**Supplemental Table 1**

*Risk of Bias Across the Included Studies*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Study name** | **Selection bias** | **Study design** | **Confounders** | **Blinding** | **Collection methods** | **Withdrawals and drop-outs** | |
| Ahola Kohut et al. (2020) | Weak | Moderate | Weak | Moderate | Strong | | Strong |
| Anand & Sharma (2014) | Moderate | Moderate | Weak | Weak | Strong | | Strong |
| Berger et al. (2018) | Moderate | Strong | Strong | Weak | Strong | | Strong |
| Bokoch & Hass-Cohen (2020) | Moderate | Strong | Weak | Weak | Strong | | Strong |
| Carey (2017) | Moderate | Moderate | Weak | Weak | Strong | | Weak |
| Carro et al. (2020) | Moderate | Strong | Weak | Weak | Strong | | Weak |
| Carro et al. (2022) | Moderate | Strong | Moderate | Moderate | Strong | | Strong |
| Faraji et al. (2019) | Moderate | Strong | Weak | Weak | Strong | | Weak |
| Haydicky et al. (2015) | Weak | Moderate | Moderate | Weak | Strong | | Strong |
| Liu et al. (2021) | Moderate | Strong | Strong | Weak | Strong | | Strong |
| Matsuba et al. (2021) | Moderate | Strong | Strong | Weak | Strong | | Moderate |
| Meadows (2018) | Weak | Strong | Weak | Weak | Strong | | Weak |
| Mendelson et al. (2010) | Moderate | Strong | Strong | Weak | Strong | | Strong |
| Menghetti (2015) | Moderate | Moderate | Weak | Weak | Strong | | Strong |
| Meyer & Eklund (2020) | Moderate | Strong | Moderate | Weak | Strong | | Weak |
| Muelller (2014) | Moderate | Moderate | Weak | Weak | Moderate | | Strong |
| Ricard et al. (2013) | Moderate | Strong | Moderate | Weak | Strong | | Weak |
| Schonert-Reichl et al. (2015) | Moderate | Strong | Moderate | Strong | Strong | | Strong |
| Terjestam et al. (2016) | Moderate | Strong | Moderate | Weak | Strong | | Strong |
| Valero et al. (2021) | Moderate | Strong | Strong | Weak | Strong | | Strong |
| Waldemar et al. (2016) | Moderate | Strong | Strong | Weak | Strong | | Strong |

**Supplemental Figure 1**

*Follow-Up Within-Group Effect Size for Intervention Effect on Overall Peer Relationship Outcomes*

**Table

Description automatically generated**

**Supplemental Figure 2**

*Sensitivity Analysis: Intervention Effect on Peer Relationship with Outliersa Removed*

|  |
| --- |
| **(a) Within-group effect sizes (*k* = 19, excluding Anand & Sharma, 2014)** |
| Table  Description automatically generated |
| **(b) Between-group effect sizes (*k* = 14, excluding Faraji et al., 2019)** |
| Table  Description automatically generated |

*Note.* aStudies with effect sizes 3 standard deviations above or below the mean were identified as outliers.

