

Development of Overall Identity and Mental Well-Being and Their Associations in Adulthood

Supplemental material

The results of sensitivity analyses with participants who had completed at least two ($n = 210$) or three ($n = 156$) measurements.

Table S1

Model Fit Indices for Univariate Latent Growth Models with Participants Who Completed at Least Two Measurements ($n = 210$)

		Model 1: no change	Model 2: linear	Model 3: quadratic	Model 4: latent basis
Overall identity	$\chi^2 (df), p$	96.30(13), <.001	28.20(10), .002	13.04(6), .042	15.29(7), .032
	CFI	0.711	0.937	0.976	0.971
	TLI	0.777	0.937	0.959	0.959
	RMSEA	0.175	0.093	0.075	0.075
	SRMR	0.160	0.076	0.055	0.062
Psychological well-being	$\chi^2 (df), p$	16.90(8), .031	7.72(5), .173	7.84(1), .005*	No convergence
	CFI	0.965	0.989	0.973	
	TLI	0.974	0.987	0.839	
	RMSEA	0.073	0.051	0.180	
	SRMR	0.240	0.112	0.021	
Life satisfaction	$\chi^2 (df), p$	34.91(8), <.001	3.25(5), .661	2.76(1), .097	2.62(3), .455
	CFI	0.814	1.000	0.988	1.000
	TLI	0.860	1.000	0.927	1.000
	RMSEA	0.127	0.000	0.092	0.000
	SRMR	0.164	0.009	0.025	0.014
Social well-being	$\chi^2 (df), p$	46.86(4), <.001	0.00(0), **		
	CFI	0.790	1.000		
	TLI	0.843	1.000		
	RMSEA	0.226	0.000		
	SRMR	0.219	0.000		
Anxious feelings	$\chi^2 (df), p$	13.34(8), .101	5.87(5), .319	2.21(1), .137*	16.05(3), .001
	CFI	0.987	0.998	0.997	0.968
	TLI	0.990	0.997	0.982	0.937
	RMSEA	0.056	0.029	0.076	0.144
	SRMR	0.105	0.071	0.013	0.077
Depressive feelings	$\chi^2 (df), p$	20.71(8), .008	6.38(5), .271	1.80(1), .179*	5.07(3), 1.67
	CFI	0.939	0.993	0.996	0.995
	TLI	0.954	0.992	0.977	0.990
	RMSEA	0.087	0.036	0.062	0.057
	SRMR	0.184	0.083	0.016	0.047

Note. The selected model for each variable is highlighted in bold. *These models were not reliable (positive definitive problem): either the covariance was over 1 or the variance/residual variance negative or 0. **This model was saturated.

Table S2

Results of Univariate Latent Growth Models with Participants Who Completed at Least Two Measurements (n = 210)

	Mean						Variance						Covariance	
	Intercept			Slope			Intercept			Slope			Intercept-Slope	
	Est.	SE	p	Est.	SE	p	Est.	SE	p	Est.	SE	p	SEst.	p
OI	.00	.16	.998	.43	.06	<.001	1.67	.63	.008	.08	.07	.247	.27	.680
PWB	3.18	.02	<.001	-.01	.01	.246	.07	.01	<.001	.01	.00	.017	-.11	.487
LS	3.06	.02	<.001	.05	.01	<.001	.08	.01	<.001	.02	.01	<.001	-.41	<.001
SWB	2.84	.03	<.001	.15	.03	<.001	.13	.02	<.001	.03	.01	<.001	-.43	<.001
ANX	1.91	.02	<.001	.00	.01	.703	.10	.01	<.001	.01	.00	.034	-.11	.398
DEP	1.44	.02	<.001	.01	.01	.328	.09	.01	<.001	.01	.00	.004	-.03	.890

Note. Est. = unstandardized estimate, SE = standard error, p = p-value, SEst. = standardized estimate, OI = overall identity, PWB = psychological well-being, LS = life

satisfaction, SWB = social well-being, ANX = anxious feelings, DEP = depressive feelings. Latent basis model for identity and linear model for the mental well-being variables.

Table S3*Model Fit Indices for Bivariate Latent Growth Models with Participants Who Completed at Least Two**Measurements (n = 210)*

Bivariate model	$\chi^2 (df), p$	CFI	TLI	RMSEA	SRMR
Overall identity and psychological well-being	43.35(28), .032	0.976	0.970	0.051	0.079
Overall identity and life satisfaction	39.95(28), .067	0.975	0.968	0.045	0.049
Overall identity and social well-being	30.25(18), .035	0.978	0.965	0.057	0.054
Overall identity and anxious feelings	33.21(28), .228	0.994	0.992	0.030	0.062
Overall identity and depressive feelings	44.83(28), .023	0.973	0.965	0.053	0.064

Note. Latent basis model for identity and linear model for the mental well-being variables.**Table S4***Standardized Results of Bivariate Latent Growth Models Between Overall Identity and Mental Well-Being**Variables with Participants Who Completed at Least Two Measurements (n = 210)*

	PWB		LS		SWB		ANX		DEP	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
Overall identity										
Intercept	.38**	.16	.21*	-.09	.31**	.05	-.22*	-.01	.12	-.18

Note. PWB = psychological well-being, LS = life satisfaction, SWB = social well-being, ANX = anxious

feelings, DEP = depressive feelings. In the bivariate LGC models, the reference point (intercept) for identity was changed to match the intercepts of the mental well-being variables. Intercept corresponds to age 36 in models between identity and psychological well-being, life satisfaction, and anxious and depressive feelings, and age 42 in the model between identity and social well-being.

* $p < .05$. ** $p < .01$.

