

RANDS 5 Technical Documentation

Overview

The National Center for Health Statistics (NCHS) Division of Research and Methodology (DRM) contracted NORC at the University of Chicago (NORC) to conduct round 5 of the Research and Development Survey (RANDS), referred to as RANDS 5 in this documentation.

RANDS is designed to evaluate estimation approaches for health outcomes from recruited panels and quantitative methodologies for measuring error. Similar to previous rounds of RANDS, RANDS 5 was fielded to explore measurement error to guide better questionnaire development, and to understand how recruited web-based panels can be integrated alongside traditional modes of data collection. Specifically, RANDS 5 examined responses to gender identity questions as well as different survey administrations of questions appearing in CDC's National Intimate Partner and Sexual Violence Survey (NISVS). To increase the scope of potential respondents and to evaluate mode effects in panel surveys, both phone-mode and web-mode panelists were included in the RANDS 5 sample.

To evaluate the question-response pattern as in previous rounds of RANDS, RANDS 5 included probe questions and three specific experiments:

- 1) Gender Identification Experiment: Comparing responses from two different question wordings, (a) a general question on how to describe oneself with response options of different gender types along with a "something else, please specify:" option versus (b) a specific question for respondents to describe themselves as a man, a woman, or in some other way.
- 2) National Intimate Partner and Sexual Violence Survey (NISVS) Formatting Experiment: Comparing responses from three different approaches to asking about intimate partner violence-related topics, including physical violence, stalking, and contact sexual violence. The three conditions include (a) a rostering approach (akin to what NISVS used in its 2012 field period), (b) a simplified grouped approach where stalking was asked before sexual violence and physical violence (akin to the NISVS approach in 2016-2017), and (c) an alternative order of the second condition where physical violence was asked before stalking and sexual violence. It is important to note that none of these three conditions on RANDS 5 exactly replicates the NISVS survey, and these data are not designed to produce national estimates on intimate partner violence. For more information on NISVS, please consult <https://www.cdc.gov/violenceprevention/datasources/nisvs/index.html>.
- 3) Open-Ended Probes vs. Close-Ended Probes: Comparing responses from the open-ended question-type versus the close-ended question-type with an option of specifying a method that is not listed in the response options. The experiment was for two probe questions on the method of counting the number of people who had done (a) unwanted sexual touching or sexual violence and (b) physical violence to the respondents. Respondents who received the open-ended probe for one probe question would receive the close-ended probes for the other.

NORC conducted RANDS 5 from January 21, 2022, to March 9, 2022. This documentation describes the sampling approach, data collection timeline, response rate, and sample weighting for the survey.

Sampling

The target population for this study consisted of the general population of the United States aged 18 and older. The source of the sample for this study was NORC's AmeriSpeak Panel (<http://amerispeak.norc.org/>). Funded and operated by NORC at the University of Chicago, AmeriSpeak is a probability-based panel designed to be representative of the U.S. household population. Randomly selected U.S. households were sampled from the NORC National Sample Frame (<https://www.norc.org/Research/Projects/Pages/2010-national-sample-frame.aspx>) and then contacted by U.S. mail, telephone, and through face-to-face field interviews for recruitment to the Panel. As of early 2022, the AmeriSpeak Panel included more than 40,000 U.S. households and provided sample coverage of approximately 97% of the U.S. household population.

For RANDS 5, NORC collaborated with NCHS' Division of Research and Methodology on a stratified sample design to obtain a random and representative sample of U.S. adults aged 18 and over from the AmeriSpeak Panel. The target population was stratified by age (18-34, 35-49, 50-64, 65+), race/Hispanic ethnicity (Hispanic, Non-Hispanic Black, Non-Hispanic All Other), education (Associate's degree/some college or less, Bachelor's degree or above), sex (male, female) and annual household income (less than \$75,000, greater than or equal to \$75,000) for a total of 96 sampling strata. Then, NORC performed sampling independently within each stratum using simple random sampling. The sampling ratios varied by stratum to account for differential nonresponse for each stratum to ensure a representative sample of the target population. If more than one panelist were available in one household, random within-household sampling was carried out to ensure only one adult from the household was eligible for sampling.

