

# Adaptation and validation of the resilience scale for spanish army military personnel (EBRET-JG12)

Adaptación y validación de la escala de resiliencia para personal militar del ejército español (EBRET-JG12)

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#### **Abstract**

Introduction: Psychological resilience is linked to the success of military operations. Resilient personnel seek social support, maintain high self-esteem, and adapt positively to adversity. Physical activity, integral to military duties, also fosters resilience by improving physical health, emotional regulation, and stress management.

Objective: To adapt and validate the Resilience Scale in a sample of personnel from the Spanish Army and to examine the relationship between emotional intelligence and resilience.

Methodology: To this end, the scale was adapted into Spanish and its psychometric properties were evaluated in a military sample from the Spanish Army (N = 739), consisting of officers, non-commissioned officers, and enlisted personnel, with an average age of 33.29 years (SD = 7.48). The measures used were the Resilience Scale and the *Brief Emotional Intelligence Inventory for Senior Citizens*.

Results: The confirmatory factor analysis revealed a unidimensional structure with twelve items, showing a good model fit.

Discussion: The scale demonstrated reliability and structural validity in this context. Resilience was found to be positively related to emotional intelligence.

Conclusions: In conclusion, the new *Brief Resilience Scale for Spanish Military Personnel* (EBRET-JG12) provides adequate evidence of validity and reliability for use within this institution. Since psychological resilience is closely associated with better mental health and greater coping capacity, having a valid and reliable tool for its assessment in the military context is essential to promote the overall well-being of personnel.

## **Keywords**

Army; emotional intelligence; instrument; military personnel; resilience.

## Resumen

Introducción: La resiliencia psicológica está vinculada al éxito de las operaciones militares. El personal resiliente busca apoyo social, mantiene una alta autoestima y se adapta positivamente a la adversidad. La actividad física, integral en las funciones militares, también fomenta la resiliencia al mejorar la salud física, la regulación emocional y el manejo del estrés.

Objetivo: Adaptar y validar la Escala de Resiliencia en una muestra de personal del Ejército de Tierra español y examinar la relación entre la inteligencia emocional y la resiliencia.

Metodología: Para ello, la escala se adaptó al español y se evaluaron sus propiedades psicométricas en una muestra militar del Ejército de Tierra español (N = 739), compuesta por oficiales, suboficiales y tropa, con una edad media de 33,29 años (DT = 7,48). Las medidas utilizadas fueron la Escala de Resiliencia y el Inventario Breve de Inteligencia Emocional para Personas Mayores.

Resultados: El análisis factorial confirmatorio reveló una estructura unidimensional con doce ítems, mostrando un buen ajuste del modelo.

Discusión: La escala demostró fiabilidad y validez estructural en este contexto. Se encontró que la resiliencia se relaciona positivamente con la inteligencia emocional.

Conclusiones: La nueva Escala Breve de Resiliencia para Personal Militar Español (EBRET-JG12) proporciona evidencia adecuada de validez y fiabilidad para su uso dentro de esta institución. Dado que la resiliencia psicológica está estrechamente asociada con una mejor salud mental y una mayor capacidad de afrontamiento, contar con una herramienta válida y fiable para su evaluación en el contexto militar es esencial.

#### Palabras clave

Ejército; inteligencia emocional; instrumento; militares; resiliencia.





### Introduction

Currently, the relationship between resilience and its impact on military personnel has gained increasing relevance in research, given the exposure of modern combatants to significant physical and psychological challenges (Sun et al., 2024). Since the 1970s, protective and risk factors influencing resilience development have been studied (Trachik et al., 2021). Two decades later, the importance of acquiring resilient resources and mechanisms to face adversity was emphasized (Pinto-Cortéz, 2014). This led to a focus on direct intervention and the creation of tools to evaluate resilience, with pioneering contributions from Connor and Davidson (2003). More recently, a neuroscientific perspective has been integrated, broadening the understanding of these processes (Barudy, 2015).

Authors such as Gouweloos-Trines et al. (2019) define resilience as the capacity to face adverse situations or significant sources of stress, a definition supported by recent studies (Lee et al., 2023; Polizzi et al., 2024). Historically linked to the concept of morale, psychological resilience is key to success in military operations (Naifeh et al., 2021). Resilient profiles tend to seek social support and maintain high self-esteem, facilitating adaptation to demanding environments and mitigating stress (Soriano-Sánchez & Sastre-Riba, 2024; Cox et al., 2022; Soriano-Sánchez, 2025; Zou et al., 2024).

