



Cohort Profile: The Prospective Research In Stress-related Military Operations (PRISMO) Study in the Dutch Armed Forces

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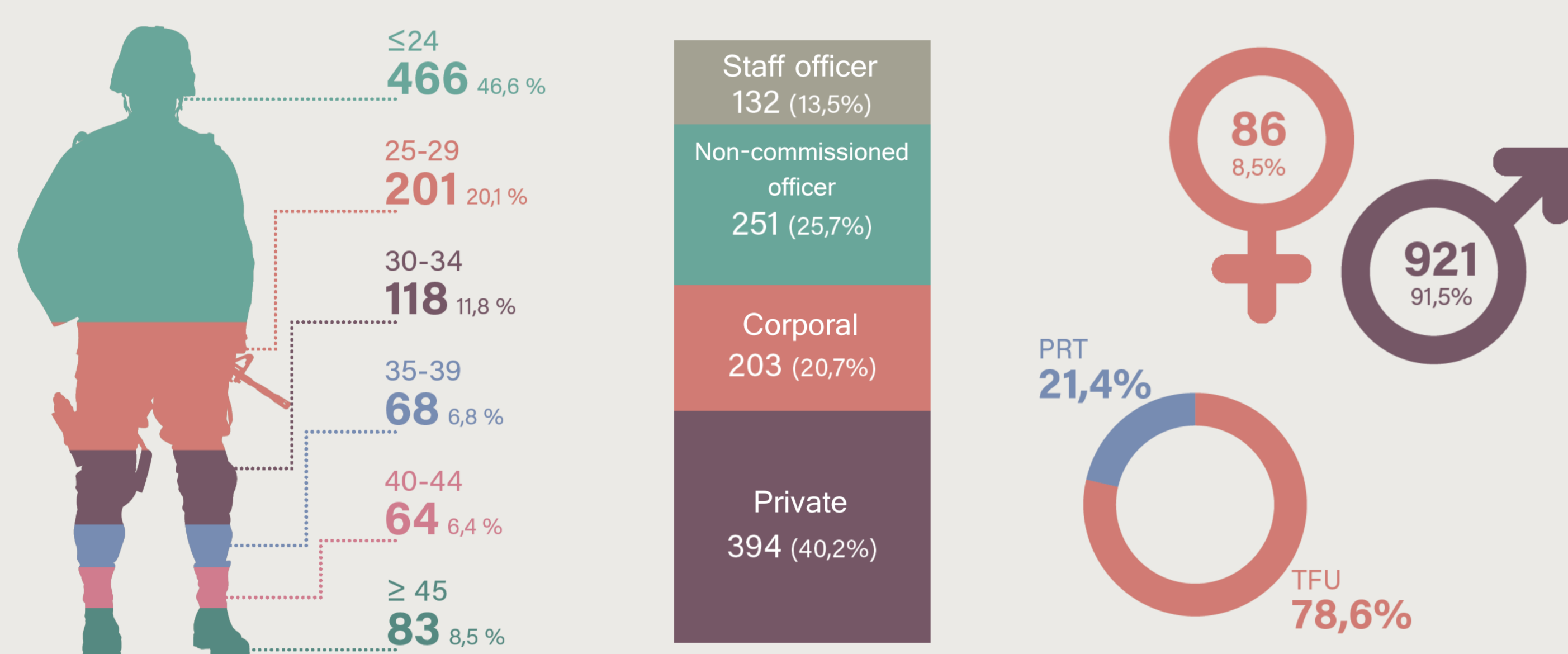
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1 Purpose

The Prospective Research in Stress-related Military Operations (PRISMO) study was initiated in 2005 by the Brain Research and Innovation Centre of the Military Mental Healthcare at the Dutch Ministry of Defence to gain a better understanding of the long-term impact of military deployment on mental health, and to map the different biological and psychological factors that contribute to the development of stress-related mental health symptoms.

