Socioeconomic Life Course Models and Oral Health: A Longitudinal Analysis

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Appendix Methods: Statistical analyses

Two absolute fit indices were assessed, values under 0.05 for Root Mean Square Error of Approximation (RMSEA) or below 1.0 for Weighted Root Mean Square Residual (WRMR) suggest close approximate (adequate) fit. The Comparative Fit Index (CFI) and the Tucker-Lewis index (TLI) represent incremental fit and values >0.95 are indicative of good fit. Standardized coefficients (SC) are scaled as standard-deviations (Std) for both independent and dependent variables and were interpreted according to Kline (1994), where an SC of about 0.10 indicates a small effect, about 0.30 a medium, and > 0.50 a strong effect. A coefficient of 0.50 means that a change in 1 Std in the independent variable is associated with 0.50 Std change in the outcome. Direct and indirect effects were obtained with "indirect" command in the software.

Sensitivity analysis was carried out, changing the cut-off-point of self-reported oral health. We also calculated prevalence and incidence of teeth in good conditions (code 1 versus all others) but results were much similar (see Appendix Tables 3 and 4), although not significant due to smaller sample (starting only with people with teeth in good conditions for incidence analysis).

Kline P. 1994. An easy guide to factor analysis. London (UK): Routledge.

Appendix Tables:

Appendix Table 1- Prevalence of people losing all or almost all teeth by two socioeconomic variables in two Swedish cohorts.

Trajectories from childhood up to survey year	Prevalence in survey 1974			Prevalence in survey 1991			Prevalence in survey 2011		
	%	N	p-value*	%	N	p-value*	%	N	p-value*
Cohort 1925–34 / mean age	44 years			61 years			81 years		
Persistently lower	35.5	262	<0.01	42.8	243	<0.01	44.5	182	<0.01
Downwardly mobile	29.0	69		30.6	85		30.0	70	
Upwardly mobile	20.2	297		26.3	209		22.0	109	
Persistently higher	7.9	252		11.6	181		14.3	105	
Total	21.9	880		28.7	718		30.3	466	
Cohort 1944–53 / mean age	26 year			43 years			63 years		
Persistently lower	3.7	324	<0.01	6.9	261	<0.01	8.7	229	<0.01
Downwardly mobile	1.1	189		2.5	161		3.4	146	
Upwardly mobile	0.8	260		1.7	239		5.0	139	
Persistently higher	0.3	365		1.0	298		2.0	201	
Total	1.5	1138		3.0	959		5.0	715	
SES in childhood									
Cohort 1925–34 / mean age	44 years			61 years			81 years		
Lower	27.4	559	<0.01	36.2	473	<0.01	39.0	305	<0.01
Middle	16.8	208		25.4	173		24.1	108	
Higher	4.4	113		5.1	99		19.4	72	
Total	21.9	880		29.5	745		32.7	485	
Cohort 1944–53 / mean age	26 year			43 years			63 years		
Lower	2.4	585	0.01	4.5	508	<0.01	8.8	374	<0.01
Middle	0.7	274		2.5	238		5.2	172	
Higher	0.4	280		0.9	235		0.6	176	
Total	1.5	1139		3.2	981		6.0	722	

*p-values for trend for SES in childhood

Appendix Table 2 - Measurement model (confirmatory factor analysis) standardized estimates for latent variables with residual variance (uniqueness) and residual correlations.

Latent Factors	Items	Cohort 1925-34		Cohort 1944-53	
		Std Estimate	uniqueness	Std Estimate	uniqueness
Tooth loss in young/mid adulthood BY	Tooth Conditions 68	0.90	0.20	0.68	0.54
	Tooth Conditions 74	0.93	0.14	0.87	0.25
Tooth loss in mid/late adulthood BY	Tooth Conditions 81	0.96	0.08	0.84	0.29
	Tooth Conditions 91	0.96	0.08	0.87	0.24
Tooth loss in late adulthood/life BY	Tooth Conditions 00	0.96	0.07	0.92	0.15
	Tooth Conditions 10	0.87	0.24	0.81	0.34
SES childhood BY	Economic Hardship	0.38	0.85	0.38	0.86
	Father occupational Class	0.68	0.55	0.74	0.46
	Father Education	0.85	0.27	0.87	0.25
	Mather Education	0.72	0.48	0.75	0.44
SES in young/mid adulthood BY	Occupational Class 68	0.66	0.56	0.48	0.86
	Occupational Class 74	0.69	0.52	0.69	0.82
	Cash Margin 68	0.45	0.80	0.38	0.77
	Cash Margin 74	0.48	0.77	0.42	0.52
SES in mid/late adulthood BY	Occupational Class 81	0.67	0.55	0.82	0.32
	Occupational Class 91	0.65	0.58	0.91	0.18
	Cash Margin 81	0.46	0.79	0.47	0.78
	Cash Margin 91	0.48	0.77	0.54	0.71
	Occupational Class 00	0.90	0.19	0.68	0.50
	Occupational Class 10	0.86	0.27	0.71	0.54
SES in late adulthood/life BY	Cash Margin 00	0.67	0.55	0.26	0.93
	Cash Margin 10	0.67	0.56	0.27	0.93
Residual correlations					
Cash Margin 00 WITH	Cash Margin 10			0.46	
Cash Margin 68 WITH	Cash Margin 74	0.42		0.26	
Cash Margin 81 WITH	Cash Margin 74			0.40	
Cash Margin 91 WITH	Cash Margin 81	0.58		0.46	
Occupational Class 74 WITH	Occupational Class 68	0.64			
Occupational Class 91 WITH	Occupational Class 81	0.64			
Occupational Class 10 WITH	Occupational Class 00			0.76	
Model Fit					
CFI		0.99		0.97	
TLI		0.98		0.96	
RMSEA		0.05		0.05	
WRMR		1.61		1.47	

