

Going Online: Results from the Consumer Expenditure Survey's Large Scale Online Diary Feasibility Test (LSF)

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Outline

- Background
- LSF Test Design
- The LSF Online Diary
- Preliminary Results
- Lessons Learned
- Next Steps



Background



CE Diary Survey Characteristics



- CE Diary Survey (CED) currently uses two one-week paper diaries to collect household expenditures
- Interviewers place the diaries in-person and conduct one more visit to pick up the diaries
- One household respondent reports on *all* household expenditures
- Expenditures grouped into four categories:
 - ▶ Food and Drinks For Home Consumption
 - ▶ Meals, Snacks, and Drinks Away from Home
 - ▶ Clothing, Shoes, Jewelry and Accessories
 - ▶ All Other Products, Services and Expenses

Large Scale Feasibility Test Design



Sample size and Procedures

- Starting sample size: 2,500 addresses
- Field period: October 2019-April 2020
- Two visits, one for diary placement and one at the end of the diary keeping period (“pickup”)
- Push to online diary if the household respondent is eligible, if they refuse or are ineligible-- they get paper diaries
- Recall tab in the CAPI instrument for interviewer to record additional expenses reported by respondent at pickup interview
- Embedded incentives/postcard experiment (see next slide)



Embedded Incentive/Postcard Experiment



	Advance Postcard	No Postcard
\$5 Cash with Advance Letter Mailing	1, 250	N/A
No cash with Advance Letter Mailing	625	625

LSF research topics

- Operational Issues
- Impact of \$5 incentive
- Impact of pre-notification postcard
- Technical Issues with online diaries
- Usefulness of respondent materials
- Effectiveness of training and protocols
- Data quality
- Mode differences



