

Replication of

Happiness and Time Preference: The Effect of Positive Affect in a Random-Assignment Experiment

by Ifcher, J./Zarghamee, H. (2011)

in: The American Economic Review, 101(7), pp. 3109–3129.

Replication Authors:

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Ifcher and Zarghamee study the causal effect of a mood-inducing film clip on time preference. They conclude that exposure to a positive-affect inducing film increases patience (measured by p/m , where p is the present value of a reward m available in the future).

Hypothesis to bet on:

Showing subjects a film clip inducing positive affect will increase measured patience, excluding subjects who do not discount at all (Table 3, column 5).

Power Analysis

The simplest effect (Table 3, column 1) of the causal treatment is significant at $p = .054$. However, we will focus attention on the regression that excludes subjects who did not discount at all (Table 3, column 5). Excluding the non-discounters is done because non-discounters may be using a simple heuristic that will not permit a causal effect of happiness, and this type of behavior is highly unusual in other subject pools. The t -statistic on the treatment effect from the focus regression (column 5) is $t = 2.997/1.352 = 2.217$ with a corresponding two-tailed p -value of 0.031.

The original sample size is 69 participants of which 58 discounted. To achieve 90% power the required sample size is 131 participants. Note that target sample size must consist only of discounters, so we need to enlarge the sample size such that the net number is 131 (excluding non-discounters).

Sample

The sample for replication consists of 131 students (after excluding non-discounters) from the Nuffield College (Oxford, UK) subject pool. In the original sample, “*sixty-nine undergraduate students were recruited from introductory English courses that all Santa Clara students are required to take; these courses were chosen in an attempt to avoid potential disciplinary bias.*” Santa Clara is a Jesuit university, and students are rather religious, three-quarters Christian, and 63% white. We will not use any inclusion or exclusion criteria to match this sample to the original Santa Clara sample.

Materials

We use the material of the original experiment (paper and pencil) along with the original instructions.

Procedure

We follow the procedure of the original article, with only slight but unavoidable devia-

tions as outlined below. The following summary of the experimental procedure is therefore based on the section “II. Experimental Design” (pp. 3112–3115) in the original study.

In the experiment, subjects first see a mood-inducing video clip. Before making choices, subjects will see either of two film clips. The positive affect clip is a montage of Robin Williams comedy bits from 2002. The neutral clip is landscapes and nature images. We will replicate the experiment using these clips. We must note that Robin Williams committed suicide in August 2014. It is possible that this event and other events will influence the affect induced by this particular clip. However, we are not comfortable trying to repair any such change in induced affect by using a different clip (instead, we will add the following debriefing at the very end of the experiment: (a) Did you know that Robin Williams died last year? [i.e. in 2014] (b) If you did know this, please indicate whether, and how much, this influenced how much you liked the film clip: 1 (it made me even happier) 3 (did not have an affect) 5 (it made me even sadder).)

Then, subjects make a series of 30 decisions equating present-equivalent payments to future payments of amount m at time delay t (for five values of m and six values of t). One of the 30 decisions will be chosen for payment, using a BDM procedure that will be explained to subjects. (We will follow the original instructions as closely as possible.) After these 30 choices they rate each of 16 affects on a 10-point scale (PANAS), and answer two additional questions about how the film clip affected their mood.

The experimental procedure for actual payment will not closely follow the original, which made a very special effort to equalize transactions costs. In the original procedure, subjects were issued “certificates of guarantee” which could be redeemed at a different building than the one in which the experimental session is conducted, after a certain point in time (no sooner than one hour after the end of the experiment). The certificates include contact information for

the experimenters and instructions to contact the experimenters if there are any problems redeeming their certificates.

In the original study, subjects are also informed of the anonymous and blind nature of the payment process. They are told (i) that one person will prepare the payment envelopes; (ii) that a second person will distribute the sealed payment envelopes; (iii) that neither will know the subject’s identity, only the subject identification number; and (iv) that the envelope-distributor will not know the payment amount.

Our replication will instead pay subjects by issuing Amazon giftcards (credit to buy Amazon products) using email delivery. Following the original procedure, payments corresponding to “today” will be emailed one hour after the experiment ends. Other payments will be emailed to arrive at 9 am of the day they are payable.

After making their 30 choices and making PANAS ratings, the single question chosen for payment is resolved using BDM. Then subjects answer questions regarding their demographic and psychological characteristics, including happiness and personality traits. Subjects then will be paid based on the same incentives as in the original study.

Analysis

The analysis will be performed exactly as in the original article. We will conduct further analysis, particularly including two self-reported ratings of the mood induction. Those ratings are “subjects were asked whether the film clip made them happier, sadder, or neither; and whether the film clip put them in a better mood, worse mood, or neither.” These should be included on the right hand side of the Table 3 regression (provided their inclusion does not create too much collinearity with the treatment dummy), as the ratings correct for subjects in whom the mood-induction did not work as required for internal validity.

Differences from Original Study

The replication procedure is identical to that of the original study, with some unavoidable deviations and a difference in payment procedure. The subject pools are likely to be somewhat different. Collecting the same demographic data, and performing the analysis which uses these

covariates, should help reduce any such effects. The replication will be performed on students and non-students from the Nuffield College (Oxford, UK) subject pool, while the original data was gathered at Santa Clara University. The experiment will be in English as in the original study.