Supplementary file 5. Risk of bias of included studies.

First author, Year;	Item	Risk of bias	Reason
1. Armed Forces Health Surveillance Center, 2011 [21]	Participation	Moderate	All armed forces were eligible, but no non-participant analysis has been presented by the authors.
	Attrition	Moderate	No loss to follow-up analyses were presented by the authors.
	Prognostic factor	Moderate	Although prognostic factors were self-reported, no substantial bias can be expected from self-reports of the current prognostic factors
	Outcome	Low	Outcomes were diagnosed in a hospital
	Confounding	High	No confounding analysis has been conducted
	Analysis/reporting	High	No proper analysis has been conducted, only descriptives were presented.
2. Andersen, 2019 [19]	Participation	Moderate	No non-participant analysis has been presented by the authors.
	Attrition	Moderate	No loss to follow-up analyses were presented by the authors.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Multivariate analyses were done with all available exposures
	Analysis/reporting	Low	Adequate analyses were used
3. Anderson, 2019 [20]	Participation	Low	86% of eligible participants, participated at baseline.
	Attrition	Moderate	60% of the participants were filled out their follow-up questionnaires
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Multivariate analyses were done with all available exposures
	Analysis/reporting	Low	Adequate analyses were used
4. Berninger, 2010 [22]	Participation	High	There were differences (e.g. in PTSD status) between participants and non-participants
	Attrition	High	Participants without follow-up data were excluded. The above therefore also holds for those lost at follow-up
	Prognostic factor	Low	Prognostic factors were self-reported and from registers
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Multivariate analyses were done with all available exposures
	Analysis/reporting	Low	Adequate analyses were used
5. Brownlow, 2018 [23]	Participation	Moderate	No non-participant analysis has been presented by the authors.
	Attrition	Moderate	No loss to follow-up analyses were presented by the authors.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	High	Only univariate analyses were reported

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	Analysis/reporting	Low	Adequate analyses were used
6. Brundage, 2015 [24]	Participation	Low	It appears as if all eligible participants were analysed.
	Attrition	Low	It appears as if all eligible participants were analysed.
	Prognostic factor	Low	Deployment records were used
	Outcome	Low	Outcomes were diagnosed (it appears).
	Confounding	High	No confounding adjustment were done
	Analysis/reporting	High	Only descriptive statistics were provided
7. Cameron, 2019 [25]	Participation	Low	It appears as if all eligible participants were analysed.
	Attrition	Low	It appears as if all eligible participants were analysed.
	Prognostic factor	Low	Deployment records were used
	Outcome	Low	Outcomes were diagnosed
	Confounding	Low	Multivariate analyses were done with all available exposures
	Analysis/reporting	Low	Adequate analyses were used
8. Chiu, 2011 [26]	Participation	Low	There were some differences between responders and non-responders.
	Attrition	Moderate	Since data were gathered retrospective, participation and attrition are similar.
	Prognostic factor	Moderate	Both self-reports and employer data were used
	Outcome	Moderate	Outcomes were self-reported using a validated questionnaire
	Confounding	Low	Confounding adjustment was performed.
	Analysis/reporting	Low	Adequate analyses were used
9. Ciarleglio, 2018 [27]	Participation	Low	11% non-response
	Attrition	Moderate	Since data were gathered retrospective, participation and attrition are similar.
	Prognostic factor	Moderate	Both self-reports and employer data were used
	Outcome	Low	Outcome was diagnosed
	Confounding	Low	Multivariate analyses were done with all available exposures
	Analysis/reporting	Low	Adequate analyses were used
10. Cone, 2015 [28]	Participation	High	There are substantial differences between responders and non-responders.
	Attrition	High	There was substantial loss to follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
11. Connorton, 2011 [29]	Participation	Moderate	No non-participant analysis has been presented by the authors.
	Attrition	Moderate	No loss to follow-up analyses were presented by the authors.
	Prognostic factor	High	Prognostic factors were self-reported and it is unclear how
	Outcome	High	Outcomes were self-reported and it is unclear how