In the field of resilience research, instruments such as the Connor-Davidson *Resilience Scale* (CD-RISC) (Connor & Davidson, 2003) have been widely used across various populations, being adapted to measure resilience in individuals with brain injuries (Aza et al., 2025) or in university students (Hébert et al., 2018). This scale assesses personal competence, tolerance to negative affect, acceptance of change, control, and spiritual influences. However, its primary emphasis on rapid recovery after adversity may be insufficient to capture the complexity and stability of the construct in highly demanding contexts such as the military (McLarnon et al., 2021). Therefore, the Wagnild and Young *Resilience Scale* (1993) was chosen, as it offers a more comprehensive and enduring perspective, focusing on dimensions such as perseverance, self-competence, and life purpose—qualities especially relevant for military personnel, since these attributes support psychological well-being and long-term performance in stressful operational environments (Bartone, 2006).

Resilience is a dynamic, multidimensional construct, where exposure to stressors, personal flexibility, and activation of psychosocial mechanisms reinforce adaptive capacity and maintain psychological wellbeing across the lifespan (Aburn et al., 2016; Gonçalves & do Carmo, 2022). Studies show that high resilience levels are negatively associated with burnout syndrome, which involves emotional exhaustion, sleep disturbances, and depressive symptoms (McBride et al., 2022; Maddah et al., 2024). Furthermore, resilience strengthens work-related competencies such as vigor, dedication, and absorption, contributing to burnout reduction (Menezes de Lucena et al., 2006).

Emotional intelligence (EI) integrates skills and attitudes to manage one's own emotions and those of others, influencing behavior, mental state, and social interaction (Goleman, 1995). It facilitates coping with emotional demands, promoting adaptive thinking and emotional problem-solving through conscious recognition of self and others' feelings (Mestre et al., 2017; Cui et al., 2022). Although its formal study consolidated in the late 20th century, various theoretical models have been developed: Ability Models emphasize cognitive capacities for processing emotional information (Mayer et al., 1990); Mixed Models include personality traits such as assertiveness and optimism (Bar-On, 1997); and others combine both perspectives, encompassing internal and external dimensions (Cooper & Sawaf, 1997; García-Fernández & Giménez-Mas, 2010).

Emotions play a key role in coping with social isolation by providing resources to develop positive skills and strategies (Palloto et al., 2021). In institutional contexts, adequate EI levels associate with effective professional performance (Srivastava et al., 2021). In the military field, Hernández and García (2021) propose programs to promote psychological adjustment and improve quality of life, reinforcing the need to foster EI to enhance well-being and the capacity to face adversity (Hasan et al., 2023; Vives et al., 2021; Nevins et al., 2023).

EI, resilience, and self-esteem are key variables for adaptation and performance in high-pressure military environments (Turliuc & Balcan, 2024; Forouzan & Rawat, 2023). Resilience is fundamental for operational success due to the physical, emotional, and social demands on personnel (Naifeh et al., 2021). Self-esteem, reflecting personal valuation (Gallego et al., 2016), is essential for psychological





well-being, motivation, and stress management (Streck et al., 2022; Hyun et al., 2022). Healthy self-esteem supports both resilience and emotional regulation in demanding contexts (Sylvia et al., 2020), and a positive relationship between resilience and self-esteem has been found in Spanish Army personnel (Soriano-Sánchez & Sastre-Riba, 2024). However, despite this evidence, the specific relationship between EI and resilience in Spanish Army personnel has not been systematically studied, representing a clear knowledge gap that this work aims to address.

Additionally, resilience is closely linked to EI, influencing self-efficacy and modulating the relationship between stressors and outcomes (Sarrionandia et al., 2018; Vilca-Pareja et al., 2022). High levels of both act as protective factors against burnout, enhancing team communication and increasing job satisfaction (White et al., 2020; Valor-Segura et al., 2020). Therefore, intervention programs are vital for developing skills that improve adaptation, well-being, and social integration (Flood & Keegan, 2022). Promoting resilience through adequate institutional resources is essential for professional development and social cohesion in the military (Peterson et al., 2024). Implementing and evaluating these programs requires validated and culturally relevant instruments (Crisol et al., 2020).

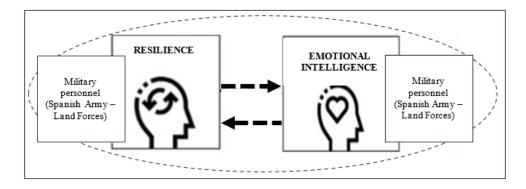
In instrument validation, exploratory factor analysis (EFA) is a fundamental step to ensure internal consistency, sometimes involving factor reduction or item elimination to achieve reliability (Guilla et al., 2019; Villacieros et al., 2021). Various resilience scales have been adapted and validated in contexts such as physical education (Trigueros et al., 2017), university settings (Sánchez-Teruel & Robles-Bello, 2015), and older adults (Sánchez-Teruel & Robles-Bello, 2019), facilitating personalized interventions (Maldonado & González, 2013).

