Online Appendix

Cross-Sectional Association Between Life Expectancy and Unhealthy Life Years: Proof of Concept Tests of the CroHaM Hypothesis^{*}

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This Online Appendix contains additional information regarding the article: https://www.comparativepopulationstudies.de/index.php/CPoS/article/view/659/416.

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Tab. A1: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent in poor or very poor self-perceived health, Germany 2012, men

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+0.94	+1.26	-0.32
Medium (ISCED 3-4)	+0.34	+0.37	-0.03
High (ISCED 5-6)	-0.71	-1.10	+0.39
Net equivalent income			
1st quartile	+1.33	+1.50	-0.17
2nd quartile	+0.08	+0.04	+0.04
3rd quartile	-0.77	-0.73	-0.04
4th quartile	-1.32	-1.46	+0.14
Household net income			
1st quartile	+1.92	+2.23	-0.32
2nd quartile	+0.60	+0.59	+0.00
3rd quartile	-0.23	-0.40	+0.17
4th quartile	-1.64	-1.82	+0.18
Work status			
Manual workers	+0.30	+0.47	-0.17
Employees	+0.08	-0.09	+0.18
Public servants	-0.57	-0.75	+0.18
Self-employed workers	-0.27	-0.36	+0.09
Marital status			
Married	-0.01	-0.05	+0.05
Unmarried	-0.16	-0.16	+0.00
Divorced	+0.37	+0.82	-0.45
Widowed	+1.38	+2.17	-0.80
Living arrangement			
Single-person household	+0.73	+1.30	-0.57
Multi-person household	-0.05	-0.09	+0.04
Smoking			
Never	-0.78	-1.25	+0.46
Ever	+0.49	+0.60	-0.11
Alcohol consumption			
Never	+2.27	+2.82	-0.55
Rarely	-0.02	-0.11	+0.09
Frequently	-0.90	-0.90	-0.00
Body Mass Index			
Normal weight	-0.82	-0.83	+0.01
Overweight	-0.64	-0.69	+0.05
Obese	+2.58	+2.83	-0.25

Tab. A2: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent with strong activity limitations, Germany 2012, men

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+2.32	+2.88	-0.56
Medium (ISCED 3-4)	+0.35	+0.41	-0.06
High (ISCED 5-6)	-1.06	-1.75	+0.69
Net equivalent income			
1st quartile	+1.51	+1.81	-0.30
2nd quartile	+1.47	+1.39	+0.07
3rd quartile	-1.68	-1.62	-0.06
4th quartile	-1.62	-1.91	+0.28
Household net income			
1st quartile	+2.01	+2.56	-0.55
2nd quartile	+0.40	+0.40	+0.00
3rd quartile	+0.27	-0.04	+0.31
4th quartile	-1.91	-2.29	+0.38
Work status			
Manual workers	+0.76	+1.07	-0.31
Employees	+0.16	-0.16	+0.33
Public servants	-0.58	-0.92	+0.33
Self-employed workers	-0.87	-1.01	+0.14
Marital status			
Married	+0.14	+0.05	+0.08
Unmarried	-1.37	-1.37	+0.01
Divorced	-0.81	-0.02	-0.79
Widowed	+0.41	+1.72	-1.32
Living arrangement			
Single-person household	-0.09	+0.82	-0.91
Multi-person household	+0.15	+0.08	+0.07
Smoking			
Never	-0.62	-1.51	+0.89
Ever	+0.55	+0.74	-0.19
Alcohol consumption			
Never	+2.73	+3.60	-0.87
Rarely	+0.29	+0.12	+0.18
Frequently	-1.16	-1.16	+0.00
Body Mass Index			
Normal weight	-1.29	-1.32	+0.03
Overweight	-0.05	-0.16	+0.10
Obese	+2.40	+2.76	-0.36

Tab. A3: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent with chronic health problems, Germany 2012, men

