

## Supplementary Material

### 1 VAS Items

(Translated from German)

#### 1.1 Tension

The following item was answered before, directly after as well as 45 minutes after the stress test.

*Please indicate how you're feeling currently! You can place your mark on or in between numbers.*

*How tense/relaxed are you feeling in this Moment?*

1.....2.....3.....4.....5.....6.....7.....8.....9.....10  
*completely relaxed* *very tense*

#### 1.2 Appraisal of the TSST

The following items were answered directly after the stress test.

*Please rate the following statements on the past situation (stress test). You can place your mark on or in between numbers.*

*The past situation was stressful for me.*

1.....2.....3.....4.....5.....6.....7.....8.....9.....10  
*Not at all* *very much*

*I experienced the past situation as a threat*

1.....2.....3.....4.....5.....6.....7.....8.....9.....10  
*Not at all* *very much*

*I experienced the past situation as a challenge*

1.....2.....3.....4.....5.....6.....7.....8.....9.....10  
*Not at all* *very much*

## 2 Multilevel Models

The baseline model, predicting participants individual cortisol (or ACTH) levels over time, containing the predictors time, type 2 diabetes and the control variables as well as the respective cross-level interactions with time can be specified in formal terms as follows:

$$\text{Level 1: } Cort_{ji} = b_{0i} + b_{1i} (TIME)_{ji} + e_{ji}$$

$$\text{Level 2: } b_{0i} = b_{00} + b_{01}(TYPE\ 2\ DIABETES)_i + b_{02}(CONTROL)_i + u_{0i}$$

$$\text{Cross-level interaction: } b_{1i} = (b_{10} + b_{11}(TYPE\ 2\ DIABETES)_i + b_{12}(CONTROL)_i)$$

Level 1 represents cortisol levels at individual measurement point  $j$  ( $T_0, T_1, T_2, T_3$ ) for individual  $i$  (within participants model).  $B_{0i}$  signifies the random intercept for participant  $i$ ,  $b_{1i}$  denotes the fixed slope as regression coefficient for the predictor time and  $e_{ji}$  is the random residual term for participant  $i$  at measurement point  $j$ . Level 2 can be understood as the between participants model with  $b_{00}$  denoting the grand mean,  $b_{01}$  and  $b_{02}$  representing the regression coefficients for the predictors type 2 diabetes and the control variables ( $(CONTROL)_i$  stands as “placeholder” for all control variables i.e. age, gender, BMI and lifetime major depression) and  $u_{0i}$  signifying the random component in the intercept.

In the subsequent model we included severity of (physical or emotional) neglect as well as the interaction between severity of neglect and type 2 diabetes and the respective cross-level interactions with time in the same manner:

$$\text{Level 1: } Cort_{ji} = b_{0i} + b_{1i} (TIME)_{ji} + e_{ji}$$

$$\text{Level 2: } b_{0i} = b_{00} + b_{01}(TYPE\ 2\ DIABETES)_i + b_{02}(CONTROL)_i + b_{03}(NEGLECT)_i +$$

$$b_{04}(NEGLECT \times TYPE\ 2\ DIABETES)_i + u_{0i}$$

$$\text{Cross-level interaction: } b_{1i} = (b_{10} + b_{11}(TYPE\ 2\ DIABETES)_i + b_{12}(CONTROL)_i + b_{13}(NEGLECT)_i +$$

$$b_{14}(NEGLECT \times TYPE\ 2\ DIABETES)_i)$$

### 3 SCID Diagnoses

**Table A:** Numbers and percentages of SCID Diagnoses of sections A (affective disorders) and F (anxiety disorders) in type 2 diabetes patients and healthy controls

SCID Diagnoses	Type 2 Diabetes Patients (n=74)	Healthy Controls (n=50)	<i>p</i>
Major depression current	1	2	.350
Major depression lifetime	26(35.1%)	11(22.0%)	.138
Bipolar disorder (I & II)	0	0	
Bipolar disorder (I & II) lifetime	0	0	
Dysthymia	5(6.8%)	2(4.0%)	.485
Panic disorder current	3(4.1%)	0	.144
Panic disorder lifetime	7(9.5%)	2(4.0%)	.219
Agoraphobia current	5(6.8%)	0	.061
Agoraphobia lifetime	4(5.4%)	0	.092
Social phobia current	1(1.4%)	0	.409
Social phobia lifetime	2(2.7%)	1(2.0%)	.794
Specific phobia current	5(6.8%)	0	.061
Specific phobia lifetime	5(6.8%)	0	.059
Obsessive-compulsive disorder current	0	0	
Obsessive-compulsive disorder lifetime	0	0	
Post-traumatic stress disorder current	0	1	.211
Post-traumatic stress disorder lifetime	1	1	.798
Generalized anxiety disorder	0	0	

**Note:** Diagnoses of panic disorder as depicted here include diagnoses of panic disorder with and without agoraphobia; diagnoses of agoraphobia as depicted here include diagnoses of agoraphobia without panic disorder. P-Values are derived using  $\chi^2$ -test.