Nonetheless, despite frequent exposure to traumatic situations, especially during deployment operations, which may lead to disorders such as post-traumatic stress disorder (PTSD; Bekesiene et al., 2024), affecting psychological well-being (Thompson, 2023) and professional commitment (Magalhães, 2013), no validated instrument currently exists to measure resilience in Spanish Army personnel. This lack of a validated tool represents a critical limitation in designing targeted interventions, underscoring the novelty and necessity of the present study.

# The Present Study

Based on the above, the general objective of the present research is to validate and adapt the *Resilience Scale* (RS) by Wagnild and Young (1993) in a sample of military personnel from the Spanish Army. The specific objectives are: (a) to analyze the multidimensionality of the construct through exploratory factor analysis; (b) to confirm the multidimensionality of the construct through confirmatory factor analysis; and (c) to analyze the reliability of the scale. Finally, based on previous empirical evidence, the following research hypothesis (H) is proposed (Figure 1):

Figure 1. Hypothesis of the present study



Source: Own elaboration. (H1): A positive relationship is established between emotional intelligence and resilience in military personnel of the Spanish Army.





### Method

## **Participants**

A total of N = 739 members of the Spanish Army (including officers, non-commissioned officers, and professional enlisted personnel) participated in this study. The participants had a mean age of 33.29 years (SD = 7.48), ranging from 18 to 66 years. Regarding gender, 87.70% (n = 648) were men and 12.30% (n = 91) were women, with mean ages of M = 33.12 (SD = 7.58) and M = 34.48 (SD = 6.64), respectively. The sample came from the same military base and included both operational units and support units. A non-probabilistic, purposive sampling method was used to select the participants.

#### Measures

First, the authors created a booklet that included previously validated instruments and an ad hoc questionnaire collecting sociodemographic information from the participants (gender and age).

The RS developed by Wagnild and Young (1993) is one of the few psychometric tools that is both reliable and valid for assessing psychosocial adaptation to significant life events (Heilemann et al., 2003). The RS consists of 25 items with a Likert-type response format ranging from 1 (strongly disagree) to 7 (strongly agree). In terms of reliability, various studies have reported alpha coefficients ranging from  $\alpha$  = .72 (Rodríguez et al., 2009) to  $\alpha$  = .87 (Sales et al., 2017). Wagnild and Young (1993) reported even higher reliability, with  $\alpha$  = .90. In the present study, the scale shows a reliability of  $\alpha$  = .93.

To assess the level of EI, the Brief Emotional Intelligence Inventory for Senior Citizens (EQ-i-M20), developed by Pérez-Fuentes et al. (2014), was used. It is a Spanish adaptation of the *Emo*tional Inventory: Youth Version (EQi:YV) by Bar-On & Parker (2000). The instrument consists of a total of 20 items with 4 response options on a Likert-type scale where 1 = Very rarely true or not true of me and 4 = Often true of me or true of me. The items of this instrument are grouped into the following five factors: 1. Intrapersonal: composed of assertiveness, emotional self-awareness, self-concept, self-actualization, and independence; 2. Interpersonal: consisting of empathy, social responsibility, and interpersonal relationships; 3. Stress Management: including stress tolerance and impulse control; 4. Adaptability: corresponding to the ability to examine lived and experienced reality, flexibility, and problem-solving; 5. General Mood: composed of optimism and happiness. Examples of items include "I find it easy to tell people how I feel" or "I feel confident in myself". Regarding the reliability of each factor, the Intrapersonal dimension has a Cronbach's alpha of  $\alpha$  = .57, Interpersonal ( $\alpha$  = .80), Stress Management ( $\alpha$  = .68), Adaptability ( $\alpha$  = .81), and General Mood ( $\alpha$  = .83). In the present study, the instrument showed an overall reliability of  $\alpha = 0.78$ . Finally, although the EQ-i-M20 was originally developed for older adults, its use in this study with a sample of young adult military personnel (mean age = 33 years) is justified, as the instrument assesses core EI skills that are applicable throughout adulthood.

## Procedure

The study was approved by the Central Defense Hospital (Approval Code: 51117). After obtaining authorization, the purpose of the study was explained to the military authorities of the King Alfonso XIII Legion Brigade (Almería). Once approval was granted, several meetings were held with the leaders of the various units to explain the study's objectives and ensure the confidentiality of the data. During these meetings, a timeline was established detailing the participation dates for each unit (operational and support).

Before participating, all individuals were informed—both verbally and in writing—about the study's objectives, their voluntary participation, the procedure, and the anonymous and confidential treatment of their data, in accordance with ethical research standards outlined in the Declaration of Helsinki (World Medical Association, 2013). This guarantees: a) the confidentiality and exclusive use of the data for research purposes; b) the anonymity of the data; and c) professional secrecy during data collection. Subsequently, each participant received the questionnaire individually, in an envelope that was to be sealed and returned upon completion. The estimated completion time was 25–30 minutes.





