

Educational Disparities in Hypertension Prevalence and Blood Pressure Percentiles in the Health and Retirement Study

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Table 1. *Additional weighted descriptive statistics*

	Overall	By education			
	Mean (SD) or %	Less than high school	High school or GED	Associate's or some college	Bachelor's or higher
Childhood SES					
Poor	26.16	48.17	28.63	24.05	16.54
About average	64.58	47.34	66.12	65.72	68.90
Well off	9.26	4.49	5.25	10.23	14.55
Mother's education					
Up to 8 years	24.15	52.22	29.03	18.22	12.98
9-11 years	11.14	10.31	15.12	11.30	7.14
12 years	38.44	15.39	40.51	45.33	39.43
More than 12 years	18.67	1.70	5.71	20.15	37.84
Unknown	7.60	20.38	9.63	5.00	2.62
Childhood health					
Poor/Fair	5.99	12.47	5.19	6.87	3.44
Good	13.73	24.33	14.79	12.40	9.51
Very good	24.23	23.16	25.25	25.39	22.55
Excellent	56.05	40.04	54.77	55.34	64.50
Region of birth					
Northeast	20.64	9.85	19.66	21.31	25.43
Midwest	29.13	14.22	34.29	29.49	29.40
South	28.20	35.63	29.04	28.13	24.38
West	8.85	5.96	7.48	11.43	9.16
Outside U.S.	13.18	34.34	9.52	9.64	11.63
Marital status					

Married/Partnered	66.80	57.07	63.68	66.82	74.00
Divorced/Separated	15.24	16.21	15.60	17.53	12.44
Widowed	11.33	19.41	14.73	9.09	6.49
Never married	6.62	7.31	5.99	6.55	7.07
Total wealth quintile					
Q1: Up to \$7,000	15.71	38.77	17.72	14.07	5.75
Q2: \$7,001 – 85,600	17.93	26.80	22.04	18.44	9.57
Q3: \$85,601 – 226,000	19.67	20.84	24.42	21.04	12.99
Q4: \$226,001 – 598,900	21.73	8.44	20.68	24.46	25.75
Q5: More than \$598,900	24.96	5.15	15.14	21.99	45.93
Body mass index (BMI)	30.20 (6.43)	30.24 (7.50)	30.77 (6.86)	30.50 (6.43)	29.32 (5.40)
Frequency of vigorous physical activity					
Never	50.44	65.27	59.00	49.83	35.98
Monthly or weekly	22.26	18.83	21.25	23.42	23.67
More than once per week	27.30	15.90	19.75	26.75	40.34
Number of alcoholic drinks per week	2.91 (5.14)	2.08 (5.91)	2.61 (5.29)	2.89 (4.88)	3.58 (4.74)
Smoking history					
Never smoked	45.07	37.61	40.57	40.68	56.75
Formerly smoked	40.85	38.31	42.93	43.80	37.04
Currently smokes	14.08	24.07	16.50	15.51	6.21
Diabetes	23.63	35.91	25.71	22.57	17.44
Heart disease	22.69	27.59	25.71	22.23	17.94
Stroke	7.05	11.23	8.06	6.96	4.36
Health insurance					
Private	60.43	28.02	55.79	63.14	75.99
Public	33.97	61.14	38.04	31.17	21.21

None	5.60	10.84	6.16	5.70	2.80
Doctor visits in past two years					
0	7.69	18.66	7.79	6.21	4.47
1-5	38.69	34.13	39.00	40.52	38.57
6-11	28.18	22.29	28.09	27.45	31.32
12-23	16.26	14.92	16.40	16.16	16.75
24 or more	9.18	10.00	8.73	9.66	8.89

Note. N=13,965.

Table 2. Coefficients and standard errors from UQR models of the 1st through 5th percentiles of systolic BP

	1 st percentile	2 nd percentile	3 rd percentile	4 th percentile	5 th percentile
Education					
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	0.45 (1.16)	-0.34 (0.83)	-0.19 (0.70)	-1.21 (0.71)	-0.99 (0.73)
Associate's or some college	0.27 (1.43)	-1.11 (1.04)	-1.56 (0.75) *	-2.13 (0.63) **	-2.26 (0.80) **
Bachelor's or higher	-0.10 (1.38)	-0.88 (1.22)	-1.94 (0.97) *	-3.49 (0.87) ***	-2.91 (0.85) **
Age	0.13 (0.21)	0.41 (0.21)	0.49 (0.17) **	0.44 (0.15) **	0.50 (0.13) ***
Age-squared	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.00) *	-0.01 (0.00) *	-0.01 (0.00) **
Female	-5.36 (0.98) ***	-5.89 (0.88) ***	-5.84 (0.75) ***	-6.03 (0.72) ***	-6.62 (0.67) ***
Race/ethnicity					
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	2.90 (1.23) *	3.23 (0.89) **	2.83 (0.75) ***	2.84 (0.66) ***	3.60 (0.60) ***
Hispanic	1.61 (1.12)	1.24 (1.07)	0.98 (0.94)	-0.14 (1.08)	0.51 (1.01)
Other	-3.10 (3.24)	-3.19 (2.90)	-4.47 (3.07)	-4.92 (2.71)	-4.26 (2.40)
Constant	91.24 (2.09) ***	94.35 (1.80) ***	96.86 (1.25) ***	99.99 (1.16) ***	100.79 (1.13) ***
Systolic BP at percentile	90.33	94.00	96.67	98.33	100.00