The LSF Online Diary

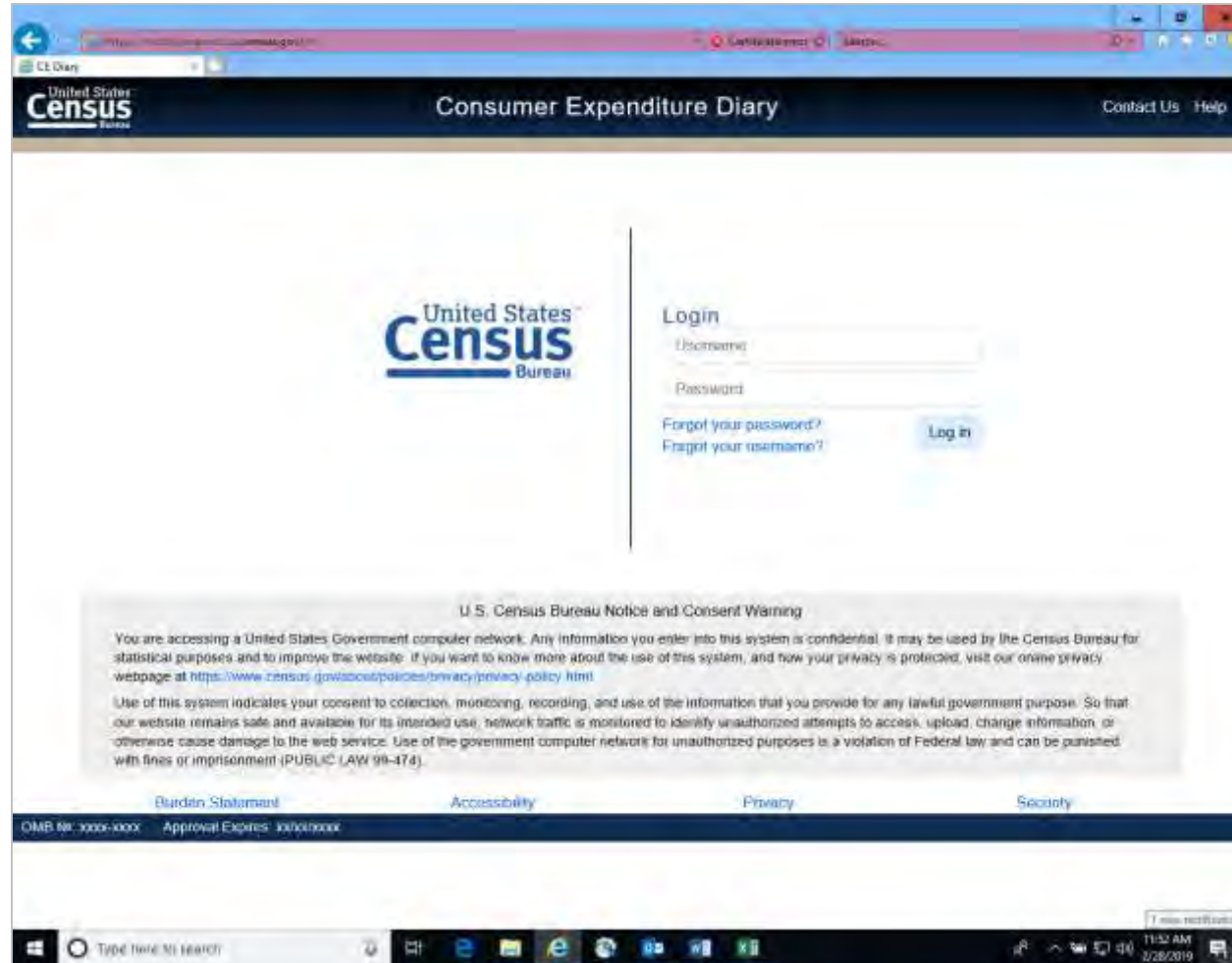


LSF Online Diary Design

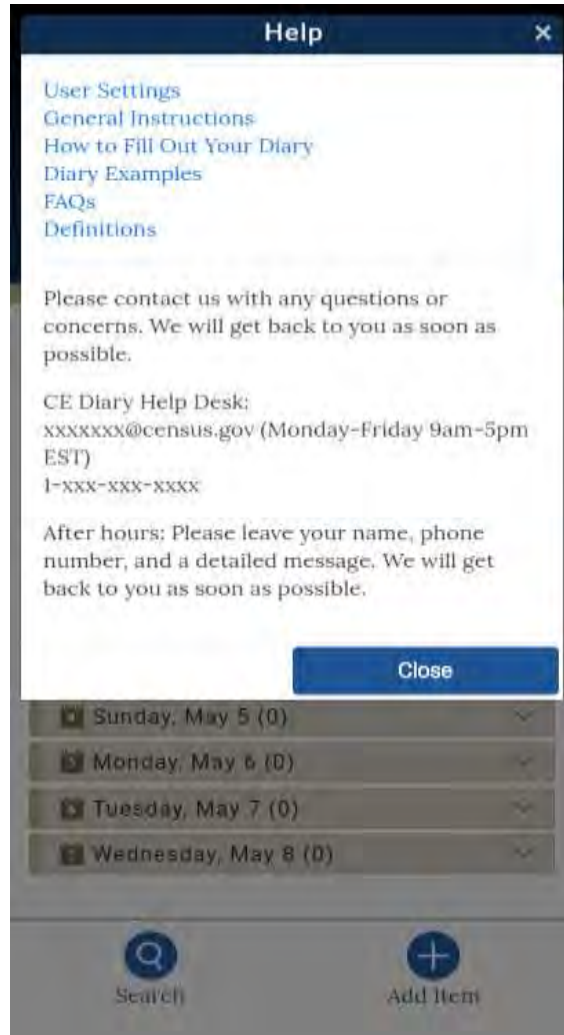
- Developed in Centurion (Census' proprietary software for online surveys)
- Device-optimized based on screen size
 - ▶ Desktop/Tablet version
 - ▶ Mobile version
- Must be connected to the internet (no data stored on device)



Login Screen



Help and changing the password/username



Desktop Expense Entry

The screenshot displays the 'Consumer Expenditure Diary' web application. The page title is 'Consumer Expenditure Diary' and it includes a 'Log out' link, 'Contact Us', and 'Help' link. The main content area is divided into a sidebar and a main panel. The sidebar contains three sections: 'Select date of expense' with a date picker, 'Business' with a text input field, and 'Select type of expense' with a dropdown menu. The dropdown menu is open, showing options: 'Meals, Snacks, and Drinks Away from Home', 'Food and Drinks for Home Consumption', 'Clothing, Shoes, Jewelry, and Accessories', and 'All Other Products, Services, and Expenses'. The main panel is titled 'Expenses' and features two tabs: 'Week 1' (highlighted in green) and 'Week 2'. Below the tabs is a search input field. The main panel displays a list of dates with their corresponding expense counts: Thursday, February 28 (0); Friday, March 1 (0); Saturday, March 2 (0); Sunday, March 3 (0); Monday, March 4 (0); Tuesday, March 5 (0); and Wednesday, March 6 (0). At the bottom of the page, there are links for 'Burden Statement', 'Accessibility', 'Privacy', and 'Security'. The footer contains the OMB number '0300-0000' and the approval expiration date '03/30/2000'. The Windows taskbar at the bottom shows the search bar, taskbar icons, and the system tray with the date '2/28/2019' and time '11:57 AM'.



Mobile expense entry



Expense categories

7:47 mobile.respond.qa.census.gov

Select type of expense:

- Meals, Snacks, and Drinks Away from Home
- Food and Drinks for Home Consumption
- Clothing, Shoes, Jewelry, and Accessories
- All Other Products, Services, and Expenses

Total cost (include tax and/or tip)

\$

What meal was this?

Breakfast Lunch Dinner Snack/Other

Select any alcohol included:

Wine Beer Other None

Enter the total cost of the alcohol:

\$

< Back

7:47 mobile.respond.qa.census.gov

Select type of expense:

- Meals, Snacks, and Drinks Away from Home
- Food and Drinks for Home Consumption
- Clothing, Shoes, Jewelry, and Accessories
- All Other Products, Services, and Expenses

Describe item or expense

Total cost (do not include tax)

\$

Was this item for:

Child under 2 Boy 2-15 Girl 2-15 Man 16 & over Woman 16 & over

< Back

Expense entry

United States **Census** Bureau

Consumer Expenditure Diary

Log out Contact Us Help

Select date of expense:

Business:
Enter business name

Select type of expense:











- Meals, Snacks, and Drinks Away from Home
- Food and Drinks for Home Consumption
- Clothing, Shoes, Jewelry, and Accessories
- All Other Products, Services, and Expenses

< Back





Expenses

Week 1 Week 2 Enter search term

Saturday, June 1 (5)

Socks	\$14.00	 
Dress Shirt	\$31.00	 
Vegetable Soup (2 cans)	\$5.70	 
Milk	\$3.75	 
Shampoo	\$2.94	 

Sunday, June 2 (2)

Tupperware	\$4.50	 
Hamburger (1.5 lbs)	\$7.95	 

Monday, June 3 (0)

Tuesday, June 4 (0)

Wednesday, June 5 (0)

Thursday, June 6 (0)

Friday, June 7 (0)

[Burden Statement](#) [Accessibility](#) [Privacy](#) [Security](#)

Entering an expense

The screenshot shows the 'Consumer Expenditure Diary' interface. On the left, a dropdown menu titled 'Select date of expense:' is open, displaying a list of dates from Saturday, Jun 1 to Friday, Jun 7. Below this is a 'Business:' field with a placeholder 'Enter business name'. At the bottom left, another dropdown menu titled 'Select type of expense:' is visible, with 'Meals, Snacks, and Drinks Away from Home' selected. On the right, the 'Expenses' section shows a list of days for 'Week 1' with counts in parentheses: Saturday, June 1 (1); Sunday, June 2 (0); Monday, June 3 (0); Tuesday, June 4 (0); Wednesday, June 5 (0); Thursday, June 6 (0); Friday, June 7 (0). A search bar is located above this list.