## Data Analysis

To assess content validity, expert judgment was used. Data analysis followed a two-phase process based on the steps proposed by Álvarez-García et al. (2017) for instrument validation, in which the total sample was divided into two randomized, homogeneous, and independent subsamples. The first subsample (n = 370) served as the calibration sample for conducting the EFA, while the second (n = 368) was used for the Confirmatory Factor Analysis (CFA) to validate the instrument.

The objective of the EFA was to examine the internal structure of the RS, whereas the CFA aimed to confirm the proposed factor structure and assess its invariance. Since the instrument was originally developed for a different population, establishing content validity required a process of translation, adaptation, and standardization. The items were first translated into Spanish by a native translator using the back-translation method, following four criteria outlined by Martín-Arribas (2004): "the cultural context in which the adaptation will take place; technical aspects of the test's development and adaptation; test administration; and score interpretation". Subsequently, a member of the military from one of the participating units in Almería reviewed the items to ensure their relevance to military personnel.

Content validity was assessed through expert judgment, a validation method considered effective for verifying the reliability of a questionnaire (Escobar-Pérez & Cuervo-Martínez, 2008). Of the participating experts, two were from the University of La Rioja and specialized in assessment and psychometrics, while the other two were military officers with over ten years of experience.

To evaluate model fit, the most commonly used statistical indices were employed, following Bentler (1989):  $\chi^2$ /df (degrees of freedom), IFI (Incremental Fit Index), CFI (Comparative Fit Index), GFI (Goodness of Fit Index), RMSEA (Root Mean Square Error of Approximation), and RMR (Standardized Root Mean Square Residual), along with their 90% confidence intervals. Additionally, correlation analyses were conducted to examine the relationship between quantitative variables, allowing for the identification of the existence, strength, and direction (positive or negative) of such associations (Lloret-Segura et al., 2014). Specifically, the relationship between resilience and EI was analyzed to test the proposed research hypothesis.

Descriptive and reliability analyses were performed using SPSS for Windows, and confirmatory factor analyses were carried out using AMOS version 24.0 (IBM, 2016; Armonk, New York, United States). Finally, a network analysis was conducted using the JASP software to examine the relationships between resilience and components of EI, allowing for the visualization of the strength of the connections between the variables (Epskamp et al., 2018).

## Risk of Bias Assessment

Risk of bias was evaluated through visual inspection of data point distribution in funnel plots, following the guidelines suggested by Higgins et al. (2011). Two researchers independently assessed the risk of bias, and any disagreements were resolved in a consensus meeting with a third researcher.

# Results

## Phase 1: Exploratory Factor Analysis

The sample consisted of a total of n = 370 military personnel. First, an EFA was conducted using the Principal Component Analysis (PCA) extraction method, requiring a minimum correlation of  $\geq$  .40 for each item to be considered significant within the factor (Stevens, 1992). The rotated component matrix (Varimax rotation) was selected for this analysis, and the resulting scores are shown in Table 1.

Following this approach, items that did not show absolute loadings equal to or greater than .40 were identified and subsequently removed. A scree plot was then generated to examine the factor structure of the instrument. To interpret the graph, one should read it from left to right, observing the different eigenvalues (Figure 2). The number of factors in the instrument corresponds to the labels with values greater than 1, which also align with the slope of the curve (Hair et al., 1999). As shown, the Scree Test indicated the presence of one component, with eigenvalues of 6.97.



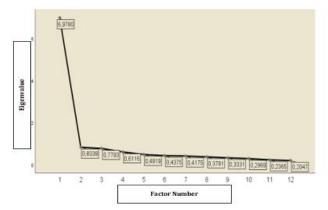


Table 1. Factor structure coefficients (n = 370)

Item	F1	F2	h <sup>2</sup>
1	.73		.52
2	.73		.52
3	.71		.61
4		.69	.70
5	.69		.73
6		.69	.73
7		-	-
8	-		-
9	-		-
10	.66		.59
11	-		-
12	-		-
13	.61		.61
14	.56		.18
15	.55		.53
16	-		-
17	.47		.66
18	.44		.51
19	-		-
20	-		-
21		-	-
22	-	-	-
23		-	-
24	-		-
25		-	-

*Note.* Extraction method: Principal Component Analysis. Rotation method: Varimax normalization with Kaiser. Rotation converged in 3 iterations. Display coefficient: .40; h<sup>2</sup>: communality; Factor 1: Personal Competence; Factor 2: Acceptance of Self and Life.