Note. N=14,498. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 3. Coefficients and standard errors from UQR models of the 95th through 99th percentiles of systolic BP

	95 th percentile	96 th percentile	97 th percentile	98 th percentile	99 th percentile
Education					
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-5.71 (2.02) **	-5.85 (2.22) *	-4.01 (2.57)	-7.91 (3.63) *	-8.14 (5.96)
Associate's or some college	-9.18 (2.05) ***	-9.72 (2.26) ***	-8.04 (2.47) **	-15.11 (3.51) ***	-14.38 (5.18) **
Bachelor's or higher	-12.29 (1.71) ***	-12.77 (2.05) ***	-11.88 (2.46) ***	-18.55 (3.46) ***	-18.34 (4.95) ***
Age	-0.11 (0.19)	-0.19 (0.19)	-0.37 (0.25)	-0.22 (0.35)	-0.55 (0.50)
Age-squared	0.01 (0.01) *	0.02 (0.01) **	0.02 (0.01) **	0.02 (0.01) *	0.03 (0.02) *
Female	-2.97 (0.92) **	-2.40 (0.90) **	-2.47 (1.06) *	-1.64 (1.33)	-2.52 (2.01)
Race/ethnicity					
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	9.52 (1.52) ***	8.77 (1.61) ***	9.32 (2.02) ***	8.58 (2.76) **	6.78 (3.83)
Hispanic	0.84 (2.08)	0.95 (2.09)	2.55 (2.68)	-0.23 (2.88)	0.31 (4.67)
Other	4.30 (2.47)	4.54 (2.90)	3.84 (3.39)	5.42 (4.22)	4.37 (6.42)
Constant	167.21 (2.46) ***	169.63 (2.44) ***	172.91 (2.71) ***	181.72 (4.18) ***	193.21 (6.08) ***
Systolic BP at percentile	161.33	164.00	167.33	173.00	182.50

Note. N=14,498. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 4. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, among those with diagnosed hypertension

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-1.86 (0.83) *	-1.34 (1.06)	-0.74 (0.89)	-1.46 (0.92)	-2.60 (1.12) *	-3.68 (1.76) *
Associate's or some college	-3.74 (0.80) ***	-2.83 (0.95) **	-2.42 (0.97) *	-2.90 (0.88) **	-4.61 (1.38) **	-6.41 (1.97) **
Bachelor's or higher	-4.04 (0.95) ***	-1.38 (1.06)	-2.48 (1.08) *	-3.70 (1.08) **	-4.65 (1.36) **	-8.61 (1.88) ***
Age	-0.03 (0.12)	0.17 (0.14)	-0.01 (0.13)	-0.05 (0.14)	-0.01 (0.18)	-0.15 (0.23)
Age-squared	0.01 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.01)
Female	-4.21 (0.44) ***	-4.14 (0.68) ***	-4.66 (0.60) ***	-4.59 (0.57) ***	-4.46 (0.78) ***	-3.39 (1.13) **
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	2.94 (0.71) ***	0.02 (0.91)	0.98 (0.82)	2.12 (0.93) *	4.82 (1.06) ***	6.87 (1.20) ***
Hispanic	0.79 (0.82)	-0.14 (1.06)	0.10 (0.83)	0.45 (0.97)	1.73 (1.09)	3.33 (2.05)
Other	4.36 (1.22) **	3.80 (1.28) **	3.17 (1.58) *	4.25 (1.39) **	5.39 (2.24) *	7.40 (2.65) **
Constant	134.50 (1.24) ***	111.66 (1.31) ***	121.86 (1.56) ***	132.83 (1.54) ***	145.39 (2.03) ***	160.41 (2.80) ***
Systolic BP at percentile		109.33	119.00	130.00	143.00	156.67

Note. N=8,917. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 5. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, among those without diagnosed hypertension

