

# Measuring survey behavior of smartphone users

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## Some concerns, given the rise of smartphone usage among survey respondents

- Usability of survey systems on smartphones
- Tolerance for longer surveys
- “Temporary” breaks in surveys that increase the likelihood of non-completion
- Attentiveness to complex questions

# Survey Design

- Started with a sampling frame of the general population
- 2 surveys with identical content
  - Smartphone survey: All starts not on mobile immediately screened out - 27% qualified
  - Computer/tablet survey: Starts demographically resemble starts of mobile phone surveys - 73% qualified
- Smartphone survey: 851 qualified starts, 706 completes
- Desktop survey: 714 qualified starts, 657 completes
- Post-stratification weights applied to starts and completes of both surveys to make the two populations as similar as possible

# Survey content - we tried to write a terrible survey

- Included repetitive items, grids with boxes to fill in, images, reading sections
- Length experiments
  - Announced length - 12 min, 20 min, or 25 min
  - Assigned length (“real length”) - short, medium, or long
- Monitoring
  - Taking breaks
  - Rotating screen
  - Switching devices
- Response quality checks
  - Straightlining, skipping
  - Strength of experimental effects

# Grid on desktop - traditional layout




YouGov


Please read the following statements and indicate how strongly you agree or disagree with each one.

	Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree
If people work hard they almost always get what they want.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even if people are ambitious they often cannot succeed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even if people try hard they often cannot reach their goals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incomes cannot be made more equal since people's abilities and talents are unequal.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>




# Grid on mobile - accordion response style

  <https://g4-us.yougov.com> 



Please read the following statements and indicate how strongly you agree or disagree with each one.

Select each category below to see available answers.


 [If people work hard they almost always get what they want.](#)

Strongly Agree

Somewhat Agree

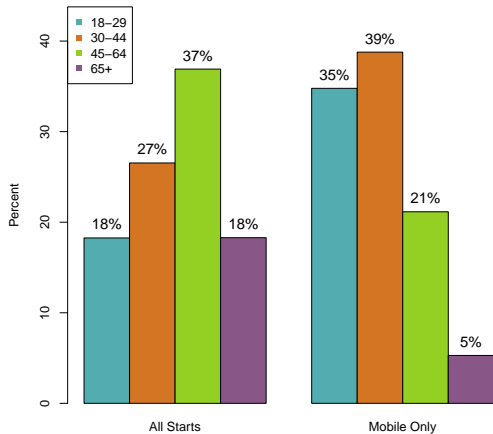
Somewhat Disagree

Strongly Disagree

 [Incomes should be more equal because every family's needs for food, housing, and so on, are the same.](#)

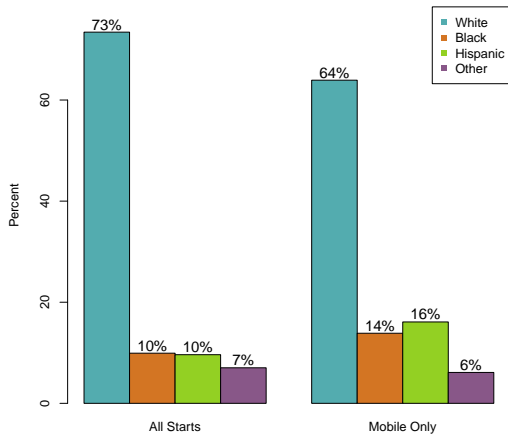
**How do smartphone survey takers differ from the general population?**

