model 1 and Model 2.

Test	Evaluation Guidelines	Model 1	Model 2
Chi square (χ^2)	Lesser is better	3.927 (p = 0.140)	0.116 (p = 0.733)
(χ^2/df)	<3	1.963 (df = 2)	2.085 (df = 1)
RMSEA	<0.08	0.052	0.000
[1] CI = [Lower; Upper]		[0.000; 0.128] [1]	[0.000; 0.098] [1]
TLI	>0.9	0.980	1.018
IFI	>0.9	0.997	1.001
CFI	>0.9	0.997	1.000
ECVI	Lower is better	0.110	0.105
AIC	Lower is better	39.927	38.116
BCC	Lower is better	40.533	38.757

Note: [1] 90% confidence intervals, CI = [Lower; Upper].

In addition, the differences between test values of these models are not essential, for example: ΔCFI is 0.003 and ΔIFI is 0.003, ΔTLI is 0.038 and ΔECVI is 0.005, which do not surpass the critical value [60]. Thus, calculation results showed that both models have sufficient goodness-of-fit and meet the evaluation test guidelines. Consequently, according to the recommendations provided by Hair [54], both of these models have good to excellent goodness-of-fit. In addition, the standardized regression measurements of the designed models were analyzed. These two models differ significantly by their design. Model 1 is constructed to analyze direct effects of psychological resilience, while Model 2 is constructed to analyze indirect effects of psychological resilience when parallel mediating relationships are included.

4.3. Hypotheses Testing by Structural Modelling

Two models were designed to test all the developed hypotheses for direct and indirect relationships between latent variables. The direct effect of psychological resilience on EFF, PRO, SEF, and MIL was assessed first. These relationships are presented by the structural Model 1 shown in Figure 2 as standardized path coefficients. Moreover, the fit guides of

the full theoretical model (Model 2) replicate a satisfactory fit (χ^2 = 0.116, df = 1, p = 0.733; CFI = 1.000; RMSEA = 0.000). Presented below are the analysis results for assessed direct effects (Section 4.3.1) and for mediating effects (Section 4.3.2).

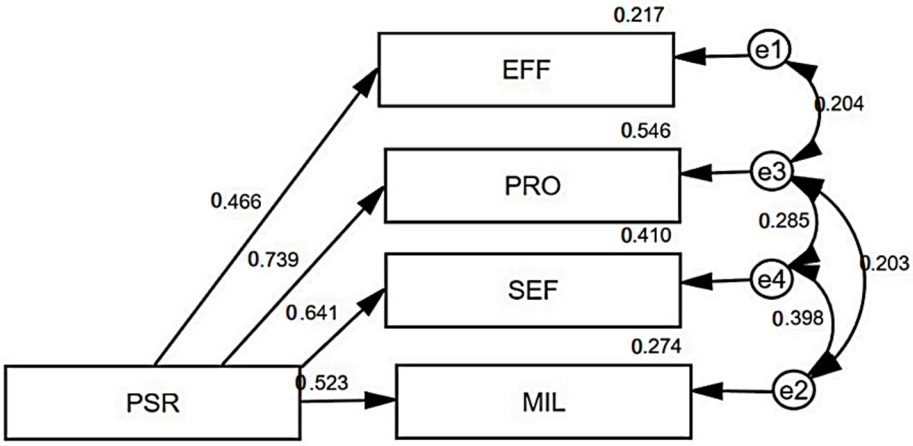


Figure 2. Model 1 accounting for PSR (χ^2 = 3.927 [df = 2, p = 0.140], CFI = 0.997, NFI = 0.995, a TLI = 0.980, RMSEA = 0.052, and PCLOSE = 0.379) and illustrating the direct relationship between four constraints: EFF, PRO, SEF, and MIL. Standardized path coefficients are presented.