Figure 2. Scree plot



The new descriptive statistics showed a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of .935, and Bartlett's test of sphericity was statistically significant

( $\chi^2$  = 2789.116; p < .001). The total percentage of variance explained was 58.150%, and Cronbach's alpha for the scale was  $\alpha$  = .93, indicating good reliability. Thus, the factor was composed of 12 items, in contrast to the original scale (Table 2).

Table 2. Factor structure coefficients, eigenvalues, Cronbach's alpha, and percentage of explained variance (n = 370)

Item	F1 (M)	SD
Ttelli .		
1	5.40	1.55
2	5.06	1.38
3	5.77	1.41
4	5.91	1.35
5	5.99	1.40
6	5.36	1.32
10	5.81	1.35
13	5.27	1.43
14	5.45	1.45
15	5.51	1.37
17	5.51	1.45
18	5.51	1.32
Eigenvalue	6.078	
% of Total Variance Explained	58.150	
Kaiser-Meyer-Olkin (KMO)	.935	
Bartlett's Test of Sphericity		$X^{2}$ (2.789,116) = 66 $p$ <.001
Cronbach's Alpha	.93	. , ,
V . F	.1 1 77 1	11 12 17 1 1 2 1 1 2

*Note.* Extraction method: Principal Component Analysis. Rotation method: Varimax normalization with Kaiser. Rotation converged in 3 iterations. Factor 1 = Factor 1; M = Mean; SD = Standard Deviation. p < .01.





Regarding the skewness and kurtosis of each item, the values found indicated a normal distribution. As noted by Curran et al. (1996), skewness values should be below 2 and kurtosis values below 7. In this case, Item 6 showed the lowest skewness value (a = -0.856, error = -1.54; K = 0.12), while Item 1 had the highest (a = 1.0, error = 0.12). Regarding kurtosis, Item 15 presented the lowest value (K = 0.38, error = 0.25), whereas Item 5 showed the highest value (K = 0.18, error = 0.25), similar to its skewness value (Table 3).

Table 3. Descriptive statistics. Calibration sample (n = 370)

Itom	Item n	М	SD	Ske	wness	K	urtosis
iteiii	n	IVI	3D	Statics	Std. Error	Statics	Std. Error
1	370	5.40	1.55	10	.12	.44	.25
2	370	5.06	1.38	66	.12	.44	.25
3	370	5.77	1.41	-1.34	.12	1.44	.25
4	370	5.91	1.35	-1.39	.12	1.76	.25
5	370	5.99	1.40	-1.52	.12	2.18	.25
6	370	5.36	1.32	-1.54	.12	1.72	.25
10	370	5.81	1.35	950	.12	.68	.25
13	370	5.27	1.43	88	.12	.47	.25
14	370	5.45	1.45	-1.03	.12	.70	.25
15	370	5.51	1.37	98	.12	.38	.25
17	370	5.51	1.45	-1.05	.12	.59	.25
18	370	5.51	1.32	-1.25	.12	1.37	.25

On the other hand, different correlation analyses between items were conducted (Table 4). The procedures followed the guidelines suggested by Lloret-Segura et al. (2014). Below are the correlations, each showing a significance level of p < .01, respectively.

## Phase 2: Confirmatory Factor Analysis

The first model showed the following fit indices:  $\chi^2/(df) = 299.053$  (54);  $\chi^2/df = 4.418$ ; CFI = .947; TLI = .914; GFI = .939; RMR = .211; and RMSEA = .074 (90% CI = .065–.083; p = .000). In contrast, the second model (Model 1), revised from the original, showed the following fit indices:  $\chi^2/(df) = 191.116$  (48);  $\chi^2/df = 2.099$ ; CFI = .984; TLI = .941; GFI = .974; RMR = .184; and RMSEA = .042 (90% CI = .030–.053; p = .000).

Table 4. Correlation between items

Tuble 1. do	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 10	Item 13	Item 14	Item 15	Item 17	Item 18
	reem r	reem 2	reem 5	reem r	reem o	Teem o	item 10	reem 15	TCCIII I I	reciii 15	reciii 17	Ttem 10
Item 1	-											
Item 2	.60**	-										
Item 3	.53**	.41**	-									
Item 4	.51**	.49**	.67**	-								
Item 5	.55**	.47**	.64**	.68**	-							
Item 6	.54**	.47**	.64**	.62**	.74**	-						
Item 10	.41**	.41**	.47**	.51**	.59**	.58**	-					
Item 13	.46**	.49**	.43**	.46**	.46**	.50**	.46**	-				
Item 14	.44**	.36**	.48**	.50**	.57**	.51**	.60**	.58**	-			
Item 15	.53**	.48**	.55**	.58**	.63**	.69**	.58**	.53**	.64**	-		
Item 17	.45**	.44**	.60**	.59**	.55**	.65**	.55**	.56**	.55**	.63**	-	
Item 18	.46**	.46**	.43**	.50**	.57**	.61**	.53**	.52**	.49**	.51**	.66**	-