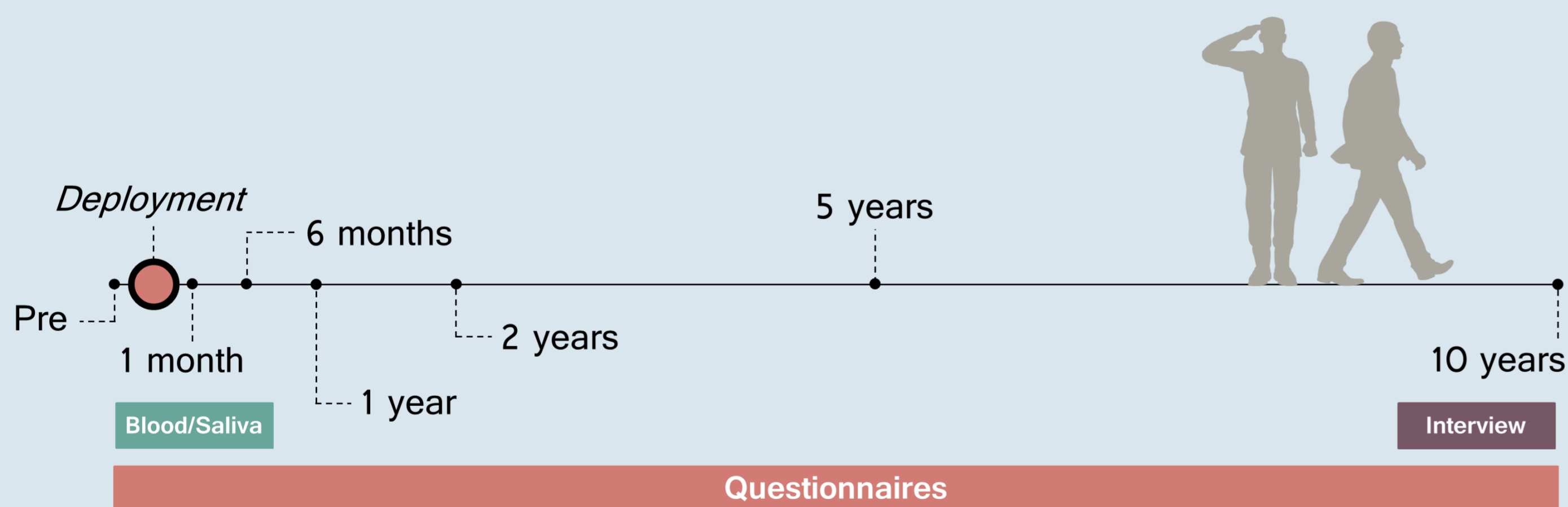
2 Participants

The PRISMO cohort consists of a convenience sample of 1007 Dutch military men and women who were deployed for about 4 months to Afghanistan between 2005 and 2008 as part of ISAF, either as part of a Provincial Reconstruction Team (PRT) or as part of Task Force Uruzgan (TFU).



3 Design and study measures

Up to now, PRISMO has had seven completed rounds of measurements spread out over 10 years, and included collection of blood samples, saliva samples, self-report questionnaires, and a face-to-face interview.



