

*Comparison of the 2016 HRS Core
Sample (Age 56+), HRS Venous Blood
Study (VBS) Sample, and Other National
Surveys*

Documentation Report

Stacey Collins, Jung Ki Kim, and Jessica Faul

Survey Research Center
Institute for Social Research
University of Michigan
Ann Arbor, Michigan

March 26, 2026

Funding

The Health and Retirement Study is funded by a grant from the National Institute on Aging (U01AG009740) with supplemental support from the Social Security Administration. HRS is conducted by the University of Michigan.

Suggested Citation

Collins, S., Kim, J.K., Faul, J. (2026). Comparison of the 2016 HRS Core Sample (age 56+), HRS Venous Blood Study (VBS) Sample, and Other National Surveys. University of Michigan. <https://hrs.isr.umich.edu/publications/biblio/15907>

Abstract

The tables in this file present analyses of sample representativeness for the core 2016 HRS, the VBS sample, the VBS innovative (epigenetic sample), the National Health Interview Survey (NHIS), and the National Health and Nutrition Examination Survey (NHANES). The sample is limited to 56+ year olds.

The analysis used 2016 data from the HRS, VBS, and NHIS and the 2015-2018 NHANES exam sample. The tables contrast both weighted and unweighted estimates from the HRS and VBS to weighted statistics from the NHIS and NHANES for common variables, using sample weights provided in each dataset. The results are stratified by race/ethnicity.

Comparison of HRS 2016 Core Sample, HRS VBS Samples, and other National Data by Race/Ethnicity (Ages 56+) (weighted)