This second model showed the best fit, as it presented CFI values above .90 along with RMSEA values equal to or below .04 and SRMR values equal to or below .08, indicating a good fit (Hu & Bentler, 1999). Furthermore, the values and the difference between the AIC of the Default model and the AIC of the Saturated model for Model 1 were lower (AIC Default model = 371.05; AIC Saturated model = 180) compared to the original model (AIC Default model = 263.11; AIC Saturated model = 180). This suggested that this second model was likely the best according to model selection criteria, in line with Akaike's definition (1974).

Table 5. Fit indices for the different proposed models

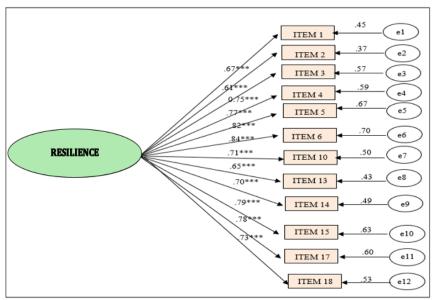
M - 1-1				CFI TLI	TLI GFI	RMR	RMSEA			
Model	$\chi^2(gl)$	$\chi^2/(gl)1$	CFI				Eat	IC 9	IC 90%	
							Est.	Lower	Upper	
Model 0 (original)	299.05 (54)	4.41	.94	.91	.93	.21	.07	.07	.06	
Model (revised original)	191.11 (48)	2.09	.98	.94	.97	.18	.04	.04	.03	





Figure 3 shows the calibration model (n = 370), composed of 1 factor and its twelve corresponding items from the initial scale. On the other hand, Figure 4 presents the validation model (n = 368).

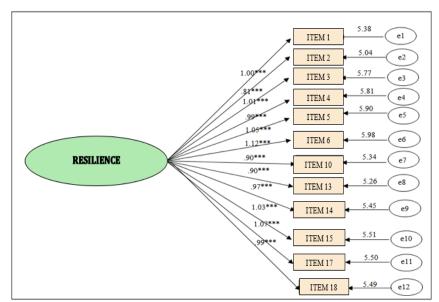
Figure 3. Calibration model n = 370 (12 Items)



*Note.* Structural equation model showing the predictive relationships of resilience with respect to each of its factors. All parameters are standardized and statistically significant \*\*\*p < .001.

On the other hand, the correlation analysis indicated a positive correlation between resilience and EI among military personnel of the Spanish Army (r = 0.39; p < .001). The network analysis conducted using JASP software allowed for the visualization of the relationships between resilience and the various components of EI. Figure 5 presents a network in which each node represents a psychological variable: resilience, General Mood, Stress Management, Adaptability, and Interpersonal Skills. The connections (edges) indicate partial associations between these variables, controlled for the influence of the other variables in the network.

Figure 4. Validation model n = 368 (12 Items)



*Note.* Structural equation model showing the predictive relationships of resilience with respect to each of its factors. All parameters are standardized and statistically significant \*\*\*p < .001.

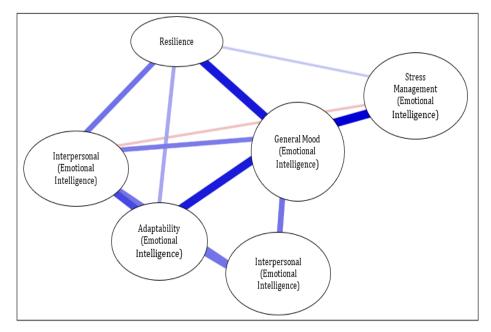




The node corresponding to the general state of mind showed connections with all other components: resilience, Stress Management, Adaptability, and Interpersonal Skills. The strongest connections were observed between General Mood and Stress Management, General Mood and resilience, and General Mood and Adaptability. These connections were represented by thicker, dark blue lines.

A strong connection was also observed between resilience and Interpersonal Skills, as well as between Adaptability and Interpersonal Skills. In contrast, weaker connections were identified, such as the one between Interpersonal Skills and Stress Management, represented by a thinner, light red line.

 $Figure\ 5.\ Network\ of\ relationships\ between\ resilience\ and\ components\ of\ emotional\ intelligence$ 



Finally, the structure of the resilience scale items used in the present study is presented (Appendix I).

## **Discussion**

The results obtained in the present study have allowed us to achieve the main objective initially proposed, confirming that the RS is an appropriate and useful instrument for evaluating this construct among personnel of the Spanish Army and to examine the relationship between resilience and EI. In line with the theoretical evolution outlined in the introduction—highlighting the need for valid tools to measure resilience in specific contexts, especially among groups exposed to high levels of stress, such as military personnel—this study contributes to the existing body of knowledge, while recognizing the contextual limitations of the sample.

