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Research Brief Series #2: Nonresponse Follow-up Impact on Panel Sample Composition and Representativeness

Prepared by Ipek Bilgen and David Dutwin

Panels are significantly different than cross-section survey research. Panelists agree to conduct multiple surveys, and as such, the "ask" to a panelist is greater than for a cross-sectional respondent. The very process of empaneling means, at least, a two-step process: joining a panel and then participating in any given invited survey. As such, it is naturally the case that surveys conducted on panels can have lower response rates than cross-sectional surveys, all else being equal. Such a reality opens the conversation to whether it is important for panels to execute processes that would increase response rates, in effect, making survey effort more vigorous, and as such "less equal" to a typical cross-sectional survey.

One method for increasing survey effort is the use of in-person nonresponse followup methods (NRFU). As one example of this, NORC's probability panel AmeriSpeak® utilizes a NRFU procedure which results in the recruiting of about half of all AmeriSpeak panelists, and a resulting AAPOR recruitment rate between 25 and 30 percent (varying as each year as new recruits are added), the only probability panel recruitment rate, to our knowledge, in double digits. Given the high level of effort to attain panelists via NRFU it is imperative to assess the value of such a practice on nonresponse and data quality. This is the first of a number of research briefs on the topic of evaluating NRFU's efficacy in improving sample representativeness and accuracy in estimates, focusing here on the utility of NRFU for overall response and more representative demographic cross-sections of panelists.

The Problem of Nonresponse

Over the last few decades, the decline in response rates both nationally and globally has become a serious concern for survey researchers (Groves et al., 2009). There are three main sources of nonresponse: 1) non-contacts (households/respondents that cannot be contacted); 2) refusals (a.k.a. lack of respondent cooperation; households/respondents that refuse to complete the survey); 3) other reasons (such as inability to accommodate the language or disability of respondents; administrative and technical issues) (Callegaro, Manfreda, and Vehovar, 2015; Groves et al., 2009; Lavrakas, 2008; Singer, 2006). Thus, studies may not obtain responses from sample units during the recruitment stage and may miss crucial sections of the study target population. Nonresponse decreases effective sample size and hence increases random error (i.e., nonresponse variance). Additionally, nonresponse bias occurs if/when respondents systematically differ from nonrespondents with respect to their demographics and/or variables of interest. The consequence of nonresponse error (bias and variance) is that we obtain less accurate estimates in our studies (Groves, 1989). While the nature of requesting that people join a panel is different than a request to participate in a cross-sectional or longitudinal, survey, the recruitment contact methodologies utilized for these types of surveys are similar. Accordingly, the error sources and types of remedies associated with these errors are similar in these types of surveys.

NRFU Methodology

NORC's AmeriSpeak Panel is unique among other commercially available probability-based research panels in its use of in-person, face-to-face recruitment. AmeriSpeak employs an address-based probability sample frame and uses multiple modes of recruitment, including mail, telephone, and in-person, in a two-stage process: 1) initial recruitment, which uses mail and phone contact strategies; 2) non-response follow-up (NRFU). For subsamples of households not responding during the initial recruitment stage (in which households are contacted via mail and phone), NORC sends FedEx mailings with an enhanced monetary incentive, and conducts in-person face-to-face recruiting. Altogether, these activities constitute the NRFU (non-response follow-up) program that is implemented to improve the response rate, sample representativeness, and accuracy of the study estimates.

Based on the 2014-2021 AmeriSpeak panel recruitment response rate calculations, we found that while weighted household response rate via initial recruitment is around 6% (AAPOR RR3); weighted household response rate via NRFU recruitment is 28% (AAPOR RR3). [1] For all recruitment years, the cumulative weighted household response rate is 21.9%; for recruitment years with NRFU (2014-2018 and 2021), the cumulative weighted household response rate is 34.0%. Accordingly, the NRFU effort drastically increases recruitment response rates. While response rates are one indicator of survey/panel quality, other important measures also factor into overall data quality, such as panel representativeness and sample quality (Biemer and Lyberg, 2003; Groves, 1989). So, it is also important to understand how NRFU impacts panel composition. To do so we compared the overall AmeriSpeak panel composition as well as the composition of the panelists enrolled during the initial and NRFU recruitment stages with Census's American Community Survey (ACS) benchmark distributions. Table 1 below provides the base weighted demographic distribution of the first recruited panelist in a household (HH) among all recruits by initial and NRFU recruitment for the AmeriSpeak Panel recruitment years with NRFU.

The Impact of NRFU on Demographic Nonresponse Error

Based on the results illustrated in Table 1, we observe the following:

- **NRFU significantly improves the representativeness of the panel by increasing the share of younger panelists (ages 18 to 24).** It is nearly always the case that survey underrepresent younger age cohorts. NRFU recruitment corrects this bias by bringing in younger panelists: When compared to the 2020 ACS benchmark, the addition of the NRFU recruits to the initial recruits decreased the absolute error from 5.6% to 1.0% among panelists ages 18-24. Unsurprisingly, then, initial recruitment also tends to over-represent older panelists (ages 55-64) and NRFU recruitment reduces this over-representation. When compared to the 2020 ACS benchmark, the addition of the NRFU panelists to the initial recruits decreased the absolute error from 2.5% to 0.0% among panelists ages 55-64. Having said that, initial recruits tend to be older and NRFU added sample tends to underrepresent the oldest panelist group (ages 65+).

