ABOUT THE FIRST VANDERBILT UNIVERSITY POLL – NASHVILLE, SEPTEMBER 2015

This survey was sponsored and funded by the Center for the Study of Democratic Institutions at Vanderbilt University. It was conducted by interviewers at Princeton Survey Research Associates International (PSRAI; www.psrai.com), who also calculated the appropriate sampling error (taking into account design effects) and associated weights to be used in analysis (described in greater detail below). Telephone interviews were conducted in English and Spanish by Princeton Data Source from September 14 to 27, 2015.

This survey was the twelfth carried out by the Poll. The Poll routinely contracts with PSRAI in the manner mentioned above, and PSRAI uses probability methods to randomly select individuals to be interviewed.

This iteration of the Vanderbilt Poll marks the first time surveying only respondents who live in Davidson County, Tennessee. To reach respondents, PSRAI used a sample constructed Survey Sampling International, LLC (SSI) of adults in Nashville who have access to either a landline or cellular telephone. Numbers for the landline sample were drawn with equal probabilities from active blocks (area code + exchange + two-digit block number) containing three or more residential directory listings. Two types of cellular samples were used. The first cellular sample was identified through Random Digit Dialing (RDD), but not list-assisted. The sample was drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers. Active cell phone numbers were targeted by using an activity flag appended by SSI which identifies numbers that are likely to be not active. Inactive numbers were not dialed thus boosting the cell phone sample working rate and productivity. In order to help target minority respondents, especially Hispanics, two other samples were dialed. A second listed cell sample was used to target Nashville residents. Ultimately, this survey's sample was of 1,000 adults residents of Davidson County. Four hundred (400) interviews were completed from the landline RDD sample, 499 interviews were completed from the cell RDD sample, and 101 interviews were conducted from the targeted cell sample.

As many as five attempts were made to contact every sampled telephone number. The sample was released for interviewing in replicates, which are representative subsamples of the larger sample. Using replicates to control the release of sample ensures that complete call procedures are followed for the entire sample. Calls were staggered over times of day and days of the week to maximize the chance of making contact with potential respondents. Each phone number received at least one daytime call when necessary.

For the landline sample, interviewers asked to speak with the adult currently at home with the most recent birthday. For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Once a potential respondent was on the phone, interviewers confirmed that they lived in Davidson County, Tennessee before conducting the full interview.

In order to better capture Nashville's diverse population, PSRAI utilized a professional translation service to translate the English language questionnaire into Spanish. The translation accurately conveys the meaning and intent of the original English version of the questionnaire. All respondents ha the option to be interviewed in either English or Spanish.

All statistical estimates are adjusted to account for systematic non-response as well as a disproportionate sample design in order to ameliorate any loss in statistical efficiency. A two-stage weighting procedure was used to weight this dual-frame sample.

The first stage of weighting corrected for different probabilities of selection associated with the number of adults in each household and each respondent's telephone usage patterns.[1] This weighting also adjusts for the overlapping landline and cell sample frames and the relative sizes of each frame and each sample. The second stage of weighting balanced total sample demographics to population parameters. The sample is balanced to match Davidson County parameters for sex by age, sex by education, race, and telephone usage. The basic weighting parameters came from the US Census Bureau's 2009-2013 5-Year American Community Survey data. The telephone usage parameter came from Davidson County estimates derived from the National Health Interview Survey.[2]

Weights were trimmed to prevent individual interviews from having too much influence on the final results. The use of these weights in statistical analysis ensures that the demographic characteristics of the sample closely approximate the demographic characteristics of the population. Table 1 compares weighted and unweighted sample distributions to population parameters.

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[1] i.e., whether respondents have only a landline telephone, only a cell phone, or both kinds of telephone.

[2] Blumberg SJ, Ganesh N, Luke JV, Gonzales G. Wireless substitution: State-level estimates from the National Health Interview Survey, 2012. National health statistics reports; no 70. Hyattsville, MD: National Center for Health Statistics. 2013.

