A Survey Experiment on Media Exposure and Attitudes

Felix Chopra

August 10, 2021

1 Motivation

In this project, I study the impact of the Dave Ramsey Show on consumer behavior. The radio show argues that Americans live beyond their means trying to impress the Joneses, but fail to recognize that the Joneses are "broke". The project consists of two parts. In the first part, I document that the radio show causally affects consumption choices using evidence from a large household scanner panel. In the second part, I conduct an online survey to shed light on some of the mechanisms underlying behavioral change. This pre-registration concerns **only the second, experimental part** of the project, which I outline below.

2 Sample

The data will be collected in collaboration with *Lucid*, a professional survey company frequently used in social science research in August 2021. I will recruit a sample of 1,500 respondents. Respondents will be randomized in equal proportion into a treatment group, a control group, and a pure control group, which I describe in more detail in Section 3.2. The randomization is carried out by the survey software Qualtrics.

I employ three exclusion criteria. First, I exclude respondents who do not pass an attention check at the beginning of the survey (see Figure 1). Second, I exclude respondents that are not able to listen to audio recording embedded in the survey (see Figure 2), which is a necessary technical requirement to administer the treatments. Operationally, I implement this by asking respondents to listen to a brief audio embedded in the survey where a voice says "gray". Respondents are then asked which color was mentioned in the audio, and I exclude respondents who provide an incorrect answer. Third, I will exclude respondents that do not finish the obfuscation survey after listening to the main audio recording (described in more detail in Section 3.3).

3 Design

The survey consists of four main stages: (1) pre-treatment stage, (2) treatment/audio stage, (3) obfuscation stage, (4) outcome stage. The instructions in each stage are identical across experimental conditions. The experimental conditions will vary the order of stages and the audio recording in the audio stage.

3.1 Pre-treatment

After providing consent and passing the attention checks at the beginning of the survey, respondents provide basic demographic characteristics. I then elicit additional background information about respondents' personal finances, including the types of debt that they currently have and their total debt.

3.2 Treatments

Respondents are then randomized into one of three experimental conditions. Respondents are asked to listen to a short audio recording. They are also informed that they will have to answer a few questions about the audio recording later in the survey. Respondents cannot advance to the next screen for five minutes, which is the time it takes to listen to the audio recording (see Figure 4).

Treatment group The treatment group listens to an excerpt from the *Dave Ramsey Show*, which was published on March 20, 2017, on the radio show's YouTube channel.[1] Respondents listen to the 5 minute and 4 seconds segment from 00:00:00 to 00:05:04.

Control group The control group will listen to Episode 277 of the Modern Mentor Podcast by Stever Robbins and published on August 25, 2015. Respondents listen to the 5 minutes and 8 seconds segment from 00:00:09 to 00:05:17.

Pure control group The pure control control directly proceeds from the pre-treatment stage to the outcome stage. After completing this stage, the pure control group moves to the audio stage and finishes the obfuscation survey. During the audio stage, the pure control group will listen to the excerpt from the Modern Mentor Podcast described above.

3.3 Obfuscation

After respondents finish listening to the audio, they proceed to the obfuscation stage which mimics a consumer research surveys to hide the real purpose of this experiment. For instance, respondents answer questions about the quality and novelty of the content and

---

[1]The full video can be found here: `https://www.youtube.com/watch?v=vz-rdaE2uUw`

indicate how much they enjoyed listening to the audio. Moreover, respondents provide information about their radio consumption.

Respondents are also asked whether they recognized the name of the show that they listened to using a free-response format. I will use the data from the treatment group to learn more about the share of Americans that recognize the *Dave Ramsey Show*.

Transition After completing the obfuscation survey, respondents are told that this completes the first part of the study and that they will now proceed to the second and final part of the survey. They are again asked to provide basic demographic information (e.g. race, ethnicity, employment status, state, 5-digit zip code) before proceeding to the outcome stage.

3.4 Outcome

3.4.1 Primary outcomes

While the radio show will most likely affect behavior through multiple channels, changes in attitudes are particularly relevant. The main outcomes are attitudes towards consumption and debt.

- **Debt**: I measure attitudes towards debt and borrowing money by asking respondents to indicate how much they agree or disagree with each of four statements on a 5-point scale from "Strongly agree" to "Strongly disagree' (see Figure 10). I will aggregate these items into a standardized index.

- **Consumption**: I measure consumption attitudes by asking respondents to indicate how much they agree or disagree with each of two statements on a 5-point scale from "Strongly agree" to "Strongly disagree' (see Figure 11). I will aggregate these items into a standardized index.

3.4.2 Secondary outcomes

I also collect additional, secondary outcomes. These include general financial literacy measured by the "Big Five" (Hastings et al., 2013), people's revealed interest in personal finance measured by their demand for information on "how to manage personal finances and become debt free" (see Figure 9), and beliefs about the average debt of Americans and the share of Americans that has any kind of debt (see Figure 12).

3.4.3 Cool-off period

To implement a delay between the treatment and the attitudinal outcomes, the order in which outcomes are measured is as follows: (1) general financial literacy, (3) interest in personal finance, (3) attitudes, (4) beliefs about debt. The goal is to mitigate concerns about social desirability bias.