4.3.1. Direct Effects Assessment between Constructs

The direct effects were explored to examine the relationship between the PSR constraint and proactivity, self-efficacy, and EFF (see Figure 2), and the fit of Model 1 was evaluated. The analysis verified the fit suitability of Model 1 for H1 and H2a-c (χ^2 = 3.927 (df = 2, p = 0.140), CFI = 0.997, NFI = 0.995, TLI = 0.967, RMSEA = 0.052, and PCLOSE = 0.379; Figure 2). The effect of PSR was measured, which showed 22% of the variance of variable EFF, 55% of the variance of variable proactivity, 41% of the variance of self-efficacy, and 27% of the variance of perceived course results. The values of assessed path coefficients of Model 1 are shown in Table 4.

Table 4. Path coefficients in Model 1.

Parameters			Regression Weights		S.E.	C.R. (*t*-Value)	*p*-Value	SMC
			Stan.	Unstan.				
MIL	<—	PSR	0.523	0.606	0.054	11.288	***	0.274
EFF	<—	PSR	0.466	0.399	0.041	9.691	***	0.217
PRO	<—	PSR	0.739	0.739	0.037	20.172	***	0.546
SEF	<—	PSR	0.641	0.752	0.049	15.351	***	0.410

Note: ***—statistical significance < 0.001 (two–tailed). MIL= perceived military competences; PSR = psychological resilience measured by Connor–Davidson Resilience Scale; EFF = effort measured by Short Grit Scale (Grit-S); PRO = cognitive performance appraisal; SEF = self-efficacy beliefs regarding the ability to successfully complete the military training education. SMC—square of the multiple correlation coefficients.

Hypothesis 1 (H1) was specified to predict a positive relationship between PSR and reservists' perceived military competences (MIL). The modelling results proved that the path coefficient between these constructs is statistically significant and in the predicted direction (PSR&MIL, β = 0.523, p < 0.001, Model 1). This result confirms that the greater the resilience and military competences are perceived to be, the higher the soldier's affective organizational commitment.

Hypothesis 2a (H2a) predicts a positive relationship between resilience (PSR) and the disposition to pursue long-term goals with sustained interest and effort over time (EFF). The results shown in Figure 2 indicate a positive and significant relationship between PSR and EFF (PSR&EFF, β = 0.466, p < 0.001, Model 1) confirming H2a. This finding confirms that

resilience contributes to sustained goal commitment results of previous studies, observed in different circumstances in the references on military preparedness [63,64].

Hypothesis 2b (H2b), predicts a significant positive effect of psychological resilience on proactive personality. We can see that the path coefficient between proactivity construct (PRO) and resilience (PSR) is significant and positive (PSR&PRO, $\beta = 0.739$, $p < 0.001$, Model 1). This result is reliable with the fundamental proactivity principle in the literature and indicates that proactive people identify opportunities and act on them, show initiative, take action, and persevere until meaningful change occurs.

Hypothesis 2c (H2c), refers to the belief of reservists before military training. H2c predicts a positive relationship between self-efficacy (SEF) and psychological resilience (PSR), which increased awareness of military competence and is highlighted by motivation for military educations. The matching path coefficient is important and in the foreseen direction (SEF variable, $\beta = 0.641$, $p < 0.001$, Model 1), supporting H2c (see Figure 2, Table 4).

4.3.2. Mediating Effects Hypothesized by H3a, H3b, and H3c

Mediating effects can be evaluated using the analysis with breaking total effects into direct and indirect effects [59]. Hypotheses H3a, H3b, and H3c predict that the relationship between the resilience and perceived course results is mediated through individual components of the reservists' behavior. To conduct this analysis, we designed a structural model, adding direct relationships between resilience, each control component (EFF, PRO, and SEF), and the reservists' perceived military competences variable (MIL) (see Table 5).

Table 5. Path coefficients in Model 2.

