Supplemental Digital Content 7

Exploratory and Sensitivity Analyses

**Exploratory analyses of depressive and anxiety symptoms**

Since the primary outcome psychological distress is a composite measure, we exploratorily analyzed depressive and anxiety symptoms separately, to understand whether the intervention effectiveness differed for those separate outcomes. The results are shown in Tables S7 and S8.

**Table S7.** Observed mean change scores per condition for depressive and anxiety symptoms; with differences and effect sizes of the differences between groups on the change scores (complete cases).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome variable | post-test | | | | | |  | follow-up | | | | | |
| Change score (*SD*) | |  | 95% CI | |  |  | Change score (*SD*) | |  | 95% CI | |  |
| Intervention | Control | Dif. | LL | UL | *d* |  | Intervention | Control | Dif. | LL | UL | *d* |
| Depressive symptoms | -1.6 (3.9)  (*n* = 53) | -2.4 (4.0)  (*n* = 59) | -0.79 | -2.27 | 0.68 | -0.20 |  | -1.7 (3.7)  (*n* = 54) | -1.7 (4.8)  (*n* = 59) | -0.01 | -1.62 | 1.61 | -0.00 |
| Anxiety symptoms | -2.1 (3.9)  (*n* = 52) | -0.8 (3.4)  (*n* = 59) | 1.27 | -0.09 | 2.63 | 0.35 |  | -2.0 (3.8)  (*n* = 54) | -0.7 (4.4)  (*n* = 59) | 1.36 | -0.16 | 2.89 | 0.33 |

*Notes.* CI = Confidence Interval; Dif. = Difference in mean change scores (baseline scores subtracted from post-test and follow-up scores, respectively) between conditions; LL = Lower Limit; UL = Upper Limit; *d* = Cohen’s *d*. Negative change scores indicate improvement. Positive differences in mean change scores between conditions and positive Cohen’s *d* values indicate that the intervention group improved more than controls.

**Table S8.** Estimated coefficients and confidence intervals based on linear mixed-effects models of depressive and anxiety symptoms adjusted for baseline covariates, assuming equal scores at baseline in the intervention (*n*=60) and control group (*n*=61).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome variable |  | Depressive symptoms | |  | Anxiety symptoms | |
|  | *b* | 95% CI |  | *b* | 95% CI |
| Intercept |  | 0.99 | 0.84 to 1.14 |  | 0.86 | 0.67 to 1.06 |
| Short-term |  | -0.16 | -0.23 to -0.10 |  | -0.07 | -0.15 to 0.00 |
| Long-term |  | -0.13 | -0.19 to -0.07 |  | -0.08 | -0.17 to 0.00 |
| Short-term\*group |  | 0.02 | -0.06 to 0.10 |  | -0.11 | -0.21 to -0.00 |
| Long-term\*group |  | -0.03 | -0.11 to 0.05 |  | -0.11 | -0.22 to 0.00 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for baseline covariates age and sex, as well as for whether participants completed all measurements digitally versus any time point on paper.

**Analyses without adjustments for baseline covariates age and sex**

In Tables S9 to S11, the results are shown of the primary and secondary analyses repeated without adjusting for the potential influence of baseline covariates age and sex. We did include covariate “paper”, indicating whether participants completed all measurements digitally versus any time point on paper, to adjust for the influence of missing data.

**Table S9.** Main analyses of the E-GOAL intervention. Estimated coefficients and confidence intervals based on linear mixed-effects models of primary and secondary outcomes, without adjusting for age and sex, assuming equal scores at baseline in the intervention (*n*=60) and control group (*n*=61).