WEIGHTED ¹	HRS 2016 core sample			HRS 2016 VBS sample			HRS 2016 VBS innovative sample (epigenetic)			NHANES 2015-2018 (Exam) ² N=4,130			NHIS 2016 ³ N=26,192		
	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White
Total (%)	9.98% n=3,193	9.01% n=2,331	77.13% n=9,839	9.96% n=1,607	8.97% n=1,294	77.84% n=6,016	10.11% n=636	9.02% n=538	77.51% n=2,614	9.72%	9.29%	73.05%	10.09%	9.17%	75.13%
Self-reported hypertension	78.22% n=3,193	62.48% n=2,331	55.74% n=9,839	80.55% n=1,607	64.55% n=1,294	56.14% n=6,016	76.54% n=636	67.98% n=538	56.66% n=2,614	68.80%	54.42%	51.81%	69.39%	57.80%	54.81%
Self-reported diabetes	35.57% n=3,193	38.91% n=2,331	20.78% n=9,839	35.78% n=1,607	39.96% n=1,294	21.51% n=6,016	33.27% n=636	39.63% n=538	22.46% n=2,614	24.87%	28.45%	18.62%	27.33%	29.81%	16.74%
Heart disease	24.64% n=3,193	18.94% n=2,331	25.29% n=9,839	26.32% n=1,607	20.70% n=1,294	25.92% n=6,016	23.58% n=636	23.09% n=538	25.40% n=2,614	15.32%	13.42%	16.51%	20.44%	18.51%	24.35%
Stroke	11.23% n=3,193	7.28% n=2,331	7.44% n=9,839	13.17% n=1,607	8.50% n=1,294	7.57% n=6,016	14.52% n=636	6.74% n=538	7.05% n=2,614	9.42%	4.41%	5.83%	9.19%	5.93%	6.43%
Measured High BP ⁴	34.94% n=2,290	27.70% n=1,625	24.98% n=7,254	33.83% n=1,353	28.14% n=1,070	23.67% n=5,176	35.67% n=537	26.11% n=457	22.84% n=2,271	45.50%	34.52%	29.81%			
Measured High SBP ⁴	30.99% n=2,290	26.09% n=1,625	22.00% n=7,253	30.92% n=1,353	26.38% n=1,070	20.91% n=5,176	33.37% n=537	25.01% n=457	19.81% n=2,271	44.48%	33.77%	28.76%			
High Cholesterol ⁵				9.15% n=1,587	10.14% n=1,287	12.61% n=5,963	7.92% n=636	12.63% n=536	11.60% n=2,605	14.70%	10.88%	13.36%			
Mean Education (SD)	12.64 (1.97) n=3,172	9.77 (3.66) n=2,317	13.83 (2.69) n=9,798	12.52 (2.09) n=1,596	9.47 (3.72) n=1,283	13.79 (2.62) n=5,998	12.73 (2.21) n=630	9.35 (3.79) n=534	13.79 (2.59) n=2,607						
Mean Age (SD)	66.73 (6.22) N=3,193	66.78 (7.00) n=2,331	68.31 (10.66) n=9,839	67.41 (6.60) n=2,383	67.26 (6.99) n=1,950	69.04 (10.19) n=7,658	67.09 (6.84) n=636	67.51 (7.20) n=538	68.97 (10.04) n=2,614						
Female	57.46% n=3,193	54.71% n=2,331	53.15% n=9,839	57.00% n=1,607	56.43% n=1,294	53.43% n=6,016	59.18% n=636	59.91% n=538	52.49% n=2,614	57.86%	54.37%	52.94%	57.37%	53.97%	53.32%
Education group															
0-8 yrs	6.94%	37.41%	2.23%	7.06%	41.39%	2.33%	6.58%	42.25%	2.33%	6.19%	31.39%	1.80%	6.83%	31.79%	2.96%
9-11 yrs	17.13%	13.11%	6.53%	19.10%	11.98%	6.50%	15.14%	10.92%	6.09%	15.46%	12.64%	6.26%	15.67%	12.60%	6.96%
12 yrs	29.25%	20.88%	30.10%	29.45%	19.30%	30.61%	33.71%	19.70%	30.52%	28.39%	18.76%	26.22%	27.71%	19.57%	27.23%
13-15 yrs	27.59%	17.67%	26.30%	26.16%	16.70%	26.14%	22.02%	18.58%	27.42%	30.88%	21.46%	31.26%	27.34%	17.80%	28.61%
16+ yrs	19.10%	10.93%	34.84%	18.23%	10.63%	34.42%	22.55%	8.56%	33.64%	19.08%	15.75%	34.46%	22.45%	18.23%	34.24%
Age group															
51-59 yrs	25.02%	23.21%	15.15%	18.79%	18.36%	16.25%	19.65%	18.43%	16.00%	25.47%	26.19%	19.58%	22.31%	23.70%	19.04%
60-69 yrs	43.60%	47.15%	31.92%	48.55%	48.07%	42.97%	50.27%	46.64%	43.13%	43.73%	42.42%	41.50%	46.57%	45.05%	42.48%
70-79 yrs	19.98%	19.48%	30.14%	21.23%	23.31%	25.22%	18.44%	25.49%	25.63%	20.50%	24.07%	24.64%	21.38%	19.59%	24.34%
80+ yrs	11.40%	10.17%	122.79%	11.43%	10.27%	15.57%	11.64%	9.44%	15.23%	10.30%	7.31%	14.28%	9.74%	11.65%	14.13%
Foreign born	7.13% n=3,189	59.06% n=2,328	3.92% n=9,837	6.62% n=1,607	60.16% n=1,292	3.67% n=6,015	8.28% n=636	63.39% n=537	3.44% n=2,614	8.29%	62.73%	5.11%	12.38%	67.44%	5.40%

¹ For innovative sample: weight (VBSI16WGTRA), pmweight for measured blood pressure. For VBS sample: weight (PVBSWGTR), pmweight for measured blood pressure. For whole sample: weight (pwgtr), pmweight for measured blood pressure. Ns are the N of the dataset. N is based on those with non-zero weight among race groups shown (others are excluded). For %race/ethnicity, others are included in calculation of %, so the total does not sum to 100%. N for individual items vary as shown.