Summary of Field Work

RANDS 5 was administered in English via either online web surveys or phone interviews. On November 18, 2021, NORC invited a small sample of AmeriSpeak web-mode panelists for a pretest and collected 120 pretest interviews. Following the pre-test, the following questions were added to the main survey: D09_1_GEN, D09_1_REL, D09_2_GEN, D09_2_REL, D09_3_GEN and D09_3_REL.

For the sampled web-mode panelists, NORC sent e-mail invitations/reminders along with text messages. The soft-launch invitation was sent to some panelists on January 21, 2022. Invitations to additional sampled web panelists were sent on January 27, February 4, and March 1. Email reminders were sent to the invited panelists who had not completed the survey on January 30, February 2, February 6, February 8, February 11, February 14, February 17, February 20, February 26, and March 1. A text message was sent to the invited web-panelists who had agreed to receive such messages on February 23.

For the sampled phone-mode panelists, NORC dialed the numbers of a soft-launch phone-preference sample starting from January 27, 2022. The numbers of additional phone-preference panelists were dialed beginning from February 3 and February 17. NORC dialed the numbers of sampled panelists who prefer to take surveys on the phone from January 27 to March 9.

In total, out of 9,469 panelists sampled, 6,896 completed the interviews (6,234 by web mode and 662 by phone mode), resulting in an overall completion rate of 72.8%. The weighted cumulative response rate was 11.1%. An additional 584 respondents were removed from the dataset prior to post-stratification weighting. Among these 584 respondents, 268 started but did not complete the survey and 316 respondents either completed the survey in less than one third of the median duration and/or had high refusal/skipping rates (defined as refused/skipped more than 50% of eligible questions). Three of the 316 respondents completing the survey quickly or with high refusal/skipping rates were panelists responding through phone interviews, and the rest were through online web surveys.

NCHS did not provide an incentive for participation in RANDS, although NORC offered a non-cash, point-based incentive for responding to surveys such as RANDS, which can be traded for gift cards or other non-cash prizes. For RANDS 5, NORC offered a higher incentive for phone respondents compared to web respondents.

Table 1 reports the sample sizes and response rates by sampling strata.

Table 1. RANDS 5 Response Rates by Sampling Strata

Race/ Ethnicity	Education Level	Age Group (Year)	Gender	Income	Total Sample per Stratum	Completes per Stratum	Response Rate
Non- Hispanic All Other	Associate degree/some college or less	18-34	Male	<\$75,000	380	238	62.63%
Non- Hispanic All Other	Associate degree/some college or less	18-34	Male	≥\$75,000	186	104	55.91%
Non- Hispanic All Other	Associate degree/some college or less	18-34	Female	<\$75,000	573	368	64.22%
Non- Hispanic All Other	Associate degree/some college or less	18-34	Female	≥\$75,000	190	122	64.21%
Non- Hispanic All Other	Bachelor degree or more	18-34	Male	<\$75,000	34	23	67.65%
Non- Hispanic All Other	Bachelor degree or more	18-34	Male	≥\$75,000	191	131	68.59%
Non- Hispanic All Other	Bachelor degree or more	18-34	Female	<\$75,000	23	15	65.22%

Non-Hispanic All Other	Bachelor degree or more	18-34	Female	≥\$75,000	275	198	72.00%
Non-Hispanic All Other	Associate degree/some college or less	35-49	Male	<\$75,000	230	177	76.96%
Non-Hispanic All Other	Associate degree/some college or less	35-49	Male	≥\$75,000	153	132	86.27%
Non-Hispanic All Other	Associate degree/some college or less	35-49	Female	<\$75,000	113	87	76.99%
Non-Hispanic All Other	Associate degree/some college or less	35-49	Female	≥\$75,000	191	161	84.29%
Non-Hispanic All Other	Bachelor degree or more	35-49	Male	<\$75,000	7	4	57.14%
Non-Hispanic All Other	Bachelor degree or more	35-49	Male	≥\$75,000	397	337	84.89%
Non-Hispanic All Other	Bachelor degree or more	35-49	Female	<\$75,000	6	2	33.33%
Non-Hispanic All Other	Bachelor degree or more	35-49	Female	≥\$75,000	379	316	83.38%
Non-Hispanic All Other	Associate degree/some college or less	50-64	Male	<\$75,000	244	202	82.79%
Non-Hispanic All Other	Associate degree/some college or less	50-64	Male	≥\$75,000	242	216	89.26%
Non-Hispanic All Other	Associate degree/some college or less	50-64	Female	<\$75,000	137	102	74.45%
Non-Hispanic All Other	Associate degree/some college or less	50-64	Female	≥\$75,000	269	241	89.59%
Non-Hispanic All Other	Bachelor degree or more	50-64	Male	<\$75,000	6	5	83.33%