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+0.91	+2.42	-1.51
Medium (ISCED 3-4)	-0.13	+0.02	-0.15
High (ISCED 5-6)	+0.99	-0.89	+1.88
Net equivalent income			
1st quartile	+0.69	+1.40	-0.71
2nd quartile	+0.73	+0.55	+0.18
3rd quartile	-1.12	-0.94	-0.18
4th quartile	-0.74	-1.55	+0.80
Household net income			
1st quartile	+0.49	+1.79	-1.30
2nd quartile	+0.82	+0.81	+0.01
3rd quartile	+0.38	-0.33	+0.71
4th quartile	-0.37	-1.55	+1.19
Work status			
Manual workers	+0.16	+1.03	-0.88
Employees	+0.84	+0.04	+0.80
Public servants	-1.65	-2.48	+0.83
Self-employed workers	+0.57	+0.23	+0.34
Marital status			
Married	+0.17	-0.04	+0.21
Unmarried	-1.94	-1.99	+0.05
Divorced	-2.21	+0.16	-2.37
Widowed	-2.92	+0.68	-3.61
Living arrangement			
Single-person household	-2.11	+0.36	-2.47
Multi-person household	+0.26	+0.08	+0.18
Smoking			
Never	+0.95	-1.44	+2.38
Ever	+0.22	+0.71	-0.49
Alcohol consumption			
Never	+0.48	+2.67	-2.18
Rarely	+1.14	+0.68	+0.46
Frequently	-1.26	-1.28	+0.02
Body Mass Index			
Normal weight	-2.21	-2.29	+0.08
Overweight	+0.07	-0.20	+0.27
Obese	+3.23	+4.04	-0.81

Tab. A4: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent in poor or very poor self-perceived health, Germany 2012, women

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+1.01	+1.03	-0.03
Medium (ISCED 3-4)	-0.48	-0.47	-0.02
High (ISCED 5-6)	-0.85	-1.38	+0.54
Net equivalent income			
1st quartile	+0.95	+1.05	-0.11
2nd quartile	-0.30	-0.36	+0.06
3rd quartile	-0.83	-0.74	-0.09
4th quartile	-2.57	-2.81	+0.23
Household net income			
1st quartile	+0.85	+1.05	-0.20
2nd quartile	-0.60	-0.58	-0.02
3rd quartile	+0.42	-0.06	+0.48
4th quartile	-1.62	-1.93	+0.31
Work status			
Manual workers	+0.57	+0.80	-0.23
Employees	-0.02	+0.00	-0.03
Public servants	+0.83	+0.57	+0.26
Self-employed workers	-2.33	-3.00	+0.67
Marital status			
Married	-0.04	-0.10	+0.07
Unmarried	+1.70	+1.91	-0.21
Divorced	+0.67	+1.17	-0.50
Widowed	+0.05	+0.05	+0.01
Living arrangement			
Single-person household	+0.67	+0.67	+0.01
Multi-person household	+0.15	+0.11	+0.04
Smoking			
Never	+0.15	-0.02	+0.17
Ever	-0.45	-0.17	-0.28
Alcohol consumption			
Never	+2.87	+3.19	-0.33
Rarely	-1.47	-1.60	+0.13
Frequently	-1.93	-2.07	+0.14
Body Mass Index			
Underweight	+3.30	+4.69	-1.39
Normal weight	-0.94	-1.11	+0.17
Overweight	-0.77	-0.63	-0.14
Obese	+2.05	+2.34	-0.29

Tab. A5: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent with strong activity limitations, Germany 2012, women

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+1.64	+1.68	-0.04
Medium (ISCED 3-4)	-0.22	-0.19	-0.03
High (ISCED 5-6)	-1.78	-2.58	+0.81
Net equivalent income			
1st quartile	+0.98	+1.14	-0.16
2nd quartile	+0.38	+0.27	+0.11
3rd quartile	-1.12	-0.97	-0.15
4th quartile	-2.28	-2.79	+0.50
Household net income			
1st quartile	+1.39	+1.72	-0.33
2nd quartile	-1.39	-1.38	-0.02
3rd quartile	+0.44	-0.31	+0.75
4th quartile	-1.53	-2.09	+0.57
Work status			
Manual workers	+1.49	+1.85	-0.36
Employees	-0.48	-0.44	-0.04
Public servants	+0.55	+0.15	+0.40
Self-employed workers	-2.00	-3.33	+1.33
Marital status			
Married	-0.50	-0.60	+0.10
Unmarried	-0.98	-0.72	-0.26
Divorced	+0.25	+1.05	-0.79
Widowed	+1.51	+1.50	+0.01
Living arrangement			
Single-person household	+1.59	+1.59	+0.01
Multi-person household	-0.63	-0.69	+0.05
Smoking			
Never	-0.40	-0.65	+0.26
Ever	+0.47	+1.02	-0.55
Alcohol consumption			
Never	+2.75	+3.20	-0.45
Rarely	-0.47	-0.73	+0.26
Frequently	-2.63	-2.88	+0.26
Body Mass Index			
Underweight	+3.59	+5.50	-1.91
Normal weight	-1.24	-1.52	+0.28
Overweight	-0.65	-0.41	-0.23
Obese	+2.48	+2.91	-0.43