United States Census Bureau

Consumer Expenditure Diary

Log out Contact Us Help

Select date of expense:

- Saturday, Jun 1
- Sunday, Jun 2
- Monday, Jun 3
- Tuesday, Jun 4
- Wednesday, Jun 5
- Thursday, Jun 6
- Friday, Jun 7

Business:

Enter business name

Select type of expense:

- Meals, Snacks, and Drinks Away from Home
- Food and Drinks for Home Consumption
- Clothing, Shoes, Jewelry, and Accessories
- All Other Products, Services, and Expenses

Expenses

Week 1 Week 2 Enter search term

- Saturday, June 1 (1)
- Sunday, June 2 (0)
- Monday, June 3 (0)
- Tuesday, June 4 (0)
- Wednesday, June 5 (0)
- Thursday, June 6 (0)
- Friday, June 7 (0)

Select Date

Preliminary Results



A note on COVID-19 interruptions

- In mid-March, the Census Bureau stopped personal visits and the National Processing Center for Census was temporarily closed
- LSF Impact:
 - ▶ New field procedures went into place in March, and all diaries were placed and/or picked up by phone
 - ▶ The Census National Processing Center closed so we have not yet received the last three months of data.



Preliminary Results (October – December)



Participation

- Response rates
- Incentives
- Pre-notification Postcard



Overall Response

	Percent of LSF Eligible (n-eligible =1,062)	Percent of CE Production Diary Eligible 2018 q4 (n-eligible =5,072)
Complete Cases	47.2 %	51.5 %
Non-interview (Noncontact)	10.4 %	7.3 %
Non-interview (Refused)	27.9 %	27.9 %
Non-interview (Other*)	14.6 %	13.3 %

* For production, "non-interview (other)" includes reclassification, where an edit check results in reclassifying a completed interview into a nonresponse diaries. This step has not been completed for LSF data.



Embedded Incentive/Postcard Experiment



	Advance Postcard	No Postcard
\$5 Cash with Advance Letter Mailing	1, 250	N/A
No cash with Advance Letter Mailing	625	625



Response Rates

	Advance Postcard	No Postcard
\$5 Cash with Advance Letter Mailing	47.9 % (n=251)	N/A
No cash with Advance Letter Mailing	49.6 % (n = 132)	42.9 % (n = 115)

n represents the number of complete cases



Response Rates

	Advance Postcard	No Postcard	
\$5 Cash with Advance Letter Mailing	47.9 % (n=251)	N/A	47.9 % (n=251)
No cash with Advance Letter Mailing	49.6 % (n = 132)	42.9 % (n = 115)	46.3 % (n=247)

n represents the number of complete cases



Response Rates

	Advance Postcard	No Postcard
\$5 Cash with Advance Letter Mailing	47.9 % (n=251)	N/A
No cash with Advance Letter Mailing	49.6 % (n = 132)	42.9 % (n = 115)
	48.5 % (n=383)	42.9 % (n=115)

n represents the number of complete cases



Online Diary Placement

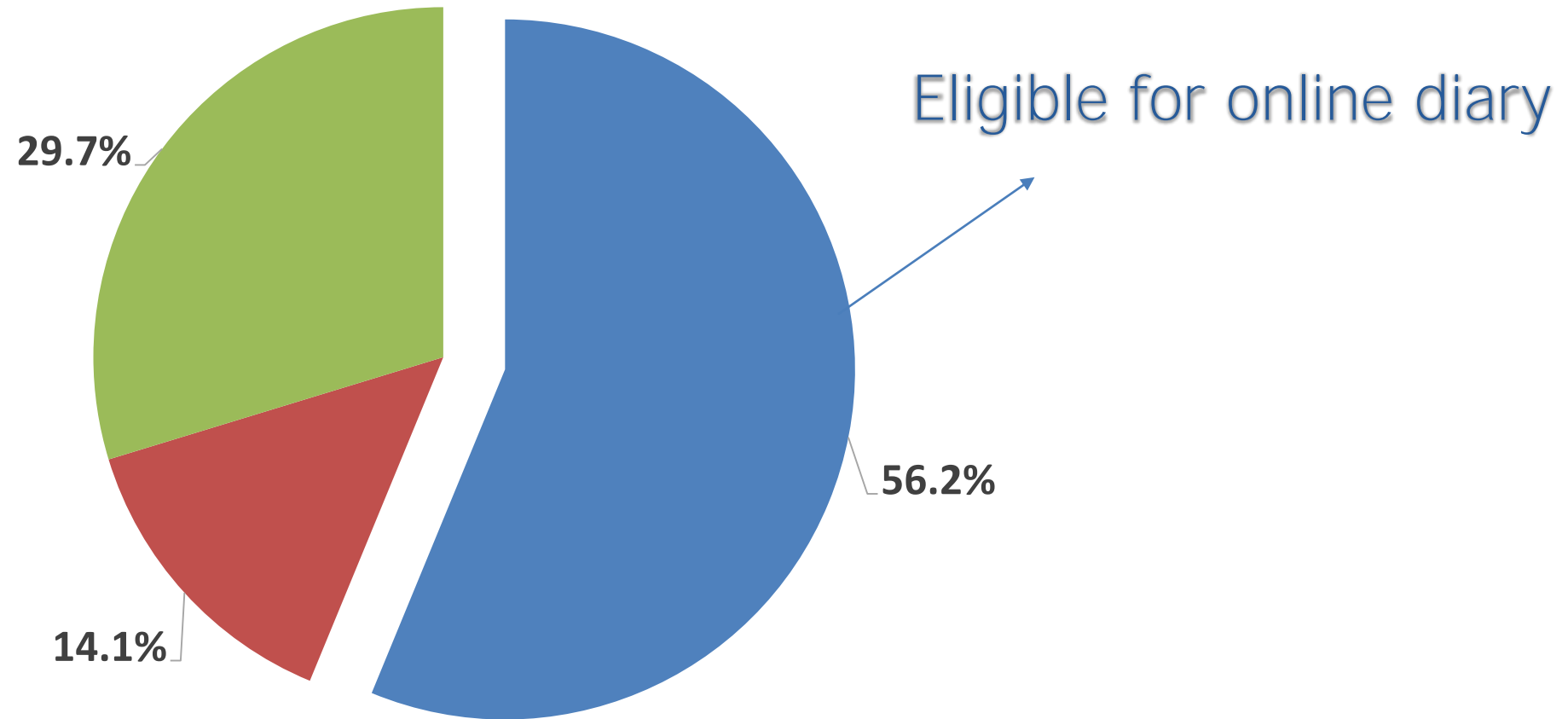


Online Diary Placement

- Push to online diary first, paper as a backup (ineligible or otherwise refused paper)
- Eligibility requirements:
 - ▶ Online access at home
 - ▶ Go online at least 1-2 per week
 - ▶ English-speaking