² NHANES heart disease includes coronary heart disease, heart attack, angina, and heart failure, congestive heart failure. NHANES age is topcoded at 80; mean not shown. NHANES education reported in categories; years of schooling to calculate mean not available.

³ NHIS heart disease includes coronary heart disease, angina, heart attack, and any other heart disease/condition. NHIS age is topcoded at 85, mean not shown. NHIS education only contains years of schooling through high school.

⁴ Measured High BP indicates either systolic blood pressure >=140 or diastolic >=90 from 2016 and 2018 physical measures (combined sample across waves). Measured High SBP indicates systolic blood pressure >=140, also using 2016 and 2018 combined physical measures.

⁵ High total cholesterol indicates total cholesterol >=240.

Comparison of HRS 2016 Core Sample (unweighted), HRS VBS Samples(unweighted), and other National Data by Race/Ethnicity (weighted) (Ages 56+)

UNWEIGHTED ¹	HRS 2016 whole sample			HRS 2016 VBS sample			HRS 2016 VBS innovative sample (epigenetic)			NHANES 2015-2018 (Exam) ² N=4,130			NHIS 2016 ³ N=26,192		
	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White	Non-Hispanic Black	Hispanic	Non-Hispanic White
Total (%)	19.99% n=3,193	14.59% n=2,331	61.60% n=9,839	17.47% n=1,607	14.06% n=1,294	65.38% n=6,016	16.29% n=636	13.78% n=538	66.94% n=2,614	9.72%	9.29%	73.05%	10.09%	9.17%	75.13%
Self-reported hypertension	78.08% n=3,193	64.14% n=2,331	59.91% n=9,839	80.58% n=1,607	66.15% n=1,294	60.19% n=6,016	77.36% n=636	67.10% n=538	60.48% n=2,614	68.80%	54.42%	51.81%	69.39%	57.80%	54.81%
Self-reported diabetes	35.64% n=3,193	38.52% n=2,331	22.50% n=9,839	36.96% n=1,607	40.49% n=1,294	23.52% n=6,016	37.11% n=636	38.85% n=538	24.06% n=2,614	24.87%	28.45%	18.62%	27.33%	29.81%	16.74%
Heart disease	23.61% n=3,193	18.62% n=2,331	29.00% n=9,839	25.26% n=1,607	20.17% n=1,294	29.99% n=6,016	24.53% n=636	22.49% n=538	29.65% n=2,614	15.32%	13.42%	16.51%	20.44%	18.51%	24.35%
Stroke	11.06% n=3,193	7.42% n=2,331	9.34% n=9,839	12.45% n=1,607	7.81% n=1,294	8.89% n=6,016	12.58% n=636	7.43% n=538	8.91% n=2,614	9.42%	4.41%	5.83%	9.19%	5.93%	6.43%
Measured High BP ⁴	35.50% n=2,290	26.09% n=1,625	25.23% n=7,254	34.07% n=1,353	27.29% n=1,070	24.56% n=5,176	33.71% n=537	26.26% n=457	24.39% n=2,271	45.50%	34.52%	29.81%			
Measured High SBP ⁴	31.18% n=2,290	23.82% n=1,625	22.63% n=7,253	30.82% n=1,353	24.77% n=1,070	22.28% n=5,176	30.91% n=537	24.07% n=457	22.06% n=2,271	44.48%	33.77%	28.76%			
High Cholesterol ⁵				9.51% n=1,587	10.18% n=1,287	11.55% n=5,963	10.06% n=636	12.13% n=536	10.86% n=2,605	14.70%	10.88%	13.36%			
Mean Education (SD)	12.55 (2.73) n=3,172	9.64 (4.59) n=2,317	13.53 (2.47) n=9,798	12.49 (2.73) n=1,596	9.62 (2.45) n=1,283	13.57 (2.45) n=5,998	12.62 (2.66) n=630	9.40 (4.70) n=534	13.55 (2.45) n=2,607						