	Confounding	Moderate	Multivariate analyses are not reported and it is unclear what was done
	Analysis/reporting	Low	Adequate analyses were done.
12. Cukor, 2011 [30]	Participation	Low	There was 86% participation
	Attrition	Moderate	There was 67% participation at follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported.
	Outcome	Moderate	Outcomes were self-reported and obtained from interviews, with interview data used for exposure-outcome associations.
	Confounding	Low	Adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
13. Fear, 2010 [31]	Participation	High	There are substantial differences between responders and non-responders.
	Attrition	High	There was substantial loss to follow-up
	Prognostic factor	Low	Deployment administrative data were used
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
14. Ferrajao, 2016 [32]	Participation	High	Unclear but probably low participation rate
	Attrition	High	Since data were gathered retrospective, participation and attrition are similar.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	High	No adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
15. Fichera, 2015 [33]	Participation	High	There was substantial non-response
	Attrition	High	There was substantial loss to follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
16. Fink, 2016 [34]	Participation	High	There was substantial non-response
	Attrition	High	There was substantial loss to follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	High	No adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
17. Goodwin, 2012 [35]	Participation	Low	There were no substantial differences between responders and non-responders.
	Attrition	Low	There were no substantial differences between responders and non-responders (including

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			those lost to follow-up).
	Prognostic factor	Moderate	Prognostic factors were self-reported.
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding was properly adjusted for
	Analysis/reporting	Low	Appropriate analyses were used.
18. Green, 2016 [36]	Participation	Moderate	There was a substantial non-response (20%)
	Attrition	Moderate	There was a substantial loss to follow-up (39%)
	Prognostic factor	Moderate	Prognostic factors were self-reported.
	Outcome	Low	Outcome was diagnosed in an interview
	Confounding	High	No confounding adjustment was conducted
	Analysis/reporting	Low	Appropriate analyses were used.
19. Hansen, 2017 [37]	Participation	High	There was a substantial amount of non-responders and no non-responder analysis.
	Attrition	Moderate	There was a substantial amount of participants lost to follow-up and no loss to follow-up analysis.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Confounding was properly adjusted for
	Analysis/reporting	Low	Appropriate analyses were used.
20. Harvey, 2012 [38]	Participation	High	There were substantial differences (e.g. in age and gender) between responders and non-responders.
	Attrition	Moderate	No loss to follow-up analysis were reported
	Prognostic factor	Low	Prospective factors were determined based on deployment characteristics
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding was properly adjusted for
	Analysis/reporting	Low	Appropriate analyses were used.
21. Horesh, 2011 [39]	Participation	Moderate	No non-responder analysis was performed
	Attrition	Moderate	No loss to follow-up analysis was performed
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	High	No confounding analyses were conducted
	Analysis/reporting	Moderate	The description of the analysis is unclear
22. Hourani, 2012 [40]	Participation	Moderate	No non-responder analysis was performed
	Attrition	High	There was substantial loss to follow-up in this study
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported

	Confounding	High	No confounding analyses were conducted (at least, not for the exposure-outcome associations)
	Analysis/reporting	High	Only descriptive statistics were reported (at least, for the exposure-outcome associations)
23. Ikeda, 2017 [41]	Participation	Moderate	About 15% non-response.
	Attrition	Moderate	There was substantial loss to follow-up with differences between those who were and were not lost.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding was properly adjusted for
	Analysis/reporting	Low	Appropriate analyses were used.
24. Joseph, 2014 [42]	Participation	Moderate	There was a substantial non-response
	Attrition	Moderate	There was a substantial loss to follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding was properly adjusted for
	Analysis/reporting	Low	Appropriate analyses were used.
25. Karstoft, 2013 [43]	Participation	Moderate	No non-responder analyses were presented
	Attrition	Low	Loss to follow-up analyses indicated no substantial differences between those who remained in the cohort or not.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	High	No adjustment for confounding were performed
	Analysis/reporting	Low	Adequate statistical analyses were conducted
26. Karstoft, 2015 [44]	Participation	Moderate	No non-responder analyses were presented
	Attrition	Low	Loss to follow-up analyses indicated no substantial differences between those who remained in the cohort or not.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	High	No adjustment for confounding were performed
	Analysis/reporting	Low	Adequate statistical analyses were conducted
27. Kim, 2014 [45]	Participation	Low	Very high >99% participation rate
	Attrition	Low	Very high >99% participation rate in follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Low	Outcome was diagnosed during an interview
	Confounding	Low	Adjustment for confounding was performed