The validity and reliability of the instrument were analyzed and adapted to the Spanish military context, with the goal of offering a practical tool to assess perceived resilience. After the translation process into Spanish and expert review, a satisfactory cross-cultural adaptation was obtained, characterized by items that were understandable, culturally relevant, and linguistically and semantically equivalent. According to the consulted specialists, the questionnaire presents acceptable content validity for application in this specific context (Crisol et al., 2020), reinforcing the methodological suitability of its implementation.

The questionnaire validation was carried out efficiently and effectively, due to its brief length and the suitability of the underlying theoretical model. The factorial analyses conducted allow for fundamental conclusions. Firstly, the EFA confirmed the adequacy of the items and their factorial distribution through the scree plot. Secondly, the CFA corroborated a statistically acceptable model fit, meeting the criteria established by Hu and Bentler (1999).





After examining the factorial structure and considering the need for a version adapted to the Spanish military population, a reduction process of items was conducted, based on principal component extraction values requiring a correlation of  $r \ge .40$  for inclusion in a factor (Stevens, 1992). The scree plot revealed that the new scale was structured around a single factor composed of twelve items. The correlation analysis showed a moderate positive relationship between resilience and EI among Spanish Army personnel. The network analysis further highlighted the central role of General Mood, which was strongly connected to resilience, Stress Management, and Adaptability. Resilience also showed a robust link with Interpersonal Skills, while weaker associations were observed between Interpersonal Skills and Stress Management. These results suggest that enhancing overall emotional well-being and specific emotional competencies could support resilience in military personnel, providing potential targets for interventions aimed at improving coping, adaptability, and teamwork in high-demand operational contexts.

Thus, the new instrument, called the *Brief Resilience Scale for Spanish Military Personnel* (EBRET-JG12), retains the conceptual framework of the original scale by Wagnild and Young (1993), adapted to the specific characteristics of this population. To verify its consistency and validity, an exploratory analysis was performed with a calibration sample and a confirmatory analysis with a second sample, allowing the achievement of the proposed specific objectives. The brief version, structured around a single factor, shows acceptable fit indices. Regarding reliability, and considering one of the most relevant indices for assessing internal consistency (Crisol et al., 2020), the EBRET-JG12 shows a Cronbach's alpha coefficient of  $\alpha$  = 0.93, which supports the objective of demonstrating reliability. This reliability is comparable to that originally reported by Wagnild and Young (1993), suggesting robust internal consistency.

Soriano-Sánchez and Sastre-Riba (2024) indicate that resilience is positively related to self-esteem. In line with this, the present study observed a positive correlation between resilience and EI, thereby partially supporting the research hypothesis. Assessing the level of resilience in military personnel allows for the identification of potential coping capacity in adverse situations and provides an approximate estimation of their EI, particularly from the perspective of mixed models of EI. These models, which integrate emotional skills with personality traits such as perseverance, optimism, and stress tolerance, consider resilience a relevant indicator of overall emotional functioning, though results should be interpreted with caution. Therefore, validating a RS in this context has practical relevance for the well-being and performance of military personnel, and may inform the design of psychological interventions aimed at strengthening essential emotional competencies in high-demand operational settings. The findings suggest that enhancements in EI could be associated with increased resilience, and vice versa, potentially contributing to improved self-esteem among members of the Spanish Army. Such relationships may support greater capacity for coping with adversity, better self-assessment, and more effective management of emotions, but further research is needed to confirm causal links.

Also, Soriano-Sánchez and Sastre-Riba (2025a) report that daily alcohol consumption is negatively associated with levels of resilience, EI, and self-esteem among Spanish Army personnel. This finding highlights the need to incorporate these psychological factors into the design and implementation of prevention and intervention strategies targeting this population. Complementarily, the analysis of resilience dimensions reveals a significant interrelationship between variables such as stress management and general mood, which show particularly consistent associations and appear to interact synergistically in emotional regulation and psychological well-being. Likewise, adaptability and interpersonal skills emerge as mediating elements that facilitate the integration of these dimensions, suggesting that comprehensive interventions aimed at strengthening them may be more effective than those focused on specific competencies in isolation. Within this framework, the promotion of healthy lifestyle habits and the improvement of quality of life among military personnel have become essential components of any prevention program. Implementing strategies that include reducing the consumption of high-risk substances, encouraging a balanced diet, promoting regular physical activity, and ensuring adequate rest could not only enhance EI and resilience but also help prevent psychological disorders associated with stress and exposure to highly demanding operational environments. Consequently, mental health interventions in the military context should go beyond an approach exclusively focused on reducing alcohol consumption, adopting a holistic perspective that promotes healthy lifestyles and enhances the overall well-being of personnel.