# Smartphone users are younger

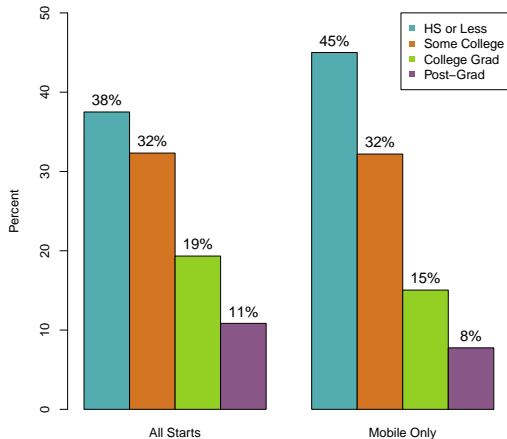




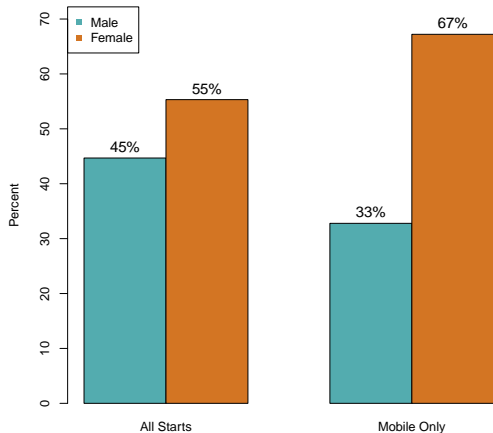
# Smartphone users are less likely to be white



