Epigenetic aging helps explain differential resilience in older adults

Supplemental results
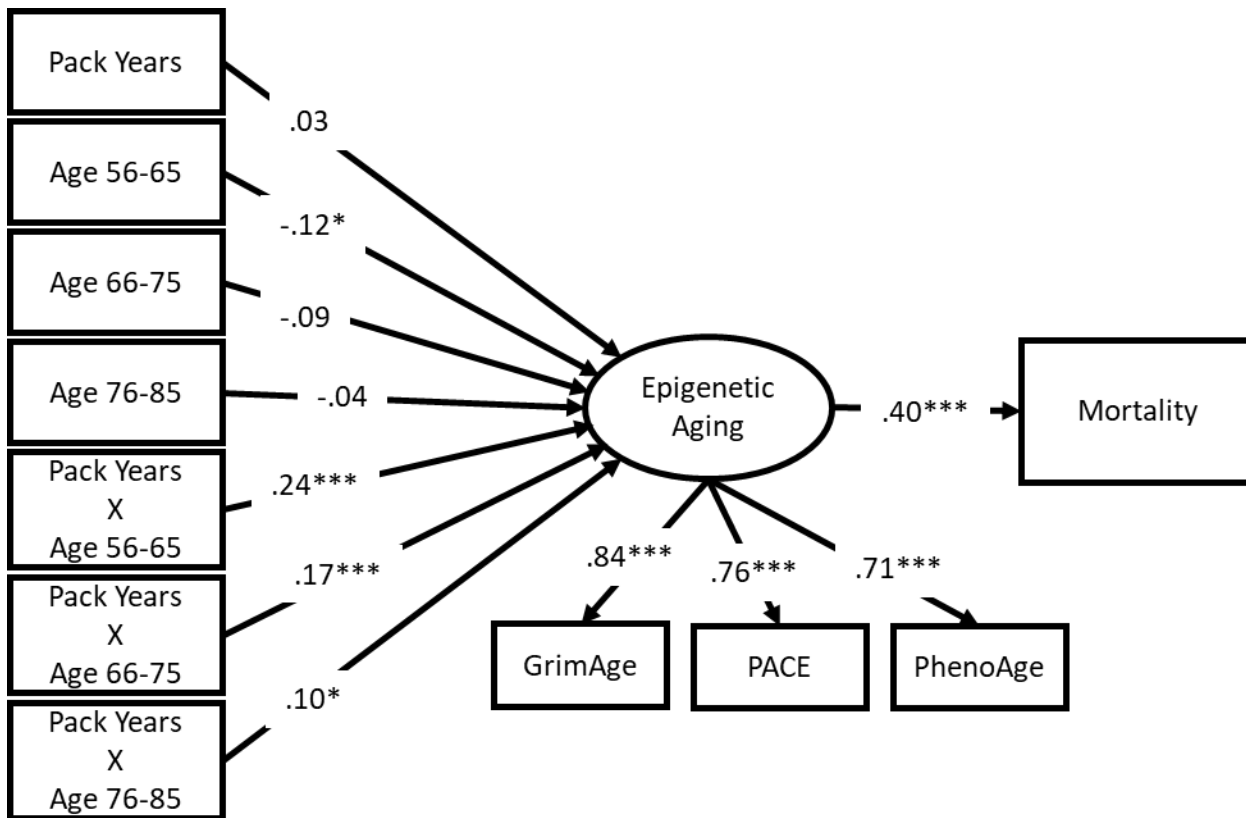

Figure S1. SEM results for Mortality with capped pack years

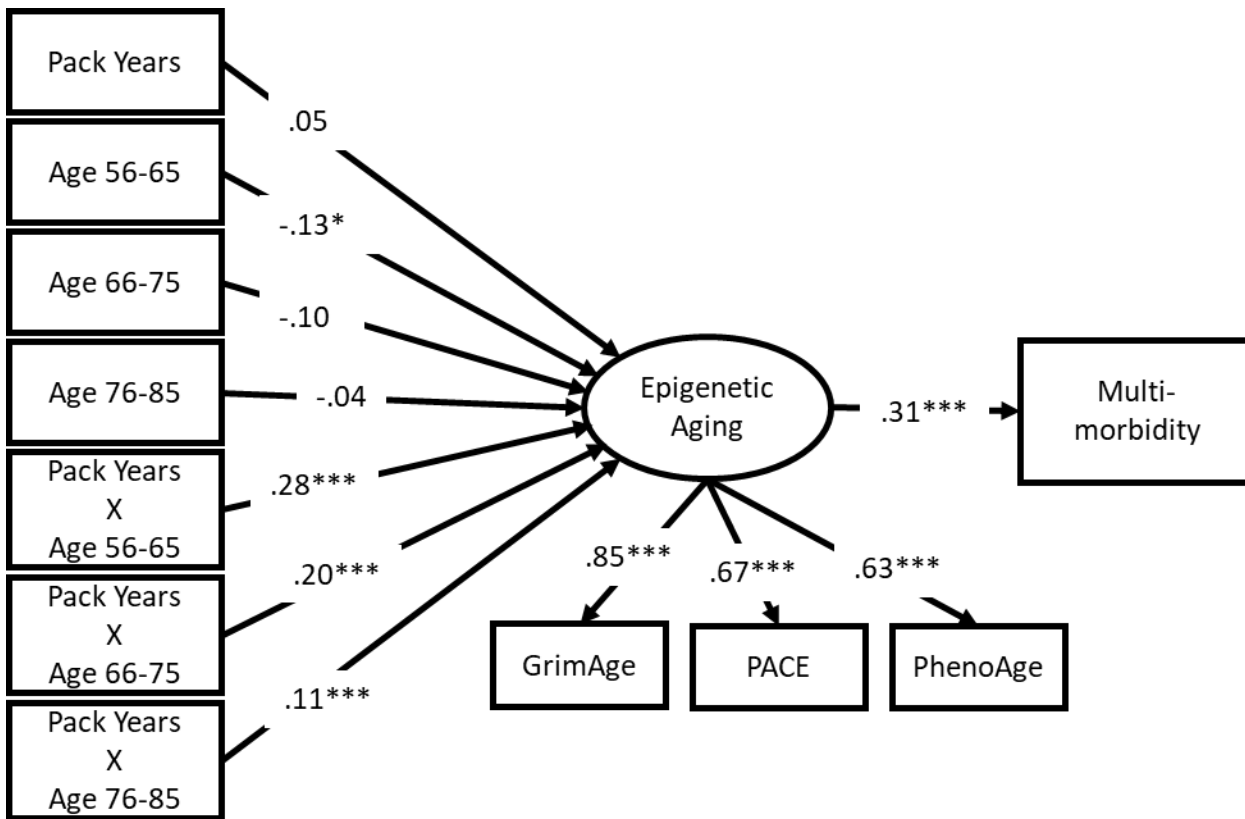Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Figure S2. SEM results for Multi-morbidity with capped pack years

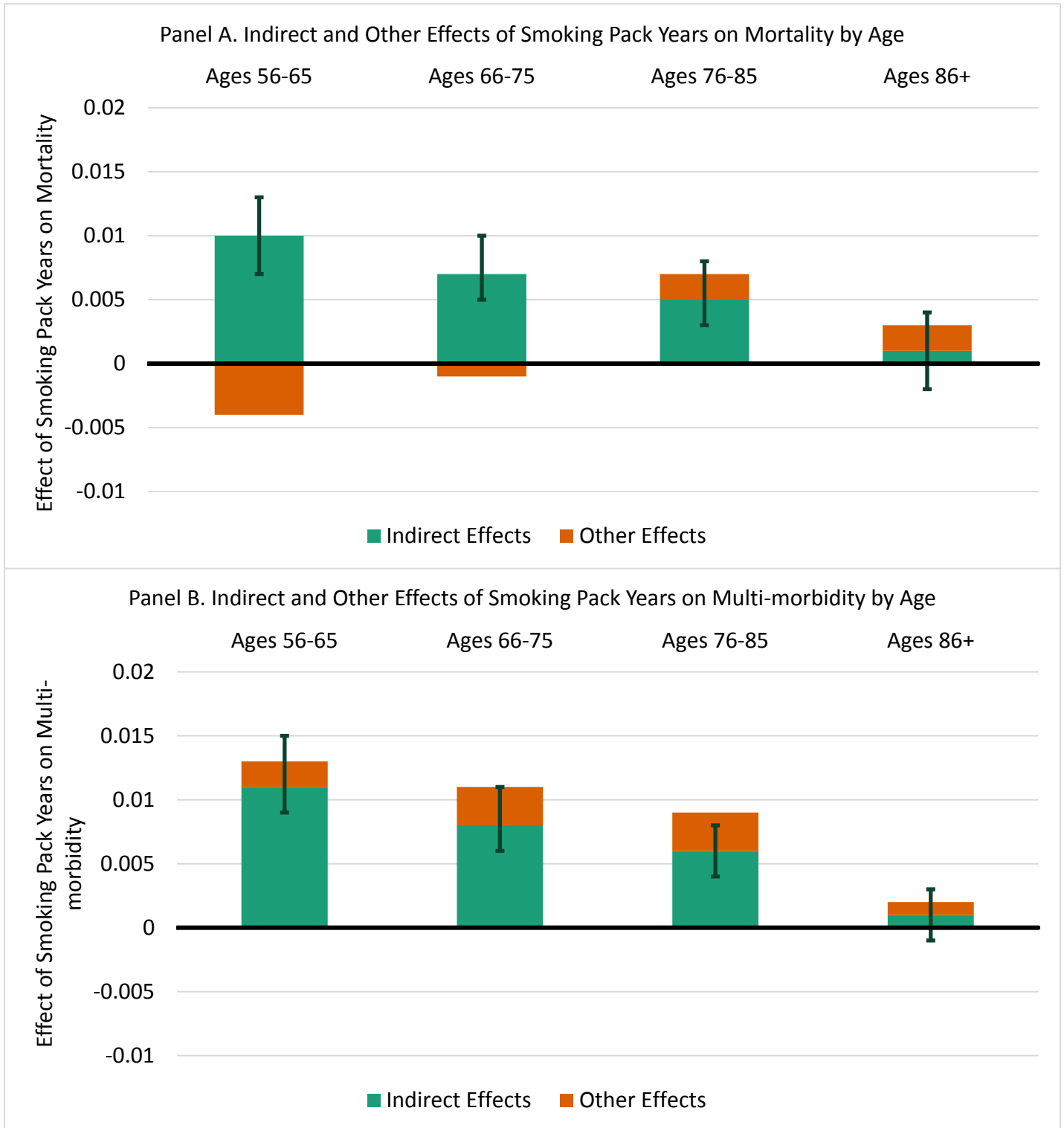Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Figure S3. Moderated mediation results with capped pack years
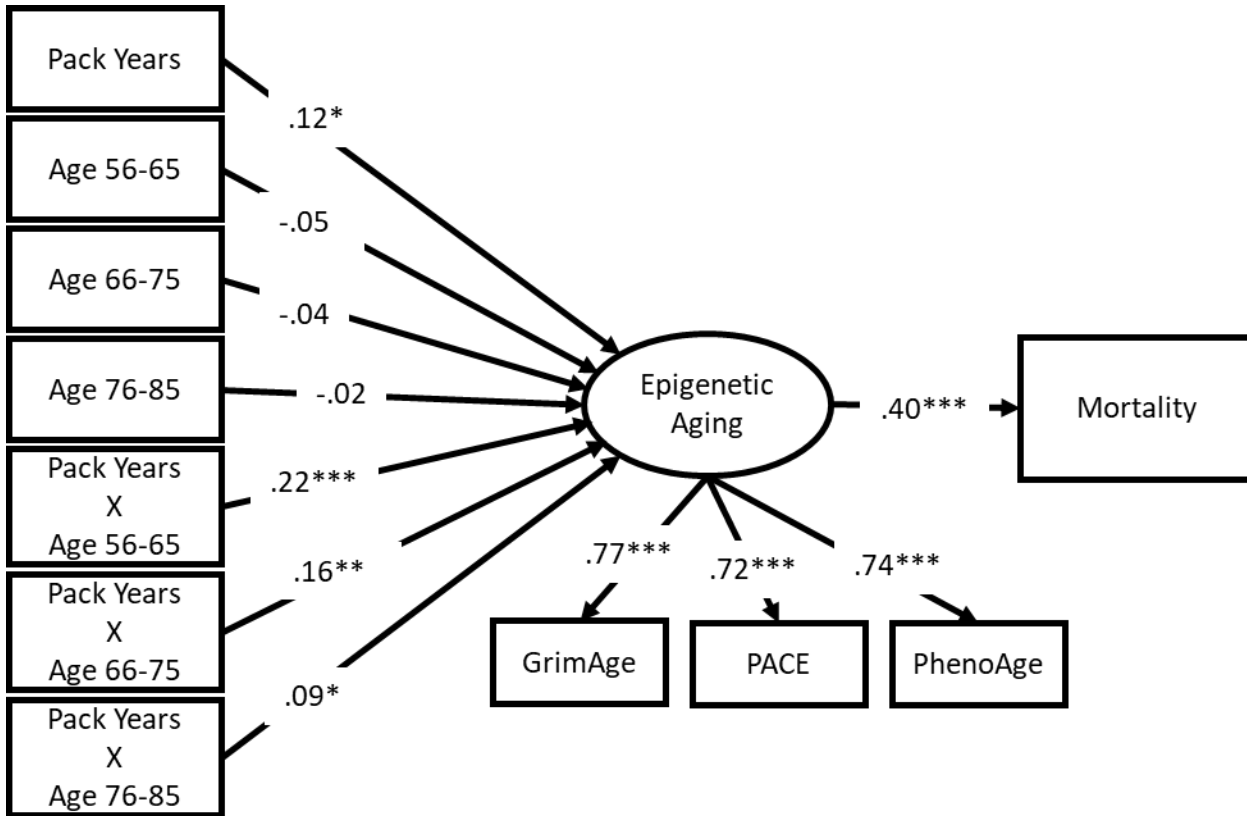
Figure S4. SEM results for Mortality with no covariates