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-1.67 (1.01)	-0.98 (1.01)	-1.54 (1.03)	0.31 (1.23)	-0.44 (1.31)	-3.57 (2.72)
Associate's or some college	-2.78 (1.00) **	-2.77 (1.13) *	-1.58 (1.03)	-0.53 (1.33)	-1.89 (1.39)	-6.50 (2.54) *
Bachelor's or higher	-5.12 (1.11) ***	-3.68 (1.12) **	-3.47 (1.15) **	-3.13 (1.28) *	-4.18 (1.34) **	-8.94 (2.63) **
Age	0.44 (0.10) ***	0.45 (0.17) **	0.28 (0.14) *	0.57 (0.14) ***	0.64 (0.14) ***	0.49 (0.19) *
Age-squared	-0.00 (0.00)	-0.01 (0.00)	-0.00 (0.00)	-0.01 (0.00)	-0.01 (0.00) *	-0.00 (0.01)
Female	-7.25 (0.52) ***	-7.66 (0.81) ***	-7.65 (0.61) ***	-7.94 (0.65) ***	-7.33 (0.81) ***	-6.13 (1.24) ***
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	5.51 (1.05) ***	3.40 (0.77) ***	3.55 (0.93) ***	4.72 (1.14) ***	7.48 (1.41) ***	8.39 (2.91) **
Hispanic	1.09 (0.91)	-0.45 (1.19)	0.04 (0.99)	1.49 (1.04)	1.90 (1.16)	1.00 (2.02)
Other	-1.24 (1.54)	-3.18 (2.39)	-1.65 (1.75)	0.07 (1.84)	0.15 (2.12)	1.49 (2.64)
Constant	124.90 (1.21) ***	104.95 (1.41) ***	114.48 (1.39) ***	121.01 (1.74) ***	132.67 (1.81) ***	148.02 (2.78) ***
Systolic BP at percentile		102.00	111.00	121.00	132.67	144.67

Note. N=5,581. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 6. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, among those with diagnosed, treated hypertension and uncontrolled BP

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-0.14 (0.89)	-0.50 (0.99)	0.29 (0.57)	-0.40 (0.84)	-0.46 (1.50)	0.25 (2.69)
Associate's or some college	-2.26 (0.90) *	-2.15 (1.07) *	-1.72 (0.83) *	-2.44 (1.00) *	-2.56 (1.60)	-4.74 (2.78)
Bachelor's or higher	-4.11 (0.96) ***	-2.70 (1.15) *	-1.72 (0.82) *	-4.20 (1.07) ***	-5.60 (1.84) **	-9.12 (2.33) ***
Age	0.34 (0.13) *	1.04 (0.21) ***	0.53 (0.11) ***	0.33 (0.14) *	-0.06 (0.22)	-0.42 (0.41)
Age-squared	-0.00 (0.00)	-0.02 (0.00) **	-0.01 (0.00) **	-0.00 (0.00)	0.01 (0.01)	0.02 (0.01)
Female	-1.28 (0.76)	-5.25 (0.97) ***	-1.83 (0.66) **	-0.52 (0.79)	-0.55 (0.99)	1.07 (1.79)
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	2.37 (0.77) **	2.27 (1.13) *	1.36 (0.68)	2.01 (0.81) *	2.90 (1.22) *	2.47 (2.65)
Hispanic	2.46 (0.96) *	2.29 (1.34)	2.64 (0.72) ***	2.68 (1.16) *	2.57 (1.72)	0.35 (3.1)
Other	2.51 (1.55)	1.09 (2.47)	1.21 (1.27)	3.46 (1.65) *	2.44 (2.40)	5.52 (5.32)
Constant	147.91 (1.41) ***	129.80 (2.07) ***	138.53 (1.16) ***	145.39 (1.58) ***	158.50 (2.56) ***	173.31 (4.15) ***
Systolic BP at percentile		137.67	142.67	148.67	158.67	170.67

Note. N=2,720. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 7. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, among those with diagnosed, treated hypertension and controlled BP

