The ‘Stressful Event Speech’: Preliminary Evidence for a New Social Stressor for Laboratory Settings

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Introduction

Laboratory stressors are often used to assess changes in subjective and physiological stress. One stress task, the Trier Social Stress Test (TSST: Kirschbaum et al., 1993), is commonly employed to induce social stress. However the TSST requires several confederates for its execution and may not be a personally relevant stressor for all participants. We therefore tested stress induction by an alternate laboratory stressor—the Stressful Event Speech (SES) which uses only one confederate (the experimenter) and allows the participant to choose the ‘experienced’ stressful event (White-Truat et al., 2008).

We predicted that the SES would increase depression, anger, tension, negative mood, and cortisol levels but decrease positive mood in participants.

Methods

Participants:
20 undergraduates (7 Female, mean age: 21)

Baseline Questionnaires:
- Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Difficulties in Emotion Regulation Scale (DERS), Relationship Quality Questionnaire (RQQ), BIS/BAS

Mood Assessment Questionnaires:
- Profile of Mood States (POMS), includes tension, anger, and depression subscales, Positive and Negative Affect Scale (PANAS), Subjective Stress Scale (Post-SES only)

SES Procedure:
- 2 minute Preparation
- 3 minute Speech
- 3 minute Video viewing

Statistical Analyses:
- Separate Repeated Measures ANOVAs for Cortisol levels, POMS Tension, POMS Depression, and PANAS-Anger Subscale, and the PANAS scale for all time points with LSD corrected pairwise comparisons
- Correlations between subjective stress scale, basal cortisol levels and emotion regulation measures

Results

Changes in Mood

- Positive mood decreased significantly at 20 min post SES (F(1,15)= 4.96, p<.005).
- Negative mood increased at the level of a trend (F(1,15)= 3.32, p<.07).
- Tension increased significantly at levels of a trend (F(1,15)= 4.77, p<.05).

For Depression, no main effect for time (F(1,15)= 1.58, ns). Exploratory paired t tests indicate a significant increase in depression in response to the stressor (paired t(15)= 2.18, p<.05) and a decrease at 20 minutes post-stressor (paired t(15)= 2.60, p<.05).

For Anger, no main effect for time (F(1,15)= 1.89, ns). Exploratory paired t test indicate a significant increase in anger in response to the stressor (paired t(15)= 2.47, p<.05) and a decrease at 20 minutes post-stressor (paired t(15)= 2.25, p<.05).

Correlations

To our knowledge, this is the first study to test stress reactivity to the Stressful Event Speech.

As predicted, the SES increased tension cortisol levels and decreased positive mood in participants.

There was also a trend toward an increase in negative mood. Exploratory analyses also indicated increased depression and anger in response to the SES.

Subjective stress was positively associated with reported difficulty engaging in goal directed behavior, impulse control difficulty, behavioral inhibition, induced tension, induced anger and basal depression levels but negatively associated with secure relationship style.

Basal cortisol levels were positively associated with induced negative emotion.

Consistent with other stress tasks, these results suggest that individuals with emotion regulation difficulties experience more stress in response to the SES.

More studies with a larger sample size are warranted.

Discussion

References


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