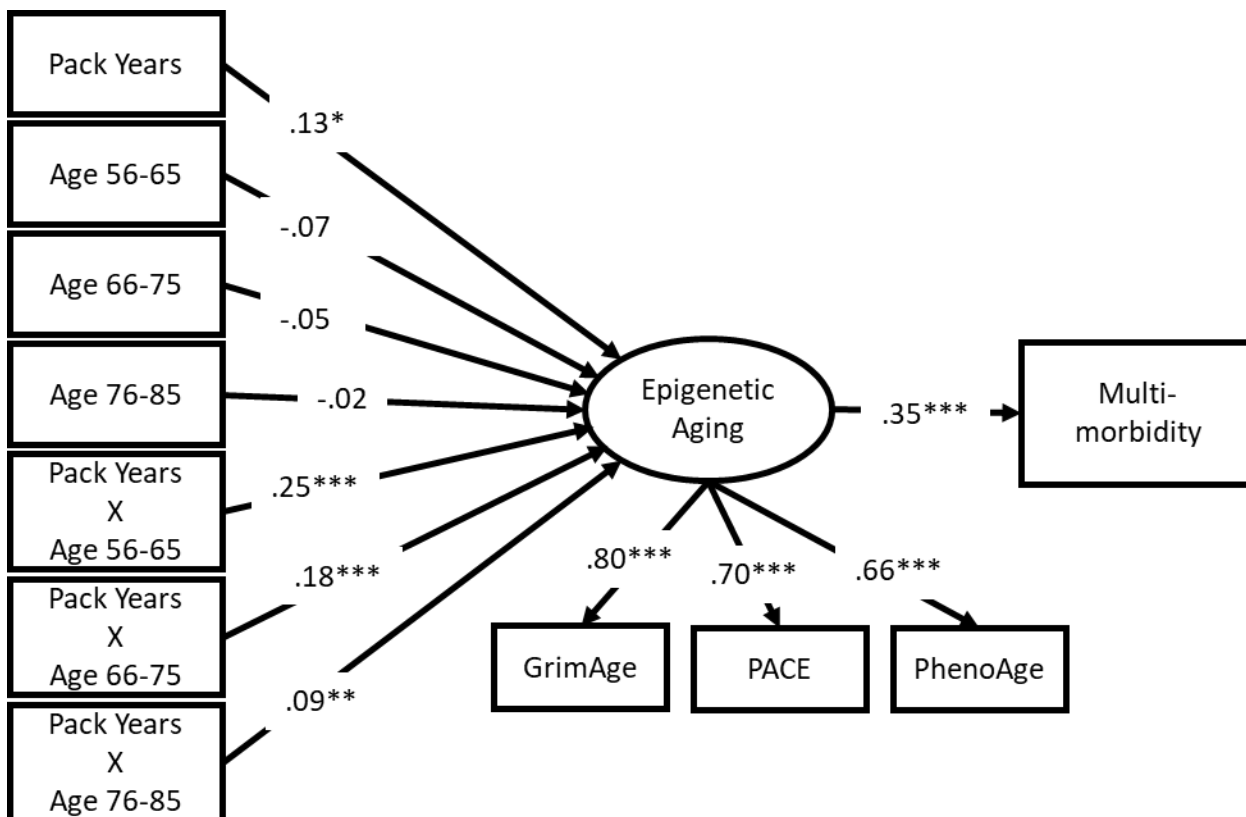Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Figure S5. Multi-morbidity results with no covariates

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Panel A. Indirect and Other Effects of Smoking Pack Years on Mortality by Age

Ages 56-65　　　Ages 66-75　　　Ages 76-85　　　Ages 86+

Panel B. Indirect and Other Effects of Smoking Pack Years on Multi-morbidity by Age

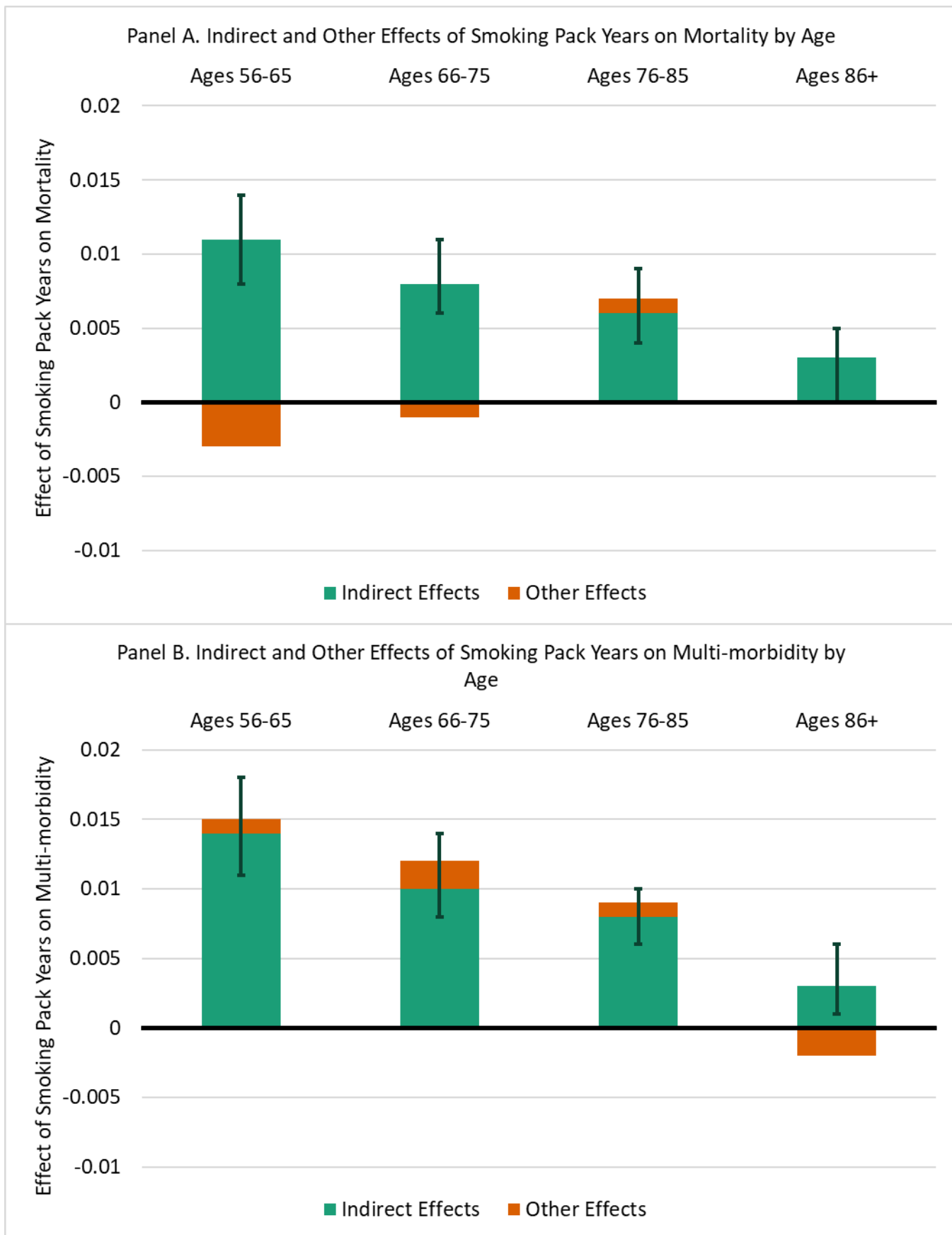Ages 56-65　　　Ages 66-75　　　Ages 76-85　　　Ages 86+

Figure S6. Moderated mediation results with no covariates
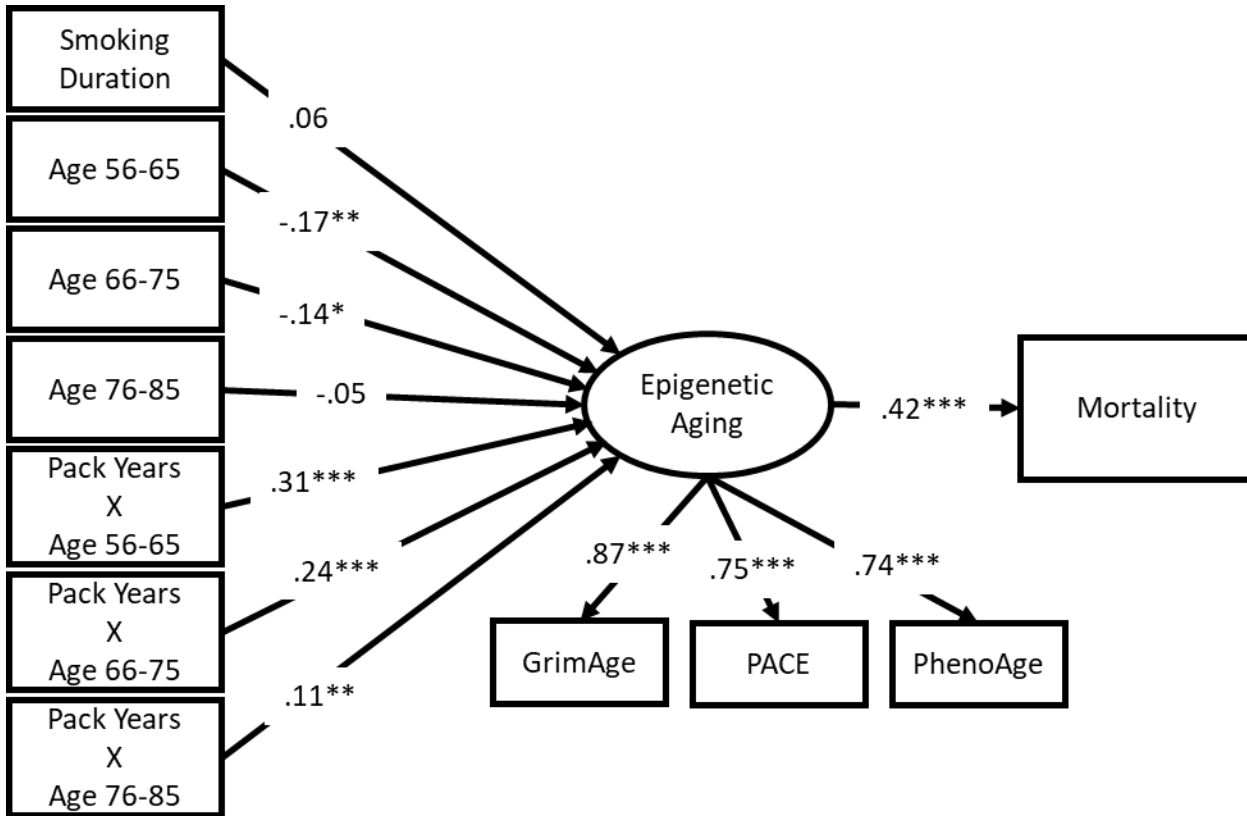
Figure S7. SEM results for Mortality using smoking duration

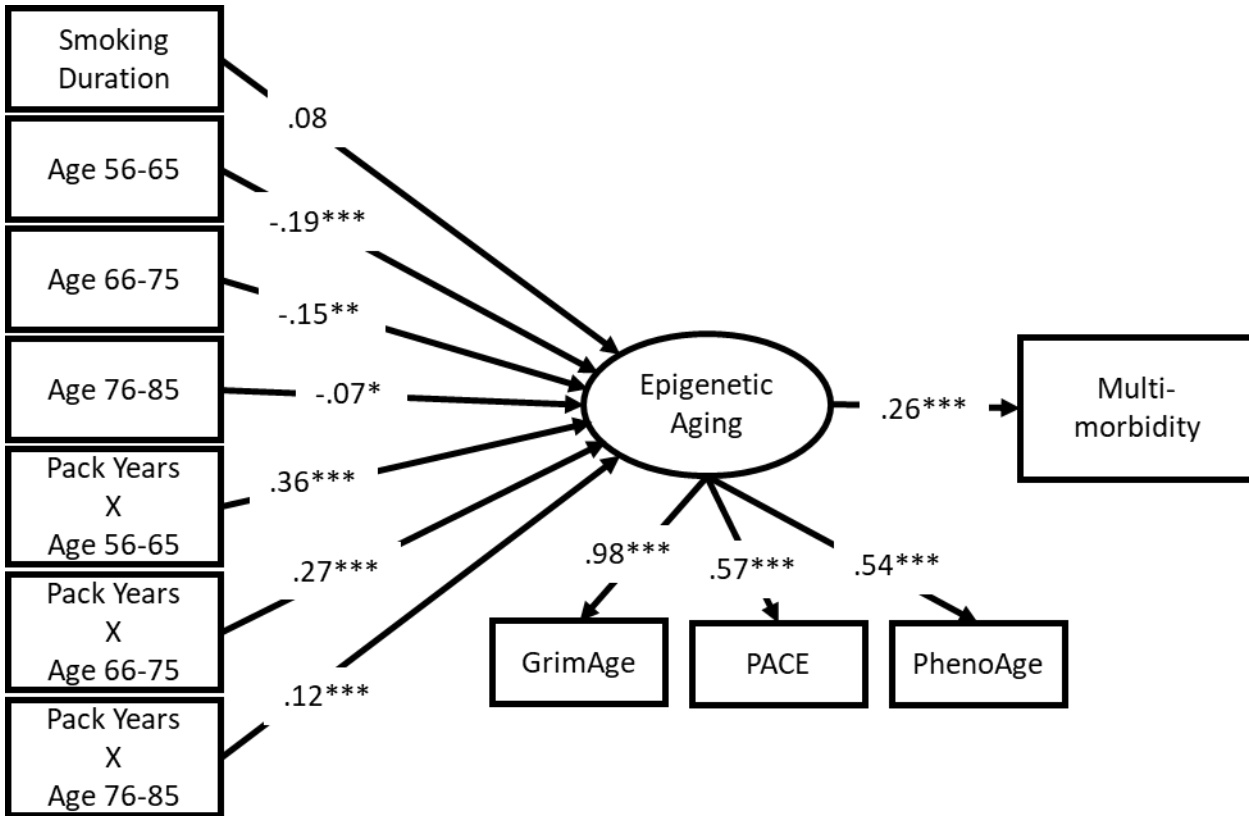Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Figure S8. Multi-morbidity results using smoking duration