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-0.11 (0.71)	-1.71 (1.29)	-0.46 (1.11)	0.10 (0.96)	-0.05 (0.86)	-0.12 (0.88)
Associate's or some college	-0.94 (0.68)	-2.82 (1.25) *	-2.28 (1.15)	-0.99 (1.04)	-0.53 (0.85)	-0.60 (0.87)
Bachelor's or higher	-0.18 (0.69)	0.35 (1.17)	-0.94 (1.26)	-0.81 (0.92)	-0.45 (0.83)	-0.30 (0.77)
Age	0.26 (0.09) **	0.42 (0.20) *	0.32 (0.15) *	0.26 (0.11) *	0.24 (0.09) *	0.06 (0.11)
Age-squared	-0.00 (0.00) *	-0.01 (0.01) *	-0.01 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
Female	-2.78 (0.35) ***	-4.07 (0.81) ***	-3.44 (0.65) ***	-3.64 (0.47) ***	-1.92 (0.45) ***	-0.99 (0.43) *
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	-0.13 (0.47)	-0.25 (1.26)	-0.26 (0.89)	-0.33 (0.62)	-0.32 (0.63)	-0.03 (0.46)
Hispanic	0.08 (0.60)	-0.93 (1.63)	-0.43 (1.15)	0.03 (0.75)	0.30 (0.80)	0.37 (0.78)
Other	1.42 (1.10)	0.98 (2.32)	1.64 (1.66)	1.71 (1.56)	2.74 (1.52)	1.12 (1.42)
Constant	120.7 (0.93) ***	106.64 (1.99) ***	113.98 (1.62) ***	122.72 (1.37) ***	128.84 (1.25) ***	135.21 (1.16) ***
Systolic BP at percentile		105.67	114.00	122.67	130.00	135.67

Note. N=5,191. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 8. *Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, adjusting for potential early-life confounders*

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-2.14 (0.70) **	-2.03 (0.70) **	-1.91 (0.68) **	-1.07 (0.73)	-2.12 (1.08)	-4.92 (1.68) **
Associate's or some college	-3.82 (0.70) ***	-2.44 (0.81) **	-3.00 (0.76) ***	-2.55 (0.77) **	-4.54 (1.10) ***	-6.65 (1.69) ***
Bachelor's or higher	-5.77 (0.79) ***	-3.64 (0.94) ***	-5.21 (0.93) ***	-5.06 (0.91) ***	-6.03 (1.16) ***	-9.39 (1.57) ***
Age	0.34 (0.07) ***	0.49 (0.12) ***	0.44 (0.10) ***	0.39 (0.09) ***	0.39 (0.10) ***	0.12 (0.18)
Age-squared	-0.00 (0.00)	-0.01 (0.00) *	-0.01 (0.00) *	-0.00 (0.00)	0.00 (0.00)	0.01 (0.01)
Female	-5.94 (0.34) ***	-6.89 (0.54) ***	-6.90 (0.48) ***	-6.48 (0.40) ***	-6.17 (0.51) ***	-3.80 (0.82) ***
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	4.78 (0.69) ***	2.75 (0.71) ***	3.59 (0.69) ***	3.65 (0.84) ***	5.98 (1.08) ***	8.33 (1.32) ***
Hispanic	1.27 (0.73)	-0.48 (1.12)	0.82 (0.83)	0.71 (0.80)	1.25 (0.97)	2.32 (1.61)
Other	2.08 (0.99) *	-0.29 (1.53)	1.37 (1.15)	1.74 (1.06)	2.76 (1.47)	4.98 (2.29) *
Childhood SES						
Poor	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
About average	0.10 (0.48)	0.76 (0.58)	0.57 (0.51)	0.49 (0.60)	-0.93 (0.72)	0.12 (1.10)
Well off	-0.12 (0.73)	-2.02 (1.28)	-0.13 (0.96)	0.66 (0.91)	-0.33 (1.02)	1.67 (1.83)
Mother's education						
Up to 8 years	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
9-11 years	0.64 (0.67)	0.23 (0.88)	0.24 (0.72)	0.20 (0.84)	1.78 (1.09)	0.79 (1.62)
12 years	-0.31 (0.56)	-0.80 (0.71)	0.07 (0.74)	-0.52 (0.62)	0.37 (0.91)	-1.69 (1.32)
More than 12 years	-0.80 (0.57)	-0.19 (0.93)	-0.42 (0.83)	-0.68 (0.71)	-1.01 (0.99)	-3.45 (1.14) **
Unknown	-0.37 (1.02)	-1.24 (1.19)	-1.93 (1.13)	-2.08 (0.98) *	0.49 (1.27)	1.81 (2.18)
Childhood health						
Poor/Fair	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

Good	-0.48 (1.05)	-0.90 (1.09)	-0.50 (1.13)	-2.16 (1.23)	-0.66 (1.53)	1.91 (2.18)
Very good	-0.50 (0.85)	-1.66 (1.05)	-1.19 (1.05)	-1.22 (1.01)	-0.22 (1.49)	0.23 (1.84)
Excellent	-0.01 (0.83)	-0.75 (1.05)	-0.34 (1.00)	-0.65 (1.04)	-0.23 (1.45)	0.74 (1.83)
Region of birth						
Northeast	-1.02 (0.61)	-0.64 (0.83)	-0.40 (0.64)	-0.60 (0.74)	-1.29 (1.11)	-1.65 (1.42)
Midwest	-1.03 (0.50) *	-0.24 (0.74)	-0.12 (0.72)	-1.05 (0.68)	-1.82 (0.71) *	-1.55 (1.21)
South	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
West	-0.77 (0.74)	-0.33 (1.04)	0.17 (0.84)	-0.54 (0.96)	-0.81 (1.18)	-0.51 (1.52)
Outside U.S.	-1.27 (0.67)	-0.49 (1.24)	-0.34 (0.85)	-0.81 (0.72)	-0.96 (1.03)	-2.33 (1.64)
Constant	130.18 (1.27) ***	108.35 (1.69) ***	116.75 (1.68) ***	128.62 (1.70) ***	140.96 (1.71) ***	156.00 (2.73) ***
<hr/>						
Systolic BP at percentile		105.33	114.67	126.33	138.67	152.33

