Psychology of Decision Making – Beliefs about delayed rewards (#52653)

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1) Have any data been collected for this study already?
No, no data have been collected for this study yet.

2) What’s the main question being asked or hypothesis being tested in this study?
In intertemporal choice:
H1a. The anticipated (i.e., estimated) size of the delayed reward is negatively associated with the tendency to choose the actual delayed reward.
H1b. The anticipated (i.e., estimated) size of the delay is positively associated with the tendency to choose the actual delayed reward.
H2a. Participant age is negatively associated with the anticipated value of the delayed reward (older people expect smaller rewards than younger people do).
H2b. Participant age is positively associated with the anticipated value of the delay (older people expect longer delays than younger people do).

3) Describe the key dependent variable(s) specifying how they will be measured.
Participants will be asked to consider an intertemporal choice in which either the monetary value or the delay until the delayed reward are not initially present. Participants will state their belief about the missing value. They will then be given the missing information (i.e., presented with a choice between £10 now and £18 in 29 days) and asked to choose between the immediate and delayed options. The DVs are the estimates and the choices.

4) How many and which conditions will participants be assigned to?
Two tasks (reward estimate and delay estimate). Each participant will complete one task (i.e., make one estimate and then one choice), with random assignment to the tasks.

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.
Estimates will be transformed as log10(x) (or log10(x+1) if there is one or more zero values). For hypotheses H1a and H1b: Logistic regressions predicting choices from monetary estimates and from delay estimates. For H2a and H2b. Linear regressions of estimates on (a) age (mean centred), (b) gender (coded -0.5 for male, 0.5 for female, 0 for prefer not to say), (c) age and gender. For each task, we will also test the correlation between age and gender, both with and without the “prefer not to say” category included, and run logistic regressions of choices on (a) age, (b) gender, and (c) age, gender, and estimate. To check robustness/generality of inferences, regressions will be run twice: once with standard linear/logistic regressions, and once with robust regressions implemented via the lmrob (setting= “KS2014”) and glmrob functions from the robustbase package for R.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.
We will exclude estimates that are anything other than a single numeric value greater than or equal to 0.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.
We will request 660 participants from Prolific (we will first request 20 to check that the software works properly, then request the remainder). We will request participants who are UK resident, first-language English, aged 18-100, have a 98% approval rating on the platform, using a desktop computer, and who have not previously participated in similar studies that we have run on this platform. The survey software will screen out people using a mobile device or who are not coming from the UK (this may be imperfect) or who answer “no” to one or more consent questions, and ask them to return the job to Prolific (in practice, people may re-try); it will also use a “captcha” to help screen out automated responses. The survey software will be set to block participation from IP addresses that have already completed the survey. All survey questions require a response to progress; we will “approve” all participants who reach the end of the survey (i.e., who answer all questions) unless they indicate an age of less than 18 in the demographics section; we will reject submissions from people who have not provided complete data. The sampling will continue until at least 660 people have been approved (the number maybe slightly higher because Prolific sometimes slightly over-recruits). In the data file, we exclude rows where the IP address occurs with an earlier time-stamp in this study or in one or more similar studies conducted in the past; in the case of overlapping time-stamps, both instances will be excluded. We will apply the same policy to Prolific IDs, where available. We will also exclude people who indicate that this was not their first attempt at this survey in a question at the end of the task. The final sample will be the number that remains after implementing these policies.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)
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