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
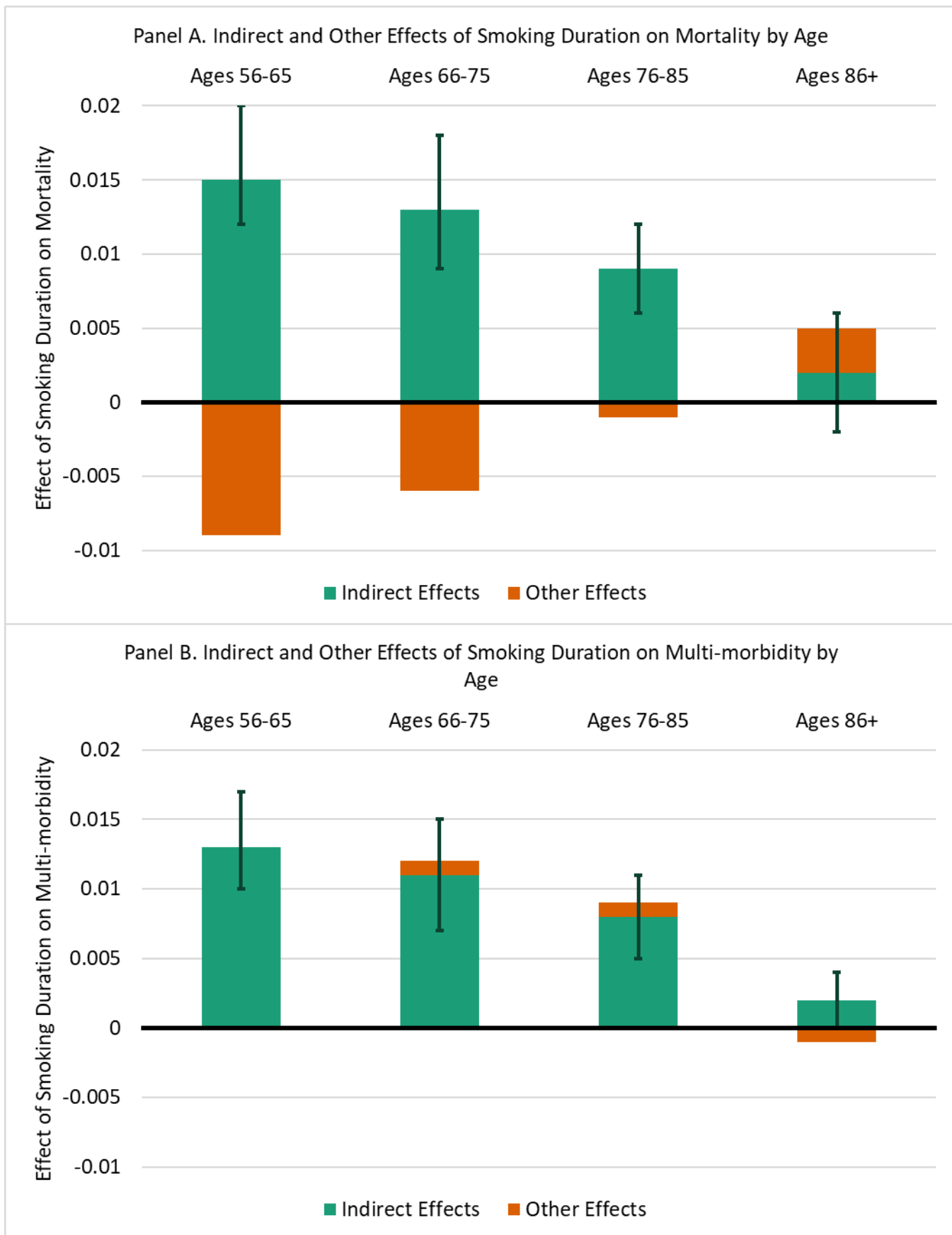
Figure S9. Moderated mediation results using smoking duration
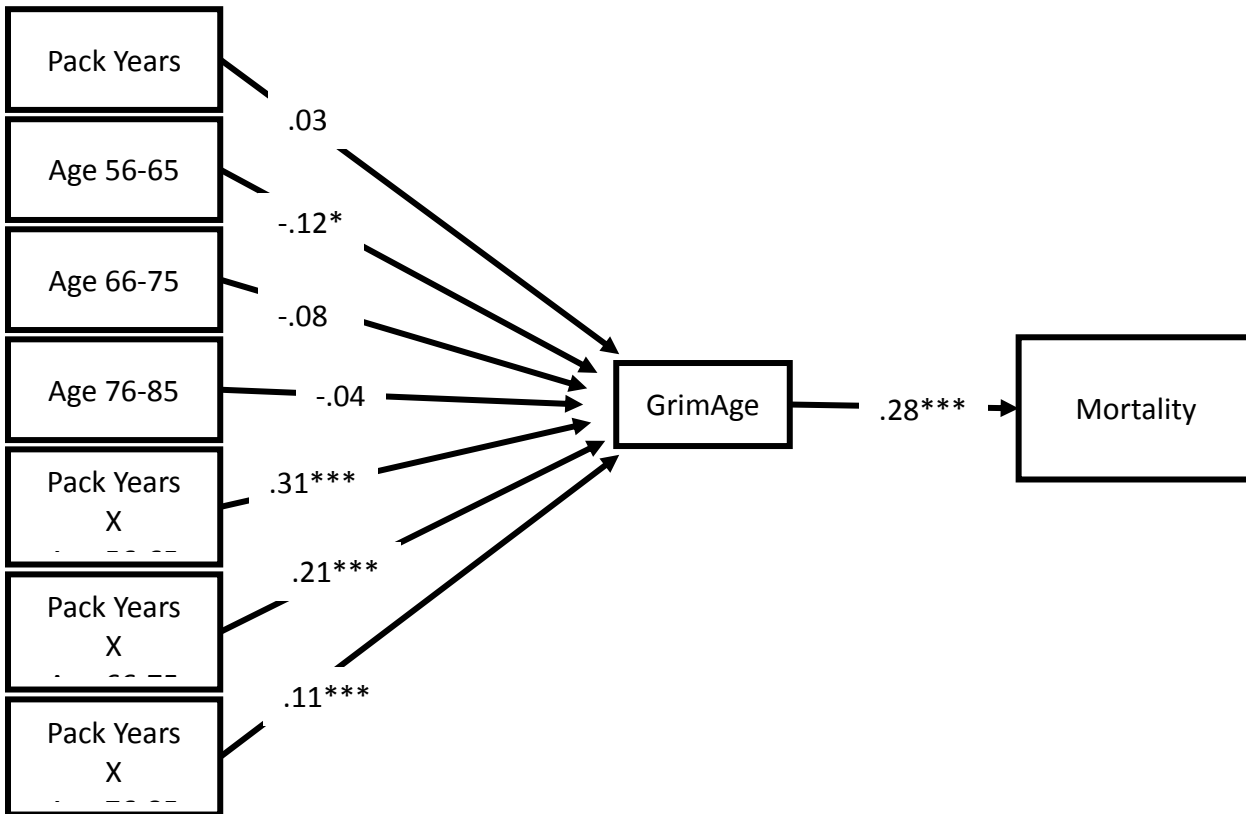
Figure S10. SEM results for Mortality using only GrimAge

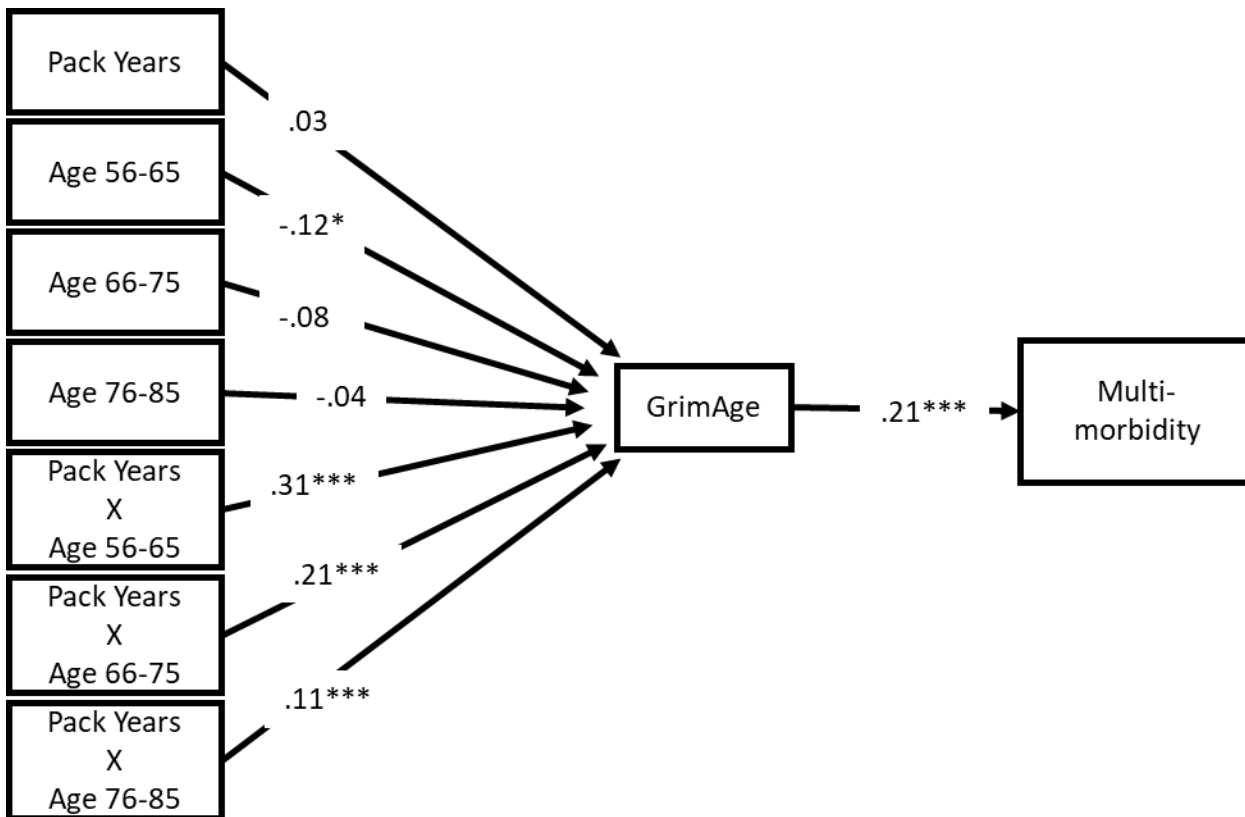Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
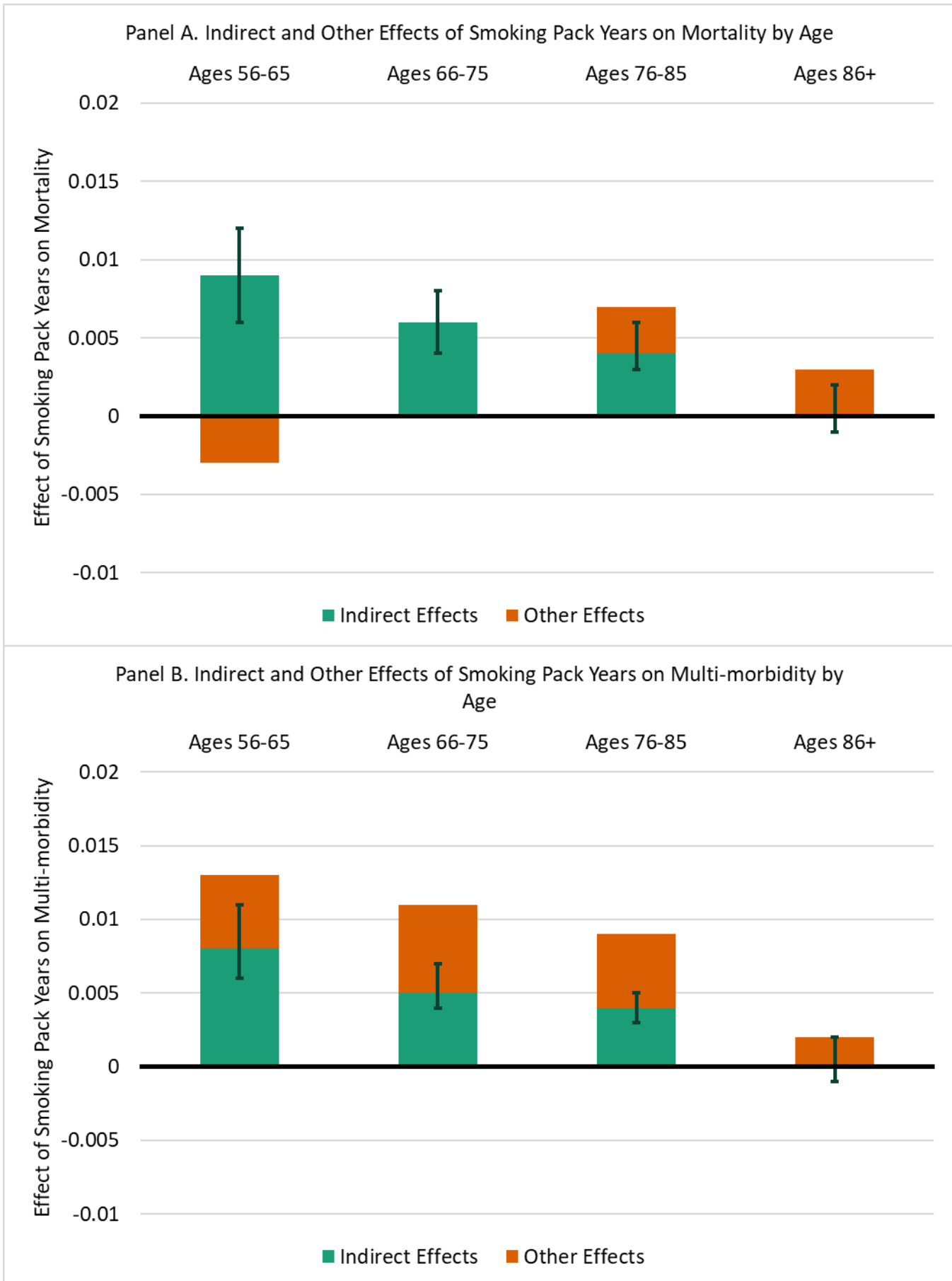
Figure S11. Multi-morbidity results using GrimAge only

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Panel A. Indirect and Other Effects of Smoking Pack Years on Mortality by Age

Panel B. Indirect and Other Effects of Smoking Pack Years on Multi-morbidity by Age

Figure S12. Moderated mediation results using GrimAge only

Figure S13. SEM results for Mortality using PhenoAge only

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Figure S14. Multi-morbidity results using PhenoAge only