Mean Age (SD)	66.73 (9.91) n=3,193	66.66 (8.98) n=2,331	71.20 (10.01) n=9,839	67.20 (10.01) n=2,383	66.62 (8.25) n=1,950	71.46 (9.44) n=7,658	66.93 (8.37) n=636	66.56 (8.34) n=538	71.48 (9.45) n=2,614						
Female	61.32% n=3,193	56.71% n=2,331	57.08% n=9,839	62.23% n=1,607	57.65% n=1,294	56.72% n=6,016	65.25% n=636	58.36% n=538	55.89% n=2,614	57.86%	54.37%	52.94%	57.37%	53.97%	53.32%
Education group															
0-8 yrs	6.97%	38.24%	2.99%	6.89%	39.36%	2.75%	6.03%	41.20%	2.80%	6.19%	31.39%	1.80%	6.83%	31.79%	2.96%
9-11 yrs	17.24%	13.60%	8.25%	18.61%	13.41%	8.14%	17.46%	10.67%	8.09%	15.46%	12.64%	6.26%	15.67%	12.60%	6.96%
12 yrs	31.27%	20.50%	32.97%	31.33%	18.94%	32.59%	32.38%	20.22%	32.80%	28.39%	18.76%	26.22%	27.71%	19.57%	27.23%
13-15 yrs	27.43%	18.21%	25.61%	26.50%	17.85%	25.83%	25.71%	18.73%	26.24%	30.88%	21.46%	31.26%	27.34%	17.80%	28.61%
16+ yrs	17.09%	9.45%	30.19%	16.67%	10.44%	30.69%	18.41%	9.18%	30.07%	19.08%	15.75%	34.46%	22.45%	18.23%	34.24%
Age group															
51-59 yrs	25.02%	23.21%	15.15%	19.42%	18.39%	11.85%	20.91%	19.89%	12.01%	25.47%	26.19%	19.58%	22.31%	23.70%	19.04%
60-69 yrs	43.60%	47.15%	31.92%	48.91%	53.09%	33.66%	48.27%	50.37%	32.79%	43.73%	42.42%	41.50%	46.57%	45.05%	42.48%
70-79 yrs	19.98%	19.48%	30.14%	20.45%	20.09%	32.45%	19.34%	21.75%	33.55%	20.50%	24.07%	24.64%	21.38%	19.59%	24.34%
80+ yrs	11.40%	10.17%	122.79%	11.33%	8.42%	22.04%	11.48%	7.99%	21.65%	10.30%	7.31%	14.28%	9.74%	11.65%	14.13%
Foreign born	6.80% n=3,189	62.37% n=2,328	4.26% n=9,837	5.29% n=1,607	62.77% n=1,292	3.76% n=6,015	6.13% n=636	66.29% n=537	3.98% n=2,614	8.29%	62.73%	5.11%	12.38%	67.44%	5.40%

¹ Ns are the N of the dataset. N is based on those with non-zero weight among race groups shown (others are excluded). For %race/ethnicity, others are included in calculation of %, so the total does not sum to 100%. N for individual items vary as shown. The NHANES and NHIS are weighted using the weights provided by each survey.

² NHANES heart disease includes coronary heart disease, heart attack, angina, and heart failure, congestive heart failure. NHANES age is topcoded at 80; mean not shown. NHANES education reported in categories; years of schooling to calculate mean not available.

³ NHIS heart disease includes coronary heart disease, angina, heart attack, and any other heart disease/condition. NHIS age is topcoded at 85, mean not shown. NHIS education only contains years of schooling through high school.

⁴ Measured High BP indicates either systolic blood pressure >=140 or diastolic >=90 from 2016 and 2018 physical measures (combined sample across waves). Measured High SBP indicates systolic blood pressure >=140, also using 2016 and 2018 combined physical measures.

⁵ High total cholesterol indicates total cholesterol >=240.