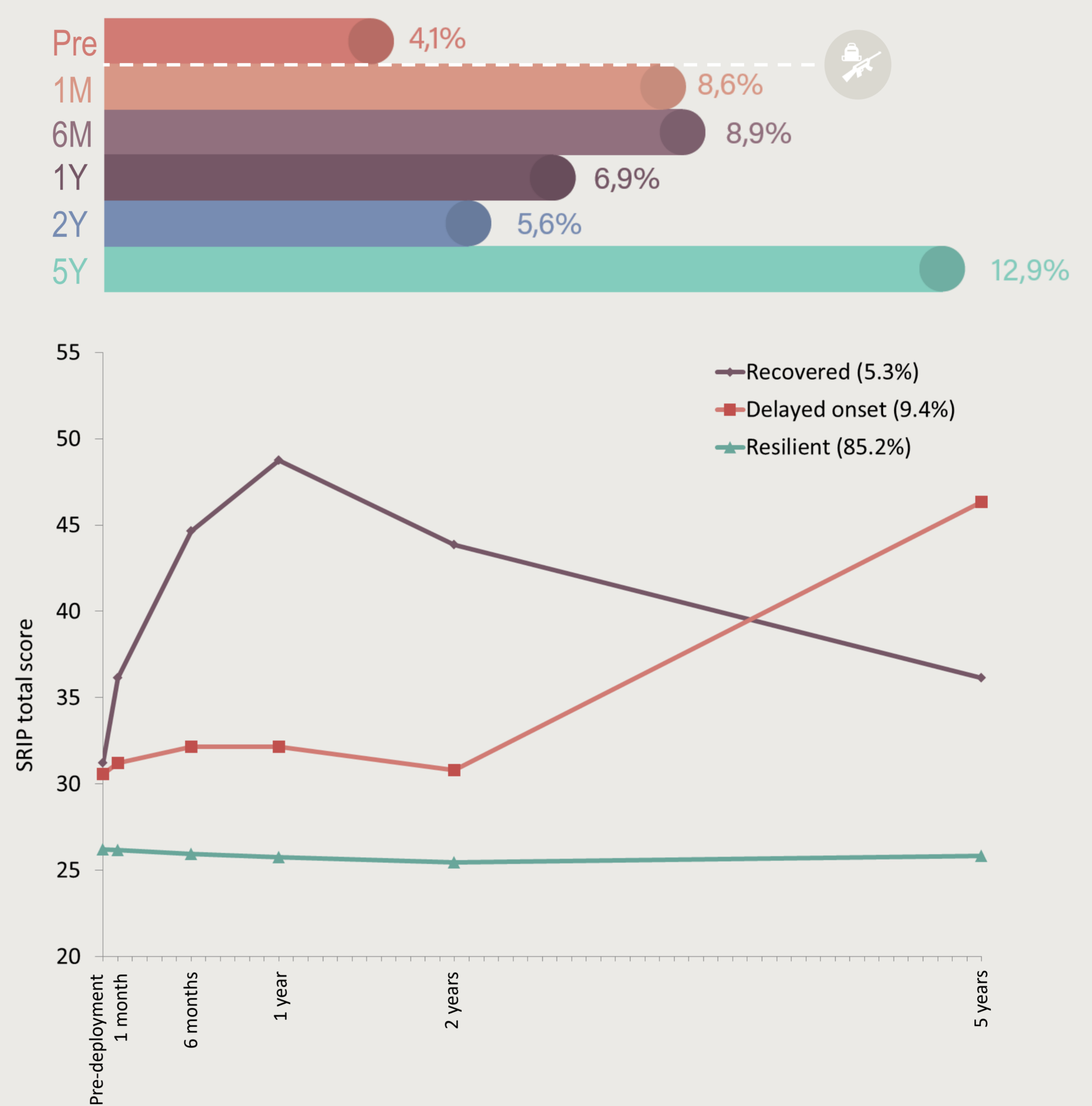
Outcomes

The primary outcome in PRISMO is psychological morbidity (PTSD, depression, anxiety, and somatic symptoms, hostility and fatigue). Biological covariates included several (epi)genetic measures, immunological measures, and neuroendocrinological measures. Psychological covariates included demographic factors, deployment experience, life events, early trauma, personality, coping style, and social support.