Tab. A6: Decomposition of differences in unhealthy life years (ULY) at age 50 between various subpopulations and the total population into health effect (HE) and mortality effect (ME), ULY defined as life years spent with chronic health problems, Germany 2012, women

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Education according to ISCED-97			
Low (ISCED 1-2)	+0.49	+0.57	-0.09
Medium (ISCED 3-4)	+0.25	+0.31	-0.05
High (ISCED 5-6)	-0.03	-1.96	+1.93
Net equivalent income			
1st quartile	+0.75	+1.09	-0.34
2nd quartile	+0.44	+0.21	+0.23
3rd quartile	-0.74	-0.41	-0.33
4th quartile	-2.49	-3.58	+1.08
Household net income			
1st quartile	+0.90	+1.59	-0.69
2nd quartile	-0.71	-0.67	-0.04
3rd quartile	+1.24	-0.25	+1.49
4th quartile	-0.94	-2.16	+1.22
Work status			
Manual workers	+0.36	+1.07	-0.71
Employees	+0.03	+0.11	-0.08
Public servants	-0.43	-1.23	+0.80
Self-employed workers	-0.10	-3.22	+3.13
Marital status			
Married	-0.02	-0.25	+0.23
Unmarried	+0.82	+1.49	-0.67
Divorced	+0.07	+1.83	-1.76
Widowed	+0.26	+0.23	+0.02
Living arrangement			
Single-person household	+1.32	+1.28	+0.04
Multi-person household	-0.27	-0.39	+0.11
Smoking			
Never	+0.76	+0.17	+0.59
Ever	-2.11	-1.11	-1.01
Alcohol consumption			
Never	+2.51	+3.45	-0.95
Rarely	-0.37	-0.92	+0.55
Frequently	-2.84	-3.45	+0.61
Body Mass Index			
Underweight	-2.85	+0.11	-2.97
Normal weight	-2.70	-3.29	+0.59
Overweight	+0.42	+0.98	-0.56
Obese	+4.09	+4.93	-0.84

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Tab. A7:Decomposition of differences in unhealthy life years (ULY) at age 50
between women and men into health effect (HE) and mortality effect
(ME), ULY defined as life years spent in poor or very poor self-perceived
health, various subpopulations, Germany 2012

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Total population	+0.82	+0.15	+0.67
Education according to ISCED-97			
Low (ISCED 1-2)	+0.88	-0.22	+1.11
Medium (ISCED 3-4)	-0.01	-0.63	+0.63
High (ISCED 5-6)	+0.68	+0.08	+0.60
Net equivalent income			
1st quartile	+0.43	-0.49	+0.92
2nd quartile	+0.44	-0.21	+0.65
3rd quartile	+0.75	+0.22	+0.53
4th quartile	-0.44	-0.77	+0.33
Household net income			
1st quartile	-0.25	-1.19	+0.94
2nd quartile	-0.38	-1.00	+0.62
3rd quartile	+1.47	+0.42	+1.04
4th quartile	+0.84	+0.45	+0.39
Work status			
Manual workers	+1.08	+0.35	+0.73
Employees	+0.71	+0.24	+0.47
Public servants	+2.21	+1.49	+0.72
Self-employed workers	-1.25	-2.39	+1.14
Marital status			
Married	+0.79	+0.02	+0.77
Unmarried	+2.67	+2.13	+0.54
Divorced	+1.12	+0.35	+0.77
Widowed	-0.51	-1.97	+1.47
Living arrangement			
Single-person household	+0.76	-0.50	+1.25
Multi-person household	+1.01	+0.25	+0.77
Smoking			
Never	+1.75	+1.60	+0.15
Ever	-0.12	-0.64	+0.52
Alcohol consumption			
Never	+1.41	-0.09	+1.50
Rarely	-0.63	-1.09	+0.46
Frequently	-0.22	-0.76	+0.54
Body Mass Index			
Normal weight	+0.69	+0.15	+0.54
Overweight	+0.68	+0.30	+0.38
Obese	+0.28	-0.98	+1.27