# Smartphone users tend to have lower levels of education

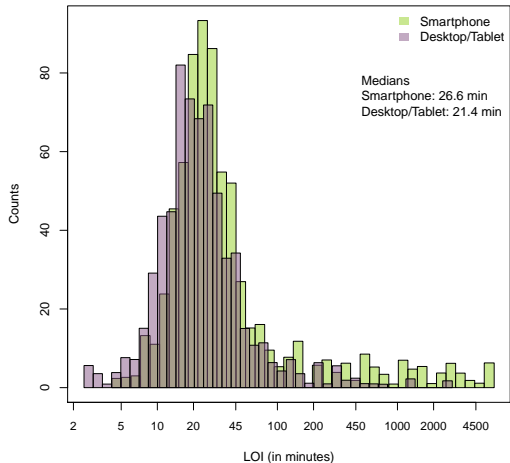


# Smartphone users are more likely to be female

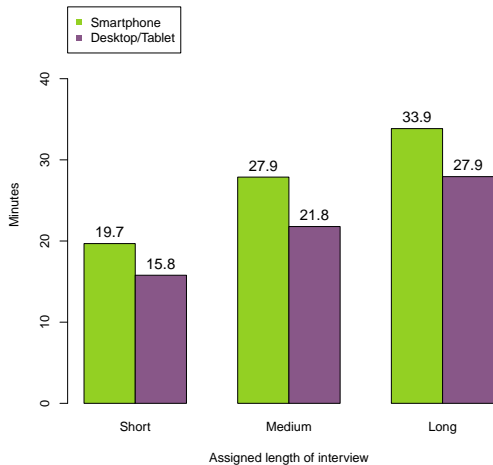


## **Challenges for smartphone survey takers**

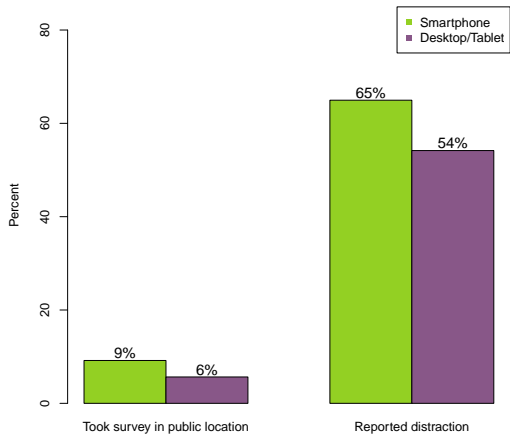
# Surveys take longer to complete



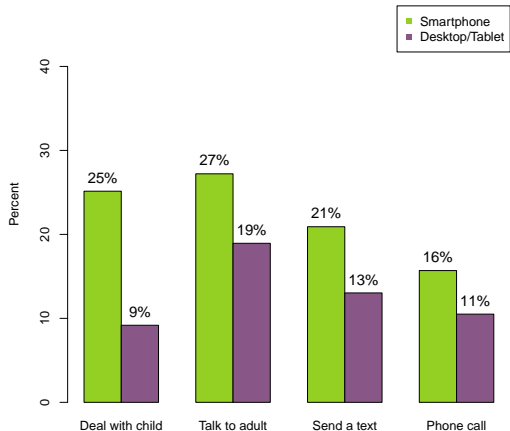
# Surveys take longer to complete



# Smartphone users are more likely to report distractions



# Biggest differences in sources of distractions are other people and smartphone functions



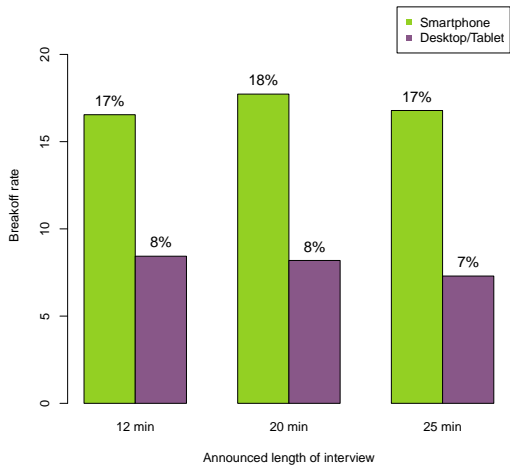


**What do smartphone users do when faced  
with a painful survey?**

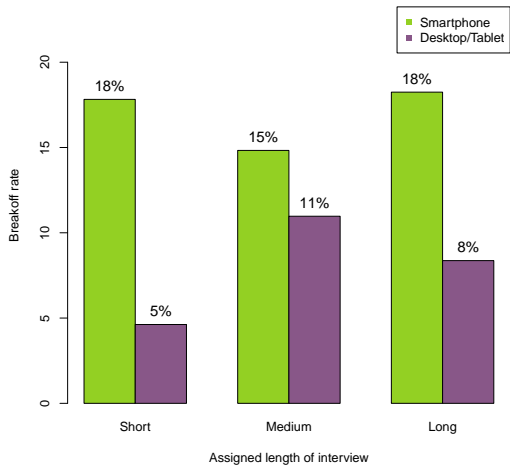
# What do smartphone users do when faced with a painful survey?

- Do they quit?
- Do they switch devices?
- Do they turn their screens frequently to help them see the questions?
- Do they take more breaks?

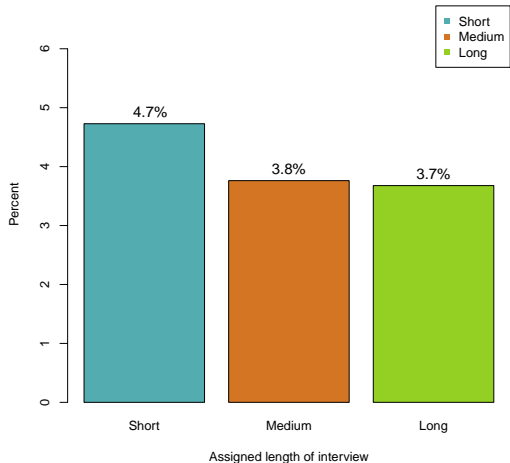
# Smartphone users are more likely quit...



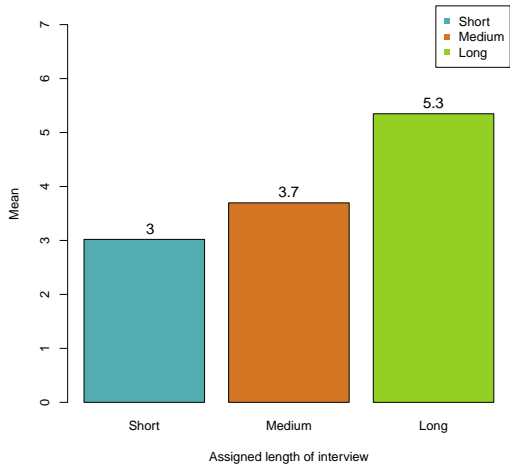
# ...whether the survey is short or long



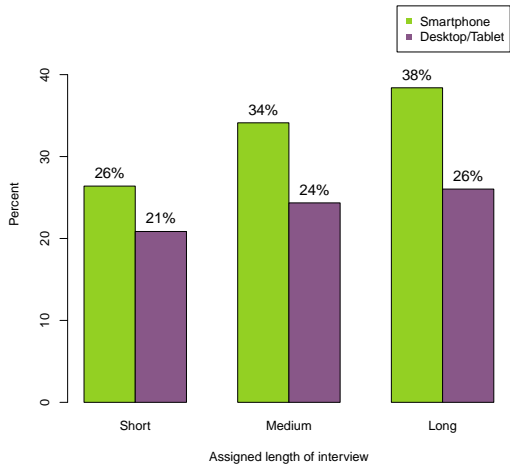
# A small percentage of smartphone users switch to friendlier devices



# The longer time spent on smartphone, the more likely the respondent is to flip the screen



# Smartphone users are also more likely to take breaks mid-survey



**Does taking a survey on a smartphone  
affect response quality?**



# Straightlining test - Interpret the emotion of 18 photos of eyes

For each pair of eyes, choose the word that best describes what the person in the picture is thinking or feeling. Most people surprise themselves by how well they do in this test. Even if you think you don't have a clue, just choose the option that "feels" right.