Table S5

Model Fit Indices for Univariate Latent Growth Models with Participants Who Completed at Least Three Measurements (n = 156)

		Model 1: no change	Model 2: linear	Model 3: quadratic	Model 4: latent basis
Overall identity	$\chi^2 (df), p$	92.65(13), <.001	29.80(10), .001	12.00(6), .062	19.19(7), .008
	CFI	0.656	0.914	0.974	0.947
	TLI	0.735	0.914	0.957	0.925
	RMSEA	0.198	0.113	0.080	0.106
	SRMR	0.193	0.091	0.044	0.071
Psychological well-being	$\chi^2 (df), p$	11.34(8), .183	5.94(5), .313	5.13(1), .024*	No convergence
	CFI	0.984	0.995	0.980	
	TLI	0.988	0.995	0.880	
	RMSEA	0.052	0.035	0.163	
	SRMR	0.201	0.130	0.020	
Life satisfaction	$\chi^2 (df), p$	38.79(8), <.001	6.25(5), .283	5.06(1), .025	5.71(3), .127
	CFI	0.740	0.989	0.966	0.977
	TLI	0.805	0.987	0.794	0.954
	RMSEA	0.157	0.040	0.161	0.076
	SRMR	0.247	0.022	0.036	0.021
Social well-being	$\chi^2 (df), p$	33.64(4), <.001	0.00(0), **		
	CFI	0.825	1.000		
	TLI	0.869	1.000		
	RMSEA	0.218	0.000		
	SRMR	0.226	0.000		
Anxious feelings	$\chi^2 (df), p$	13.10(8), .109	9.54(5), .089	4.37(1), .037*	No convergence
	CFI	0.987	0.988	0.991	
	TLI	0.990	0.986	0.947	
	RMSEA	0.064	0.076	0.147	
	SRMR	0.130	0.101	0.020	
Depressive feelings	$\chi^2 (df), p$	22.20(8), .005	7.14(5), .211	2.93(1), .087*	4.69(3), .196
	CFI	0.928	0.989	0.990	0.995
	TLI	0.946	0.987	0.942	0.990
	RMSEA	0.107	0.052	0.111	0.060
	SRMR	0.217	0.088	0.022	0.042

Note. The selected model for each variable is highlighted in bold. *These models were not reliable (positive definitive problem): either the covariance was over 1 or the variance/residual variance negative or 0. **This model was saturated.

Table S6

Results of Univariate Latent Growth Models with Participants Who Completed at Least Three Measurements (n = 156)

	Mean						Variance						Covariance	
	Intercept			Slope			Intercept			Slope			Intercept-Slope	
	Est.	SE	p	Est.	SE	p	Est.	SE	p	Est.	SE	p	SEst.	p
OI	.00	.18	.999	.48	.06	<.001	1.42	.68	.037	.09	.08	.299	.22	.763
PWB	3.20	.03	<.001	-.01	.01	.396	.07	.01	<.001	.00	.00	.069	-.09	.616
LS	3.07	.03	<.001	.06	.01	<.001	.08	.01	<.001	.02	.01	.001	-.44	<.001
SWB	2.86	.03	<.001	.14	.03	<.001	.13	.02	<.001	.03	.01	<.001	-.43	<.001
ANX	1.92	.03	<.001	.00	.01	.864	.10	.01	<.001	.00	.00	.126	-.11	.532
DEP	1.44	.03	<.001	.01	.01	.360	.08	.01	<.001	.01	.00	.005	-.01	.961

Note. Est. = unstandardized estimate, SE = standard error, p = p-value, SEst. = standardized estimate, OI = overall identity, PWB = psychological well-being, LS = life

satisfaction, SWB = social well-being, ANX = anxious feelings, DEP = depressive feelings. Latent basis model for identity and linear model for the mental well-being variables.

Table S7

Model fit Indices for Bivariate Latent Growth Models with Participants Who Completed at Least Three Measurements (n = 156)

Bivariate model	χ^2 (df), p	CFI	TLI	RMSEA	SRMR
Overall identity and psychological well-being	41.28(28), .051	0.975	0.968	0.055	0.083
Overall identity and life satisfaction	42.33(28), .040	0.962	0.951	0.057	0.055
Overall identity and social well-being	31.87(18), .023	0.969	0.951	0.070	0.058
Overall identity and anxious feelings	36.79(28), .124	0.988	0.984	0.045	0.073
Overall identity and depressive feelings	48.75(28), .009	0.961	0.950	0.069	0.069

Note. Latent basis model for identity and linear model for the mental well-being variables.

Table S8

Standardized Results of Bivariate Latent Growth Models Between Overall Identity and Mental Well-Being Variables with Participants Who Completed at Least Three Measurements (n = 156)

	PWB		LS		SWB		ANX		DEP	
	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope	Intercept	Slope
Overall identity										
Intercept	.44**		.21*	-.08	.29**	.04	-.37**		.01	-.23

Note. PWB = psychological well-being, LS = life satisfaction, SWB = social well-being, ANX = anxious

feelings, DEP = depressive feelings. In the bivariate LGC models, the reference point (intercept) for identity was changed to match the intercepts of the mental well-being variables. Intercept corresponds to age 36 in models between identity and psychological well-being, life satisfaction, and anxious and depressive feelings, and age 42 in the model between identity and social well-being. Univariate LGC analysis of psychological well-being and anxious feelings showed that the variance of the slope factors was not statistically significant. Therefore, the results of the bivariate LGC analyses are reported only between the intercept of overall identity and the intercepts of the psychological well-being and anxious feelings.

* $p < .05$. ** $p < .01$.