Supplementary Material

Telomere length and socioeconomic status at neighborhood and individual levels among 80,000 adults in the GERA cohort

Stacey E. Alexeeff[1], Catherine A. Schaefer[1], Mark N. Kvale[2], Jun Shan[1], Elizabeth H. Blackburn[2], Neil Risch[1,2], Dilrini K. Ranatunga[1], Eric Jorgenson[1], Thomas J. Hoffmann[2], Lori C. Sakoda[1], Charles P. Quesenberry[1], Stephen K. Van Den Eeden[1]
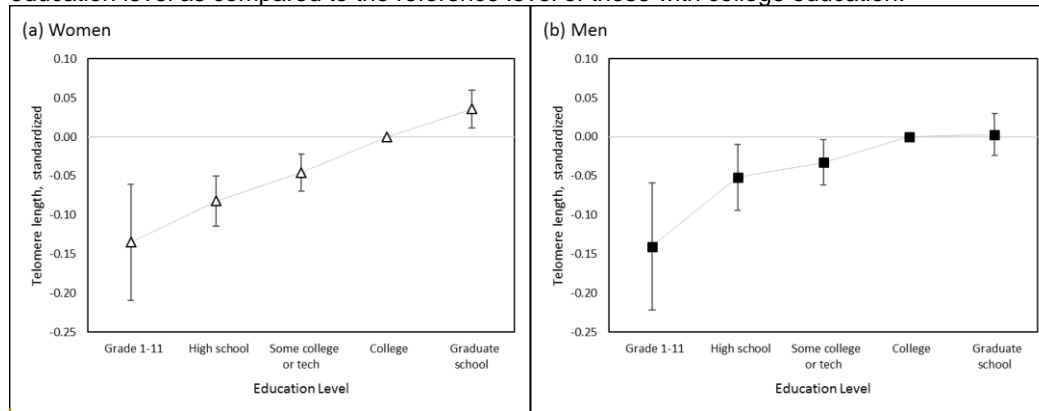
[1] Kaiser Permanente Northern California, Division of Research, Oakland, CA 94612

[2] University of California San Francisco, San Francisco, CA 94143

Supplementary Figure 1. Map of the 22-county service area that covers over 28,000 square miles in northern California where cohort members lived.

Supplementary Figure 2. Association between standardized telomere length and education level by sex in the fully adjusted model*, showing the effect estimate and 95% CI for each education level as compared to the reference level of those with college education.

* Fully adjusted model includes age, sex, smoking, BMI, comorbidities, diet, NDI, education level. There were no statistically significant differences in the associations between education level and telomere length by sex (p-value for interaction 0.3323 0.1338).

Supplementary Table 1. Association of standardized telomere length with education level overall and by sex.

Education	Minimally adjusted model[†]			Fully adjusted model[§]		
	Effect estimate	95% CI	p-value*	Effect estimate	95% CI	p-value*
Education			<0.0001			<0.0001
Grade 1-11	-0.1523	(-0.2057, -0.0989)		-0.1371	(-0.1919, -0.0823)	
High school	-0.0812	(-0.1062, -0.0563)		-0.0719	(-0.0976, -0.0462)	
Some college or tech	-0.0459	(-0.0640, -0.0279)		-0.0408	(-0.0593, -0.0223)	
College	0.0000	Reference		0.0000	Reference	
Graduate school	0.0215	(0.0038, 0.0392)		0.0201	(0.0022, 0.0381)	
Effects by Sex						
Education, Men			<0.0001			<0.0001
Grade 1-11	-0.1530	(-0.2253, -0.0807)		-0.1347	(-0.2089, -0.0606)	
High school	-0.0917	(-0.1231, -0.0603)		-0.0821	(-0.1143, -0.0499)	
Some college or tech	-0.0493	(-0.0727, -0.0260)		-0.0455	(-0.0693, -0.0217)	
College	0.0000	Reference		0.0000	Reference	
Graduate school	0.0331	(0.0091, 0.0571)		0.0359	(0.0116, 0.0601)	
Education, Women			<0.0001			<0.0001
Grade 1-11	-0.1524	(-0.2315, -0.0733)		-0.1405	(-0.2216, -0.0594)	
High school	-0.0617	(-0.1029, -0.0205)		-0.0520	(-0.0942, -0.0097)	
Some college or tech	-0.0405	(-0.0690, -0.0119)		-0.0327	(-0.0618, -0.0036)	
College	0.0000	Reference		0.0000	Reference	
Graduate school	0.0089	(-0.0175, 0.0354)		0.0030	(-0.0238, 0.0297)	

* P-value for test of linear trend ~~difference in telomere length by education level, F-test, 4 degrees of freedom~~
[†] Minimally adjusted model includes age, sex, education
[§] Fully adjusted model includes age, sex, smoking, BMI, comorbidities, diet, NDI, education level

Supplementary Table 2. Association of standardized telomere length with neighborhood deprivation index (NDI) overall and by sex, per standard deviation change in NDI.

	Minimally adjusted model[†]			Fully adjusted model[§]		
	Effect estimate	95% CI	p-value	Effect estimate	95% CI	p-value
NDI	-0.0257	(-0.0366, -0.0148)	<.0001	-0.0192	(-0.0306, -0.0078)	0.0010
Effects by sex						
NDI, women	-0.0253	(-0.0396, -0.0110)	0.0005	-0.0201	(-0.0350, -0.0053)	0.0079
NDI, men	-0.0263	(-0.0431, -0.0094)	0.0022	-0.0186	(-0.0362, -0.0010)	0.0379

[†] Minimally adjusted model includes age, sex, NDI
[§] Fully adjusted model includes age, sex, smoking, BMI, comorbidities, diet, NDI, education level

Supplementary Table 3. Association of standardized telomere length with neighborhood deprivation index (NDI) overall and by sex in sensitivity analyses restricting to subjects who lived at their current address for at least five years, per standard deviation change in NDI.

	Minimally adjusted model[†]			Fully adjusted model[§]		
	Effect estimate	95% CI	p-value	Effect estimate	95% CI	p-value
NDI	-0.0296	(-0.0420, -0.0172)	<.0001	-0.0236	(-0.0366, -0.0107)	0.0004
Effects by sex						
NDI, women	-0.0306	(-0.0469, -0.0142)	0.0002	-0.0260	(-0.0431, -0.0090)	0.0028
NDI, men	-0.0283	(-0.0473, -0.0093)	0.0034	-0.0212	(-0.0410, -0.0013)	0.0365

[†] Minimally adjusted model includes age, sex, NDI
[§] Fully adjusted model includes age, sex, smoking, BMI, comorbidities, diet, NDI, education level