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome variable | Psychological distress | | Physical HRQoL | | Mental HRQoL | | Self-efficacy | | Self-management | |
|  | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI |
| Intercept | 1.13 | 1.10 to 1.17 | 35.70 | 33.90 to 37.49 | 39.77 | 38.02 to 41.52 | 37.75 | 36.62 to 38.88 | 1.14 | 1.08 to 1.20 |
| Short-term | -0.15 | -0.21 to -0.08 | 2.42 | 0.68 to 4.16 | 2.46 | 0.46 to 4.47 | 1.60 | 0.19 to 3.01 | -0.04 | -0.10 to 0.01 |
| Long-term | -0.14 | -0.22 to -0.06 | 3.03 | 1.29 to 4.78 | 2.09 | -0.22 to 4.41 | 0.90 | -0.51 to 2.32 | -0.04 | -0.11 to 0.02 |
| Short-term\*group | -0.03 | -0.13 to 0.06 | 0.50 | -1.93 to 2.93 | 1.08 | -1.67 to 3.83 | 0.53 | -1.38 to 2.44 | -0.09 | -0.17 to -0.01 |
| Long-term\*group | -0.07 | -0.18 to 0.05 | -0.29 | -2.72 to 2.14 | 0.78 | -2.30 to 3.86 | 1.51 | -0.39 to 3.42 | -0.04 | -0.12 to 0.05 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for whether participants completed all measurements digitally versus any time point on paper.

**Table S10.** Estimated coefficients and confidence intervals of one-way analyses of covariance between the intervention (*n*=60) and control group (*n*=61) at post-test and follow-up, on mean perceived progress on personally prioritized areas of functioning and self-management, without adjusting for age and sex.

|  |  |  |
| --- | --- | --- |
| Outcome variable | *b* | 95% CI |
| Progress on priorities of functioning at post-test | 0.47 | 0.08 to 0.85 |
| Progress on priorities of self-management at post-test | 0.55 | 0.16 to 0.94 |
| Progress on priorities of functioning at follow-up | 0.60 | 0.17 to 1.02 |
| Progress on priorities of self-management at follow-up | 0.02 | -0.48 to 0.52 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for whether participants completed all measurements digitally versus any time point on paper.

**Table S11.** Estimated coefficients and confidence intervals based on linear mixed-effects models of depressive and anxiety symptoms, without adjusting for age and sex, assuming equal scores at baseline in the intervention (*n*=60) and control group (*n*=61).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome variable |  | Depressive symptoms | |  | Anxiety symptoms | |
|  | *b* | 95% CI |  | *b* | 95% CI |
| Intercept |  | 0.92 | 0.87 to 0.97 |  | 0.73 | 0.67 to 0.79 |
| Short-term |  | -0.16 | -0.23 to -0.10 |  | -0.07 | -0.14 to 0.00 |
| Long-term |  | -0.13 | -0.19 to -0.07 |  | -0.08 | -0.17 to 0.00 |
| Short-term\*group |  | 0.02 | -0.06 to 0.10 |  | -0.11 | -0.21 to -0.01 |
| Long-term\*group |  | -0.03 | -0.11 to 0.05 |  | -0.11 | -0.22 to 0.00 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for whether participants completed all measurements digitally versus any time point on paper.

**Analyses without multiple imputation**

In Table S12, the results of the ANCOVA analyses can be found, repeated on the original dataset without imputing missing data.

**Table S12.** Estimated coefficients and confidence intervals of one-way analyses of covariance between the intervention (*n*=53) and control group (*n*=59) at post-test and follow-up, on mean perceived progress as compared to previous time point on personally prioritized areas of functioning and self-management as indicated at baseline, adjusted for baseline covariates.

|  |  |  |
| --- | --- | --- |
| Outcome variable | *b* | 95% CI |
| Progress on priorities of functioning at post-test | 0.47 | 0.07 to 0.87 |
| Progress on priorities of self-management at post-testa | 0.55 | 0.14 to 0.96 |
| Progress on priorities of functioning at follow-up | 0.62 | 0.18 to 1.05 |
| Progress on priorities of self-management at follow-up | 0.04 | -0.46 to 0.53 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for baseline covariates age and sex, as well as for whether participants completed all measurements digitally versus any time point on paper. a*n*intervention=52, *n*control=58.