Parameters			Regression Weights		S.E.	C.R. (*t*-Value)	*p*-Value
			Stan.	Unstan.			
EFF	<—	PSR	0.466	0.400	0.040	9.955	***
PRO	<—	PSR	0.738	0.739	0.036	20.479	***
SEF	<—	PSR	0.641	0.757	0.048	15.883	***
MIL	<—	PSR	0.131	0.159	0.077	2.062	0.039
MIL	<—	EFF	0.072	0.098	0.065	1.521	0.128
MIL	<—	SEF	0.412	0.393	0.056	7.060	***
MIL	<—	PRO	0.128	0.153	0.075	2.030	0.042

Note: ***—statistical significance < 0.001 (two–tailed). MIL= perceived military competences; PSR = resilience measured by Connor–Davidson Resilience Scale; EFF = effort measured by Short Grit Scale (Grit-S); PRO = cognitive performance appraisal; SEF = self-efficacy beliefs regarding the ability to successfully complete the military training education.

The constructed structural Model 2 fit for hypotheses H3a, H3b, and H3c was acceptable, $\chi^2 = 0.116$ [df = 1, $p = 0.733$], CFI = 1.000, NFI = 1.000, a TLI = 1.018, RMSEA = 0.000, and PCLOSE = 0.827 (see Figure 3). Measured path coefficients in the parallel mediating Model 2 showed high statistically significance only with one exception, impact of effort (EFF) to military competences (MIL) was insignificant (detailed presentation in Table 5). The remaining two elements of the three make a significant indirect impact on perceived military competences after completed training. In Model 2, SEF has some ($\beta = 0.412$) impact on MIL, which is highly significant ($p < 0.001$); the PRO ($\beta = 0.128$) has also significant ($p < 0.05$) impact on MIL, but there was not impact proven for EFF ($p > 0.1$). Additionally, to clarify study results for Model 2, a diagram with standardized path coefficients annotated near the arrows is presented in Figure 3.

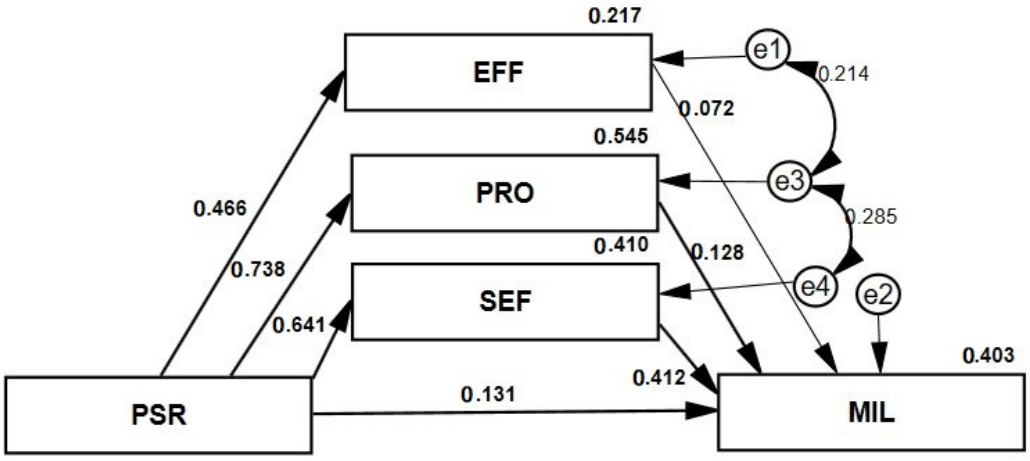


Figure 3. Mediation Model 2 accounting for PSR (χ^2 = 0.116 [df = 1, p = 0.733], CFI = 1.000, NFI = 1.000, a TLI = 1.018, RMSEA = 0.000, and PCLOSE = 0.827) and illustrating the indirect relationship between three constraints (EFF, PRO, SEF) and MIL. The standardized path coefficients are annotated near the arrows.

Hypotheses H3a, H3b, and H3c itemized that the relationship of psychological resilience and achieved military competencies is mediated through the individual psychological component measures EFF, PRO, and SEF. To prove the abovementioned hypotheses, the total effects were braced down and changed into direct and indirect effects and the mediating effects were assessed. Additionally, the modelling analysis conducted for indirect relationship effects was evaluated by the bootstrap procedure, which shows valuable information concerning the standard errors for total, direct, and indirect effects, and helps to test their statistical significance [65,66].