Note. N=13,965. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 9. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, adjusting for potential early-life confounders and adult socioeconomic and health-related covariates

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-1.55 (0.67) *	-2.15 (0.73) **	-1.91 (0.71) **	-0.77 (0.73)	-1.16 (1.02)	-3.52 (1.63) *
Associate's or some college	-2.82 (0.71) ***	-2.39 (0.90) *	-2.77 (0.79) **	-1.96 (0.79) *	-3.07 (1.11) **	-4.49 (1.66) **
Bachelor's or higher	-4.25 (0.82) ***	-3.39 (1.04) **	-4.84 (0.99) ***	-4.13 (0.95) ***	-3.79 (1.17) **	-6.17 (1.56) ***
Age	0.47 (0.08) ***	0.63 (0.12) ***	0.57 (0.10) ***	0.50 (0.10) ***	0.52 (0.11) ***	0.30 (0.19)
Age-squared	-0.00 (0.00)	-0.01 (0.00) **	-0.01 (0.00) *	-0.00 (0.00)	-0.00 (0.00)	0.01 (0.01)
Female	-5.49 (0.35) ***	-6.39 (0.59) ***	-6.44 (0.53) ***	-6.05 (0.42) ***	-5.54 (0.52) ***	-3.45 (0.94) ***
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	3.58 (0.69) ***	1.93 (0.72) **	2.88 (0.71) ***	2.78 (0.84) **	4.62 (1.15) ***	6.55 (1.39) ***
Hispanic	0.32 (0.78)	-1.04 (1.10)	0.13 (0.81)	-0.04 (0.86)	0.26 (1.08)	1.12 (1.68)
Other	2.35 (0.95) *	0.40 (1.47)	1.89 (1.12)	2.02 (1.06)	2.92 (1.40) *	5.09 (2.28) *
Childhood SES						
Poor	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
About average	0.07 (0.48)	0.74 (0.57)	0.55 (0.51)	0.45 (0.60)	-0.96 (0.72)	0.03 (1.13)
Well off	-0.00 (0.74)	-1.58 (1.26)	0.21 (0.98)	0.81 (0.91)	-0.42 (1.04)	1.49 (1.86)
Mother's education						
Up to 8 years	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
9-11 years	0.55 (0.64)	0.13 (0.84)	0.22 (0.67)	0.15 (0.83)	1.59 (1.07)	0.55 (1.53)
12 years	-0.16 (0.54)	-0.70 (0.69)	0.20 (0.71)	-0.37 (0.62)	0.49 (0.90)	-1.43 (1.29)
More than 12 years	-0.57 (0.57)	-0.04 (0.94)	-0.21 (0.81)	-0.50 (0.70)	-0.79 (0.95)	-3.11 (1.12) **
Unknown	-0.42 (1.01)	-1.02 (1.17)	-1.70 (1.14)	-2.04 (0.96) *	0.27 (1.28)	1.45 (2.18)
Childhood health						
Poor/Fair	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