## 4 CTQ Scores

**Table B:** CTQ severity scores depicted as mean values with standard deviations and prevalence of moderate to severe abuse or neglect depicted as number with percentages.

CTQ Severity Scores (5-25)	Type 2 Diabetes Patients (n=74)	Healthy Controls (n=50)	<i>p</i>
Emotional neglect	11.6(5.9)	10.1(4.0)	.090
Physical neglect	7.8(2.6)	7.5(2.2)	.509
Emotional abuse	7.2(3.1)	7.3(3.0)	.827
Physical abuse	6.4(3.2)	6.1(2.2)	.637
Sexual abuse	6.5(4.0%)	6.2(3.1%)	.640
Prevalence of moderate to severe abuse or neglect			
Emotional neglect	18(24.3%)	7(14.0%)	.119
Physical neglect	18(24.3%)	12(24.0)	.571
Emotional abuse	4(5.4%)	2(4.0%)	.538
Physical abuse	9(12.4%)	3(6.0)	.206
Sexual abuse	12(16.2%)	7(14.0%)	.491

**Note:** *P*-values are derived using *t*-test for continuous severity scores and *chi*<sup>2</sup>-test for categorical prevalence scores. Cut-off scores for “moderate to severe” abuse or neglect vary for each scale and are based on Häuser et al. (30).

## 5 Descriptive Statistics for Figure 1-3

**Table C:** Means and standard errors for type 2 diabetes patients and healthy controls with and without the experience of “moderate to severe” childhood **physical** neglect.

	Type 2 Diabetes Patients (n=74)		Healthy Controls (n=50)	
	Low physical neglect	High physical neglect	Low physical neglect	High physical neglect
VAS <sub>Baseline</sub>	3.8(0.3)	2.9(0.3)	3.6(0.3)	3.0(0.5)
VAS <sub>+0 min</sub>	5.0(0.3)	7.0(0.4)	5.3(0.3)	4.6(0.6)
VAS <sub>+45 min</sub>	3.5(0.3)	5.2(0.6)	3.3(0.3)	3.5(0.5)
ACTH T <sub>0</sub>	16.1(1.1)	17.2(2.1)	15.4(1.3)	18.3(3.8)
ACTH T <sub>1</sub>	27.3(2.1)	33.6(5.1)	27.3(2.9)	37.9(9.0)
ACTH T <sub>4</sub>	18.0(1.2)	20.9(2.7)	16.4(1.1)	21.8(4.2)
ACTH T <sub>3</sub>	16.4(1.6)	15.3(2.4)	13.1(0.9)	17.0(3.0)
Cortisol T <sub>0</sub>	117.4(6.2)	115.7(12.7)	113.3(7.5)	134.0(8.2)
Cortisol T <sub>1</sub>	167.8(7.5)	188.9(11.6)	152.4(9.9)	170.2(12.6)
Cortisol T <sub>2</sub>	150.6(8.9)	153.5(14.5)	131.9(8.9)	159.4(12.6)
Cortisol T <sub>3</sub>	120.8(6.7)	121.4(10.2)	108.5(8.1)	134.8(9.9)

VAS= visual analogue scale assessing feelings of tension

**Table D:** Means and standard errors for type 2 diabetes patients and healthy controls with and without the experience of “moderate to severe” childhood **emotional** neglect.

	Type 2 Diabetes Patients (n=74)		Healthy Controls (n=50)	
	Low emotional neglect	High emotional neglect	Low emotional neglect	High emotional neglect
VAS <sub>Baseline</sub>	3.8(0.3)	2.9(0.3)	3.5(0.3)	2.9(0.7)
VAS <sub>+0 min</sub>	5.1(0.3)	6.7(0.5)	5.2(0.3)	4.3(0.7)
VAS <sub>+45 min</sub>	3.7(0.3)	4.7(0.6)	3.2(0.2)	4.1(1.0)
ACTH T <sub>0</sub>	15.4(1.0)	19.5(2.3)	16.7(1.4)	12.8(2.5)
ACTH T <sub>1</sub>	27.5(2.1)	33.5(5.5)	31.7(3.4)	19.2(4.3)
ACTH T <sub>4</sub>	17.7(1.1)	22.3(3.1)	18.2(1.5)	14.6(2.4)
ACTH T <sub>3</sub>	14.7(1.4)	20.1(3.0)	14.3(1.1)	12.2(1.5)
Cortisol T <sub>0</sub>	116.0(6.3)	120.1(12.3)	119.4(7.1)	108.8(11.8)
Cortisol T <sub>1</sub>	170.2(7.2)	182.7(13.5)	161.7(8.9)	128.9(19.6)
Cortisol T <sub>2</sub>	152.5(9.0)	147.4(13.4)	140.8(8.1)	124.2(23.1)
Cortisol T <sub>3</sub>	118.2(6.5)	129.5(11.1)	113.8(7.7)	115.6(16.0)

VAS= visual analogue scale assessing feelings of tension