	Analysis/reporting	Low	Adequate analyses were conducted
28. Levin-Rector, 2018 [46]	Participation	Low	Responders comprised >90% of the eligible population
	Attrition	Low	Participants during follow-up comprised >90% of the cohort
	Prognostic factor	Low	Prognostic factors were obtained from database information
	Outcome	Low	Outcomes were obtained from diagnosed register information
	Confounding	Moderate	Only adjustment for clustering within units was done
	Analysis/reporting	Low	Adequate statistical analyses were conducted
29. MacGregor, 2015 [47]	Participation	Moderate	It is unclear what the non-response in this study was
	Attrition	Moderate	It is unclear what the loss to follow-up in this study was
	Prognostic factor	Low	Prognostic factors were obtained from register data
	Outcome	Low	Outcomes were obtained from register data and were diagnosed.
	Confounding	Low	Adjustment for confounding has been conducted
	Analysis/reporting	Low	Adequate statistical analyses were used.
30. MacGregor, 2012 [48]	Participation	Low	All eligible participants were analysed.
	Attrition	Low	All eligible participants were analysed.
	Prognostic factor	Low	Register data were used
	Outcome	Low	Diagnosed register data were used
	Confounding	Low	Adjustment for confounding has been conducted
	Analysis/reporting	Low	Adequate statistical analyses were used.
31. Maguen, 2012 [49]	Participation	Moderate	No non-responder analyses were presented
	Attrition	Moderate	No loss to follow-up analyses were presented
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Adjustment for confounding was done
	Analysis/reporting	Low	Adequate analyses were used
32. Maguen, 2010 [50]	Participation	Moderate	No non-responder analyses were presented
	Attrition	Moderate	No loss to follow-up analyses were presented
	Prognostic factor	Low	Prognostic factors were obtained from company data.
	Outcome	Low	Outcome was diagnosed
	Confounding	High	No adjustment for confounding was done
	Analysis/reporting	Low	Adequate analyses were used
33. Martindale, 2018 [51]	Participation	High	No non-responder analyses were presented, with substantial non-response.
	Attrition	Moderate	No loss to follow-up analyses were presented
	Prognostic factor	Moderate	Prognostic factors were obtained from an interview
	Outcome	Low	Outcome was diagnosed during an interview

	Confounding	High	No adjustment for confounding was done
	Analysis/reporting	High	No statistical analysis was done on the exposure-outcome association (only other analysis).
34. Nagamine, 2018 [52]	Participation	Moderate	No non-responder analyses were presented
	Attrition	Moderate	No loss to follow-up analyses were presented
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	High	No adjustment for confounding was done
	Analysis/reporting	Low	Adequate analyses were used
35. Osorio, 2018 [53]	Participation	High	A substantial amount of eligible participants did not participate. No non responder analysis was conducted.
	Attrition	High	A substantial amount of participants were lost in the follow-up. No loss to follow-up analysis was conducted.
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding analyses were conducted
	Analysis/reporting	Low	Adequate statistical analyses were performed.
36. Pihl-Thingvad, 2019 [54]	Participation	Low	Responders and non-responders did not differ substantially from one another (only in age)
	Attrition	Low	Variables that predicted loss to follow-up (e.g. baseline PTSD) were adjusted for
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding analyses were conducted
	Analysis/reporting	Low	Adequate statistical analyses were performed.
37. Polusny, 2011 [55]	Participation	Moderate	There were slight differences between responders and non-responders
	Attrition	Moderate	There were slight differences between those with and without follow-up data
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding analyses were conducted
	Analysis/reporting	Low	Adequate statistical analyses were performed.
38. Reijnen, 2015 [56]	Participation	High	There were substantial differences (e.g. in mental health) between responders and non-responders.
	Attrition	High	Participants without follow-up data were excluded. The above therefore also holds for those lost at follow-up
	Prognostic factor	Moderate	Prospective factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	High	No confounding adjustment was conducted

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	Analysis/reporting	Low	Appropriate analyses were used.
39. Shea, 2013 [57]	Participation	Moderate	It is unclear what the non-response in this study was
	Attrition	Moderate	It is unclear what the loss to follow-up in this study was
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Low	Outcome was diagnosed during a structured interview.
	Confounding	Low	Confounding analyses were conducted
	Analysis/reporting	Low	Adequate statistical analyses were performed.
40. Soo, 2011 [58]	Participation	Moderate	It is unclear what the non-response in this study was
	Attrition	Moderate	It is unclear what the loss to follow-up in this study was
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcome was self-reported
	Confounding	Low	Confounding analyses were conducted
	Analysis/reporting	Low	Adequate statistical analyses were performed.
41. Stevelink, 2018 [59]	Participation	High	There was substantial non-response
	Attrition	High	There was substantial loss to follow-up
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Moderate	Outcomes were self-reported
	Confounding	Low	Adjustment for confounding was performed.
	Analysis/reporting	Low	Adequate analyses were conducted
42. Wittchen, 2012 [60]	Participation	Moderate	It is unclear what the non-response in this study was
	Attrition	Moderate	It is unclear what the loss to follow-up in this study was
	Prognostic factor	Moderate	Prognostic factors were self-reported
	Outcome	Low	Outcomes was diagnosed during a structured interview
	Confounding	High	No adjustment for confounding was performed
	Analysis/reporting	Low	Adequate analyses were conducted

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