*Sensitivity Analysis: Moderator Analyses of Within-Group Intervention Effect with Outliers Removed (k = 18, excluding Anand & Sharma, 2014 and Faraji et al., 2019)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Peer Relationship** | | | | |
| **Study Characteristics** | ***k*** | **Hedge’s *g* (95% *CI*)** | ***Qb*** | ***df*** | ***p*** |
| **Participant age** |  |  |  |  |  |
| School-age children (6-12 years) | 9 | 0.39 (0.25, 0.53)\*\*\* | 4.82 | 2 | 0.09+ |
| Adolescents (13-18 years) | 6 | 0.48 (0.17, 0.80)\*\* |
| Mixed | 3 | 0.20 (0.07, 0.34)\*\* |  |  |  |
| **Participant gender** |  |  |  |  |  |
| Predominantly female (female >= 50%) | 8 | 0.46 (0.22, 0.70)\*\*\* | 1.43 | 1 | 0.23 |
| Predominantly male (female < 50%) | 9 | 0.30 (0.20, 0.40)\*\*\* |
| **Participant pre-existing condition** |  |  |  |  |  |
| Predominantly clinical/at-risk | 6 | 0.35 (0.19, 0.51)\*\*\* | 0.20 | 1 | 0.65 |
| None/Not mentioned | 12 | 0.40 (0.24, 0.56)\*\*\* |
| **Type of mindfulness intervention** |  |  |  |  |  |
| Manualized mindfulness-based program | 12 | 0.39 (0.21, 0.57)\*\*\* | 0.03 | 1 | 0.86 |
| General mindfulness practice | 6 | 0.37 (0.22, 0.51)\*\*\* |
| **Any adaptation of intervention programb** | |  |  |  |  |
| Yes | 13 | 0.42 (0.26, 0.57)\*\*\* | 0.50 | 1 | 0.48 |
| No | 5 | 0.32 (0.13, 0.52)\*\* |
| **Other activities involved in intervention** |  |  |  |  |  |
| Yes | 12 | 0.35 (0.26, 0.44)\*\*\* | 0.35 | 1 | 0.55 |
| No | 6 | 0.47 (0.08, 0.85)\* |
| **Dosage** |  |  |  |  |  |
| Low | 5 | 0.25 (0.12, 0.38)\*\*\* | 3.84 | 2 | 0.15 |
| Medium | 7 | 0.47 (0.18, 0.75)\*\* |
| High | 6 | 0.42 (0.27, 0.57)\*\*\* |
| **Facilitator** |  |  |  |  |  |
| Non-teaching personnel onlyc | 9 | 0.43 (0.22, 0.65)\*\*\* | 18.20 | 2 | 0.0001\*\*\* |
| Schoolteacher only | 4 | 0.18 (0.09, 0.28)\*\*\* |
| Mixed | 5 | 0.52 (0.39, 0.65)\*\*\* |
| **Intervention target** |  |  |  |  |  |
| Children only | 14 | 0.38 (0.24, 0.52)\*\*\* | 0.24 | 1 | 0.62 |
| Children & others (parents/teachers) | 4 | 0.46 (0.16, 0.77)\*\* |
| **Group setting** |  |  |  |  |  |
| Classroom-based intervention | 12 | 0.40 (0.24, 0.56)\*\*\* | 0.20 | 1 | 0.65 |
| Group-based intervention | 6 | 0.35 (0.19, 0.51)\*\*\* |
| **Study design** |  |  |  |  |  |
| Controlled studies | 13 | 0.37 (0.23, 0.51)\*\*\* | 0.84 | 1 | 0.36 |
| Non-controlled studies | 5 | 0.50 (0.25, 0.75)\*\*\* |

*+ p* < .1, \* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001.

**Supplemental Figure 3**

*Sensitivity Analysis: Within-Group Effect Sizes Assuming Pre-Post Correlations = 0.7*

|  |
| --- |
| **(a) All peer relationship outcomes (*k* = 20)** |
| Table  Description automatically generated |
| **(b) Negative peer interactions (*k* = 14)** |
| Table  Description automatically generated |
| **(c) Positive peer interactions (*k* = 8)** |
| Table  Description automatically generated |

*Sensitivity Analysis: Within-Group Effect Sizes Assuming Pre-Post Correlations = 0.9*

|  |
| --- |
| **(a) All peer relationship outcomes (*k* = 20)** |
| Table  Description automatically generated |
| **(b) Negative peer interactions (*k* = 14)** |
| Table  Description automatically generated |
| **(c) Positive peer interactions (*k* = 8)** |
| Table  Description automatically generated |

**Supplemental Figure 4**

*Funnel Plots of Standard Error by Effect Sizes on All Peer Relationship Outcomes*

|  |
| --- |
| **(a) Within-group effect sizes (*k* = 20)** |
| Chart  Description automatically generated |
| **(b) Between-group effect sizes (*k* = 15)** |
| Chart  Description automatically generated |

*Note.* Each circle represents an included study; the diamond represents the overall random effect size of all included studies on peer relationship outcomes. The x-axis represents the mean result (Hedge’s g), and the y-axis represents study precision (standard errors of the effect estimates). Studies with smaller standard errors or larger sample sizes appear toward the top.

**Supplemental Figure 5**

*Publication Bias Assessed by Trim and Fill Analysis*

|  |
| --- |
| **(a) Between-group effect sizes (assuming missing studies were to the *left* of the mean)** |
| Chart  Description automatically generated |
| **(b) Between-group effect sizes (assuming missing studies were to the *right* of the mean)** |
| Chart  Description automatically generated |

*Note.* The funnel plots present random-effects model results. The white dots represent actual effect sizes observed in the studies; the black dots represent imputed studies assuming there was potential estimation bias. The white diamond represents actual effect size based on our meta-analysis; the black diamond represents adjusted effect size based on Trim and Fill analysis. In Figure (a), when assuming there were missing studies to the left of the mean, no missing study was identified; the average effect size remained the same with our main analysis. In Figure (b), when assuming there were missing studies to the right of the mean, one missing study was identified; the imputed average effect size was *g* = 0.46, 95% CI [0.23, 0.69]. Given that no potential missing studies were identified for the within-group effect size, only between-group effect size is presented here.

**Supplemental Figure 6**

*Meta-Regression Result of Within-Group Effect Sizes on Intervention Dosage (Total Minutes)*

Graphical user interface

Description automatically generated with medium confidence  
*Note.* This figure presents a meta-regression result with dosage (total intervention minutes) as a continuous variable. The scatter plot showed that dosage was not associated with the overall effect size (regression *β* = 0.00, *p* = .98).