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

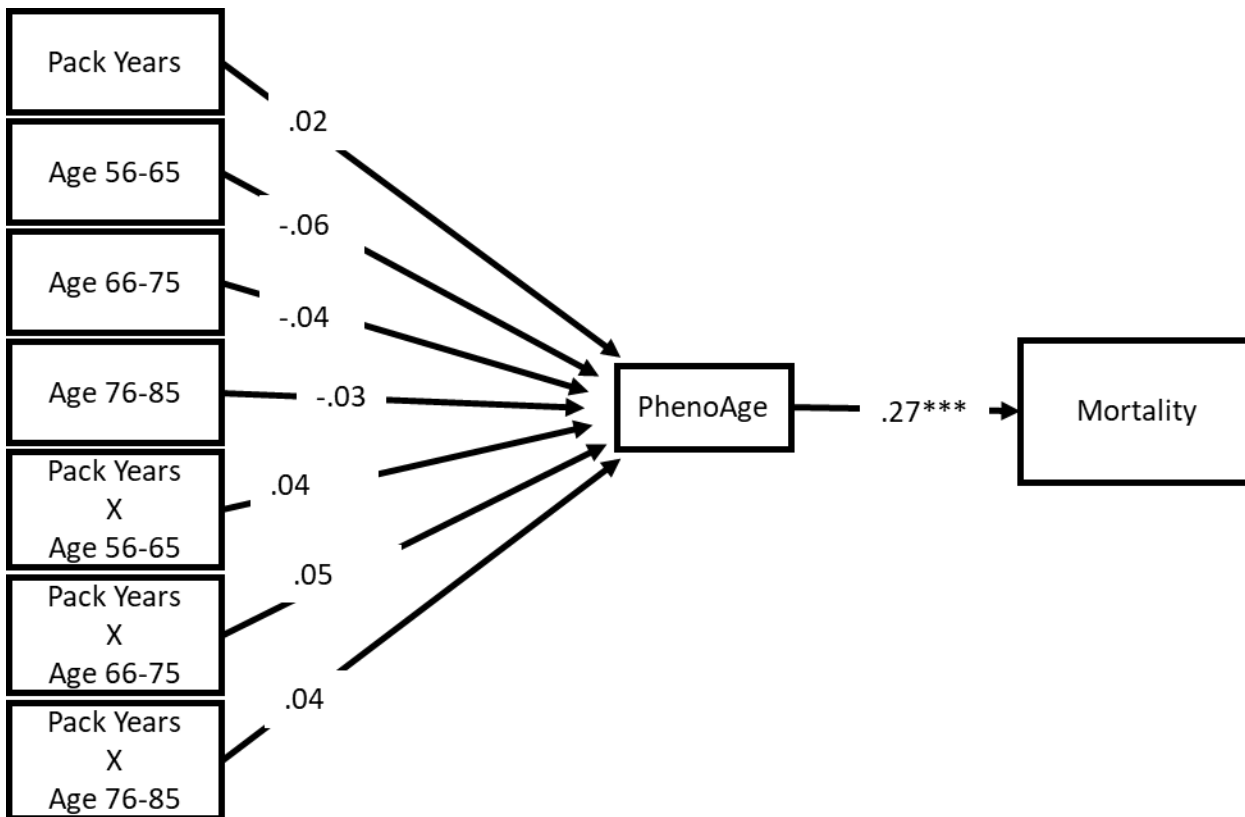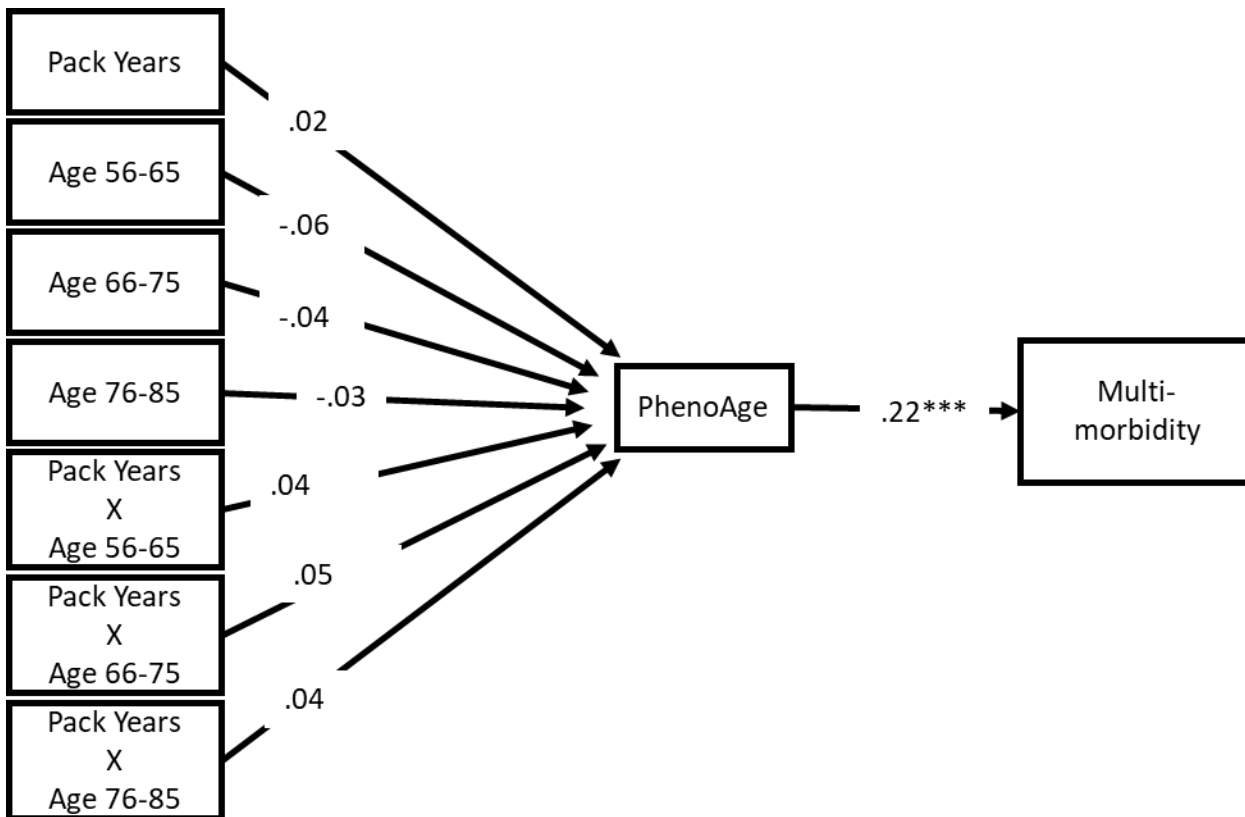Panel A. Indirect and Other Effects of Smoking Pack Years on Mortality by Age
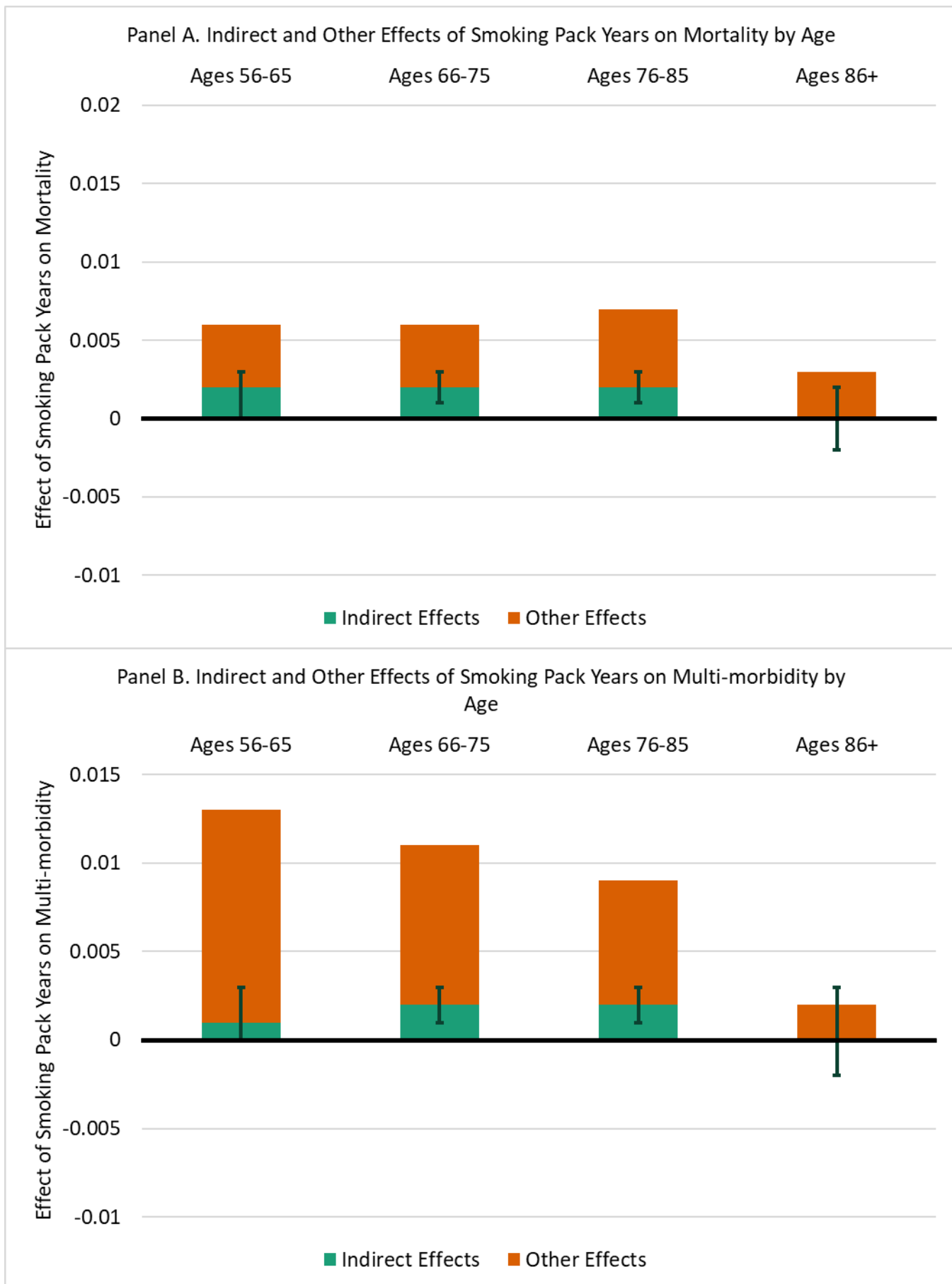
Figure S15. Moderated mediation results using PhenoAge only
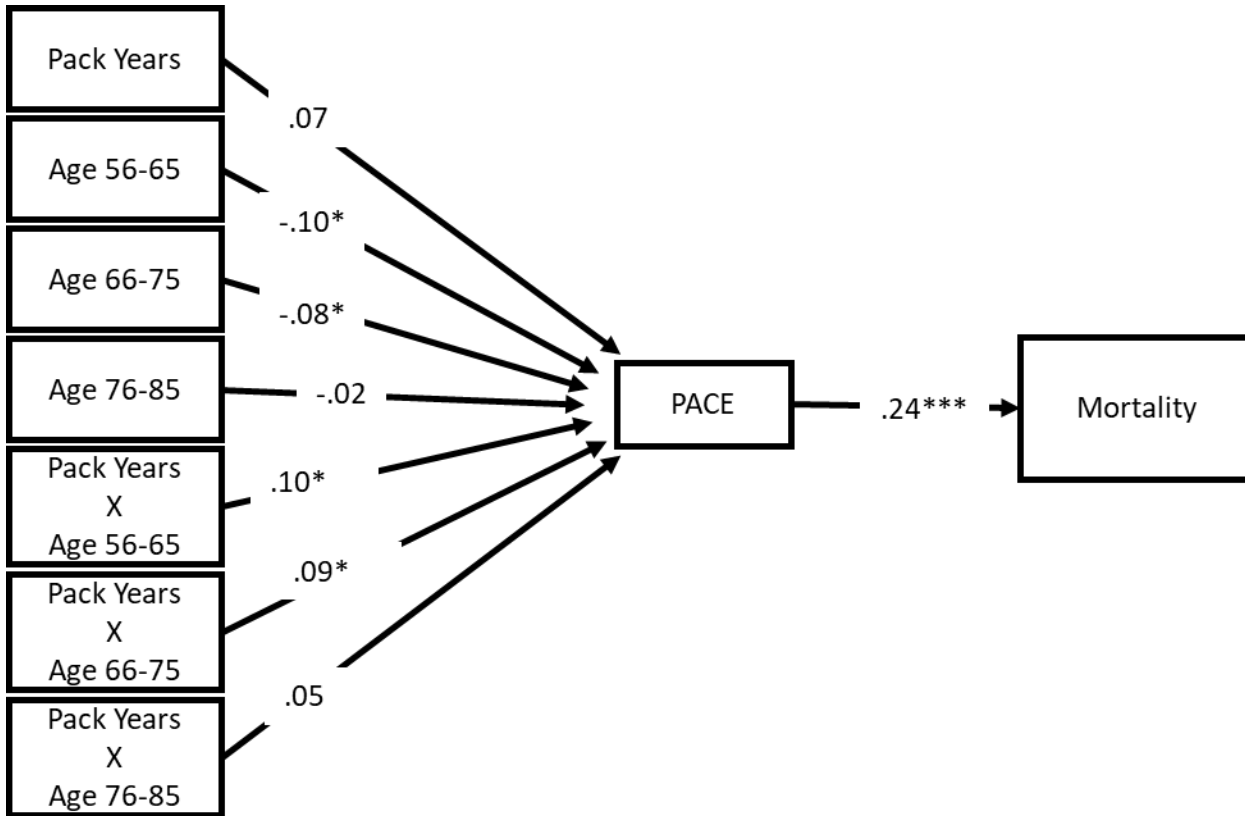
Figure S16. SEM results for Mortality using DunedinPACE only