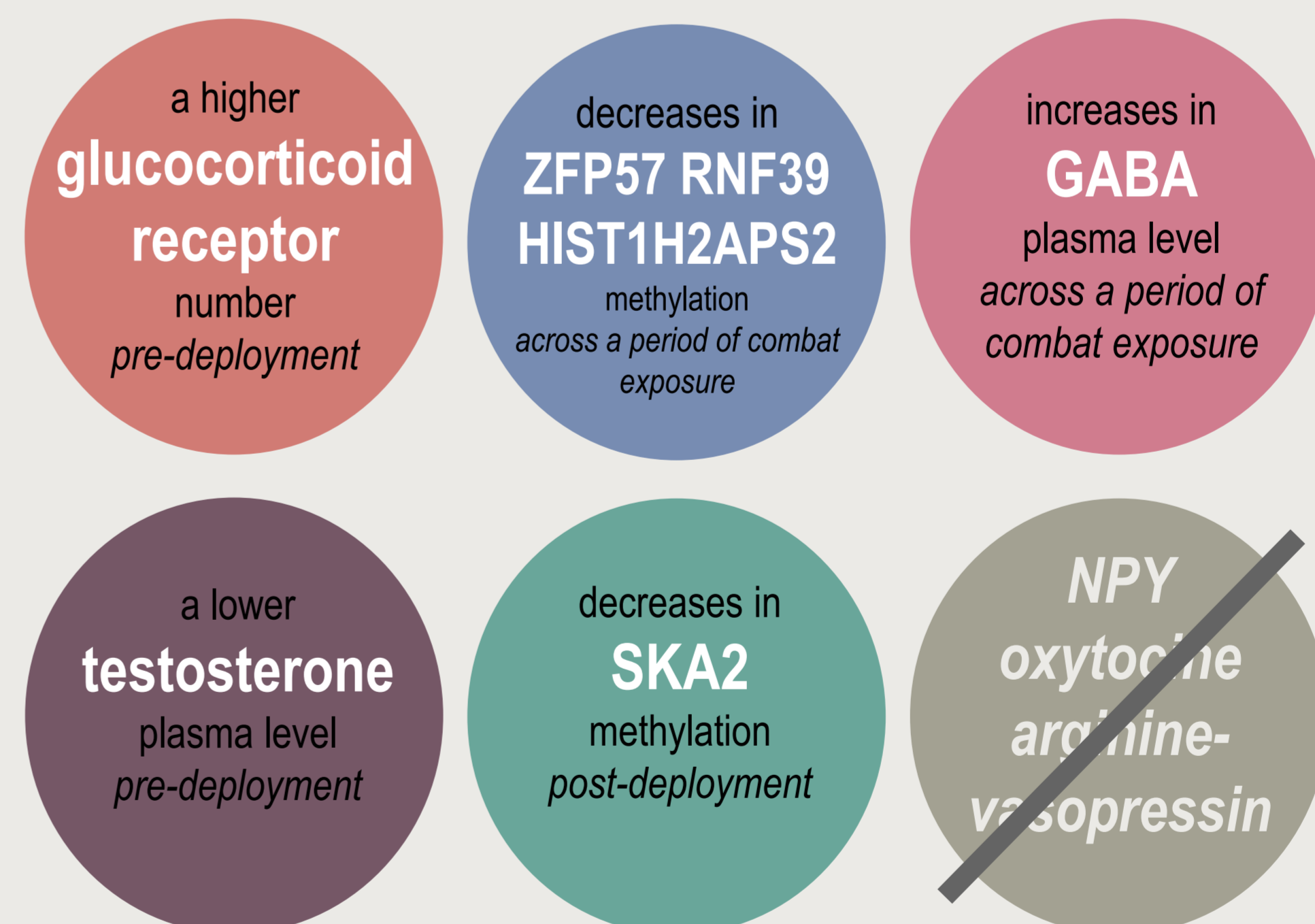
4 Findings to date

A total of 34 publications has resulted from the cohort. A complete list of publications can be found online (www.prismo.nl).

Prevalence and trajectories of PTSD symptoms^{1,2}



Biomarkers and biological risk factors for PTSD³⁻¹⁰



5 Future plans

Various analyses are planned that will include the prevalence of mental health symptoms at 10 years post-deployment, as well as trajectory analyses that capture the longitudinal development of symptoms. Furthermore, we will use a machine learning approach to develop predictive and network models for PTSD symptoms, incorporating biological, psychological, and social factors.

References

¹ Reijnen et al. (2015) *European Psychiatry*. ² Eekhout et al. (2016) *The Lancet Psychiatry*. ³ van Zuiden et al. (2011) *American Journal of Psychiatry*. ⁴ van Zuiden et al. (2012) *Psychoneuroendocrinology*. ⁵ Reijnen et al. (2015) *Psychoneuroendocrinology*. ⁶ Reijnen et al. (2017) *Journal of Psychiatric Research*. ⁷ Reijnen et al. (2018) *Biological Psychology*. ⁸ Boks et al. (2016) *Neuropsychopharmacology*. ⁹ Rutten et al. (2018) *Molecular Psychiatry*. ¹⁰ Schür et al. (2016) *Psychoneuroendocrinology*.

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