**Supplementary Table 3. Assessment of Evidence for an Association Between Recurrent Pain (RP) and Academic Achievement (AA) including Subgroups Analysis According to the GRADE Framework (Huguet et al., 2013)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Associations**  | **Participants**(n) | **CohortsAll****Studies** (n) | **Univariate Analyses (n)1** | **Multivariate Analyses (n)1** | **Phase2** | **GRADE Factors3** | **Overall****Evidence4** |
| **pos** | **0** | **neg** | **pos** | **0** | **neg** | **Study Limit.**(Quality) | **Inconsistent** | **Indirect** | **Imprecise** | **Publ.****bias** | **Mod/large effect size** | **Dose-****response** |
|  RP ass. AA? | 84 720 | 2/21 | 2 | 10 | 12 | 1 | 3 | 4 | 3\* | X(5 fair, 16 poor) | X | ✔ | ✔ | X | **unclear** | X | ++ |
| Headache ass. AA? | 26 313 | 2/8 | 0 | 3 | 4 | 1 | 2 | 2 | 3\* | X(3 fair, 5 poor) | X | ✔ | ✔ | X | **unclear** | X | ++ |
| Abdominal pain ass. AA? | 2 853 | -/3 | 0 | 2 | 1 | 0 | 1 | 0 | 1\*\* | X(1 fair, 2 poor) | X | ✔ | X | X | X | X | + |
| Musculoskeletal Pain ass. AA? | 2 470 | -/4 | 1 | 1 | 2 | 0 | 0 | 0 | 1\*\* | X(1 fair, 3 poor) | X | ✔ | X | X | X | X | + |
| RP ass. Objective AA?(Grades, Exams, Graduation) | 50 245 | 2/13 | 2 | 5 | 6 | 1 | 2 | 3 | 3\* | X(4 fair, 9 poor) | X | ✔ | ✔ | X | unclear | X | ++ |
| RP ass. Perceived AA?  | 34 569 | -/8 | 0 | 5 | 6 | 0 | 1 | 1 | 1\*\* | X(1 fair, 7 poor) | X | ✔ | ✔ | X | X | X | + |
| RP ass. AA in age ≤12y? | 44 087 | 1/10 | 0 | 5 | 7 | 0 | 1 | 2 | 2\* | X(3 fair, 7 poor) | X | ✔ | ✔ | X | X | X | ++ |
| RP ass. AA in age ≥13y? | 40 633 | 1/11 | 2 | 5 | 4 | 1 | 2 | 2 | 3\* | X(2 fair, 9 poor) | X | ✔ | X | X | unclear | X | ++ |
| RP cause impaired AA? | 9 971 | 2/2 | 0 | 0 | 1 | 1 | 1 | 1 | 3\* | X(2 poor) | X | X | ✔ | X | unclear | X | ++ |
| RP ass AA: moderated by perceived teacher support of competence and of autonomy? | 10 650 | 0/1 | 0 | 0 | 1 | 0 | 0 | 0 | 1\*\* | NA(1 poor) | NA | NA | unclear | NA | X | X | + |
| RP ass AA: moderated by sex | 13 108 | 0/1 | 0 | 0 | 1 | 0 | 0 | 1 | 1\*\* | NA(1 poor) | NA | NA | unclear | NA | X | X | + |
| RP ass AA: moderated by parental unemployment status | 13 108 | 0/1 | 0 | 0 | 1 | 0 | 0 | 1 | 1\*\* | NA(1 poor) | NA | NA | unclear | NA | X | X | + |
| RP ass. AA: mediated by absenteeism, problems with attention and homework  | 9 000 | 1/1 | 0 | 0 | 0 | 0 | 0 | 1 | 3\* | NA(1 poor) | NA | NA | unclear | NA | unclear | X | + |

1 pos.: positive associations; 0: non-significant associations, neg.: negative associations; 2 \*: high initial evidence; \*\*: moderate initial evidence; 3 ✓: no serious limitations; ✕: serious limitations (or not present moderate/large effect size /dose-response effect); 4 +: very low; ++: low; +++: moderate; ++++: high evidence
ass: associated with; Study limit.: study limitations; Publ.bias: publication bias; Mod./large effect: moderate /large effect