Table 1: Total Sample Demographics

	Parameter	Unweighted	Weighted
Gender			
Male	47.7	45.1	48.2
Female	52.3	54.9	51.8
Age			
18-24	14.3	5.7	12.9
25-34	23.5	13.1	24.6
35-44	17.6	13.7	17.9
45-64	31.1	38.2	30.6
65+	13.5	29.2	14.0
Education			
HS Grad or less	38.1	31.2	38.1
Some College/Assoc Degree	28.9	24.6	29.6
College Graduate	33.0	44.2	32.3
Race/Ethnicity			
White/not Hispanic	57.3	62.5	56.0
Black/not Hispanic	27.5	23.7	28.5
Hispanic	9.7	10.5	10.3
Other/not Hispanic	5.4	3.3	5.2
		3.7	3.5
Household Phone Use			
LLO	4.1	2.9	3.3
Dual	43.7	59.1	44.6
CPO	52.1	38.0	52.1

Two additional weight variables were computed: one for African-American respondents and one for Hispanic respondents. These weights balanced those groups' demographics to their population parameters for sex, age and education

Table 2 reports the disposition of all sampled telephone numbers ever dialed from the original telephone number samples. This study's response rate for the landline samples was 9 percent; the response rate for the cellular samples was 14 percent. Response rates are computed according to AAPOR standards using the formula below.[3]

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[3] The American Association for Public Opinion Research. 2011. Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 7th edition. AAPOR.

Table 2. Sample Disposition

Landline	Total Cell	RDD Cell	Targeted Cell	
863	247	217	30	Non-residential/Business
0	----	----	----	Cell in landline frame
863	247	217	30	OF = Out of Frame
18,215	2,070	1,995	75	Not working
668	11	8	3	Computer/fax/modem
18,883	2,081	2,003	78	NWC = Not working/computer
1,230	386	383	3	$UHUO_{NC}$ = Non-contact, unknown if household/unknown other
2,313	3,939	3,576	363	Voice mail
15	24	21	3	Other non-contact
2,328	3,963	3,597	366	UO_{NC} = Non-contact, unknown eligibility
1,732	3,650	3,409	241	Refusals
186	1,198	1,088	110	Callbacks
1,918	4,848	4,497	351	UO_R = Refusal, unknown if eligible
8	66	66	0	O = Other (language)
----	347	333	14	Child's cell phone
45	1,044	1,017	27	Not Davison county resident
45	1,391	1,350	41	SO = Screen out
91	209	179	30	R = Refusal, known eligible
400	600	499	101	I = Completed interviews
25,766	13,791	12,791	1,000	T = Total numbers dialed
19.5%	82.6%	82.1%	89.2%	$e1 = (I+R+SO+O+UO_R+UO_{NC})/(I+R+SO+O+UO_R+UO_{NC}+OF+NWC)$ - Est. frame eligibility of non-contacts
91.6%	36.8%	33.4%	76.2%	$e2 = (I+R)/(I+R+SO)$ - Est. screening eligibility of unscreened contacts
48.9%	62.4%	62.8%	58.7%	$CON = [I + R + (e2*[O + UO_R])]/[I + R + (e2*[O + UO_R + UO_{NC}]) + (e1*e2*UHUO_{NC})]$
17.7%	22.9%	22.6%	25.4%	$COOP = I/[I + R + (e2*[O + UO_R])]$
8.7%	**14.3%**	**14.2%**	**14.9%**	**AAPOR** $RR3=I/[I+R+[e2*(UO_R+UO_{NC}+O)]+[e1*e2*UHUO_{NC}]] = CON*COOP$

Including adjustments for design effects, the resulting margin of sampling error for the complete set of weighted data in this survey is ± 3.80 percentage points at a confidence level of 95%. In analysis of questions that required random half samples of respondents, we further adjusted the margin of error to reflect the greater imprecision associated with smaller samples.[4] Appropriately weighted data were used for all analyses. All data analysis was conducted using STATA SE Version 13, which allows for adjustment of standard errors for complex sample designs.

The questionnaire used in this survey, along with topline results, is available at www.vu.edu/poll.

For more information, please contact Shannon Meldon-Corney, Program Coordinator, at the Center for the Study of Democratic Institutions at (615)-875-6954 or at csdi@vanderbilt.edu.

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[4] For more information about these questions and their corresponding sample sizes, please refer to the questionnaire and our topline results at www.vu.edu/poll.