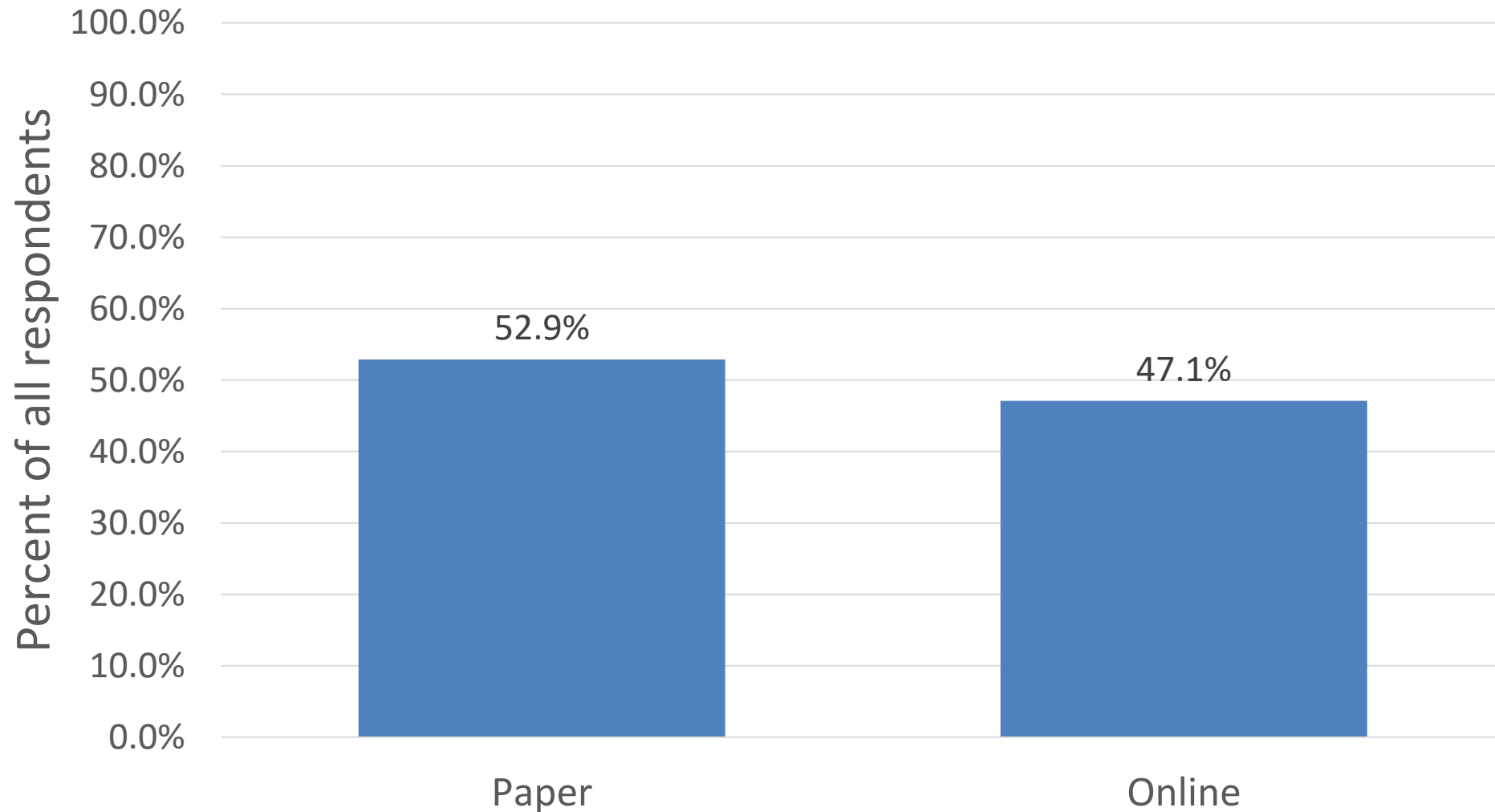


Online Diary Eligibility (n=498)



■ Home Internet Access - Frequent Use ■ Home Internet Access - Infrequent Use ■ No Home Internet Access

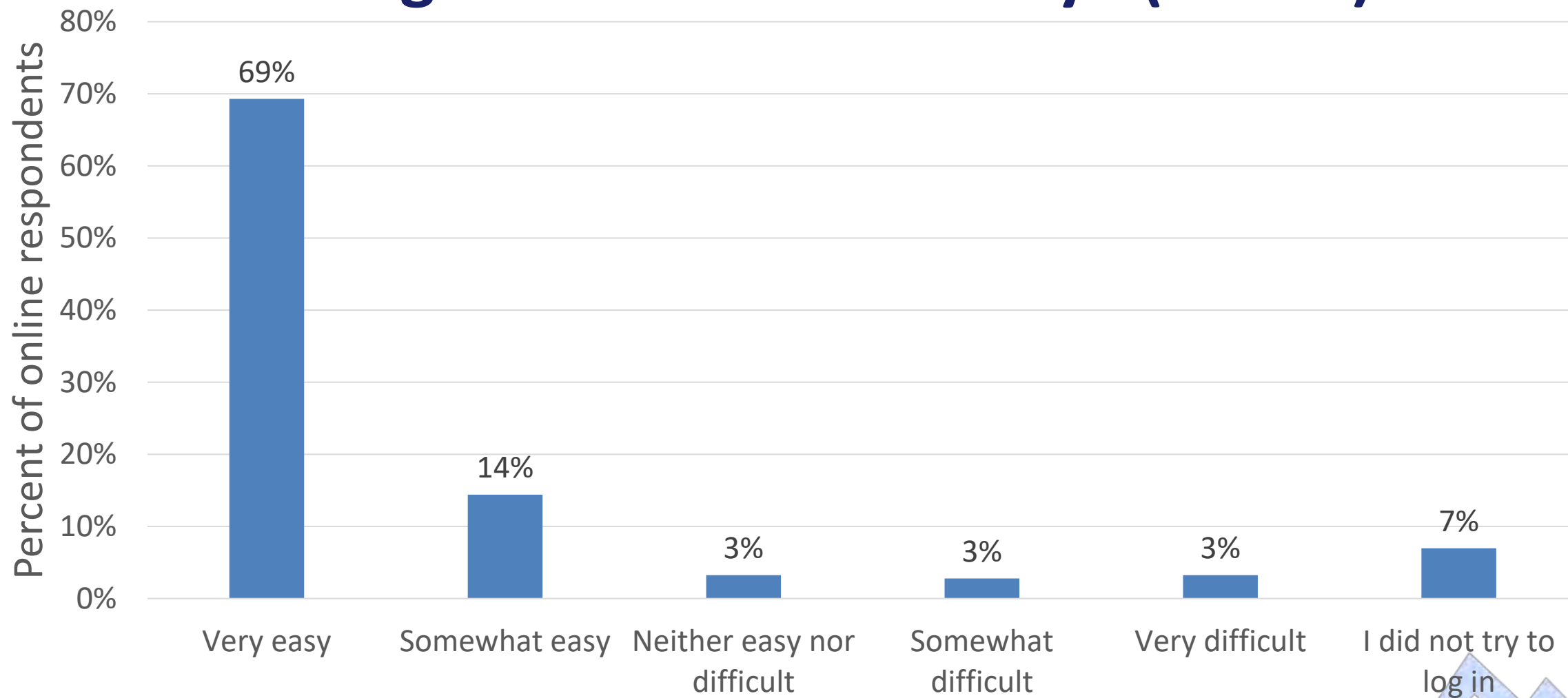
Diary Placement Modes (n=501)