Non-Hispanic All Other	Bachelor degree or more	50-64	Male	≥\$75,000	408	358	87.75%
Non-Hispanic All Other	Bachelor degree or more	50-64	Female	<\$75,000	5	3	60.00%
Non-Hispanic All Other	Bachelor degree or more	50-64	Female	≥\$75,000	235	203	86.38%
Non-Hispanic All Other	Associate degree/some college or less	65+	Male	<\$75,000	351	286	81.48%
Non-Hispanic All Other	Associate degree/some college or less	65+	Male	≥\$75,000	175	154	88.00%
Non-Hispanic All Other	Associate degree/some college or less	65+	Female	<\$75,000	276	178	64.49%
Non-Hispanic All Other	Associate degree/some college or less	65+	Female	≥\$75,000	203	182	89.66%
Non-Hispanic All Other	Bachelor degree or more	65+	Male	<\$75,000	15	9	60.00%
Non-Hispanic All Other	Bachelor degree or more	65+	Male	≥\$75,000	327	294	89.91%
Non-Hispanic All Other	Bachelor degree or more	65+	Female	<\$75,000	9	5	55.56%
Non-Hispanic All Other	Bachelor degree or more	65+	Female	≥\$75,000	138	124	89.86%
Non-Hispanic Black	Associate degree/some college or less	18-34	Male	<\$75,000	104	53	50.96%
Non-Hispanic Black	Associate degree/some college or less	18-34	Male	≥\$75,000	16	7	43.75%
Non-Hispanic Black	Associate degree/some college or less	18-34	Female	<\$75,000	266	145	54.51%

Non-Hispanic Black	Associate degree/some college or less	18-34	Female	≥\$75,000	19	11	57.89%
Non-Hispanic Black	Bachelor degree or more	18-34	Male	<\$75,000	7	3	42.86%
Non-Hispanic Black	Bachelor degree or more	18-34	Male	≥\$75,000	6	3	50.00%
Non-Hispanic Black	Bachelor degree or more	18-34	Female	<\$75,000	7	5	71.43%
Non-Hispanic Black	Bachelor degree or more	18-34	Female	≥\$75,000	17	14	82.35%
Non-Hispanic Black	Associate degree/some college or less	35-49	Male	<\$75,000	62	45	72.58%
Non-Hispanic Black	Associate degree/some college or less	35-49	Male	≥\$75,000	15	13	86.67%
Non-Hispanic Black	Associate degree/some college or less	35-49	Female	<\$75,000	72	49	68.06%
Non-Hispanic Black	Associate degree/some college or less	35-49	Female	≥\$75,000	10	9	90.00%
Non-Hispanic Black	Bachelor degree or more	35-49	Male	<\$75,000	2	2	100.00%
Non-Hispanic Black	Bachelor degree or more	35-49	Male	≥\$75,000	23	21	91.30%
Non-Hispanic Black	Bachelor degree or more	35-49	Female	<\$75,000	2	1	50.00%
Non-Hispanic Black	Bachelor degree or more	35-49	Female	≥\$75,000	37	28	75.68%
Non-Hispanic Black	Associate degree/some college or less	50-64	Male	<\$75,000	74	55	74.32%