Tab. A8:Decomposition of differences in unhealthy life years (ULY) at age 50
between women and men into health effect (HE) and mortality effect
(ME), ULY defined as life years spent with strong activity limitations,
various subpopulations, Germany 2012

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Total population	+1.10	-0.03	+1.13
Education according to ISCED-97			
Low (ISCED 1-2)	+0.41	-1.28	+1.69
Medium (ISCED 3-4)	+0.53	-0.67	+1.20
High (ISCED 5-6)	+0.38	-0.54	+0.92
Net equivalent income			
1st quartile	+0.57	-0.88	+1.45
2nd quartile	+0.01	-1.26	+1.27
3rd quartile	+1.65	+0.80	+0.85
4th quartile	+0.43	-0.57	+1.01
Household net income			
1st quartile	+0.48	-1.13	+1.61
2nd quartile	-0.70	-1.53	+0.83
3rd quartile	+1.26	-0.50	+1.76
4th quartile	+1.48	+0.57	+0.91
Work status			
Manual workers	+1.83	+0.60	+1.22
Employees	+0.45	-0.32	+0.78
Public servants	+2.23	+1.04	+1.19
Self-employed workers	-0.04	-2.21	+2.17
Marital status			
Married	+0.46	-0.73	+1.19
Unmarried	+1.48	+0.95	+0.53
Divorced	+2.16	+0.97	+1.19
Widowed	+2.20	-0.43	+2.63
Living arrangement			
Single-person household	+2.78	+0.66	+2.12
Multi-person household	+0.31	-0.83	+1.14
Smoking			
Never	+1.32	+1.07	+0.25
Ever	+1.02	+0.00	+1.02
Alcohol consumption			
Never	+1.12	-0.86	+1.99
Rarely	+0.33	-0.83	+1.16
Frequently	-0.37	-1.45	+1.08
Body Mass Index			
Normal weight	+1.15	+0.12	+1.03
Overweight	+0.50	-0.27	+0.77
Obese	+1.17	-0.52	+1.69

Tab. A9: Decomposition of differences in unhealthy life years (ULY) at age 50 between women and men into health effect (HE) and mortality effect (ME), ULY defined as life years spent with chronic health problems, various subpopulations, Germany 2012

Group indicator / subpopulation	Difference in ULY	Health effect	Mortality effect
Total population	+3.32	+0.62	+2.70
Education according to ISCED-97			
Low (ISCED 1-2)	+2.90	-1.33	+4.23
Medium (ISCED 3-4)	+3.70	+0.90	+2.80
High (ISCED 5-6)	+2.30	-0.29	+2.59
Net equivalent income			
1st quartile	+3.39	+0.21	+3.17
2nd quartile	+3.03	+0.21	+2.82
3rd quartile	+3.70	+1.21	+2.49
4th quartile	+1.58	-1.18	+2.75
Household net income			
1st quartile	+3.74	+0.35	+3.39
2nd quartile	+1.79	-0.90	+2.70
3rd quartile	+4.18	+0.70	+3.48
4th quartile	+2.75	+0.17	+2.58
Work status			
Manual workers	+3.53	+0.56	+2.96
Employees	+2.51	+0.66	+1.85
Public servants	+4.55	+2.14	+2.41
Self-employed workers	+2.65	-2.69	+5.34
Marital status			
Married	+3.14	+0.36	+2.78
Unmarried	+6.08	+4.35	+1.73
Divorced	+5.60	+2.09	+3.51
Widowed	+6.50	+0.02	+6.49
Living arrangement			
Single-person household	+6.76	+1.47	+5.28
Multi-person household	+2.79	+0.09	+2.70
Smoking			
Never	+3.14	+2.47	+0.66
Ever	+0.99	-1.05	+2.04
Alcohol consumption			
Never	+5.35	+0.81	+4.54
Rarely	+1.81	-0.94	+2.75
Frequently	+1.74	-1.09	+2.83
Body Mass Index			
Normal weight	+2.84	+0.16	+2.68
Overweight	+3.68	+1.68	+1.99
Obese	+4.18	+0.76	+3.43

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