Good	-0.79 (1.00)	-1.46 (1.05)	-1.09 (1.12)	-2.52 (1.19) *	-0.81 (1.48)	1.89 (2.09)
Very good	-0.82 (0.83)	-2.32 (1.01) *	-1.86 (1.06)	-1.62 (0.98)	-0.35 (1.47)	0.27 (1.81)
Excellent	-0.28 (0.8)	-1.42 (0.99)	-1.00 (1.00)	-1.02 (1.04)	-0.32 (1.44)	0.92 (1.81)
Region of birth						
Northeast	-1.13 (0.61)	-0.88 (0.86)	-0.54 (0.64)	-0.71 (0.74)	-1.40 (1.11)	-1.73 (1.40)
Midwest	-1.22 (0.49) *	-0.51 (0.77)	-0.38 (0.73)	-1.22 (0.68)	-1.99 (0.70) **	-1.74 (1.18)
South	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
West	-0.87 (0.74)	-0.49 (1.09)	-0.02 (0.81)	-0.69 (0.95)	-0.89 (1.15)	-0.47 (1.52)
Outside U.S.	-1.28 (0.66)	-0.44 (1.23)	-0.38 (0.84)	-0.77 (0.73)	-0.94 (1.03)	-2.38 (1.64)
Marital status						
Married/Partnered	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Divorced/Separated	0.47 (0.58)	-0.11 (0.93)	-0.27 (0.68)	0.18 (0.65)	1.43 (0.85)	1.01 (1.28)
Widowed	1.38 (0.56) *	0.28 (0.88)	0.98 (0.68)	1.21 (0.68)	1.20 (0.87)	2.46 (1.36)
Never married	0.85 (0.82)	1.92 (0.91) *	1.22 (0.91)	0.42 (1.16)	0.25 (1.55)	0.57 (1.94)
Total wealth quintile						
Q1: Up to \$7,000	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Q2: \$7,001 – 85,600	-1.10 (0.56)	-0.47 (0.84)	-1.36 (0.75)	-0.39 (0.81)	-1.09 (0.86)	-1.46 (1.43)
Q3: \$85,601 – 226,000	-1.25 (0.74)	-1.23 (0.89)	-0.79 (0.84)	-0.97 (0.88)	-0.59 (1.19)	-1.52 (1.65)
Q4: \$226,001 – 598,900	-2.38 (0.64) ***	-1.67 (1.09)	-1.80 (0.81) *	-1.47 (0.80)	-2.91 (1.24) *	-2.51 (1.75)
Q5: More than \$598,900	-1.98 (0.83) *	-1.78 (1.13)	-1.46 (0.85)	-1.36 (0.97)	-1.74 (1.39)	-2.87 (1.82)
Body mass index (BMI)	0.37 (0.03) ***	0.49 (0.05) ***	0.45 (0.04) ***	0.34 (0.04) ***	0.31 (0.05) ***	0.31 (0.07) ***
Freq. of vigorous physical activity						
Never	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Monthly or weekly	0.56 (0.54)	1.16 (0.80)	1.77 (0.69) *	0.18 (0.67)	0.51 (0.84)	-0.44 (1.05)
More than once per week	-0.45 (0.52)	1.19 (0.73)	0.16 (0.63)	-0.23 (0.67)	-1.04 (0.76)	-2.36 (1.17) *
N alcoholic drinks per week	0.31 (0.04) ***	0.26 (0.06) ***	0.31 (0.04) ***	0.31 (0.05) ***	0.37 (0.07) ***	0.41 (0.10) ***
Smoking history						
Never smoked	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Formerly smoked	-1.53 (0.42) ***	-0.61 (0.60)	-1.64 (0.55) **	-1.17 (0.56) *	-1.59 (0.69) *	-2.81 (0.86) **

Currently smokes	0.84 (0.61)	0.40 (0.86)	-0.50 (0.75)	0.25 (0.69)	2.23 (1.08) *	3.12 (1.67)
Diabetes	1.39 (0.55) *	0.42 (0.56)	1.10 (0.51) *	1.79 (0.51) **	1.34 (0.89)	1.37 (1.08)
Heart disease	-2.32 (0.56) ***	-2.67 (0.79) **	-2.35 (0.57) ***	-2.71 (0.68) ***	-2.26 (0.71) **	-2.46 (0.82) **
Stroke	1.48 (0.88)	-0.34 (0.90)	0.22 (0.90)	2.24 (0.99) *	2.43 (1.25)	3.01 (1.92)
Health insurance						
Private	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Public	-0.35 (0.50)	-1.35 (0.65) *	-0.97 (0.48) *	-0.78 (0.65)	0.23 (0.87)	0.44 (1.12)
None	0.37 (1.02)	0.04 (1.49)	0.97 (1.15)	-0.31 (1.23)	0.47 (1.43)	-0.06 (1.94)
Doctor visits in past two years						
0	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
1-5	-2.66 (0.94) **	0.31 (1.19)	-0.15 (0.91)	-1.77 (0.82) *	-3.57 (1.23) **	-6.48 (2.12) **
6-11	-3.43 (1.00) **	-0.51 (1.20)	-1.12 (0.99)	-2.47 (1.00) *	-4.26 (1.23) **	-6.61 (2.18) **
12-23	-3.85 (0.99) ***	-0.45 (1.24)	-0.98 (1.04)	-2.77 (1.02) **	-5.71 (1.23) ***	-7.73 (2.54) **
24 or more	-5.15 (1.14) ***	-2.21 (1.39)	-2.41 (1.28)	-3.74 (1.17) **	-5.95 (1.41) ***	-9.67 (2.19) ***
Constant	120.86 (1.84) ***	93.08 (2.92) ***	103.51 (2.57) ***	119.35 (2.32) ***	133.05 (2.47) ***	150.75 (4.13) ***
Systolic BP at percentile		105.33	114.67	126.33	138.67	152.33

