**RRR protocol for short-term violent-game effects**

**Specific Study:**

**Lead Laboratory:** Joseph Hilgard & Douglas Gentile

**Editor:** Daniel Simons

**Overview and Motivation**

As violent video games become increasingly popular and increasingly sophisticated, researchers and the public are concerned that use of these games may increase aggressive behaviors. Initial research by Anderson and Dill (2000) and Anderson and colleagues (2004) reports that playing a violent game for 15-20 minutes has significant effects on subsequent aggressive behavior. A meta-analysis by Anderson and colleagues (2010) reports that these effects are robust, of small-to-medium magnitude, and highly significant. However, re-analysis of this dataset by Hilgard, Engelhardt, and Rouder (2017) suggests that the evidence may be contaminated by selection biases. Therefore, the estimate from this meta-analysis may be an overestimate.

[Research in this area has often been subject to heated disagreements. Some laboratories have only ever reported significant results, leading skeptics to raise concerns about selection bias. On the other hand, some laboratories have never reported significant results, leading proponents to raise concerns about experimental design or researcher expertise.

To address these concerns, a preregistered multi-laboratory experiment is planned. The methodology will be designed with the input of expert proponents, thereby addressing concerns about experimental design. Preregistration ensures transparent and complete reporting, addressing concerns about selection biases.]

The

**Effects the RRR will measure:**

1. The difference in aggressive behavior for participants who played a violent video game and participants who played a nonviolent video game.
2. The moderation of the effect size across naïve and non-naïve participants.
3. The moderation of the effect size by self-identification as a gamer.

**Method Overview:**

1. Informed consent
2. [Essay provocation? 5 minutes for writing, 5-10 minutes for exchange and feedback]
3. 20 minutes of violent game
4. Measurement of aggressive behavior: CRTT or hot sauce.
5. Measurement of aggressive cognition: Word-stem task or scenario-completion task
6. Demographic variables: gender, past VVG experience, identification as a gamer
7. Screening questionnaire.

**Protocol Requirements**

**Minimum sample size:  
Ideal sample size:**

**Required sample demographics:**

* Participants should be students recruited from a psychology participant pool
* Participants should be 18-24 years old
* Participants should be unfamiliar with laboratory paradigms for measuring aggression. Students recruited from a participant pool should be recruited before such laboratory measures are covered in class.

**A participant’s should be excluded if:**

* They correctly guessed the purpose of the experiment. This data, however, be retained for the secondary analysis, using this as a moderator.
* They indicate suspicion that they are not actually aggressing against another participant.
* They did not follow instructions.
* They did not complete all the tasks.
* They experimental script crashed or did not administer the experiment correctly.
* Laboratories will be provided with a spreadsheet for documenting exclusions. The spreadsheet will store the subject number, date and time tested, and the reason for exclusion. All excluded data should be included with the full data set, but stored in a separate folder. The editors will provide details on how to organize their raw data files for inclusion in the official analyses.

**Testing setting:**

* Participants must be tested in person and not online
* [Participants must be tested individually / Participants may be tested in small groups]
* Participants must be tested in separate rooms so that they do not see each other once the experiment begins.
* Participating laboratories must upload photos of the testing setting to their OSF page.
* [The RA that collects aggressive behavior should be blind to the game played – but how?]

**Experimenters:**

* Any graduate student, postdoctoral researcher, faculty member, or trained research

assistant (at least 18 years of age). [No special expertise is necessary to conduct the

study.]

* [Does the experimenter need previous experience collecting experimental psychology data? Or just training?]

**Data collection:**

* Participating laboratories will receive a [PsychoPy script / Qualtrics questionnaire link] that will collect all questionnaire measures.
* If laboratories are required to provide a description of the study for subject pool or recruiting purposes, the description should be “[Play a video game and perform creative behaviors.]”
* Participants should not know that there are different game stimuli.
* During debriefing, participants should be explicitly instructed not to tell other participants about the aggression measure or other aspects of the study.
* [Laboratories are allowed to add additional measures after the completion of the study. They should use their own experimental script for that purpose and should not alter the official RRR experimental script. Additional measures may only be collected after the completion of the RRR script.]

**Required data analyses**

The primary data analyses will be conducted using official R scripts written to calculate the effect size for the overall violent game effect (violent - nonviolent).

Two secondary analyses will be conducted. The first will test for moderation of the violent game effect by task (separate violent - nonviolent calculations for the CRTT and for the hot sauce task and a comparison of those difference scores). The second will test for moderation of the violent game effect by participant naiveté (separate violent - nonviolent calculations for those that did and those that did not guess the purpose of the experiment and a comparison of those difference scores).

[I don’t know about this part: Individual labs can calculate means and standard deviations for trivia performance in each combination of Sex x Prime condition. The core metaanalysis will be based on these raw accuracy difference scores. Laboratories are welcome to conduct their own analyses and to report them on their OSF page. ]

The RRR meta-analysis will report the accuracies and effect size measures for each lab and they will be computed directly from the raw data from each laboratory.

The official R scripts will be written without viewing the actual data and will be made publicly available. The analyses will be conducted with and without any “judgment call" exclusions.

**Procedure**

1. Obtain informed consent according to the requirements of your university. Note that individual laboratories are required to obtain any necessary ethics approval from their university prior to beginning the study.
2. Read the following instructions to participants: “[Here’s what you’ll do in this study.]”
3. [Essay provocation? 5 minutes for writing, 5-10 minutes for exchange and feedback]
4. 20 minutes of violent game
5. Measurement of aggressive behavior: CRTT or hot sauce.
6. Measurement of aggressive cognition: Word-stem task or scenario-completion task
7. Demographic variables: gender, past VVG experience, identification as a gamer
8. Screening questionnaire.

**Step-by-step summary of experimenter’s script**

*Hot sauce task*

[Hot sauce recipe?]

[Hot sauce delivery vehicle?]

*Competitive Reaction Time Task*