The results showed that indirect effects of psychological resilience, which in overall context denotes to individuals' capability to adapt to significant difficulties while keeping good psychological and physical welfare, are noteworthy for accomplishing high military competencies (PSR → (EFF + PRO + SEF) → MIL, indirect effect = 0.392 ***, $p < 0.01$, see Table 6).

Another situation appears with effort (EFF), which expects achievement in part by promoting self-control, thus letting people continue in repetitive, monotonous, or frustrating performances that are essential for success [67–69], but the study results showed that reservists' physiological underpinnings of grit did not show the significant indirect effect (PSR → EFF → MIL, indirect effect = 0.034, $p > 0.1$, see Table 6). These findings indicate rejection of H3b. This result was not accidental because the effort typically is presented as one of the grit features that represent the personality peculiarity, which is associated more with perseverance in achieving long-term goals by anticipating gains in a variability of significant life consequences. These findings represent the autonomous processes related with how "gritty" soldiers follow their goals, and they propose that additional consideration should be given to the belongings of different features.

Moreover, the conducted analysis indicated that indirect effect of self-efficacy is significant (PSR → SEF → MIL, indirect effect = 0.264 **, $p < 0.05$, see Table 6). These findings let us accept H3c. Additionally, it was demonstrated that self-efficacy appears very significant for an enlarged insight of military capability in reserve soldiers with greater motivation.

Table 6. Standardized direct, indirect, and total effects measured in parallel mediating Model 2.

H1: Psychological Resilience Effects to Perceived Military Competences: PSR → (EFF + PRO + SEF) → MIL		
Direct effect:		0.131 *
Indirect effect:	(0.466 ** × 0.072 + 0.738 *** × 0.128 + 0.641 *** × 0.412 **)	0.392 ***
Total effect:		0.523 ***
H3a: Psychological resilience effects to perceived military competencies through EFF: PSR → EFF → MIL		
Direct effect:		0.131 *
Indirect effect:	0.466 ** × 0.072	0.034
Total effect:		0.165
H3b: Psychological resilience effects to perceived military competencies through proactivity: PSR → PRO → MIL		
Direct effect:		0.131 *
Indirect effect:	0.738 *** × 0.128	0.094
Total effect:		0.225
H3c: Psychological resilience effects to perceived military competencies through self-efficacy: PSR → SEF → MIL		
Direct effect:		0.131 *
Indirect effect:	0.641 *** × 0.412 **	0.264 **
Total effect:		0.395 **

Note: Model 2 is presented in Figure 3. MIL = perceived military competences; PSR = resilience measured by Connor–Davidson Resilience Scale; EFF = effort measured by Short Grit Scale (Grit-S); PRO = cognitive performance appraisal; SEF = self-efficacy principles concerning the aptitude to positively complete the military training education. *** Significance of standardized coefficient at the 0.01 level (two-tailed). ** Significance of standardized coefficient at the 0.05 level (two-tailed). * Significance of standardized coefficient at the 0.10 level (two-tailed).

5. Discussion

Based on a survey of 337 reserve soldiers, this study demonstrates that psychological resilience (PSR) positively affects three studied components: effort, which refers to reservists' capability to cope with difficulties and perform well (EFF); proactivity, which refers to proactive personality that can be presented as an anticipatory, transformational, and proactive behavior to enforce positive situational changes (PRO); and self-efficacy, which encompasses academic and military performance attainments (SEF). Our study findings also confirm that psychological components increase along with psychological resilience. Finally, our results show that effort, proactivity, and self-efficacy mediates the relationships between resilience and perceived military training results. Additionally, they demonstrate a full mediating effect on utilizing the soldiers' psychological factors controllability principle and performance feedback. In addition, it can be mentioned that the highest mediating effect to military competencies was shown by reserve soldiers' self-efficacy. This research helps us to make some contributions.