Note. N=13,965. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 10. Coefficients and standard errors from OLS linear regression and UQR models of diastolic BP

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-0.26 (0.36)	0.35 (0.54)	0.07 (0.47)	0.00 (0.35)	0.02 (0.58)	-2.43 (1.05) *
Associate's or some college	-0.50 (0.37)	-0.01 (0.56)	0.48 (0.44)	-0.27 (0.37)	0.37 (0.55)	-2.66 (1.06) *
Bachelor's or higher	-1.64 (0.39) ***	-0.12 (0.47)	-0.56 (0.46)	-1.35 (0.42) **	-1.72 (0.58) **	-5.16 (1.02) ***
Age	-0.21 (0.04) ***	-0.07 (0.07)	-0.13 (0.06) *	-0.22 (0.06) ***	-0.25 (0.06) ***	-0.36 (0.10) **
Age-squared	-0.00 (0.00)	-0.01 (0.00) *	-0.00 (0.00) *	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Female	-1.11 (0.22) ***	-0.90 (0.30) **	-0.98 (0.27) ***	-1.18 (0.26) ***	-1.40 (0.37) ***	-1.28 (0.45) **
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	2.47 (0.32) ***	1.02 (0.31) **	1.23 (0.34) **	1.74 (0.38) ***	3.03 (0.44) ***	4.30 (0.62) ***
Hispanic	-0.85 (0.35) *	-0.27 (0.51)	-0.86 (0.48)	-0.62 (0.37)	-0.61 (0.50)	-2.86 (0.78) ***
Other	1.36 (0.58) *	-0.25 (0.65)	0.65 (0.66)	1.36 (0.67) *	2.09 (0.80) *	1.59 (1.16)
Constant	82.83 (0.47) ***	68.20 (0.60) ***	74.57 (0.54) ***	82.23 (0.61) ***	89.39 (0.74) ***	100.63 (1.20) ***
Diastolic BP at percentile		65.00	71.00	78.00	85.33	93.00

Note. N=14,498. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 11. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, measuring education with years of schooling

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Years of schooling	-0.74 (0.08) ***	-0.38 (0.12) **	-0.60 (0.11) ***	-0.67 (0.10) ***	-0.89 (0.11) ***	-1.27 (0.13) ***
Age	0.35 (0.07) ***	0.50 (0.11) ***	0.43 (0.10) ***	0.39 (0.09) ***	0.37 (0.10) ***	0.19 (0.17)
Age-squared	-0.00 (0.00)	-0.01 (0.00) **	-0.01 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.01 (0.01)
Female	-5.92 (0.33) ***	-6.91 (0.54) ***	-6.93 (0.45) ***	-6.37 (0.39) ***	-6.07 (0.51) ***	-3.59 (0.83) ***
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	5.40 (0.62) ***	3.33 (0.66) ***	3.73 (0.62) ***	3.93 (0.73) ***	7.01 (0.97) ***	9.82 (1.29) ***
Hispanic	1.02 (0.57)	0.00 (0.89)	0.69 (0.69)	0.27 (0.62)	1.00 (0.74)	2.78 (1.38) *
Other	1.98 (0.96) *	-0.57 (1.67)	1.11 (1.08)	1.89 (0.99)	3.13 (1.39) *	5.12 (1.97) *
Constant	129.60 (0.77) ***	106.37 (1.13) ***	116.75 (1.11) ***	128.17 (1.10) ***	140.51 (1.07) ***	154.72 (1.66) ***
Systolic BP at percentile		105.33	114.67	126.33	138.67	152.33