Respondent Experience with the Online Diary



Respondent experience – How easy or difficult was it to log in to the online diary? (n=215)



Paradata – login attempts/failures (n=256)

	n	percent
Failed login on first attempt	56	22.2%
At least one failed login during	113	44.8%
No Failed logins	139	55.2%

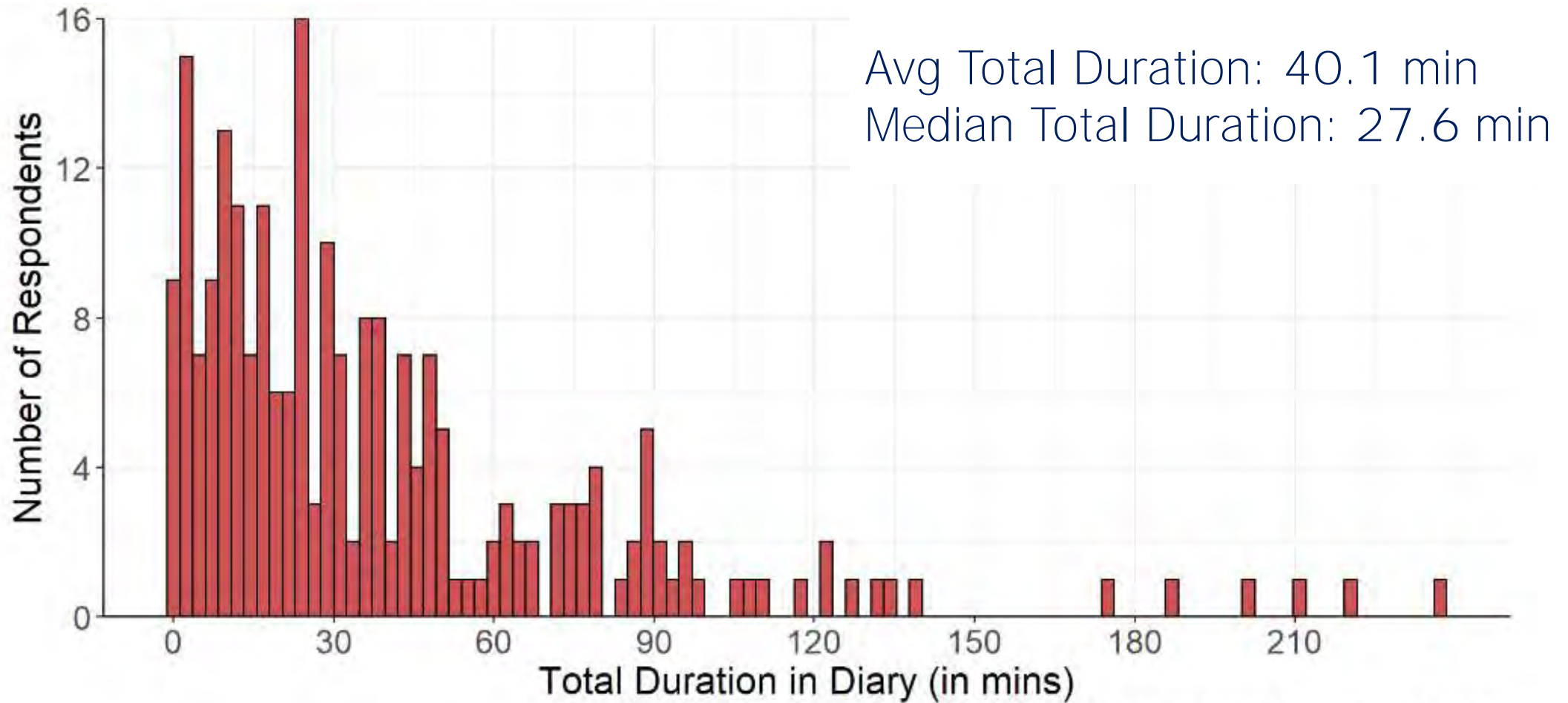


Logins by Device

Device Type	Respondents	Average number of logins
Desktop Only	102	7.4
Mobile Only	96	6.6
Both	45	8.7