**Analyses in the per-protocol sample**

In Tables S13 to S15, the results are shown of the main analyses repeated in the per-protocol sample, in which the intervention participants who dropped out of treatment *(n*=6) were excluded.

**Table S13.** Main analyses of the E-GOAL intervention in the per-protocol sample (*N*=115). Estimated coefficients and confidence intervalsbased on linear mixed-effects models of primary and secondary outcomes adjusted for baseline covariates, assuming equal scores at baseline in the intervention and control group.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Outcome variable | Psychological distress | | Physical HRQoL | | Mental HRQoL | | Self-efficacy | | Self-management | |
|  | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI | *b* | 95% CI |
| Intercept | 1.20 | 1.07 to 1.33 | 45.94 | 39.78 to 51.11 | 41.59 | 35.58 to 47.60 | 33.85 | 30.12 to 37.58 | 1.34 | 1.14 to 1.54 |
| Short-term | -0.15 | -0.21 to -0.08 | 2.32 | 0.58 to 4.07 | 2.37 | 0.37 to 4.37 | 1.65 | 0.23 to 3.07 | -0.04 | -0.10 to 0.02 |
| Long-term | -0.14 | -0.22 to -0.05 | 2.93 | 1.18 to 4.67 | 1.96 | -0.35 to 4.27 | 0.97 | -0.46 to 2.39 | -0.04 | -0.11 to 0.02 |
| Short-term\*group | -0.03 | -0.13 to 0.0.06 | 0.57 | -1.87 to 3.01 | 0.93 | -1.83 to 3.69 | 0.53 | -1.39 to 2.45 | -0.10 | -0.18 to -0.01 |
| Long-term\*group | -0.07 | -0.19 to 0.05 | -0.14 | -2.57 to 2.29 | 0.86 | -2.22 to 3.95 | 1.46 | -0.45 to 3.37 | -0.04 | -0.12 to 0.05 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for baseline covariates age and sex, as well as for whether participants completed all measurements digitally versus any time point on paper.

**Table S14.** Estimated coefficients and confidence intervals of one-way analyses of covariance between groups at post-test and follow-up in the per-protocol sample (*N*=115), on mean perceived progress on personally prioritized areas of functioning and self-management, adjusted for baseline covariates.

|  |  |  |
| --- | --- | --- |
| Outcome variable | *b* | 95% CI |
| Progress on priorities of functioning at post-test | 0.44 | 0.04 to 0.83 |
| Progress on priorities of self-management at post-test | 0.55 | 0.14 to 0.95 |
| Progress on priorities of functioning at follow-up | 0.59 | 0.15 to 1.02 |
| Progress on priorities of self-management at follow-up | 0.06 | -0.44 to 0.56 |

*Notes.* *b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for baseline covariates age and sex, as well as for whether participants completed all measurements digitally versus any time point on paper.

**Table S15.** Estimated coefficients and confidence intervals based on linear mixed-effects models in the per-protocol sample (*N*=115) of depressive and anxiety symptoms adjusted for baseline covariates, assuming equal scores at baseline in the intervention and control group.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Outcome variable |  | Depressive symptoms | |  | Anxiety symptoms | |
|  | *b* | 95% CI |  | *b* | 95% CI |
| Intercept |  | 0.99 | 0.83 to 1.15 |  | 0.87 | 0.67 to 1.07 |
| Short-term |  | -0.16 | -0.23 to -0.10 |  | -0.07 | -0.14 to 0.01 |
| Long-term |  | -0.13 | -0.19 to -0.07 |  | -0.08 | -0.17 to 0.00 |
| Short-term\*group |  | 0.02 | -0.07 to 0.10 |  | -0.11 | -0.21 to -0.00 |
| Long-term\*group |  | -0.03 | -0.11 to 0.05 |  | -0.11 | -0.22 to -0.00 |

*Notes. b*=Parameter Estimate; CI=Confidence Interval. All analyses were adjusted for baseline covariates age and sex, as well as for whether participants completed all measurements digitally versus any time point on paper.