

Promoting multilevel factors of psychological resilience in the military: a systematic review

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Background

Psychological resilience is crucial for military personnel to bounce back from potential threats to their lives and safety (Nash et al., 2011). It can be defined as an outcome of predicting factors that operate across different interacting levels (Bonanno et al., 2015). While the importance of a multilevel approach in a military context has been recognized (Adler, 2013; Meredith et al., 2011), promoting multilevel resilience factors have not yet been identified on a broad level (Bonanno et al., 2015).

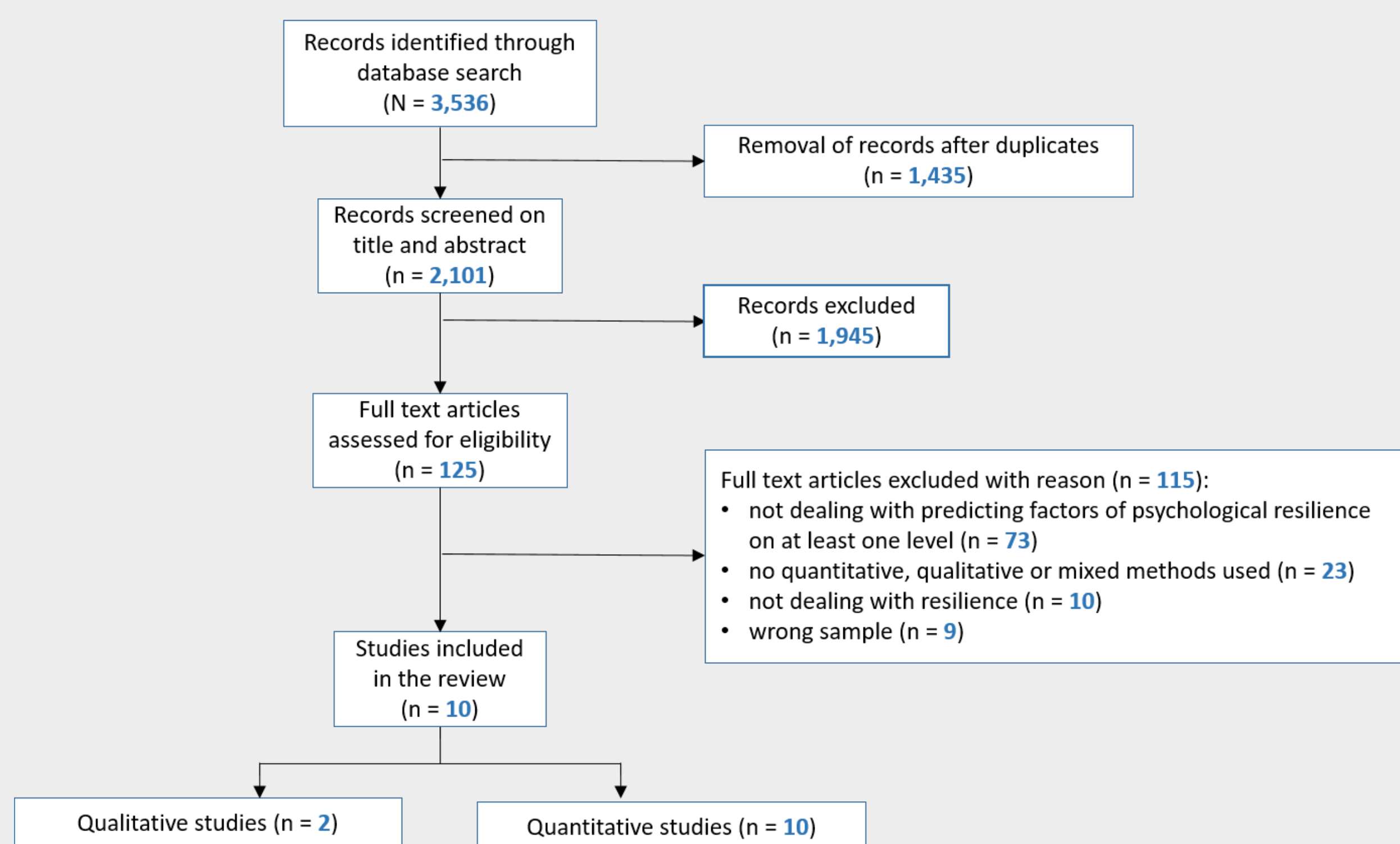
Objectives

- Identifying multilevel factors fostering psychological resilience in the military by synthesizing the scientific literature.
- Classifying these factors based on an individual (micro), a military unit (meso) and a military community (macro) level.