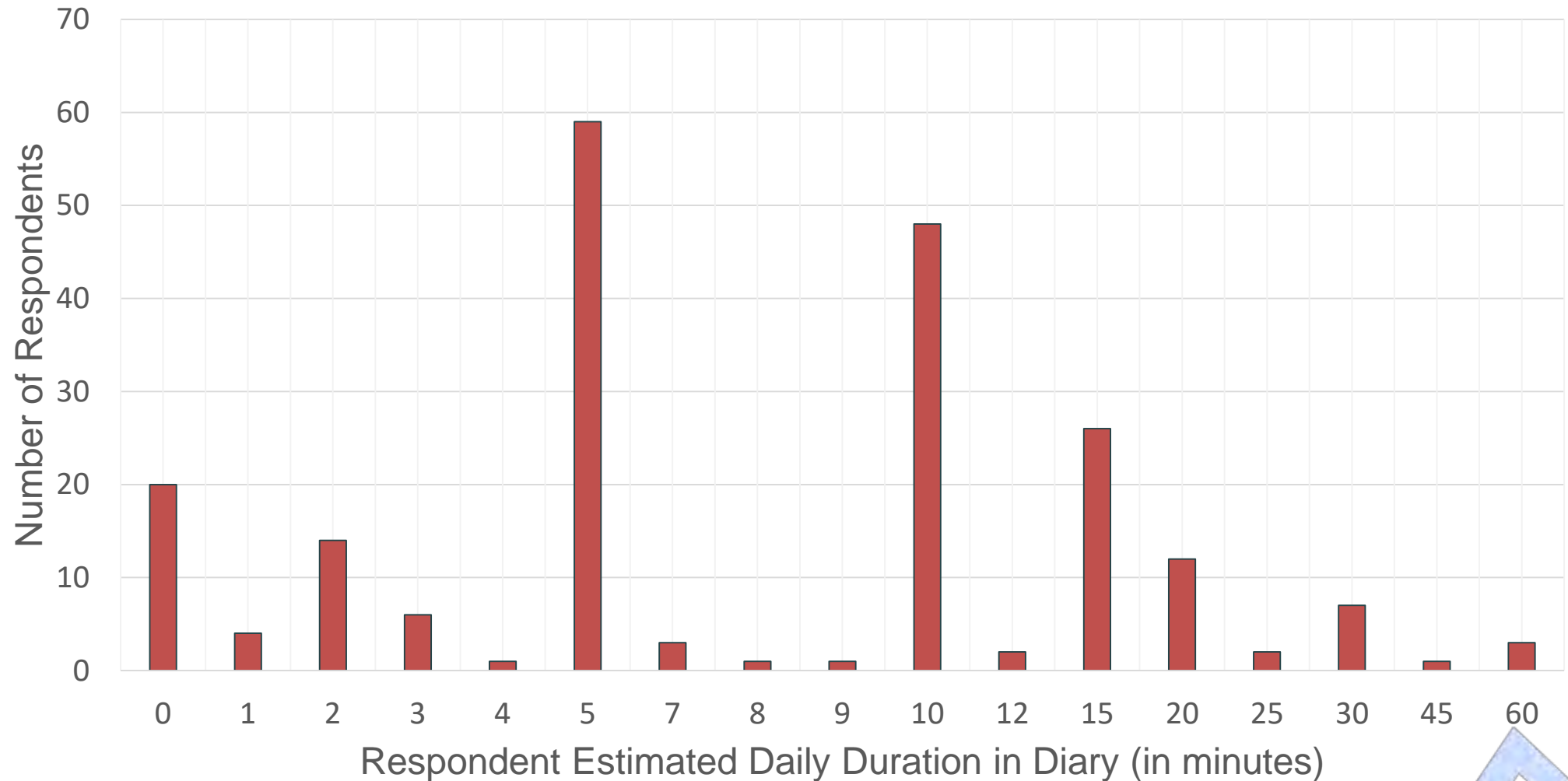
Time Spent in Diary (n= 228)



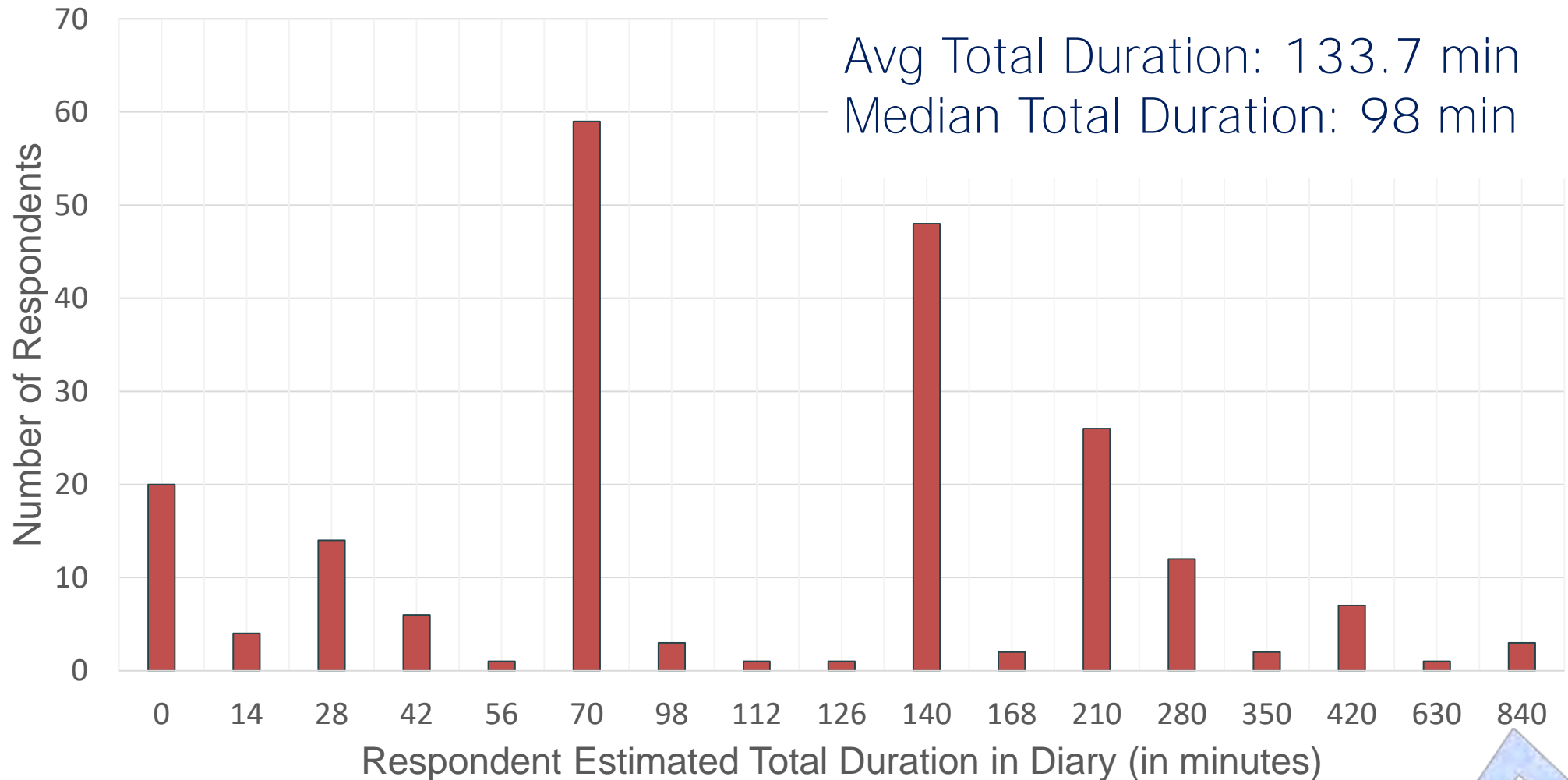
Removes entry, exit, failed_login, login, and logout actions from data.