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
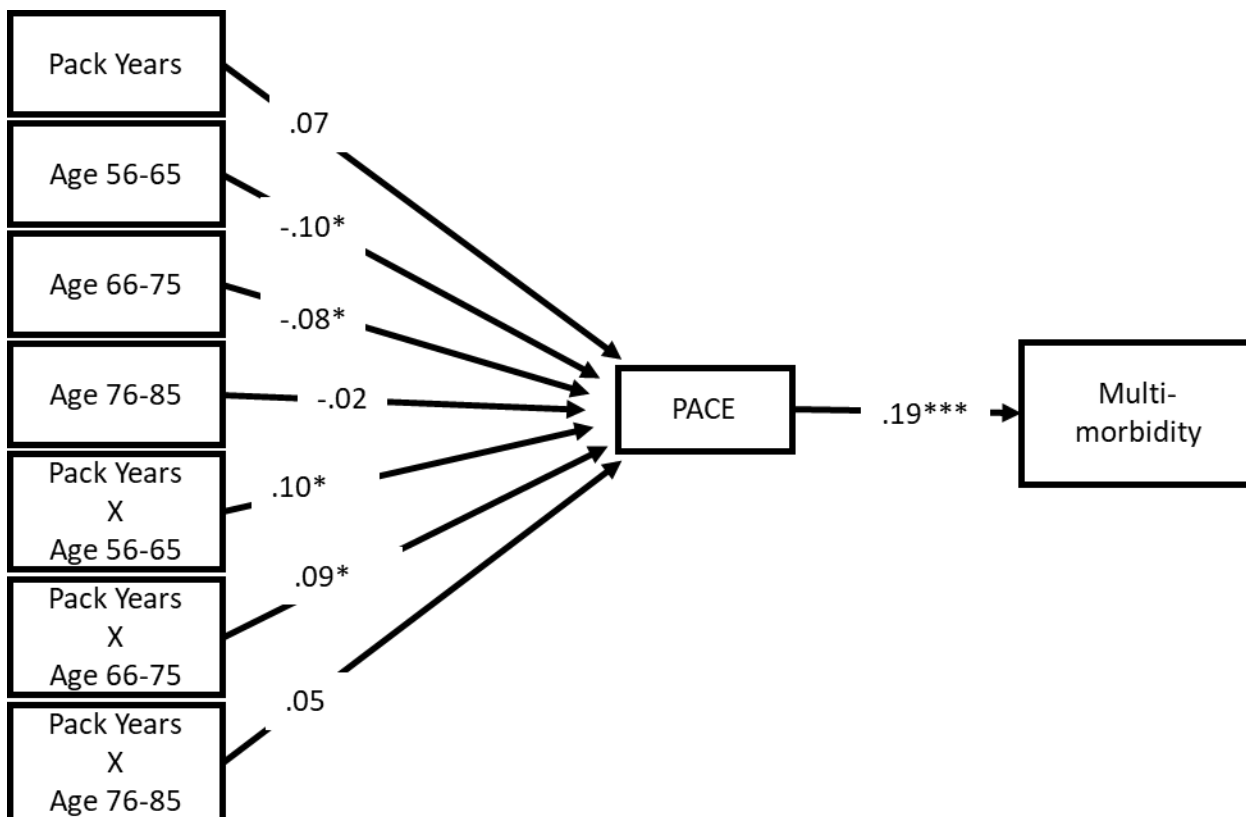
Figure S17. Multi-morbidity results using DunedinPACE only