Method

According to the PRISMA guidelines (Shamseer et al., 2015), a systematic review was conducted and registered in PROSPERO (ID: CRD42021254629). We searched the PubMed, PsycINFO, SCOPUS and Web of Science databases. The **PRISMA flow** (Figure 1) illustrates the study selection process, which was based on the following inclusion criteria: (1) peer-review journal article, (2) published since 2000, (3) English or German language, (4) qualitative, quantitative, or mixed method study, (5) military sample, (6) participants aged 18 years or older. The exclusion criteria were (1) review or meta-analysis studies, (2) non-military sample, (3) pediatric or adolescent sample, (4) sample involving veterans or service leavers (5), studies not dealing with predicting factors of psychological resilience on at least one level, (6) studies assessing resilience trainings.

Figure 1. PRISMA Flowchart



Preliminary results

We included 10 studies in the review. Table 1 briefly characterises these studies and their samples.

Table 1. Characteristics of the included studies

Study	Country	Sample	N	Age ^a	Gender	Type
Abraham et al. (2018)	USA	Combat Medics of the U.S. Army	17	n.r. 28 6.4	74% male	qual.
An et al. (2019)	USA	Personnel of the U.S. Army National Guard Special Forces	24	[26-56] 42.5 7.9	100% male	quan.
Cai et al. (2017)	CHN	Soldiers of the Chinese People's Liberation Army	1.477	[17-38] 21.34 3.332	100% male	quan.
Charbonneau (2019)	CAN	Cadets of the Royal Military College of Canada	328	[17-36] 20.43 3.46	259 males 56 females	quan.
Doody et al. (2021)	IRL	Personnel of the Irish Defence Forces	12	[24-40] 32 5.67	males & females	qual.
Georgoulas-Sherry & Kelly (2019)	USA	Cadets at the US Military Academy	1.205	[18-19] 18.3 n.r.	82% male	quan.
Jensen & Bowen (2018)	USA	Personnel of the U.S. Air Force members	30.541	n.r. n.r. n.r.	83% male	quan.
Pickering et al. (2010)	USA	Cadre members of the warrior transition unit	22	[24-57] 38.3 n.r.	14 males 12 females	quan.
Reyes et al. (2020)	PHL	Military personnel of the Philippine Army	360	[20-53] 33.22 6.89	90.8% male 9.2% female	quan.
Szabó et al. (2022)	HUN	Hungarian soldiers	62	n.r. n.r. n.r.	6% female 94% male 1.1% other	quan.

^a Age: [Range], Mean, SD

We analyzed quantitative and qualitative studies separately. The quantitative studies solely investigated microlevels of psychological resilience. They are listed in Table 2.

Table 2. Microlevel resilience factors in quantitative studies

Study	Resilience factor(s)
An et al. (2019)	Heart rate variability
Cai et al. (2017)	Positive emotion regulation strategies
Charbonneau (2019)	Mindfulness
Georgoulas-Sherry & Kelly (2019)	Spirituality, positive appraisal, active coping, self-efficacy, acceptance of limitations, meaning making and learning
Jensen & Bowen (2018)	Financial fitness, physical fitness, psychological fitness
Pickering et al. (2010)	Emotion management, imagery/mental practice, focusing, competition planning
Reyes et al. (2020)	Self-esteem, optimism
Szabó et al. (2022)	Subclinical narcissism

The qualitative studies identified resilience factors on micro, meso and macro levels, which are categorized and listed in Table 3.

Table 3. Multilevel resilience factors in qualitative studies

Level	Resilience factor(s)
Micro	Personality traits/states: empathy ^a , altruism ^a , integrity ^a , spirituality/religiosity ^a , optimism ^b , pride ^b Coping skills: emotion regulation ^a , mental coping skills ^a , physical coping skills ^a , emotional detachment ^b Combat-related skills: maintaining focus and alertness in combat ^a Experience: personal experience ^b , combat experience ^a
Meso	Social resources: connectedness ^a , comradeship ^a , supportive social network ^b , social support ^b , social cohesion ^b Leadership: leading by example/role modelling ^b Social culture: knowledge and skill sharing
Macro	Organizational culture: leadership ^b , knowledge and skill sharing ^b Organisational/external factors: training ^b , breaks/rest periods ^b , hierarchical structure ^b , military procedures (e.g. planning) ^b

^a Abraham et al. (2018), ^b Doody et al. (2021)

Conclusion

The review identified only a small number of studies dealing with multilevel resilience factors, rarely containing meso and macro level factors. Because of the importance of a multilevel approach of resilience in the military, further research is needed to fill this gap.