Non-Hispanic Black	Associate degree/some college or less	50-64	Male	≥\$75,000	20	14	70.00%
Non-Hispanic Black	Associate degree/some college or less	50-64	Female	<\$75,000	55	26	47.27%
Non-Hispanic Black	Associate degree/some college or less	50-64	Female	≥\$75,000	22	18	81.82%
Non-Hispanic Black	Bachelor degree or more	50-64	Male	<\$75,000	1	0	0.00%
Non-Hispanic Black	Bachelor degree or more	50-64	Male	≥\$75,000	24	23	95.83%
Non-Hispanic Black	Bachelor degree or more	50-64	Female	<\$75,000	1	1	100.00%
Non-Hispanic Black	Bachelor degree or more	50-64	Female	≥\$75,000	32	27	84.38%
Non-Hispanic Black	Associate degree/some college or less	65+	Male	<\$75,000	64	52	81.25%
Non-Hispanic Black	Associate degree/some college or less	65+	Male	≥\$75,000	14	8	57.14%
Non-Hispanic Black	Associate degree/some college or less	65+	Female	<\$75,000	67	32	47.76%
Non-Hispanic Black	Associate degree/some college or less	65+	Female	≥\$75,000	5	5	100.00%
Non-Hispanic Black	Bachelor degree or more	65+	Male	<\$75,000	1	1	100.00%
Non-Hispanic Black	Bachelor degree or more	65+	Male	≥\$75,000	18	16	88.89%
Non-Hispanic Black	Bachelor degree or more	65+	Female	<\$75,000	1	1	100.00%

Non-Hispanic Black	Bachelor degree or more	65+	Female	≥\$75,000	12	12	100.00%
Hispanic	Associate degree/some college or less	18-34	Male	<\$75,000	185	91	49.19%
Hispanic	Associate degree/some college or less	18-34	Male	≥\$75,000	44	26	59.09%
Hispanic	Associate degree/some college or less	18-34	Female	<\$75,000	311	172	55.31%
Hispanic	Associate degree/some college or less	18-34	Female	≥\$75,000	51	33	64.71%
Hispanic	Bachelor degree or more	18-34	Male	<\$75,000	40	23	57.50%
Hispanic	Bachelor degree or more	18-34	Male	≥\$75,000	32	16	50.00%
Hispanic	Bachelor degree or more	18-34	Female	<\$75,000	82	49	59.76%
Hispanic	Bachelor degree or more	18-34	Female	≥\$75,000	45	30	66.67%
Hispanic	Associate degree/some college or less	35-49	Male	<\$75,000	104	58	55.77%
Hispanic	Associate degree/some college or less	35-49	Male	≥\$75,000	53	27	50.94%
Hispanic	Associate degree/some college or less	35-49	Female	<\$75,000	209	128	61.24%
Hispanic	Associate degree/some college or less	35-49	Female	≥\$75,000	56	36	64.29%
Hispanic	Bachelor degree or more	35-49	Male	<\$75,000	30	22	73.33%

Hispanic	Bachelor degree or more	35-49	Male	≥\$75,000	58	40	68.97%
Hispanic	Bachelor degree or more	35-49	Female	<\$75,000	63	41	65.08%
Hispanic	Bachelor degree or more	35-49	Female	≥\$75,000	63	39	61.90%
Hispanic	Associate degree/some college or less	50-64	Male	<\$75,000	71	37	52.11%
Hispanic	Associate degree/some college or less	50-64	Male	≥\$75,000	29	20	68.97%
Hispanic	Associate degree/some college or less	50-64	Female	<\$75,000	123	73	59.35%
Hispanic	Associate degree/some college or less	50-64	Female	≥\$75,000	43	32	74.42%
Hispanic	Bachelor degree or more	50-64	Male	<\$75,000	21	17	80.95%
Hispanic	Bachelor degree or more	50-64	Male	≥\$75,000	41	27	65.85%
Hispanic	Bachelor degree or more	50-64	Female	<\$75,000	27	21	77.78%
Hispanic	Bachelor degree or more	50-64	Female	≥\$75,000	49	29	59.18%
Hispanic	Associate degree/some college or less	65+	Male	<\$75,000	39	28	71.79%
Hispanic	Associate degree/some college or less	65+	Male	≥\$75,000	15	9	60.00%
Hispanic	Associate degree/some college or less	65+	Female	<\$75,000	58	33	56.90%