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

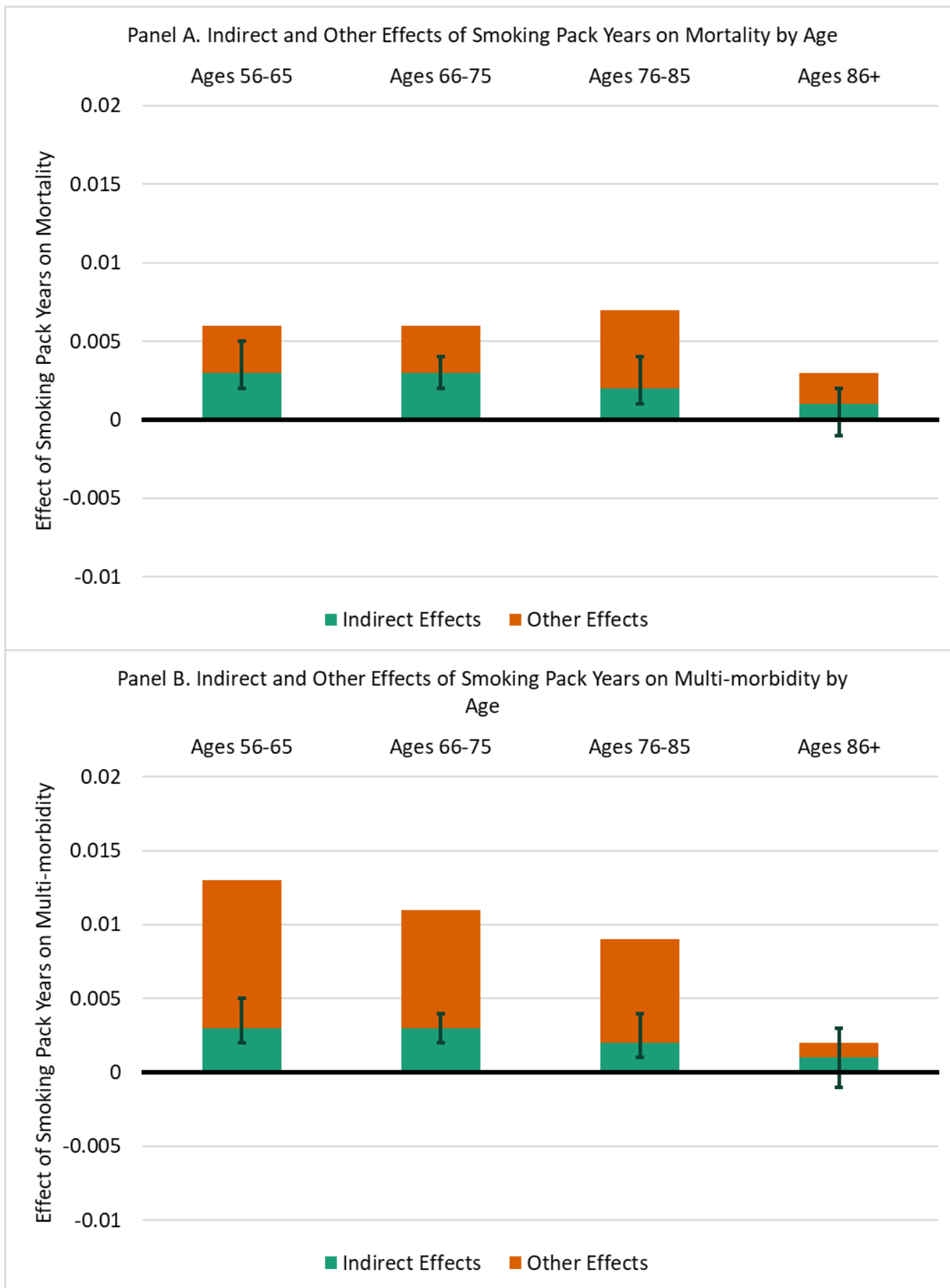Figure S18. Moderated mediation results using DunedinPACE only
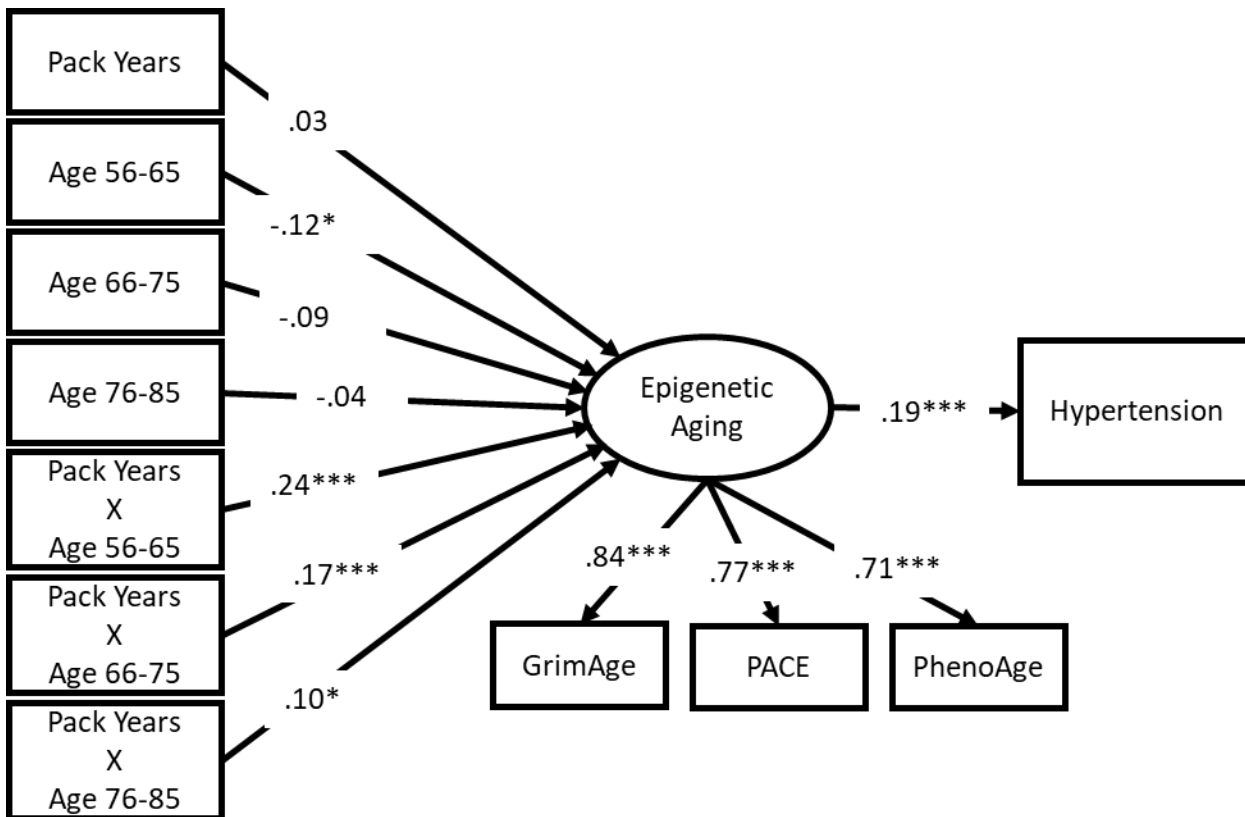
Figure S19. Hypertension results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
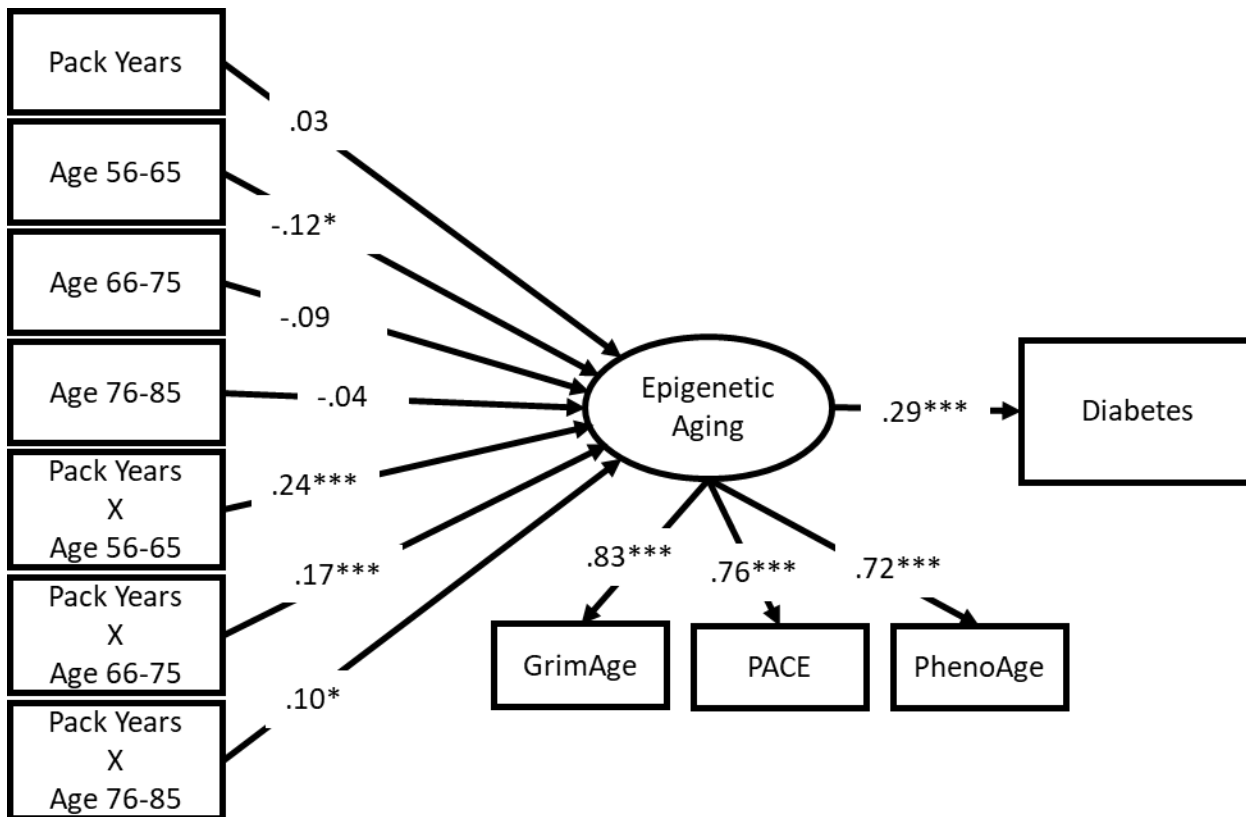
Figure S20. Diabetes results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
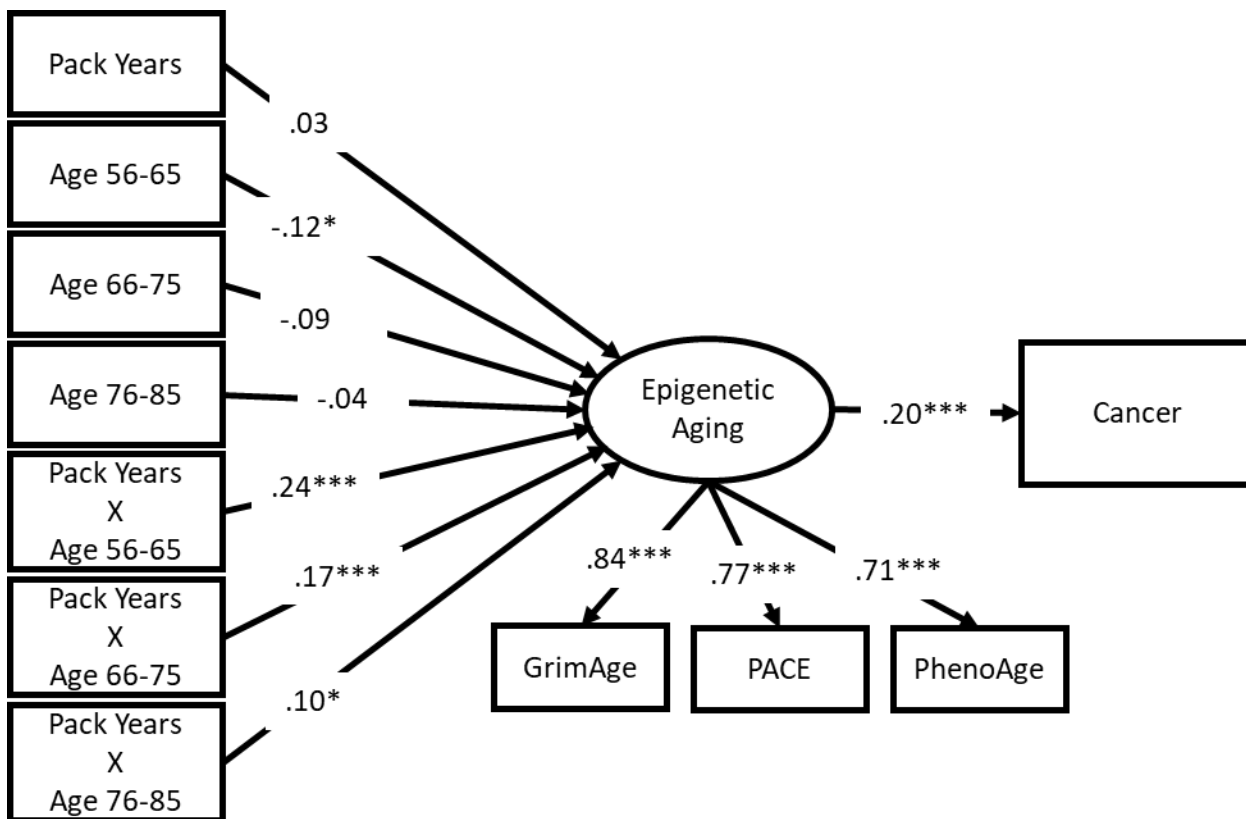
Figure S21. Cancer results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
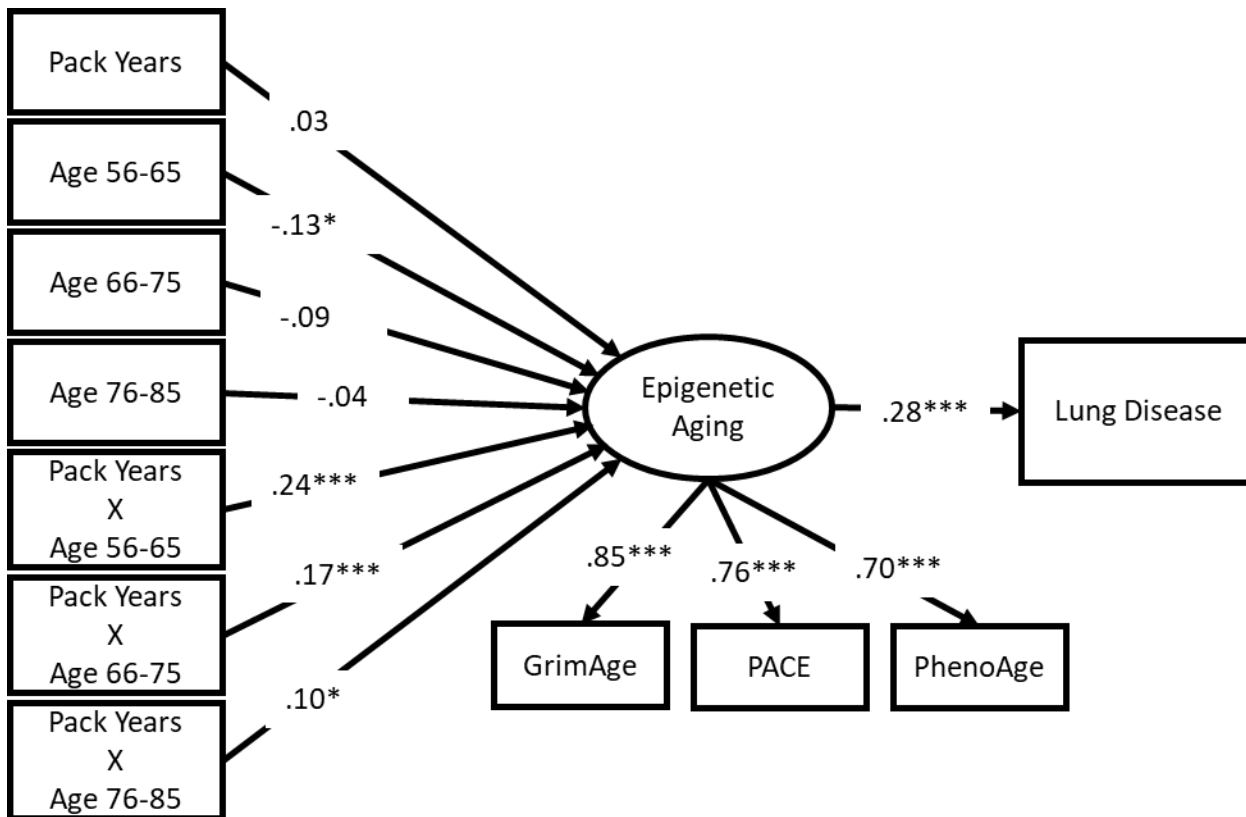
Figure S22. Lung disease results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
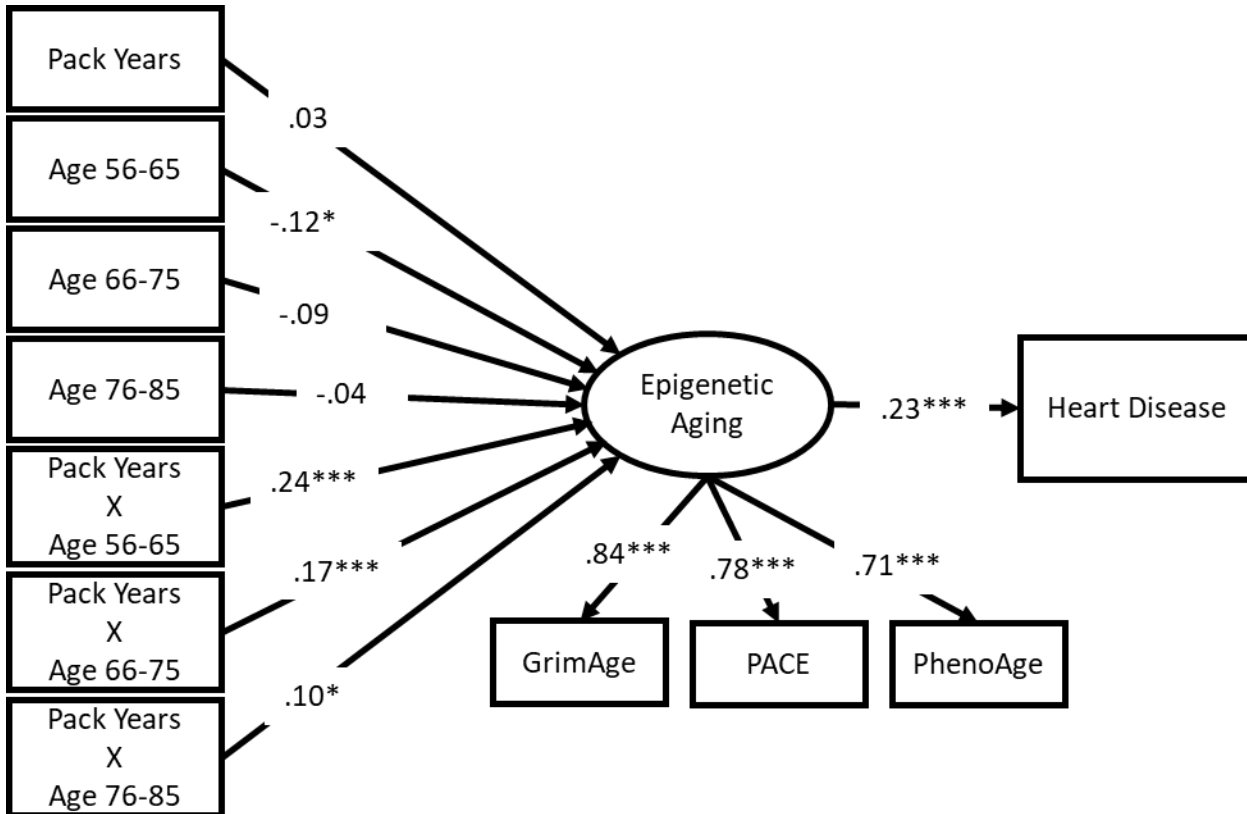
Figure S23. Heart disease results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
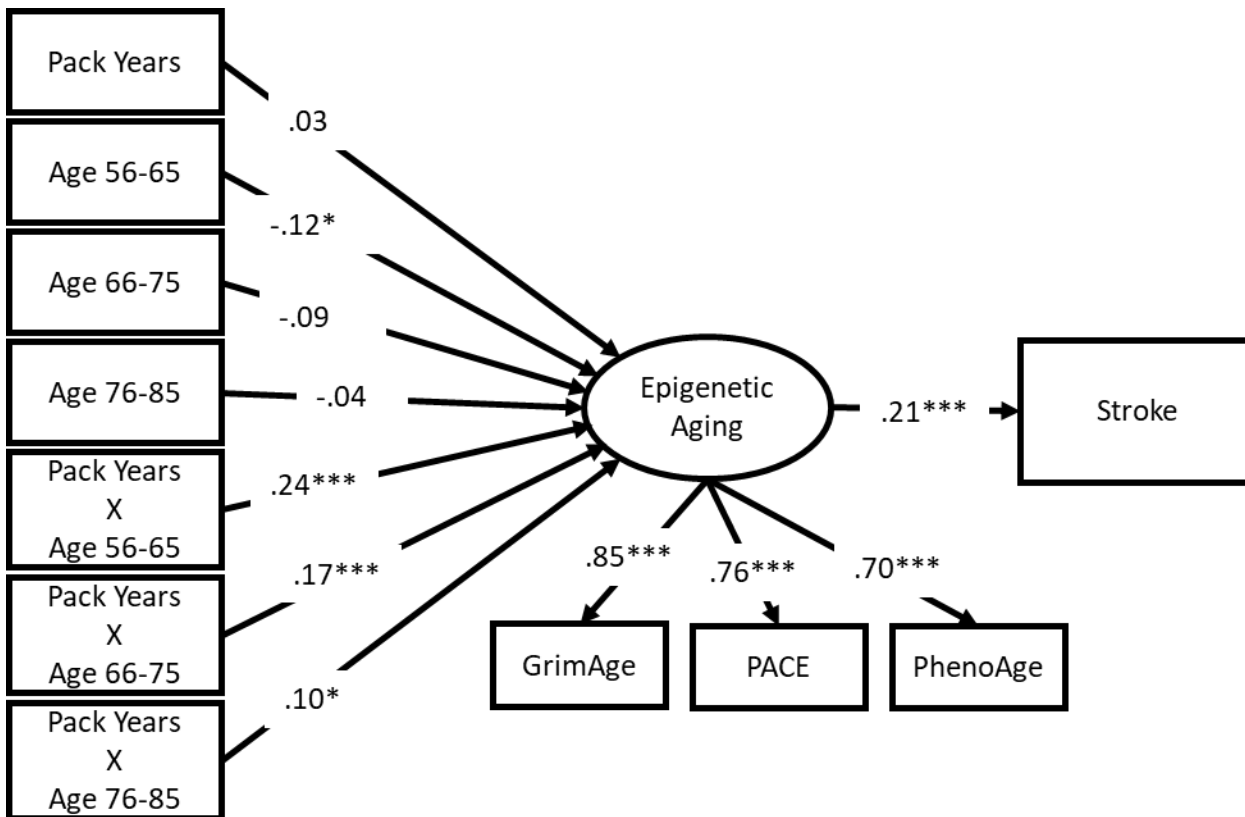
Figure S24. Stroke results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05
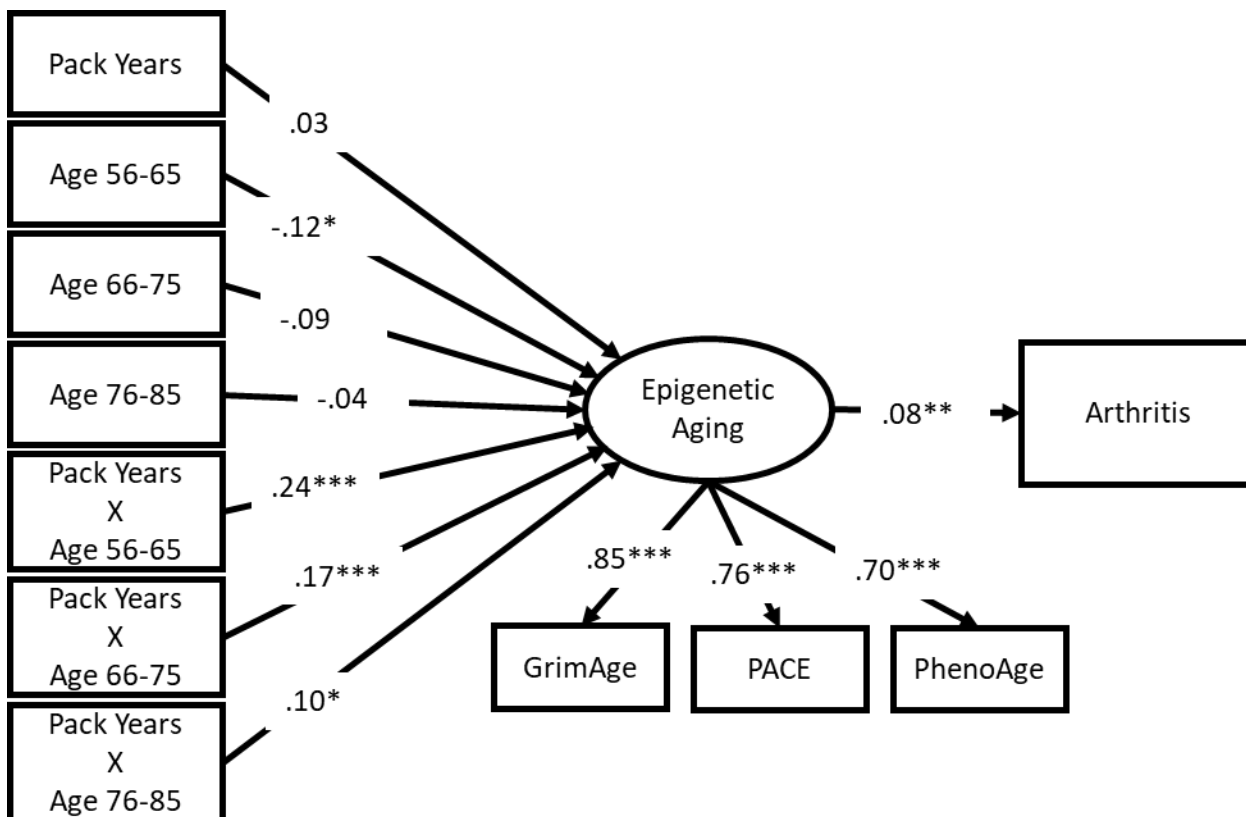
Figure S25. Arthritis results

