



Replication of a Research Claim from Fritz et al. (2010), from the Journal of Organizational Behavior - Direct Replication - k17

Public registration

Updates



Metadata

Study Information



Hypotheses

Relaxation at Time 2 (Sunday evening) will positively predict joviality at Time 3 (the following Friday) in a regression analysis controlling for joviality at Time 1 (the previous Friday) and demographic characteristics (gender, age, education, having children, work hours per week, workdays per week).

Design Plan

Study type

Observational Study - Data is collected from study subjects that are not randomly assigned to a treatment. This includes surveys, "natural experiments," and regression discontinuity designs.

Blinding

No blinding is involved in this study.

Is there any additional blinding in this study?

No response

Study design

Three-wave survey of preschool teachers, with all measurements taken within one week, per the schedule below (from p. 1146 of the original paper). Each observation represents a measurement (one of the three time points) nested within respondents (preschool teachers in the sample).

- [Study design.png](#)

Randomization

No response

Sampling Plan

Existing Data

Registration prior to creation of data

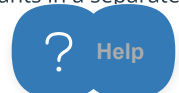
Explanation of existing data

No response

Data collection procedures

The project team will contact administrators of kindergartens in Germany and ask them to participate in the study. After agreeing, the administrators will be asked to estimate the number of respondents in the organization and provide the emails of the employees who would potentially be interested in participating. Informed consent will be obtained from participants in a separate step, detailed below.

Participants will be individually remunerated for their time.



After agreeing to participate in the study, participants will be asked to provide contact information (email) and will be sent the first email that will include the web link to the study information sheet and consent form for the study. Only participants who provided informed consent at this stage will be included in the study. All questionnaires will be administered via the Qualtrics survey software.

The first Friday evening after receiving the consent form back, participants will be invited by email to complete the T1 web-based questionnaire that will include a measure of affective states (joviality, serenity, self-assurance, fear, hostility, sadness, and fatigue) and sociodemographic questions (gender, age, education, having children, work hours per week, workdays per week). Data on the institution / employer of participants will not be recorded. No other identifying information (including technical information such as IP addresses or software versions) will be collected.

On Sunday evening of the same week, the participants will be invited by email to complete the T2 questionnaire that will include a measure of affective states and a measure of weekend experiences (relaxation, mastery, control, detachment, and non-work hassles).

On Friday evening the following week, the participants will be invited by email to complete the T3 questionnaire that will include a measure of affective states.

After the final questionnaire is submitted, the participants will be thanked, debriefed, and instructed on receiving remuneration for their time, either via the administration of their institution (if recruited by recruitment strategy 1) or directly by the study team (if recruited by recruitment strategy 2).

No files selected

Sample size

The initial target sample size for the analysis is 795 preschool teachers. Two data collection teams are involved in the replication. This protocol relates to the collection of 400 participants. The second team will collect the remaining 395 participants, for a total of 795 participants. If a statistically significant effect is not observed after the first round of data collection, a second-round will begin. The second round of analysis will include an additional 391 preschool teachers for a pooled sample of 1186 preschool teachers.

The original paper had a response rate of 48% and a noncompletion rate of further 3%, resulting in 47% of sent out questionnaires being completed for all three time points. Assuming an equivalent response and noncompletion rates in the replication, recruiting 400 participants will require sending out 851 questionnaire.

Sample size rationale

Power calculations were done in accordance with the guidelines of the Social Sciences Replication Project (SSRP, www.socialsciencesreplicationproject.com). The first round of data collection achieves 90% power to detect 75% of the original effect size. The pooled sample, if necessary after testing the effect on the first round of data, achieves 90% power to detect 50% of the original effect size.

The power analysis was performed by the Center for Open Science SCORE team using the pwr package in R, using a script for the test of one coefficient from multiple linear regression. The R markdown file that produced the analysis is contained here (https://osf.io/qcjf3/?view_only=4499de647707427e971b4cb7e34f6d49).

Stopping rule

The planned analytic sample size is 795 preschool teachers. Our team is responsible for collecting responses from 400 preschool teachers. The original study had a 47% completion rate for distributed questionnaires. To achieve the analytic sample size, we will send out 851 (400/.47) questionnaires to be completed. Analyses will be run using the collected sample of responses.

Variables

Manipulated variables

No response

No files selected

Measured variables

All measures included in the original study will be administered in the same order as in the original study. All measures will be translated into the German language, translations will be verified using translation - back-translation procedure.

