Supplemental Table 1. Model Parameters for Unconditional Models Estimating Change in Burdensomeness across Assessment Points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Model Parameters* | Fixed Linear Time, Random Intercept | Random Linear Time\*\* | Fixed Quadratic, Random Linear Time | Random Quadratic Time |
|  | *B* | *SE* | *p*  | *B* | *SE* | *p* | *B* | *SE* | *p* | *B* | *SE* | *p* |
| Model for the Means |
|  γ00 Intercept | **13.80** | .98 | <.001 | **14.03** | .97 | <.001 | **14.09** | .99 | <.001 | **14.17** | .99 | <.001 |
|  γ10 Linear time | **-0.23** | .05 | <.001 | **-0.32** | .10 | .002 | **-0.36** | .16 | .025 | -0.46 | .23 | .05 |
|  γ20 Quadratic time |  |  |  |  |  |  | .005 | .01 | .731 | .02 | .02 | .33 |
| Model for the Variance  |
|  τ2u0 Intercept variance | **86.55** | 12.83 | <.001 | **86.00** | 13.18 | <.001 | **86.10** | 13.19 | <.001 | **87.60** | 13.75 | <.001 |
|  τ2u1 Linear slope variance |  |  | **.55** | .13 | <.001 | **.55** | .13 | <.001 | **3.22** | .76 | <.001 |
|  τ2u2 Quadratic slope variance |  |  |  |  |  |  |  |  | .**02** | .005 | .002 |
|  σ2e Residual variance | **20.16** | 1.05 | <.001 | **14.97** | .83 | <.001 | **14.98** | .84 | <.001 | **13.11** | .77 | <.001 |
| Model Fit (ML) |
|  Parameters | 4 |  |  | 6 |  |  | 7 |  |  | 10 |  |  |
|  -2LL | 5203.53 | 5094.97 |  | 5094.86 |  | 5053.81 |
|  AIC | 5211.53 |  | 5106.97 |  | 5108.86 |  | 5073.81 |
|  BIC | 5230.43 |  | 5135.32 |  | 5141.92 |  | 5121.05 |

*Notes.* Bold values are p < .05. ML=maximum likelihood; SE= standard error; \*\*determined to be best fitting model

Supplemental Table 2. Model Parameters for Unconditional Models Estimating Change in Thwarted Belongingness across Assessment Points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Model Parameters* | Fixed Linear Time, Random Intercept | Random Linear Time\*\* | Fixed Quadratic, Random Linear Time | Random Quadratic Time |
|  | *B* | *SE* | *p*  | *B* | *SE* | *p* | *B* | *SE* | *p* | *B* | *SE* | *p* |
| Model for the Means |
|  γ00 Intercept | **25.57** | .90 | <.001 | **25.67** | .92 | <.001 | **25.77** | .95 | <.001 | **25.82** | .95 | <.001 |
|  γ10 Linear time | **-0.37** | .06 | <.001 | **-0.43** | .11 | <.001 | **-0.50** | .19 | .01 | **-0.55** | .26 | .04 |
|  γ20 Quadratic time |  |  |  |  |  |  | .007 | .02 | .66 | .02 | .02 | .44 |
| Model for the Variance  |
|  τ2u0 Intercept variance | **68.26** | 10.41 | <.001 | **74.25** | 11.90 | <.001 | **74.39** | 11.92 | <.001 | **75.45** | 12.68 | <.001 |
|  τ2u1 Linear slope variance |  |  | **.69** | .19 | <.001 | **.68** | .19 | <.001 | **3.58** | 1.03 | .001 |
|  τ2u2 Quadratic slope variance |  |  |  |  |  |  |  |  | **.02** | .008 | .02 |
|  σ2e Residual variance | **28.85** | 1.51 | <.001 | **23.00** | 1.31 | <.001 | **23.01** | 1.31 | <.001 | **21.10** | 1.26 | <.001 |
| Model Fit (ML) |
|  Parameters | 4 |  |  | 6 |  |  | 7 |  |  | 10 |  |  |
|  -2LL | 5415.17 | 5350.83 |  | 5350.64 |  | 5328.41 |
|  AIC | 5423.17 |  | 5362.83 |  | 5364.64 |  | 5348.41 |
|  BIC | 5442.04 |  | 5391.14 |  | 5397.66 |  | 5395.59 |

*Notes.* Bold values are p < .05. ML=maximum likelihood; SE= standard error; \*\*determined to be best fitting model

Supplemental Table 3. Multilevel Model Examining the Concurrent Relationship between Interpersonal Needs Constructs and Suicidal Ideation across Treatment including the Within-Person Interaction

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | ***B***  | ***SE*** | ***p*** | **95% CI *(B)*** |
| Intercept | 1.49 | .19 | <.001 | 1.11, 1.88 |
| Time | -.16 | .06 | .008 | -.27, -.04 |
| Time\*Time | .01 | .005 | .003 | .01, .02 |
| Burdensomeness between-subjects | .13 | .03 | <.001 | .08, .19 |
| Burdensomeness within-subjects | .06 | .01 | <.001 | .04, .08 |
| Belongingness between-subjects | -.02 | .03 | .44 | -.08, .03 |
| Belongingness within-subjects | .01 | .01 | .12 | -.003, .03 |
| Belongingness\*Burdensomeness within-subjects | .0002 | .001 | .89 | -.002, .002 |

*Notes.* CI= confidence interval; SE= standard error. Time refers to the linear fixed effect of time or slope. Time\*Time refers to the quadratic effect of time. “Burdensomeness” refers to the Perceived Burdensomeness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater perceived burdensomeness. “Belongingness” refers to the Thwarted Belongingness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater thwarted belongingness (e.g., loneliness).