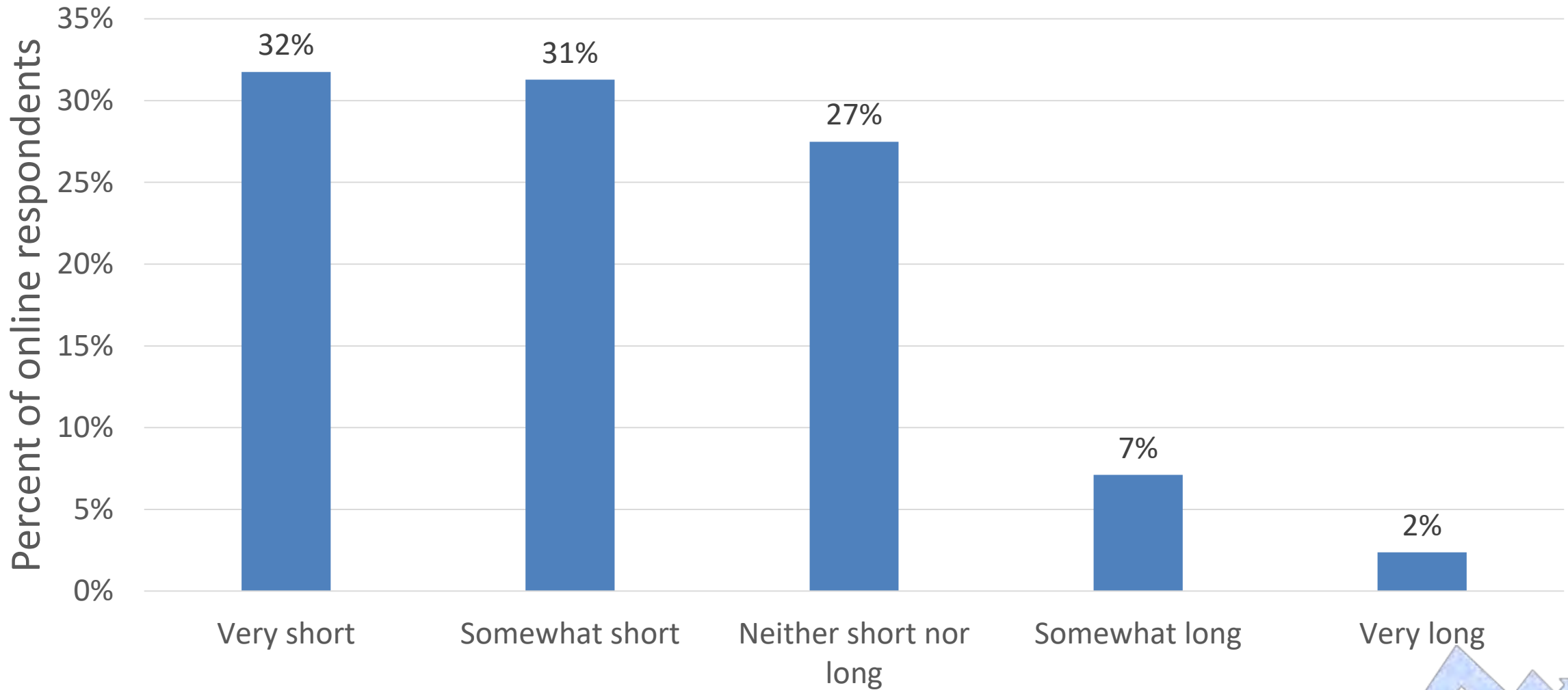
Respondent Daily Time Spent in Diary (n=210)