Note: standardized results shown; *** p < .001, ** p < .01, * p < .05

Panel A. Indirect and Other Effects of Smoking Pack Years on Hypertension by Age
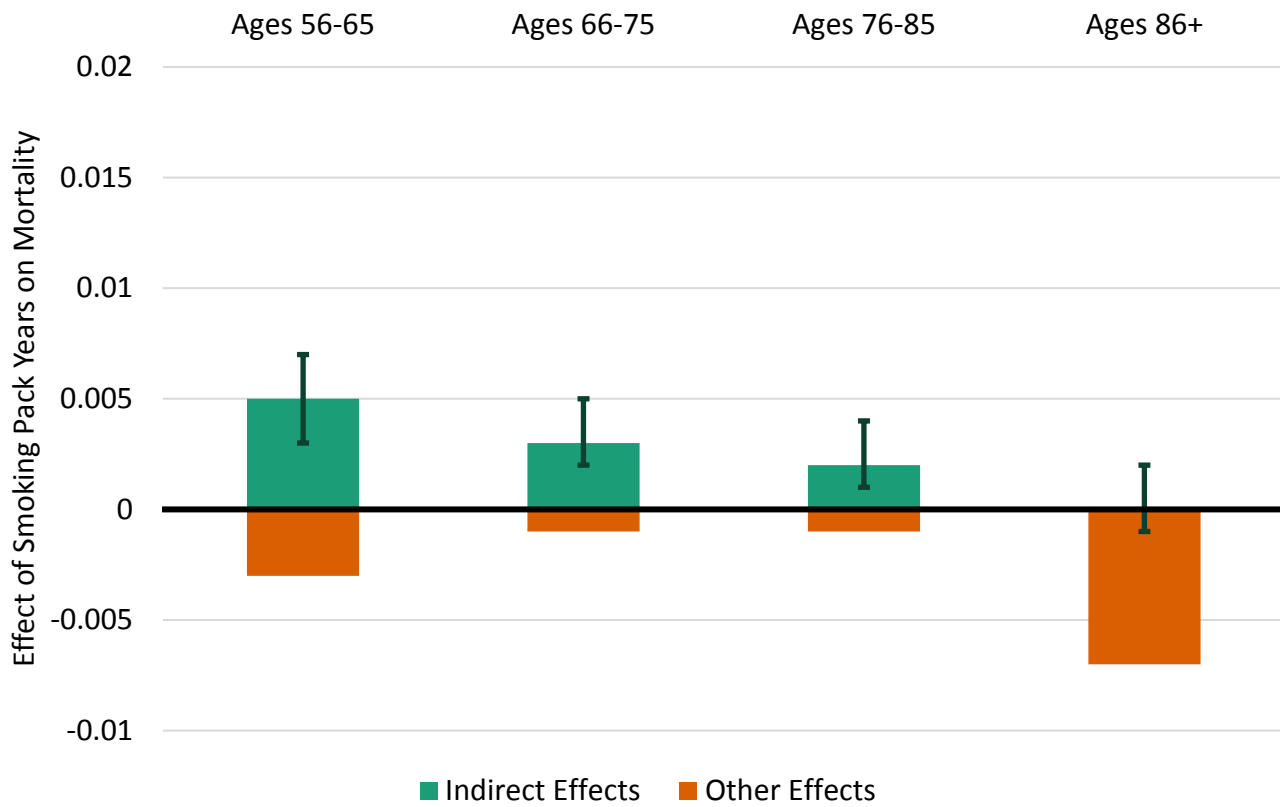
Panel B. Indirect and Other Effects of Smoking Pack Years on Diabetes by Age
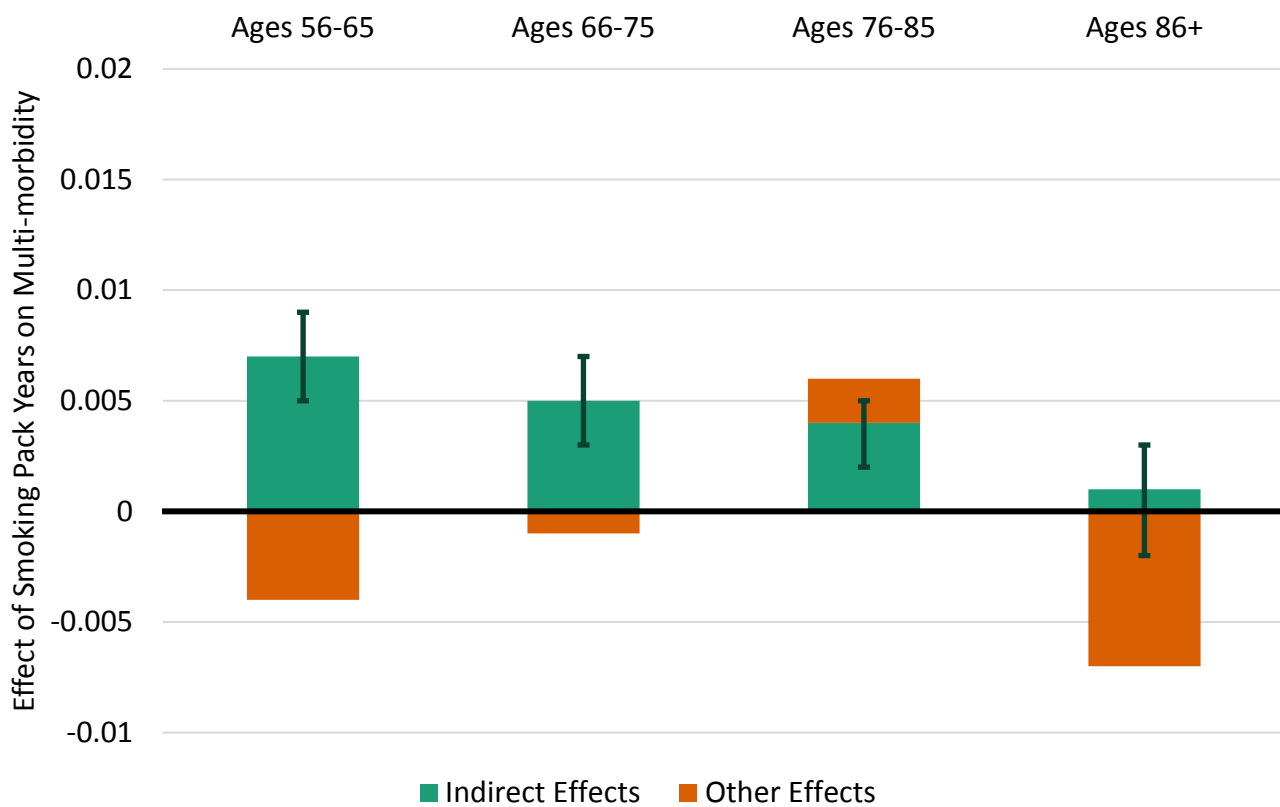
Panel C. Indirect and Other Effects of Smoking Pack Years on Cancer by Age
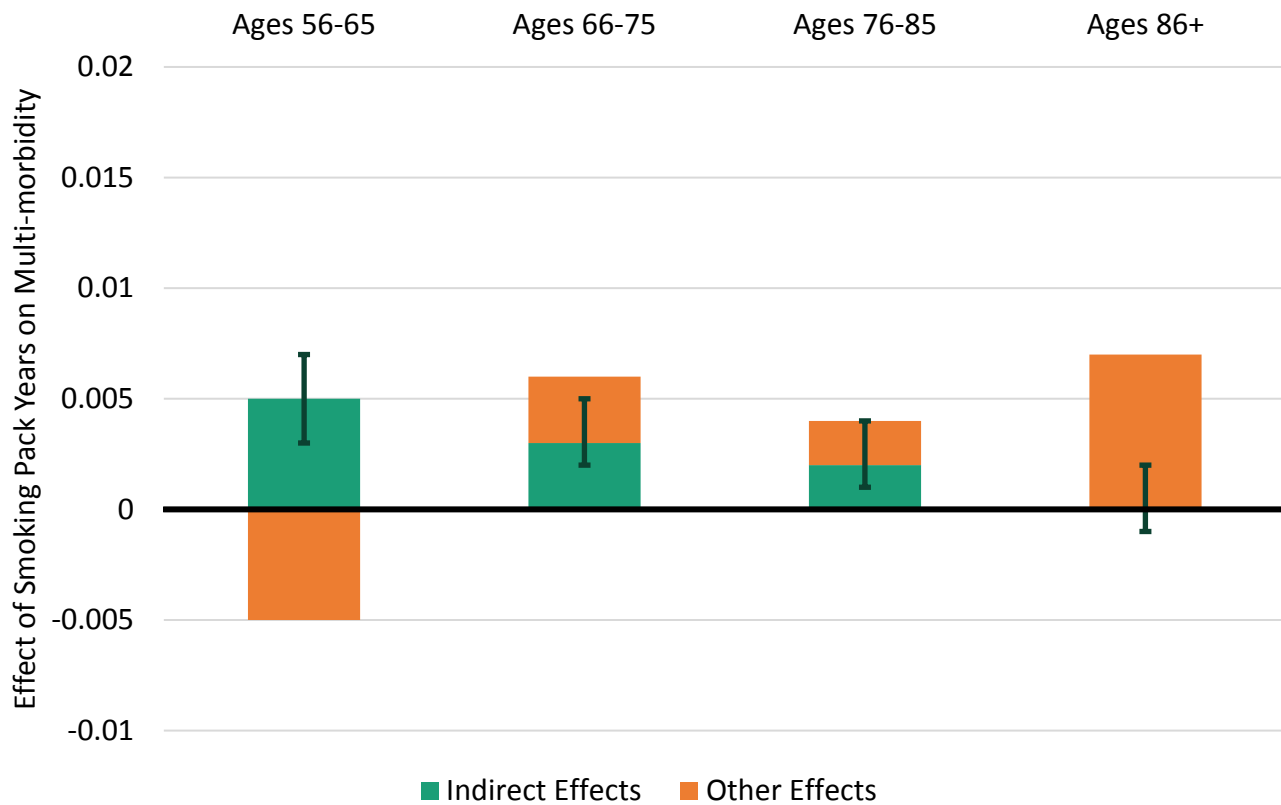
Panel D. Indirect and Other Effects of Smoking Pack Years on Lung Disease by Age

Panel E. Indirect and Other Effects of Smoking Pack Years on Heart Disease by Age

Panel F. Indirect and Other Effects of Smoking Pack Years on Stroke by Age

Figure S26. Moderated mediation results for individual diseases

Table S1. Comparing tertiles of accelerated aging across the three epigenetic aging measures.