Hispanic	Associate degree/some college or less	65+	Female	≥\$75,000	14	11	78.57%
Hispanic	Bachelor degree or more	65+	Male	<\$75,000	21	12	57.14%
Hispanic	Bachelor degree or more	65+	Male	≥\$75,000	18	14	77.78%
Hispanic	Bachelor degree or more	65+	Female	<\$75,000	18	15	83.33%
Hispanic	Bachelor degree or more	65+	Female	≥\$75,000	12	10	83.33%

Sample Weighting

The final RANDS 5 sample was weighted to account for the sample design and was further weighted to U.S. population counts to account for differential nonresponse and under-coverage of some groups on the sample frame. Sample weights and survey design information must be used in the analysis of these data to produce results with meaningful population representativeness.

Derivation of statistical weights first started with panel base sampling weights. Since the AmeriSpeak Panel is a probability panel, the panel base sampling weights were computed as the inverse probability of selection from the NORC National Sample Frame or other address-based sample frames for the supplemental panel samples. NORC adjusted the panel sampling weights for nonresponse and under-coverage. The sample design and recruitment protocol for the AmeriSpeak Panel involved subsampling initial non-respondent housing units for an in-person follow up. The subsample of housing units that were selected for nonresponse follow-up (NRFU) had their panel base sampling weights inflated by the inverse of the subsampling rate. The base sampling weights were further adjusted to account for unknown eligibility and nonresponse among eligible housing units. The household-level nonresponse-adjusted weights were then post-stratified to external counts of the number of households per census division obtained from the U.S. Census Bureau Current Population Survey (CPS). Final household weights were assigned to each eligible adult in the recruited household, with weight adjustment carried out at the person-level to account for non-responding adults within the household. Furthermore, the person-level panel weights were adjusted by raking to external population totals associated with age, sex, education, race/Hispanic ethnicity, housing tenure, household telephone status, and Census Division using information obtained from the CPS to obtain the final panel weights.

The RANDS 5-specific base sampling weights were derived using a combination of the final panel weights (described above) and the probability of selection into RANDS 5 associated with the sampled panel member. Since not all sampled panel members responded to the survey interview, an adjustment is needed to account for non-respondents. This adjustment decreases

potential nonresponse bias associated with probability-sampled panel members who did not complete the survey. The nonresponse-adjusted survey weights for the study were calculated first by a weighting class method, with the weighting classes defined by age, race/Hispanic ethnicity, sex, education and annual household income, followed by raking the overall survey sampling weights to general population totals associated with the following socio-demographic characteristics: age, sex, education, race/Hispanic ethnicity and Census Division. Any extreme weight was trimmed based on a criterion of minimizing the mean squared error associated with key survey estimates and then weights were re-raked to the same population totals. Once weighting adjustment achieved the goal of matching the CPS population post-stratum totals, the weights provided by NORC (WEIGHT_GP) were proportionally adjusted to sum to the total number of RANDS 5 respondents (n=6,896). NORC also provided another set of weights (WEIGHT_NISVS) that align with the different versions of the NISVS survey formats examined in the RANDS 5. For this weight, the sum of WEIGHT_NISVS is equal to the total number of RANDS 5 respondents (n=6,896) and the sum of WEIGHT_NISVS for each NISVS version is equal to the total number of respondents completing the corresponding NISVS version.

The NORC-provided weights were further calibrated by NCHS through raking using information from the 2020 National Health Interview Survey (NHIS). In order to correct for potential biases due to differences in demographic distribution and health statuses of probability-sampled respondents to RANDS 5 and the 2020 NHIS, the weights (WEIGHT_NISVS) were adjusted by raking to the percentage estimates of demographic and health variables from the 2020 NHIS (i.e. age, sex, education, race/Hispanic ethnicity, Census region, household income, marital status, metropolitan status, diagnosed asthma, diagnosed hypertension, diagnosed diabetes, and diagnosed high cholesterol). The final calibrated weights (WEIGHT_CALIBRATED) were proportionally adjusted to sum to the total number of respondents in the RANDS 5 (n=6,896).

Suggested Citation

National Center for Health Statistics. RANDS 5 Technical Documentation. Hyattsville, Maryland. 2023.