**APPENDIX 1 Search strategy**

PubMed: ("Mental Health"[Mesh]) OR "Mental Disorders"[Mesh] OR "mental health" OR "mental illness" OR "mentally ill" OR "mental disorder" AND (athlete OR athletic OR sport[tw] OR athletes) AND (elite[tw] OR professional[tw] OR Olympic OR "highly trained" OR "high performing" OR "high performance" OR competitive[tw] OR collegiate[tw])))))))) 1146 results ADD: prevalence OR risk OR statistic OR occurrence

Psycinfo: (MAINSUBJECT.EXACT.EXPLODE("Mental Disorders") OR 'mental illness' OR "mental disorder" OR "mentally ill") AND (elite OR professional OR Olympic OR "highly trained" OR "high performing" OR "high performance" OR competitive OR collegiate) AND (athlete OR athletic OR sport OR athletes) AND (prevalence OR risk OR statistic OR occurrence)

SportDiscus: ( (DE "MENTAL illness") OR (DE "MENTAL health" OR DE "MENTAL health of athletes") OR "mental health' OR "mentally ill" Or "mental disorder" ) AND ( elite OR professional OR Olympic OR "highly trained" OR "high performing" OR "high performance" OR competitive OR collegiate ) AND ( athlete OR athletic OR sport )

Scopus: ( ( TITLE-ABS-KEY ( "mental health" OR "mentally ill" OR "mental disorder" ) AND TITLE-ABS-KEY ( elite OR professional OR Olympic OR "highly trained" OR "high performing" OR "high performance" OR competitive ) AND TITLE-ABS-KEY ( athlete OR sport OR athletic OR competition ) ) )

Cochrane: "mental health" OR "mentally ill" OR "mental disorder" ) AND ( elite OR professional OR Olympic OR "highly trained" OR "high performing" OR "high performance" OR competitive ) AND ( athlete OR sport OR athletic ) AND (prevalence OR risk OR statistic OR occurrence)

**APPENDIX 2 Risk of bias**

1. Was the study’s target population a close representation of the national population in relation to relevant variables, e.g. age, sex, occupation? (Yes = 0; No = 1)

2. Was the sampling frame a true or close representation of the target population? (Yes = 0; No = 1)

3. Was some form of random selection used to select the sample, OR, was a census undertaken? (Yes = 0; No = 1)

4. Was the likelihood of non-response bias minimal? (Yes = 0; No = 1)

5. Were data collected directly from the subjects (as opposed to a proxy)? (Yes = 0; No = 1)

6. Was an acceptable case definition used in the study? (Yes = 0; No = 1)

7. Was the study instrument that measured the parameter of interest (e.g. prevalence of low back pain) shown to have reliability and validity (if necessary)? (Yes = 0; No = 1)

8. Was the same mode of data collection used for all subjects? (Yes = 0; No = 1)

9. Were the numerator(s) and denominator(s) for the parameter of interest appropriate? (Yes = 0; No = 1)

**APPENDIX 3 Description of the risk of bias of the 34 included studies**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Risk of bias |
| Biggins 201715 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Brown 201716 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Drew 201817 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Du Preez 201718 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Escobar-Molina 201519 | 0 | 0 | 0 | U | 0 | 0 | 0 | 0 | 0 | Low |
| Foskett 201820 | 0 | 0 | 0 | U | 0 | 0 | 0 | 0 | 0 | Low |
| Giel 201621 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201512 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201522 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201523 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201624 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201625 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201626 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201627 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201713 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201728 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Gouttebarge 201729 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201730 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201731 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gouttebarge 201832 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Gulliver 201533 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Hakansson 201834 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Hart 201335 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | Low |
| Hulley 200136 | 0 | 0 | 0 | 0 | 0 | 0 | U | 0 | 0 | Low |
| Junge 201637 | 0 | 0 | 1 | U | 0 | 0 | 0 | 1 | 0 | Low |
| Kerr 201238 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | Low |
| Kilic 201739 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Sanders 201740 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | Low |
| Schaal 201141 | 0 | 0 | 0 | U | 0 | 0 | 0 | 0 | 0 | Low |
| Schuring 201714 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Schwenk 200742 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | Low |
| Tan 201643 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | Low |
| Van Ramele 201744 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | Low |
| Willer 201845 | 0 | 1 | 1 | U | 0 | 0 | 0 | 0 | 1 | Moderate |

*U, unclear*