YouGov



Aghast

Doubtful

Playful

Affectionate

YouGov



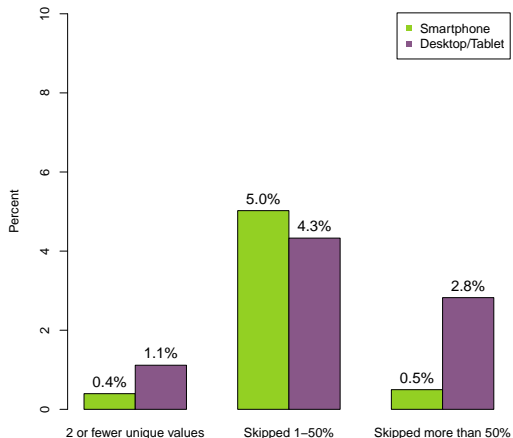
Regretful

Flirtatious

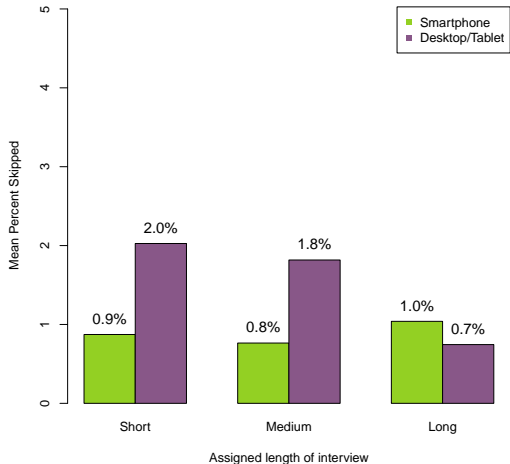
Amused

Terrified

# Little evidence of straightlining overall. Mobile users not more likely to skip repetitive items



# Incidence of skipping questions is relatively low, regardless of platform or length of survey



# Tversky and Kahneman (*Science* 1981) Framing Experiment

Imagine that your country is preparing for the outbreak of an unusual disease, which is expected to kill 600 people. Two alternative programs to combat the disease have been proposed. Assume that the exact scientific estimate of the consequences of the programs are as follows:

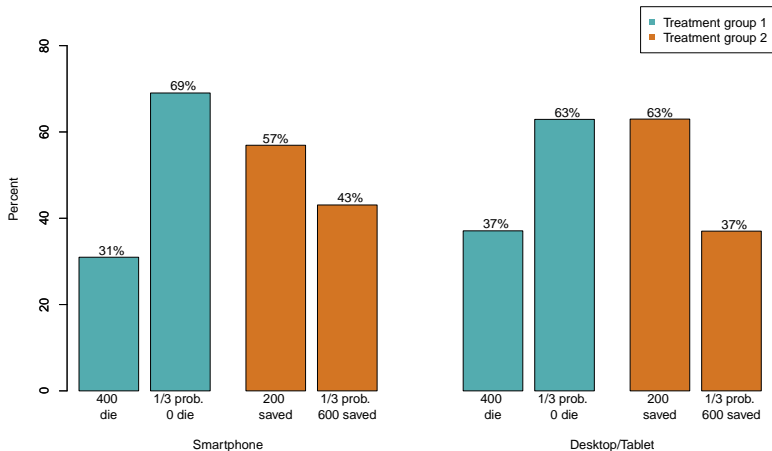
## Treatment 1

- If Program A is adopted, 400 people will die.
- If Program B is adopted, there is 1/3 probability that no people will die, and 2/3 probability that 600 people will die.

## Treatment 2

- If Program A is adopted, 200 people will be saved.
- If Program B is adopted, there is 1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved.

# There is no difference in the framing effect by survey platform



# Summary

- Taking a long survey on a smartphone is a miserable experience
  - Questions take longer to answer
  - Lots of distractions
  - Many break off
- Those who stick it out do a decent job
- Remaining questions:
  - Are there unmeasured differences between the two groups?
  - What other indicators of response quality may be affected?