

## **CONFIDENTIAL - FOR PEER-REVIEW ONLY**

### **On or Off Track: Study 6 (Break Attribution) (#69041)**

Created: 06/22/2021 10:53 AM (PT)

This is an anonymized copy (without author names) of the pre-registration. It was created by the author(s) to use during peer-review.  
A non-anonymized version (containing author names) should be made available by the authors when the work it supports is made public.

#### **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?**

Participants with an intact streak of playing number sum games will be more likely to continue playing number sums (vs. switch to playing word jumbles) than participants with a broken streak. We are unsure of what the moderating role of how the streak is broken (self vs external) will be.

#### **3) Describe the key dependent variable(s) specifying how they will be measured.**

Choice between continuing to play number sums versus switch to playing word jumbles.

#### **4) How many and which conditions will participants be assigned to?**

Three between subjects conditions: intact streak, externally-caused broken streak, self-caused broken streak.

All participants are told they are testing out a game app. Also, they are all told before starting the games that they might encounter a quota message meaning that enough people have already tested out that particular game puzzle. This message will prevent them from seeing that puzzle, and that this will happen at most once while testing.

In the intact streak condition, participants are told that all game attempts add a checkmark to the app's tracker. They attempt 4 puzzles in a number sum game. We anticipate that almost everyone will get the first three correct, as they are fairly easy, and the 4th puzzle incorrect, as it is fairly hard.

In the self broken streak condition, participants are told that only correct answers add checkmarks to the app's tracker. They attempt the same 4 game puzzles; this means that most participants will have a streak from the first three easy games but will break that streak with the last hard game.

In the external broken streak condition, participants encounter the quota message instead of being able to play the 4th game.

After the 4 games (or three games and a quota message, depending on condition), participants are asked the main DV.

#### **5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.**

Chi square analysis with condition and choice for what to do next (i.e., continue or switch).

We will also conduct separate chi-square tests to examine the contrasts between pairs of conditions.

#### **6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.**

We will exclude all participants who chose to not complete the study. We also have an attention/bot filter at the start of the study before condition assignment; participants who answer this incorrectly will not be able to complete the study.

Since our manipulation is dependent on how participants answer, we plan to exclude all participants who do not correctly solve any of the first three game puzzles (as they will not have a streak, meaning our manipulation will not be in play). This is our primary exclusion criterion because it should not create a selection bias across conditions.

#### **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.**

Our target sample size is 200 per condition (600 total) after the pre-registered exclusions.

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

We will also ask the following questions:

1. If participants would be willing to watch an ad to repair their streak (broken conditions) or keep their streak intact (intact condition) if they were to continue using the app in their day-to-day lives.
2. If participants would recommend this app to a friend.
3. If participants would continue using the app themselves.
4. A manipulation check asking participants in the broken streak conditions the extent to which the break was due to their own actions versus external forces.

We will also run all analyses excluding all participants who get game #4 correct (as this would work against our broken streak/self manipulation) and as 'intent-to-treat' (i.e., including all participants who complete the survey, regardless of answers).