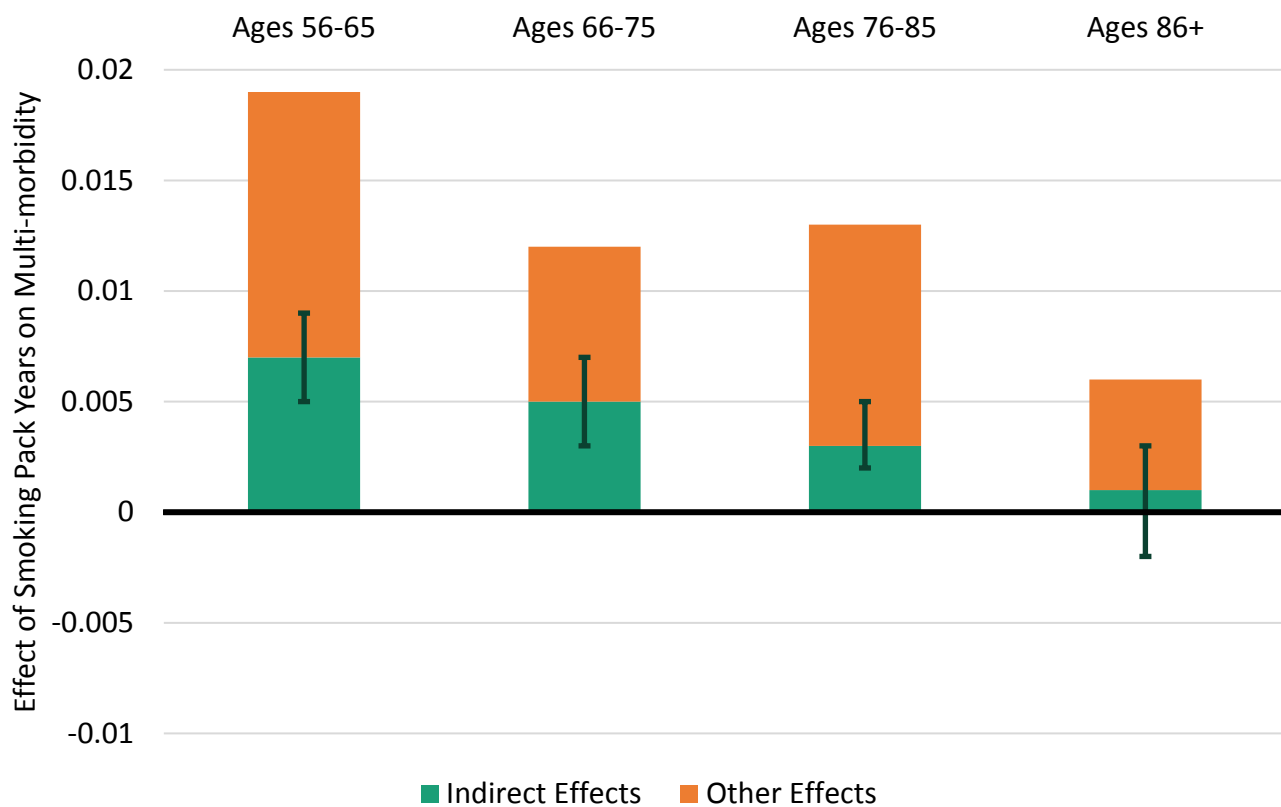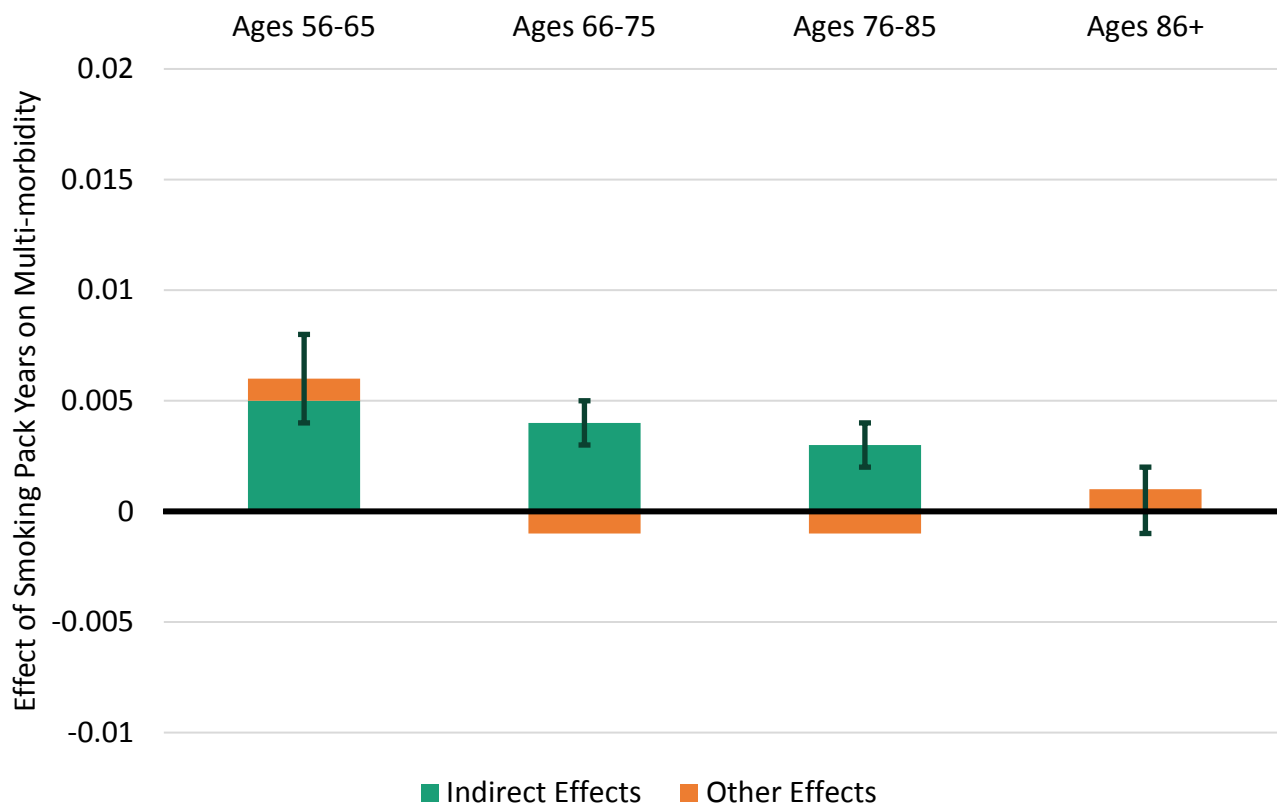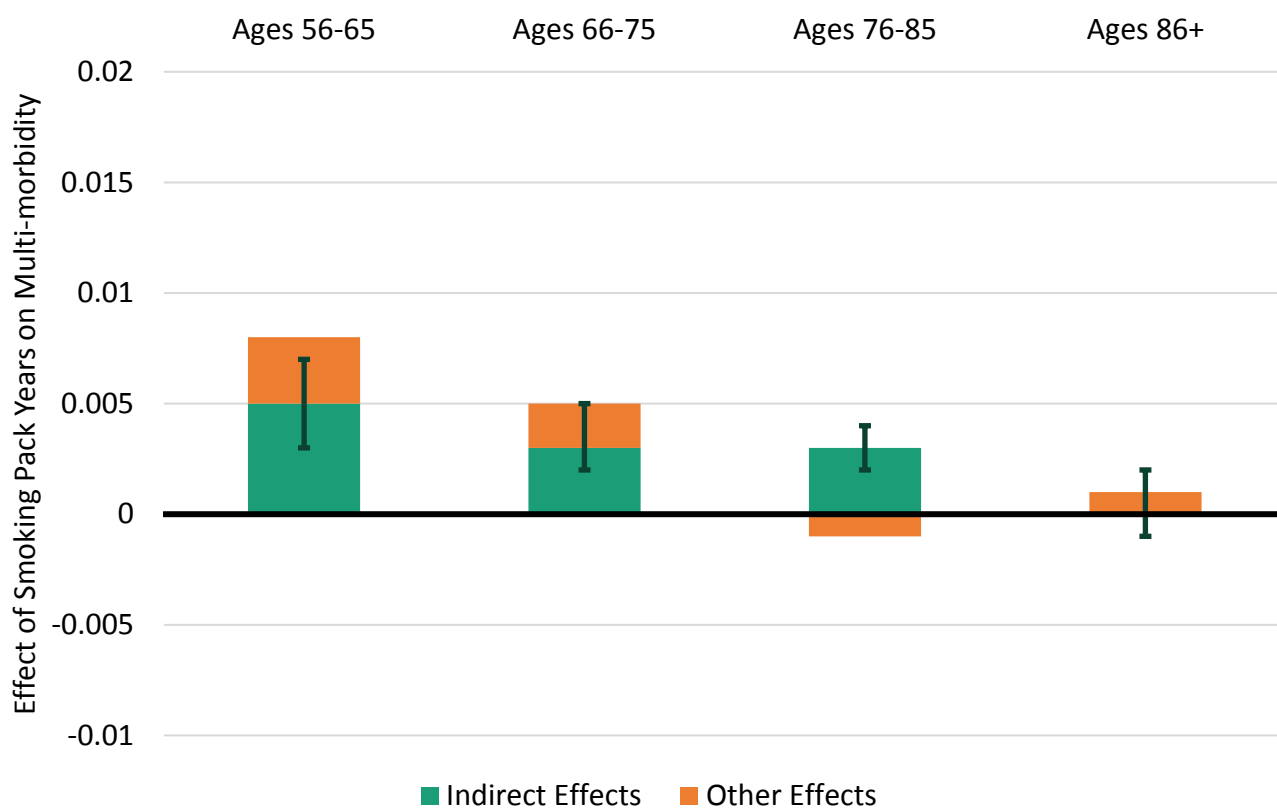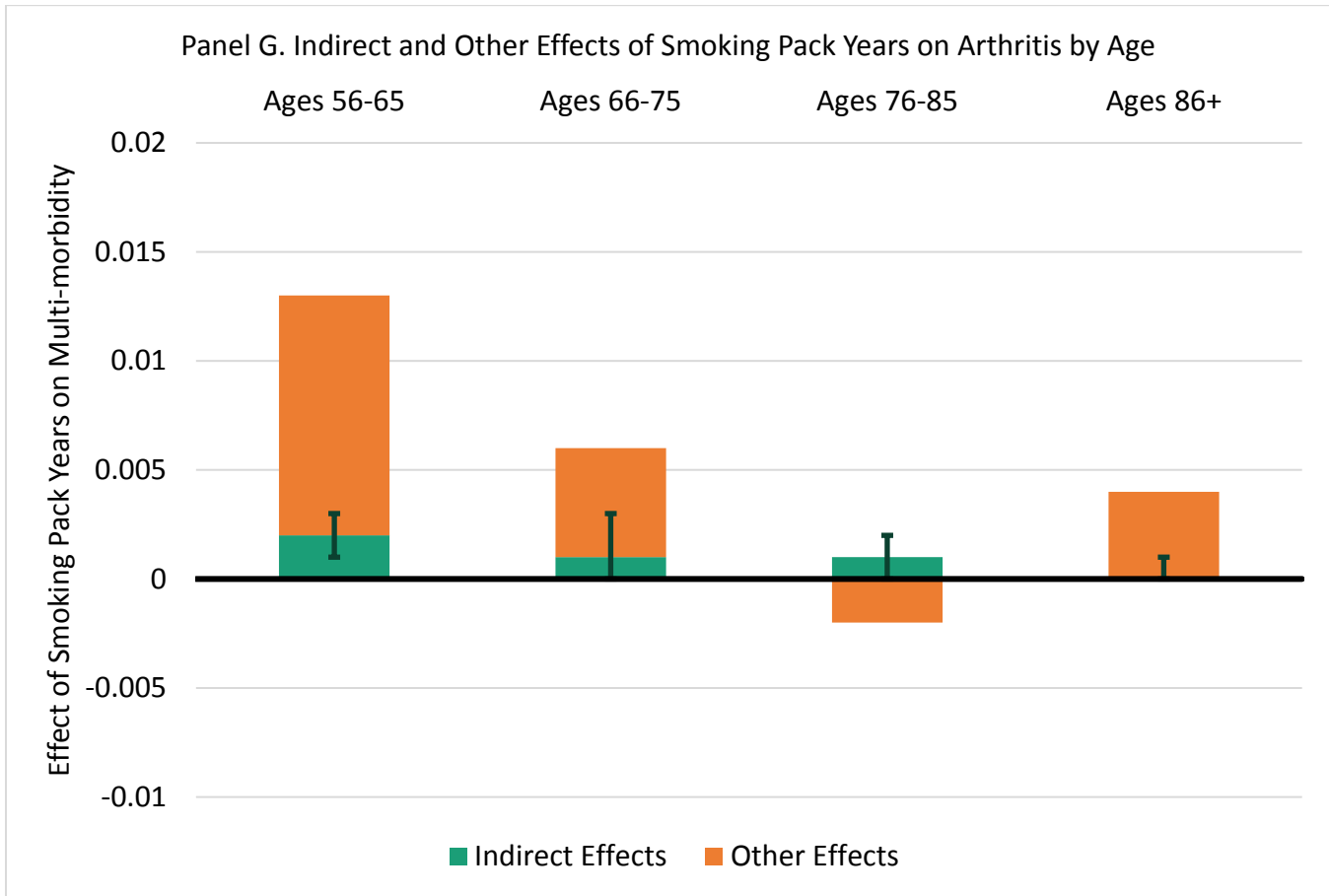|	Accelerated PhenoAge			Accelerated GrimAge			Accelerated DunedinPACE		
	1st Tertile	2nd Tertile	3rd Tertile	1st Tertile	2nd Tertile	3rd Tertile	1st Tertile	2nd Tertile	3rd Tertile
Mortality (Death = 1)	0.064	0.079	0.158 ***	0.047	0.093 **	0.157 ***	0.060	0.086	0.159 ***
Multi-morbidity (Number of Morbidities)	1.860	2.186 ***	2.775 ***	1.853	2.304 ***	2.613 ***	1.785	2.278 ***	2.806 ***
Lifetime Packyears	9.896	11.458 *	15.105 ***	4.739	9.186 ***	22.517 ***	7.985	12.135 ***	16.966 ***
Gender (Female = 1)	0.606	0.536 *	0.463 ***	0.781	0.506 ***	0.319 ***	0.622	0.494 ***	0.485 ***
Education: 0-11 Years	0.115	0.138	0.166 **	0.108	0.142 *	0.166 ***	0.078	0.127 ***	0.227 ***
Education: 12 Years	0.263	0.303	0.340 ***	0.251	0.296	0.355 ***	0.249	0.316 **	0.345 ***
Education: 13-15 Years	0.253	0.267	0.253	0.272	0.242	0.259	0.258	0.268	0.245
Education: 16+ Years	0.369	0.292 **	0.242 ***	0.368	0.320 *	0.220 ***	0.414	0.289 ***	0.182 ***
Race/Ethnicity: White, not Hispanic	0.825	0.779 **	0.726 ***	0.770	0.772	0.796	0.869	0.779 ***	0.666 ***
Race/Ethnicity: Black, not Hispanic	0.057	0.095 ***	0.159 ***	0.089	0.101	0.114 *	0.048	0.095 ***	0.175 ***
Race/Ethnicity: Hispanic	0.082	0.091	0.085	0.100	0.092	0.066 *	0.056	0.087 **	0.123 ***
Race/Ethnicity: Other, not Hispanic	0.035	0.035	0.030	0.041	0.035	0.024	0.027	0.039	0.036
BMI: Under Weight	0.014	0.020	0.015	0.016	0.009	0.024	0.021	0.008 *	0.020
BMI: Normal Weight	0.306	0.232 ***	0.217 ***	0.289	0.219 **	0.253	0.348	0.225 ***	0.170 ***
BMI: Overweight	0.423	0.365 *	0.316 ***	0.400	0.344 *	0.367	0.388	0.390	0.326 *
BMI: Obese 1	0.198	0.249 *	0.227	0.211	0.261 *	0.201	0.181	0.253 **	0.245 **
BMI: Obese 2	0.058	0.134 ***	0.225 ***	0.084	0.167 ***	0.155 ***	0.061	0.124 ***	0.239 ***

Note: significance tests from bivariate regression of varaible on age category with tertile 1 as reference group; *** p < .001, ** p < .01, * p < .05.