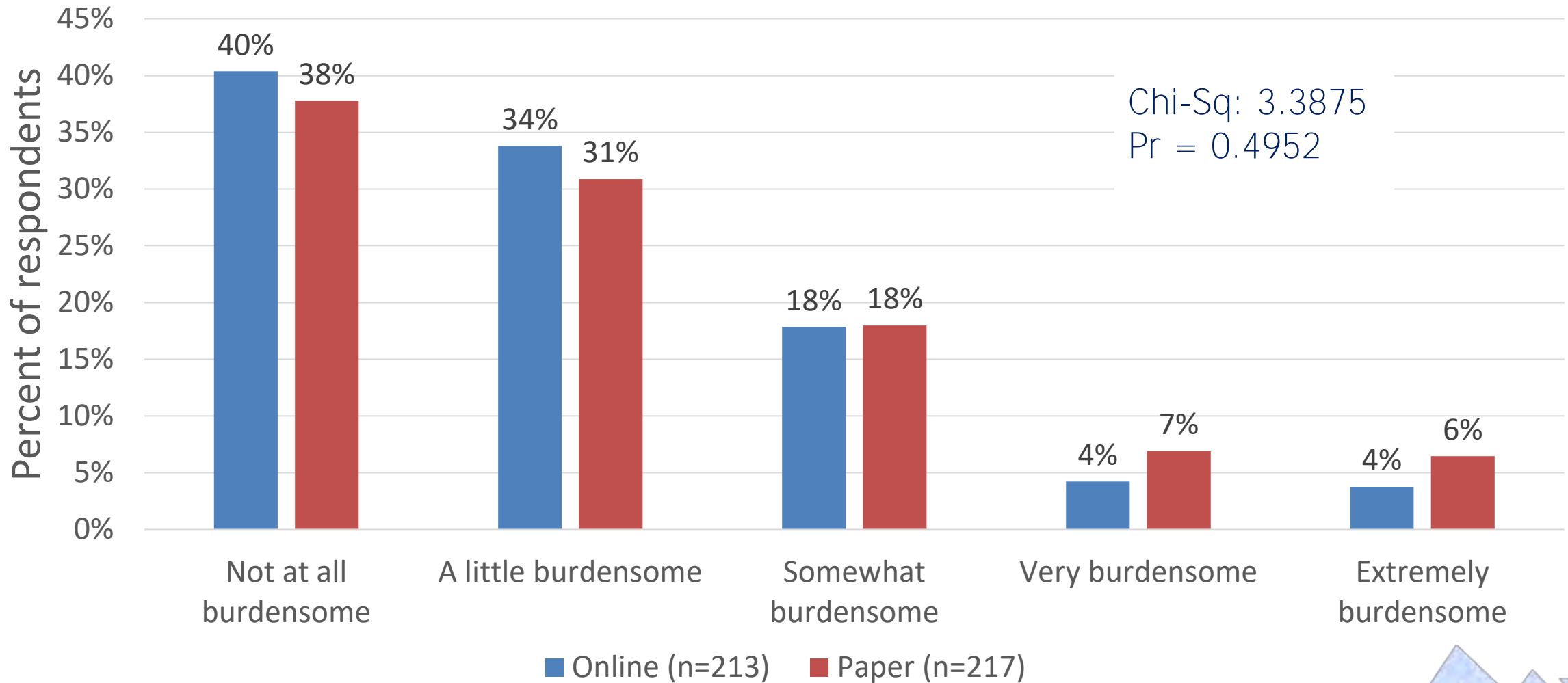
Respondent Total Time Spent in Diary (n=210)



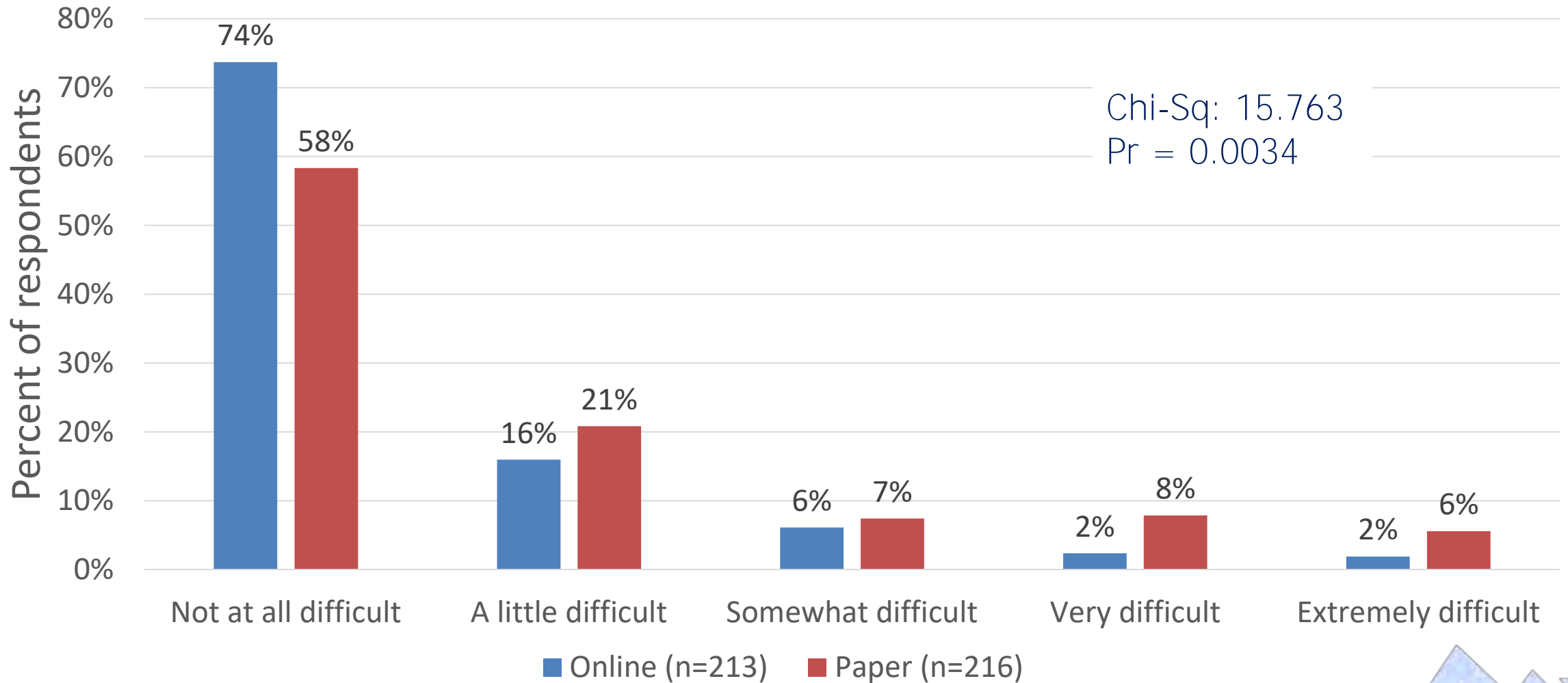
Respondent experience – length (n=211)



How burdensome was filling out the diary to you?



How difficult was it for you to complete the diary?



Lessons Learned



Lessons Learned

- Online diary placement: lower rate than expected, despite screening. Barriers include language, tech savviness, and connectivity.
- Incentives: minimal increase in response rate from \$5 token incentive
- Postcards: larger increase in response rate
- Difficulty with logins – still a concern
- In general, respondent experience with the online diary has been positive



Next Steps

- Go/No-Go decision on implementation in 2022 (pending full analysis)

Pending “Go” decision:

- Continuous improvements to the online diary and protocols
 - ▶ Exploring ways to collect business name
 - ▶ Auto-filled response or response look up?
- Updates to training based on lessons learned



Contact Information

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