Supplemental Table 4. Multilevel Model Examining the Concurrent Relationship between Interpersonal Needs Constructs and Suicidal Ideation across Treatment while Accounting for Baseline Body Mass Index, Depressive Symptoms, and Eating Disorder Severity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | ***B***  | ***SE*** | ***p*** | **95% CI *(B)*** |
| Intercept | 1.48 | .19 | <.001 | 1.11, 1.86 |
| Time | -.16 | .06 | .008 | -.27, -.04 |
| Time\*Time | .01 | .005 | .003 | .01, .02 |
| Body Mass Index (admission) | .06 | .04 | .13 | -.02, .14 |
| Depressive Symptoms (admission) | .01 | .02 | .48 | -.02, .04 |
| Eating Disorder Severity (admission) | .14 | .15 | .33 | -.15, .44 |
| Burdensomeness between-subjects | .11 | .03 | <.001 | .06, .17 |
| Burdensomeness within-subjects | .06 | .01 | <.001 | .04, .08 |
| Belongingness between-subjects | -.02 | .03 | .52 | -.08, .04 |
| Belongingness within-subjects | .01 | .01 | .11 | -.003, .03 |

*Notes.* CI= confidence interval; SE= standard error. Time refers to the linear fixed effect of time and Time\*Time refers to the quadratic fixed effect of time. “Burdensomeness” refers to the Perceived Burdensomeness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater perceived burdensomeness. “Belongingness” refers to the Thwarted Belongingness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater thwarted belongingness (e.g., loneliness).

Supplemental Table 5. Multilevel Model Examining the Concurrent Relationship between Interpersonal Needs Constructs and Suicidal Ideation including the Within-Person Interaction and Accounting for Baseline Body Mass Index, Depressive Symptoms, and Eating Disorder Severity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | ***B***  | ***SE*** | ***p*** | **95% CI *(B)*** |
| Intercept | 1.48 | .19 | <.001 | 1.11, 1.86 |
| Time | -.16 | .06 | .008 | -.27, -.04 |
| Time\*Time | .01 | .005 | .003 | .01, .02 |
| Body Mass Index (admission) | .06 | .04 | .13 | -.02, .14 |
| Depressive Symptoms (admission) | .01 | .02 | .48 | -.02, .04 |
| Eating Disorder Severity (admission) | .14 | .15 | .33 | -.15, .44 |
| Burdensomeness between-subjects | .11 | .03 | <.001 | .06, .17 |
| Burdensomeness within-subjects | .06 | .01 | <.001 | .04, .08 |
| Belongingness between-subjects | -.02 | .03 | .52 | -.08, .04 |
| Belongingness within-subjects | .01 | .01 | .12 | -.003, .03 |
| Belongingness\*Burdensomeness within-subjects | .0005 | .001 | .97 | -.002, .002 |

*Notes.* CI= confidence interval; SE= standard error. Time refers to the linear fixed effect of time and Time\*Time refers to the quadratic fixed effect of time. “Burdensomeness” refers to the Perceived Burdensomeness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater perceived burdensomeness. “Belongingness” refers to the Thwarted Belongingness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater thwarted belongingness (e.g., loneliness).

Supplemental Table 6. Multilevel Model Examining the Prospective Relationship between Interpersonal Needs Constructs and Suicidal Ideation while Accounting for Baseline Body Mass Index, Depressive Symptoms, and Eating Disorder Severity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | ***B***  | ***SE*** | ***p*** | **95% CI *(B)*** |
| Intercept | 1.22 | .21 | <.001 | .81, 1.64 |
| Time | -.07 | .06 | .27 | -.19, .05 |
| Time\*Time | .008 | .005 | .08 | -.001, .02 |
| Body Mass Index (admission) | .06 | .04 | .16 | -.02, .15 |
| Depressive Symptoms (admission) | .01 | .02 | .77 | -.03, .04 |
| Eating Disorder Severity (admission) | .11 | .15 | .48 | -.20, .41 |
| Burdensomeness between-subjects (lag) | .11 | .03 | <.001 | .06, .17 |
| Burdensomeness within-subjects (lag) | .03 | .01 | .004 | .01, .05 |
| Belongingness between-subjects (lag) | -.01 | .03 | .79 | -.07, .05 |
| Belongingness within-subjects (lag) | -.002 | .01 | .78 | -.02, .01 |

*Notes.* CI= confidence interval; SE= standard error. Time refers to the linear fixed effect of time and Time\*Time refers to the quadratic fixed effect of time. “Burdensomeness” refers to the Perceived Burdensomeness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater perceived burdensomeness. “Belongingness” refers to the Thwarted Belongingness subscale of the Interpersonal Needs Questionnaire, with higher scores indicating greater thwarted belongingness (e.g., loneliness).

Supplemental Table 7. Multilevel Model Examining whether Suicidal Ideation Prospectively Predicts Perceived Burdensomeness after Accounting for Baseline Body Mass Index, Depressive Symptoms, and Eating Disorder Severity.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | ***B***  | ***SE*** | ***p*** | **95% CI *(B)*** |
| Intercept | 13.63 | .72 | <.001 | 12.19, 15.06 |
| Time | -.26 | .09 | .008 | -.45, -.07 |
| Body Mass Index (admission) | -.17 | .18 | .33 | -.52, .18 |
| Depressive Symptoms (admission) | .35 | .06 | <.001 | .23, .47 |
| Eating Disorder Severity (admission) | .33 | .63 | .61 | -.93, 1.58 |
| Ideation between-subjects (lag) | 1.72 | .39 | <.001 | .96, 2.49 |
| Ideation within-subjects (lag) | .29 | .14 | .04 | .01, .57 |

*Notes.* CI= confidence interval; SE= standard error. Time refers to the linear fixed effect of time and Time\*Time refers to the quadratic fixed effect of time.