Appendix Table 3 – Incidence of teeth not in good conditions by two socioeconomic variables in two Swedish cohorts.

	Incidence from 1968 up to 1974			Incidence from 1981 up to 1991			Incidence from 2000 up to 2011		
Trajectories from Childhood up to last survey year	%	N	p-value*	%	N	p-value*	%	N	p-value*
Cohort 1925-34 / mean age in the period	38 to 44 years			51 to 61 years			70 to 81 years		
Persistently lower	51.9	81	0.31	56.9	51	0.20	72.7	44	0.31
Downwardly mobile	58.3	24		70.6	17		66.7	12	
Upwardly mobile	42.7	136		42.6	47		60.0	35	
Persistently higher	43.1	116		49.1	55		50.0	22	
Total	45.9	357		51.8	170		63.7	113	
Cohort 1944-53 / mean age in the period	20 to 26 years			33 to 43 years			52 to 63 years		
Persistently lower	41.8	194	<0.01	47.3	112	0.19	35.3	68	0.69
Downwardly mobile	39.9	143		36.9	84		42.2	45	
Upwardly mobile	27.2	202		38.9	108		39.5	38	
Persistently higher	25.5	302		34.6	165		31.9	69	
Total	32.1	841		39.0	469		36.4	220	
Socioeconomic Position in Childhood									
Cohort 1925-34 / mean age in the period	38 to 44 years			51 to 61 years			70 to 81 years		
Lower	46.1	217	0.99	47.1	104	0.47	67.5	80	0.44
Middle	45.5	88		57.1	49		52.4	21	
Higher	46.2	52		45.8	24		64.3	14	
Total	45.9	357		49.7	177		64.4	115	
Cohort 1944-53 / mean age in the period	20 to 26 years			33 to 43 years			52 to 63 years		
Lower	34.3	397	<0.01	42.2	225	0.12	36.8	106	0.98
Middle	37.4	211		36.3	124		35.3	51	
Higher	23.5	234		31.6	136		36.5	63	
Total	32.1	842		37.7	485		36.4	220	

* chi-square test p-values

Note: we kept only people with teeth in good conditions at baseline year

Appendix Table 4 – Prevalence of people with teeth not in good conditions by two socioeconomic variables in two Swedish cohorts

	Prevalence in 1974			Prevalence in 1991			Prevalence in 2011		
Trajectories from Childhood up to survey year	%	N	p-value*	%	N	p-value*	%	N	p-value*
Cohort 1925-34 / mean age	44 years			61 years			81 years		
Persistently lower	76.0	262	0.02	87.2	243	0.01	87.9	182	0.02
Downwardly mobile	78.3	69		87.1	85		88.6	70	
Upwardly mobile	67.7	297		80.4	209		79.8	109	
Persistently higher	65.9	252		76.2	181		75.2	105	
Total	70.5	880		82.5	718		83.3	466	
Cohort 1944-53 / mean age	26 year			43 years			63 years		
Persistently lower	55.6	324	<0.01	68.2	261	0.05	73.8	229	0.24
Downwardly mobile	47.6	189		60.3	161		72.6	146	
Upwardly mobile	36.5	260		59.4	239		73.4	139	
Persistently higher	32.9	365		57.1	298		65.7	201	
Total	42.6	1138		61.2	959		71.2	715	
Socioeconomic Position in Childhood									
Cohort 1925-34 / mean age	44 years			61 years			81 years		
Lower	71.6	559	0.43	83.51	473	0.19	85.57	305	0.35
Middle	70.2	208		82.08	173		79.63	108	
Higher	65.5	113		75.76	99		83.33	72	
Total	70.5	880		82.15	745		83.92	485	
Cohort 1944-53 / mean age	26 year			43 years			63 years		
Lower	47.01	585	0.01	63.58	508	0.05	74.06	374	0.05
Middle	44.89	274.0		59.66	238		73.26	172	
Higher	31.07	280.0		54.47	235		64.2	176	
Total	42.58	1139		60.45	981		71.47	722	

* chi-square test p-values