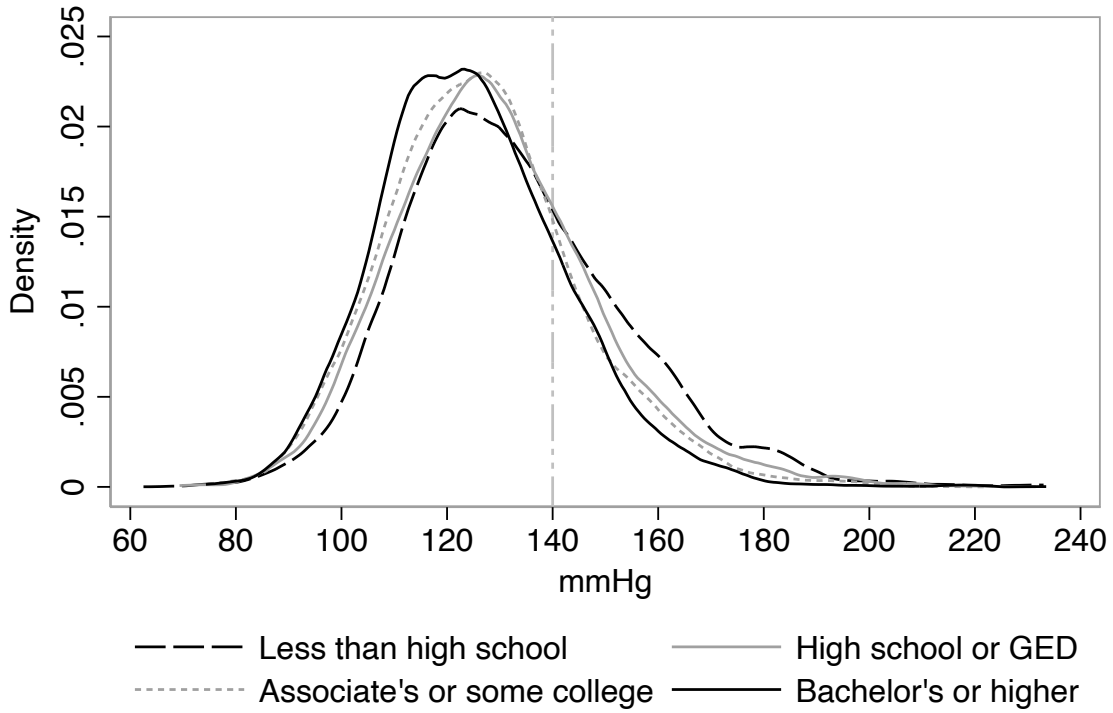
Note. N=14,498. Standard errors in parentheses. Years of schooling ranges from 8 or fewer to 17 or more, and is centered at 8. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); NH=Non-Hispanic; OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Table 12. Coefficients and standard errors from OLS linear regression and UQR models of systolic BP, among those aged 51-69

	OLS	UQR				
	Mean	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Education						
Less than high school	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
High school or GED	-2.85 (0.89) **	-3.39 (0.86) ***	-1.55 (0.81)	-1.18 (0.89)	-3.18 (1.26) *	-6.54 (2.27) **
Associate's or some college	-4.99 (0.89) ***	-3.61 (0.80) ***	-2.56 (0.87) **	-3.12 (0.91) **	-6.34 (1.39) ***	-9.10 (2.16) ***
Bachelor's or higher	-7.34 (0.93) ***	-4.62 (0.94) ***	-4.90 (1.02) ***	-6.02 (0.99) ***	-8.70 (1.30) ***	-12.12 (2.00) ***
Age	0.09 (0.19)	0.14 (0.28)	-0.08 (0.25)	0.29 (0.24)	-0.19 (0.29)	0.11 (0.38)
Age-squared	0.01 (0.01)	0.01 (0.01)	0.02 (0.01)	0.00 (0.01)	0.03 (0.02)	0.02 (0.02)
Female	-8.05 (0.43) ***	-8.39 (0.62) ***	-8.12 (0.57) ***	-8.36 (0.54) ***	-8.56 (0.65) ***	-7.39 (0.96) ***
Race/ethnicity						
Non-Hispanic White	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Non-Hispanic Black	5.74 (0.80) ***	3.16 (0.67) ***	3.25 (0.82) ***	4.16 (0.97) ***	6.82 (1.16) ***	9.44 (1.62) ***
Hispanic	0.91 (0.68)	-0.68 (0.90)	0.00 (0.74)	0.64 (0.66)	0.50 (0.93)	3.32 (1.75)
Other	1.93 (1.06)	-0.66 (1.75)	0.81 (1.28)	1.76 (1.04)	2.94 (1.41) *	4.65 (2.49)
Constant	131.89 (1.16) ***	110.27 (1.33) ***	119.00 (1.52) ***	128.82 (1.49) ***	144.51 (1.69) ***	157.53 (2.62) ***
Systolic BP at percentile		104.67	113.33	124.67	137.00	149.67

Note. N=8,917. Standard errors in parentheses. Age is centered at 51 years. BP=Blood pressure, measured in millimeters of mercury (mmHg); OLS=Ordinary least squares; Ref=Reference; UQR=Unconditional quantile regression. Two-sided significance tests: *** $P < .001$; ** $P < .01$; * $P < .05$

Figure 1. Kernel density plots of systolic BP by education



Note. N=14,498. BP=Blood pressure, measured in millimeters of mercury (mmHg). The dashed vertical line indicates the recommended systolic BP threshold for hypertension when respondents were surveyed (140 mmHg) (Chobanian et al., 2003).

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