Theoretically, our results add to the significance of psychological resilience in the interplay between psychological elements and perceived military competence after five-weeks training. These findings encourage military behavior scholars to include personal qualities when investigating the impacts of resilience on active-duty soldiers' or reservists' attitude, behavior, and performance. The present study also shows that the soldiers' preparedness can influence their training results, a variable that has not been thoroughly examined in our field of investigation. Studies in other research areas have demonstrated that previous trainings affect soldiers' performance [69,70]. If the role of military training

program is to enhance soldiers' performance, then one should emphasize what impact such programs may have on military preparedness and resilience. Finally, our study casts new light on specific psychological components of the military competencies results control system.

From a methodological point of view, our research is based on a specific sample; we analyzed the reserve soldiers while prior studies on a similar theme used active-duty military service members or veterans [71,72].

From an empirical standpoint, our results confirm the findings of studies which examine the relationship between soldiers' psychological characteristics and military trainings and perceived military competence. To be more accurate, the previous studies on how self-efficacy effects increased awareness of military competence proved the motivation [73,74] and indicated that military education is inundated with social, physical, and psychological challenges [75,76]. Military life is paramount to a person's psychological development. Correspondingly, the self-efficacy–performance relationship was proved by researchers [76] who found that self-efficacy had a significant impact on the training results for soldiers attending in a physically challenging program used in the US Special Forces [76].

Both previous studies and the present research represent complementary findings concerning the mediating role of reserve soldiers' psychological aspects. No prior study has shown what impact the reservists' resilience and performance feedback has on military training through personal qualities. Additionally, the results of the present study indicate that psychological components, that is, EEF, PRO, and SEF, are unequally essential in developing one's understanding of military competencies. The previous studies typically researched one dimension at a time, taking into account either the very beginning of training or a stage-of-performance evaluation. The findings of our study confirm that various components, occurring at different intervals of time, contribute to a far better understanding of personal qualities, thus increasing the psychological resilience role to perceived military competencies.

From a practical point of view, our study helps understand how the psychological resilience can enhance military knowledge through other psychological skills. Moreover, the results obtained make military organizations aware that the reserve soldiers' readiness is not a technical matter only. Behavioral and psychological aspects must be taken into consideration when seeking to attain a desired level of reserve soldiers' performance. Careful attention must be given to the method that reserve soldiers' preparedness procedures are implemented in their trainings, and this study helps to identify indirect dimensions that must be preferred for special attention. Additionally, it helps for military leaders to understand the impacts of psychological elements and perceived military competence of soldiers' and force them to emphasize long-term and strategic goals. Furthermore, the implementation of the sustainable development of military competencies will support the stability of operations and facilitate the military's ability to successfully overcome modern conflicts while maintaining and supporting this unity of effort.

Similar to any other study, our study has limitations. In particular, this research was conducted on self-reported measurements that could increase the overall variance error using a single measurement system [77]. Another possible limitation is that we examined some factors—representing only few individual psychological aspects and aggregating the data—and performed a limited multilevel analysis. This research paucity could be rectified in future research by broadening a scope of analysis and endeavoring to examine psychosocial phenomena with additional causes. The parallel mediating model of this study could be one of the limitations, and future research will investigate the perceived military competencies in longitudinal studies to analyze the role of psychological resilience and motivation to increase reservists' potency.

6. Conclusions

In summary, psychological resilience is an important phenomenon in the context of military training. Being on active service in the armed forces, resilient soldiers have to

perform tasks in a complex environment that characterizes today's life. The potential of reservists in military units allows them to reach a higher level of readiness and carry out missions that society has entrusted to its armed forces, and will continue to do so. One possible avenue of research is to investigate the impact of military readiness factors and various mediating variables. Despite the fact that the military training program for reservists has been gaining momentum in recent years, it needs to be improved in light of psychological aspects. Another area for new research is to better operationalize the constructs of social and organizational identification.

The theoretical model presented suggests that the soldiers' psychological resilience has a positive and statistically highly significant explicit and implicit effect and may determine the potential for soldiers to reach their maximum level of military competence. Furthermore, it can be noted that according to the results of the present study, self-efficacy—identified as a key personality aspect in Model 2—is of great importance to reservists, for it indicates the determinants of personal academic and military performance.

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