Empirical findings also highlight that high levels of resilience are associated with a lower likelihood of PTSD (Lee et al., 2023), greater optimism (Umucu et al., 2022), and a significant reduction of negative emotional symptoms (Lely et al., 2022). Improvements are also observed in key emotional competencies such as recognition and regulation of one's own emotions, self-motivation, empathy, and the manifestation of prosocial behaviors (Valor-Segura et al., 2020), factors that positively influence both the professional performance of military personnel (Liu et al., 2024) and the adoption of healthier lifestyles (Zou et al., 2024). In this regard, psychological resilience is closely linked to maintaining good mental health and a greater capacity to cope with adverse situations (Gonçalves and do Carmo, 2022), as well as better emotional management (Soriano-Sánchez & Sastre-Riba, 2025b). Therefore, having a valid and reliable tool to assess it in the military field could be fundamental for promoting the comprehensive well-being of personnel.

However, this research is not without limitations. The main limitation lies in the validation being conducted exclusively with personnel from the Army, so results cannot be generalized to the entire Armed Forces. Additionally, the study relied on a cross-sectional design, which limits the ability to establish causal relationships between resilience and associated variables. The sample, although large, may not fully capture the diversity of ranks, deployment experiences, or regional differences within the Army.

As a future research line, it would be appropriate to replicate the study in other branches such as the Navy or the Air Force, as well as to include longitudinal designs to examine changes in resilience over time and in response to specific interventions. Expanding the sample to include personnel from different ranks, operational roles, and regions would enhance the generalizability of the findings. Additionally, future studies could incorporate alternative or complementary measures of EI and resilience to strengthen convergent validity.

The practical implications of this study are significant, as understanding risk factors constitutes the necessary first step for designing effective preventive programs aimed at improving the well-being of military personnel (Hernández & García, 2021). In this context, resilience could serve as a key tool for coping with adversity, enhancing mental health, and acting as an important predictor of self-concept, as indicated by other lines of research (García et al., 2025). In fact, in countries such as the United States, strengthening resilience through specific programs and optimizing military personnel readiness are considered strategic priorities (Peterson et al., 2024).

This study validates and demonstrates the reliability of the *Brief Resilience Scale for Spanish Military Personnel* (EBRET-JG12), providing a precise and useful tool for resilience assessment in the professional context of the Army. While the original Wagnild and Young (1993) scale consisted of two factors (Personal Competence and Acceptance of Self and Life) distributed across 25 items, the version presented here synthesizes both factors into a single factor composed of 12 items, offering a more operational and adapted measure suited to the needs of today's military environment.

## **Conclusions**

The instrument proposed in this study for measuring resilience can be a useful tool for identifying intervention needs within the professional military context, thereby contributing to the improvement of service members' quality of life. Resilience represents a key variable, as it promotes the activation of adaptive mechanisms and essential prosocial factors for optimal functioning in demanding environments. In the military field, having a high level of resilience enables Armed Forces members to constructively face various stressful situations throughout their careers, promoting both psychological well-being and operational effectiveness. Moreover, resilience is positively related to EI, which allows for a better understanding of the overall emotional functioning of military personnel and the design of more effective interventions aimed at strengthening key emotional competencies for performance in high-demand scenarios. In this way, fostering resilience not only has a positive impact on individual well-being, but also contributes to strengthening institutional functioning by ensuring a more emotionally prepared workforce capable of meeting the challenges inherent to the military environment.





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# **Appendix**

## Appendix I. Item Formation of the Present Study

1. Cuando hago planes voy tras ellos.	1	2	3	4	5	6	7
2. Normalmente gestiono de una forma u otra.	1	2	3	4	5	6	7
3. Soy capaz de depender de mí mismo.	1	2	3	4	5	6	7
4. Mantengo interés en cosas que son importantes para mí.	1	2	3	4	5	6	7
5. Puedo hacer las cosas por mi cuenta si he de hacerlas.	1	2	3	4	5	6	7
6. Me siento orgulloso de finalizar las tareas.	1	2	3	4	5	6	7
7. Soy determinado.	1	2	3	4	5	6	7
8. Puedo enfrentarme a momentos difíciles porque ya he experimentado antes.	1	2	3	4	5	6	7
9. Tengo autodisciplina.	1	2	3	4	5	6	7
10. Me mantengo interesado en las cosas.	1	2	3	4	5	6	7
11. La creencia en mí mismo me permite afrontar momentos duros.	1	2	3	4	5	6	7
12. En una emergencia soy alguien en quien la gente normalmente confía.	1	2	3	4	5	6	7