- **NRFU recruitment adds significantly more Hispanic and non-Hispanic Blacks.** The addition of NRFU panelists increased Hispanic participation in the panel. When compared to the 2020 ACS benchmark, the addition of NRFU panelists to the initial recruits decreased absolute error for the Hispanic portion from 5.4% to 1.2%. During NRFU recruitment, groups that are less likely to respond are sampled at a higher rate in order to increase the proportion. Hence, by design, AmeriSpeak over-represents some segments of the population that are usually under-represented. Accordingly, our results reflect the Black oversample during the NRFU recruitment. Additionally, the AmeriSpeak panel tends to over-represent non-Hispanic Blacks. These hard-to-reach groups are under-sampled when appropriate for AmeriSpeak client surveys.

- **NRFU significantly improves the distribution of panelists by educational attainment.** NRFU recruitment corrects the initial skew (again, highly typical of most survey cross-sections) by bringing in

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[1] Response rate calculations are based on the standards of the American Association for Public Opinion Research. http://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf

more panelists with no high school diploma: When compared to the 2020 ACS benchmark, the addition of the NRFU recruits to the initial recruits decreased the absolute error within the education category from 5.4% to 1.9% among panelists with some or no high school education. As such. initial recruitment over-represents panelists with BA and above education.

NRFU recruitment reduces this over-representation. When compared to the 2020 ACS benchmark, the addition of the NRFU panelists to the initial recruits decreased the absolute error within the education category from 9.3% to 1.4% among panelists with BA and above education.

Table 1. Base weighted demographic distribution of the first recruited panelist in a household (HH) among all recruits by initial and NRFU recruitment for AmeriSpeak Panel recruitment years with NRFU (2014-2018 and 2021), Comparative Benchmark[2]

	Benchmark		AmeriSpeak Recruits		Absolute Error (Deviation from ACS)	
	2020 ACS	**Initial Recruits**	**NRFU Recruits**	**All Recruits**	**Initial**	**All**
Age						
18-24	10.73	5.12	10.72	9.71	5.61	1.02
25-34	18.04	16.20	21.68	20.70	1.84	2.66
35-44	16.79	19.16	19.86	19.73	2.37	2.94
45-54	15.91	18.25	17.35	17.51	2.34	1.60
55-64	16.79	19.29	16.24	16.79	2.50	0.00
65+	21.74	21.99	14.15	15.56	0.25	6.18
Race/Hispanic Ethnicity						
White, non-Hispanic	61.73	64.28	54.01	55.85	2.55	5.88
African American, non-Hispanic	11.28	15.81	18.69	18.17	4.53	6.89
Asian, non-Hispanic	6.03	3.43	3.37	3.38	2.60	2.65
Other, non-Hispanic	0.95	1.76	1.54	1.58	0.81	0.63
Hispanic	16.71	11.31	19.29	17.86	5.40	1.15
2+, non-Hispanic	3.30	3.41	3.11	3.16	0.11	0.14
Education						
No HS diploma	10.46	5.11	9.37	8.60	5.35	1.86
HS graduate or equivalent	26.45	16.43	21.45	20.55	10.02	5.90
Some college	29.70	35.81	36.08	36.03	6.11	6.33
BA or above	33.40	42.65	33.10	34.81	9.25	1.41
Gender						
Male	48.32	40.28	40.16	40.18	8.04	8.14
Female	51.68	59.72	59.84	59.82	8.04	8.14

The Center's Perspective

Our first takeaway is that NRFU plays a major role in creating and maintaining a highly representative panel. While it is true that typical RDD and ABS surveys fall short in representing young adults, the lesser educated, and nonwhites, NRFU is highly effective at recruiting exactly these segments. It could be argued that increasing under-represented segments of the overall population is a "minor" advantage given that standard weighting will correct for these errors. However, this perspective does

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[2] NRFU strata containing groups that are less likely to respond are sampled at a higher rate in order to increase the proportion of young adults, non-Hispanic African Americans, and Hispanics recruited in the panel. In order to disentangle this oversampling impact, we examined the base weighted demographic distributions among all recruits by initial and NRFU recruitment for AmeriSpeak Panel.

not take into consider that first, having surveys that underrepresent populations by half is never best practice, and significantly increases the chance of bias in the estimates of these groups, making, in effect, small groups so small as to be inherently unreliable.

Second, AmeriSpeak takes panel health seriously, including the protection of its panelists from burden (see *AmeriSpeak Research Brief Series, 2023*). For population segments significantly under-represented in the panel, AmeriSpeak routinely "over-invites" panelists in these segments in order to produce representative samples of completed interviews for our client surveys. As a result, these over-utilized segments are at higher risk of panel "fatigue" and even "burn-out," necessitating even more intense efforts in sample replacement.

Third and finally, our research supports the conclusion that NRFU improves the representativeness of the panel in terms of survey estimates of behavioral, attitudinal, and opinion measures. For instance, AmeriSpeak research panelists acquired by NRFU have different personality and psychological predispositions and political attitudes as well. NRFU is much more than a method by which to attain more respectable response rates in panels: It is a method by which to significantly improve the representativeness of a panel and the accuracy of the metrics measured therein.

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