Weekend experiences: Recovery experiences during the weekend will be measured at T2 using the Recovery Experience Questionnaire (REQ; Sonnentag & Fritz, 2007). The four subscales of REQ include relaxation (e.g. "During the weekend, I used the time to relax"), mastery (e.g. "During the weekend, I sought out intellectual challenges"), control (e.g. "During the weekend, I decided my own schedule"), and detachment (e.g. "During the weekend, I distanced myself from work"). Each scale of the REQ includes four

items rated on a five-point Likert-type scale ranging from 1 ("not at all") to 5 ("very much"). In addition to the REQ, non-work hassles will include 53 possible hassles (DeLongis, Folkman, & Lazarus, 1988), and participants will be asked to rate each of them on a five-point Likert-type scale from 1 ("not a hassle at all") to 5 ("big hassle").

Affective states: Affective states will be assessed using the extended Positive and Negative Affect Schedule-X (PANAS-X; Watson & Clark, 1994). PANAS-X is a 60-item schedule that assesses 11 specific affects: Fear, Sadness, Guilt, Hostility, Shyness, Fatigue, Surprise, Joviality, Self-Assurance, Attentiveness, and Serenity. Each affect is assessed with 3 to 8 items. Items are rated by participants from 1 ("very slightly or not at all") to 5 ("extremely"). The instructions will direct participants to assess their emotional states during the current workweek (T1 and T3) and during the current weekend (T2).

Demographic characteristics (gender, age, education, having children, work hours per week, workdays per week) will be assessed using single-item questions.

No files selected

Indices

Note that the authors only explicitly discuss the procedure for creating an index for one of their measures (non-work hassles, below), but indices will also be required for measures of joviality, detachment, mastery, relaxation, and control.

Weekend experiences: individual REQ subscale scores will be calculated by averaging the ratings assigned to items by participants over the four subscales: relaxation, mastery, detachment, and control. The score for non-work hassles will be calculated as the sum of item scores per person, as in the original paper.

Affective states: individual PANAS-X subscale scores (Fear, Sadness, Guilt, Hostility, Shyness, Fatigue, Surprise, Joviality, Self-Assurance, Attentiveness, and Serenity) will be calculated by averaging the item scores across the items included in the subscale (Sonnentag & Fritz, 2007).

Non-work hassles: as in the original article, the score for non-work hassles will be calculated as the sum per person.

No files selected

Analysis Plan

Statistical models

As in the original paper, the data will be analyzed using a hierarchical regression model. For the test of the focal hypothesis, joviality at Time 3 is the outcome. In Step 1, we will include the demographic variables (age, gender, having children, contract working hours per week, days worked per week). In Step 2, we will include the affect (joviality) at Time 1, and in Step 3, the weekend experiences, namely, relaxation, mastery, control, psychological detachment, and non-work hassles at Time 2.

No files selected

Transformations

TRANSFORMATIONS: We do not plan to transform any variables. Gender and having children are the two categorical variables in the model and will be coded as dummy variables (0 - man, 1 - woman for gender, and 0 - no children, 1 - has children for having children)

Inference criteria

Criterion for a successful replication for the focal test would be a statistically significant positive effect ($\alpha = .05$, one-tailed) of relaxation at Time 2 on joviality at Time 3 in the regression model.

Data exclusion

As in the original study, all participants who did not complete the survey at least at one of the three time points will be excluded from the analysis.

Missing data

We will check if there are any instances of more than 5% of missing data on any of the variables and if so, check whether they are missing at random. If less than 5% of data is missing, or missingness is random, all data will be included in the final analysis and pairwise deletion will be used. If more than 5% of the data is missing and missingness is not random, we will use multiple imputations before running the regression analysis.

Exploratory analysis

In addition to testing the focal claim, we will run regression analyses to explore the relationships between the weekend experiences of relaxation, detachment, and non-work hassles at Time 2 and the affective states of self-assurance, serenity, fear, and sadness at Time 3.

Other

Other

The original study does not report which language was used in the survey and we do not have access to the original study materials. Therefore, we cannot estimate whether or not any deviations will occur in the content of the questionnaire. The measures reported in the study are available in English and we will translate them to German before conducting the study. If the original study was conducted in German as well, we do not expect this to impact the results.

In the original study, data was collected using a paper and pencil questionnaire and we plan to collect the data using an online questionnaire. Finally, the recruitment was done exclusively via the preschools' administration, and we plan to additionally recruit participants via snowballing. Combined, these two deviations might result in higher non-completion rates, but should not affect the outcome of the study.

The replication will be conducted during the COVID-19 pandemic, with data collection taking place in winter-spring 2021. COVID-19 response in Germany included prolonged closure of educational institutions, including kindergartens. The data will be collected from kindergarten teachers who will be attending work during the data collection. However, the COVID-19 pandemic might affect the baseline affective states, work- and home-related hassles, quality of weekend experiences, and the psychological separation between the work week and the weekend among the kindergarten teachers. The unique context of the COVID-19 pandemic needs to be taken into account when interpreting the results of this replication.

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