4   Analysis

The main specification is the following regression, which I will estimate using OLS:

$$y_i = \beta_0 + \beta_1 \text{Treatment}_i + \varepsilon_i \tag{1}$$

where Treatment_i is a binary indicator taking value one if respondent i is in the treatment group, and zero otherwise; ε_i is an individual-specific error term. I use robust standard errors for inference. For each outcome in Section 3.4, I will estimate the above specification and test whether $\beta_1 \neq 0$.

In my primary analyses, I will focus only on respondents in the treatment group and the control group. I will thus exclude respondents in the pure control group when estimating Equation (1). As an additional robustness check, I will also estimate Equation (1) using only respondents in the treatment group and the pure control group.

5   Hypotheses

Primary outcomes   My primary hypothesis is that listening to the radio show for five minutes will affect people's attitudes. In particular, I expect people to adopt more negative attitudes towards debt and consumption compared to respondents in the control group.

Secondary outcomes   I expect to find no effect on general financial literacy because the audio that respondents listen to does not discuss the concepts involved in measuring financial literacy. The main purpose of including the general financial literacy module is to increase the delay between the audio treatment and the measurement of attitudes. For interest in personal finance, it seems plausible that the radio show might increase demand for information in the treatment group compared to the control group. Comparisons between the treatment group and the pure control group are more challenging to predict ex-ante: Treated respondents have spent 5 more minutes in the survey compared to the pure control group, which might make them less willing to receive information that might increase the length of the survey. This is why I will primarily focus on the comparison between the treatment group and the control group.

6 Instructions

This section provides screenshots of the key experimental instructions.

6.1 Attention check and audio check

Figure 1: Attention check

The next question is about the following problem. In questionnaires like ours, sometimes there are participants who do not carefully read the questions and just quickly click through the survey. This compromises the results of research studies. **To show that you are reading the survey carefully, please choose both "Very strongly interested"** <u>**and**</u> **"Not at all interested"** **as your answer to the next question.**

Given the above, how interested are you in politics?

> Very strongly interested

> Very interested
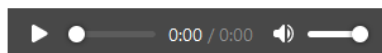
> A little bit interested

> Not very interested

> Not at all interested

> →

Figure 2: Audio check

As part of this survey, you will listen to an audio recording. You can only participate in this survey if your device can play audio recordings. To see if this works, please try to play the audio below.

▶ ○———— 0:00 / 0:00 ◀) ———○

Which color was mentioned in the audio recording?

[⌄]
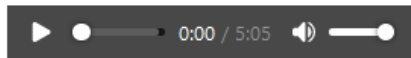
6.2 Treatment

Figure 3: Transition screen

On the next page, you will listen to a **5 minutes** recording.

→

Figure 4: Main audio screen

Please listen to this audio. We will ask you a few questions about it afterwards.

▶ ● ————— 0:00 / 5:05 ◀) ———●

You will be able to advance to the next page once you finished listening to the audio.

6.3   Obfuscation and post-treatment demographics

Figure 5: Obfuscation I

Please answer these questions about the audio content you just listened to.

Did you enjoy listening to the content?

> Yes

> No

Imagine a local radio station near you would feature content like this. Would you be more or less likely to listen to this station?

> Much more likely

> Somewhat more likely

> About the same

> Somewhat less likely

> Much less likely

Figure 6: Obfuscation II

How would you rate the production quality of the content?

Very high

High

Low

Very low

How would you rate the novelty of the content?

Very high

High

Low

Very low

What is the name of the radio show that you just listened to?

On how many days do you listen to the radio in a typical week?

Figure 7: Obfuscation III

Which, if any, of the following radio programs have you listened to in the past? Please select all that apply.

Savage Nation	Howard Stern Show
Sean Hannity Show	Mark Levin Show
Dave Ramsey Show	Coast to Coast
Marketplace	Morning Edition
BBC World Service	I don't listen to these radio shows

Figure 8: Post-treatment demographics

Please answer these questions about yourself.

Which of the following best describes your race or ethnicity?

[⌄]

Are you of Hispanic, Latino, or Spanish origin?

Yes
No

What is your current employment status?

[⌄]

In which state do you currently reside?

[⌄]

What is your zipcode of residence?

[   ]

6.4   Outcomes

Figure 9: Information demand

Information

Would you like to receive free information on how to manage your personal finances and pay off your debt?

> Yes

> No

If you click "Yes", you will receive the information at the end of this survey. If you click "No", you will not receive the information.

→

Figure 10: Attitudes towards debt

How much do you agree or disagree with the statements below?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
There is no excuse for borrowing money	○	○	○	○	○
You should always save up first before buying something	○	○	○	○	○
You can live a good life without borrowing money	○	○	○	○	○
All in all, borrowing money is not worth the cost	○	○	○	○	○

→

Figure 11: Attitudes towards consumption

How much do you agree or disagree with the statements below?

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
I admire people who own expensive homes, cars, and clothes	○	○	○	○	○
The things I own say a lot about how well I'm doing in life	○	○	○	○	○

→

Figure 12: Beliefs

In 2019, how much **debt** did the **average American** have?

0	25000	50000	75000	100000	125000	150000	175000	200000

●

→

In 2019, what was the share of Americans that had **any kind of debt**?

0	25	50	75	100

●

→

References

Hastings, Justine S., Brigitte C. Madrian, and William L. Skimmyhorn, "Financial Literacy, Financial Education, and Economic Outcomes," *Annual Review of Economics*, 8 2013, *5* (1), 347–373.