

Appendix B

Sensitivity Analyses

As preregistered, we conducted three sets of sensitivity analyses to examine the robustness of the results. First, we examined each of the three models without autoregressive effects (see Table B1). The autoregressive lag-1 models (AR(1) models) control for well-being at the previous measurement moment, by including the autoregressive effects of well-being. This can be considered a rather restrictive approach (Adachi & Willoughby, 2015). To assess the effect of social media use on well-being without controlling for the previous level of well-being, we relaxed the assumption of autoregressive effects by running multilevel models without the lagged effects of well-being. All other model specifications were identical. Consistent with the AR(1) models, the average within-person effects were non-significant and close to zero for all three types of social media use. However, relaxing the assumption of autoregressive effects resulted in considerably more variation: The effect sizes ranged from $\beta = -.34$ to $\beta = +.38$ for active private social media use, from $\beta = -.38$ to $\beta = +.38$ for passive private use, and from $\beta = -.47$ to $\beta = +.58$ for passive public use.

Second, we examined an AR(1) model with all three types of social media use included as predictors (see Table B2). All results were similar to those of the default models. Again, the average within-person effects of active private, passive private, and passive public social media use were close to zero, but the effects differed substantially across adolescents. Finally, we tested each of the three AR(1) models while excluding participants who provided potentially untrustworthy responses to the ESM questions ($n=8$) from the analyses (see Table B3). Again, all results remained virtually unchanged when eliminating these participants.

Table B1

Multilevel Model Estimates for the Within-Person Effects, Between-Person Associations, Random Effects, and Variances of the Time Spent Using Social Media (SMU) in an Active Private, Passive Private, and Passive Public Way, and Affective Well-Being (AWB)

	Active Private SMU Model 1				Passive Private SMU Model 2				Passive Public SMU Model 3			
	<i>B</i>	β	<i>p</i>	95% CI	<i>B</i>	β	<i>p</i>	95% CI	<i>B</i>	β	<i>p</i>	95% CI
Within-Person Effects												
SMU → AWB [H1/2/3; beta]	0.005	.005	.302	[-.013, .023]	0.002	.002	.417	[-.014, .019]	0.006	.006	.271	[-.013, .024]
Between-Person Associations												
SMU & AWB	-0.114	-.115	.011	[-.215, -.017]	-0.116	-.118	.010	[-.218, -.020]	-0.095	-.114	.016	[-.216, -.009]
SMU & beta ^a	-0.010	-.039	.297	[-0.184, .107]	-0.010	-.065	.171	[-.198, .073]	-0.008	-.045	.257	[-.182, .087]
AWB & beta ^a	-0.035	-.203	.003	[-.343, -.052]	-0.040	-.243	.000	[-.379, -.098]	-0.049	-.211	.003	[-.349, -.065]
	σ^2	<i>p</i>	95% CI		σ^2	<i>p</i>	95% CI		σ^2	<i>p</i>	95% CI	
Random Effects												
SMU → AWB [H4]^b	0.027	.000	[0.019, 0.039]		0.025	.000	[0.017, 0.035]		0.049	.000	[0.036, 0.066]	
Other Variances												
SMU (within-person)	0.858	.000	[0.846, 0.871]		0.920	.000	[0.907, 0.934]		0.716	.000	[0.705, 0.727]	
SMU (between-person)	0.888	.000	[0.770, 1.026]		0.870	.000	[0.754, 1.006]		0.628	.000	[0.541, 0.733]	
AWB (within-person)	1.286	.000	[1.267, 1.307]		1.287	.000	[1.267, 1.307]		1.277	.000	[1.257, 1.297]	
AWB (between-person)	1.119	.000	[0.970, 1.291]		1.119	.000	[0.969, 1.290]		1.119	.000	[0.974, 1.301]	

Note. SMU = social media use; AWB = affective well-being; β s are standardized using the STDYX Standardization in Mplus. *p*-values are one-tailed Bayesian *p*-values (see McNeish & Hamaker, 2020).

^abeta reflects the within-person effect of active private (H1; Model 1), passive private (H2; Model 2), and passive public (H3; Model 3) social media use on affective well-being. The between-person associations between SMU & beta and AWB & beta reflect the extent to which the within-person effect of active private (Model 1), passive private (Model 2), and passive public (Model 3) social media use on affective well-being depends on adolescents' average level of social media use (SMU & beta) and on adolescents' average level of affective well-being (AWB & beta). ^bThe random within-person effect of social media use on affective well-being (H4) reflects the between-person variance around the within-person effect of active private (Model 1), passive private (Model 2), and passive public (Model 3) social media use on affective well-being.

Table B2

DSEM Estimates and 95% Bayesian Credible Intervals for the Within-Person Effects, Between-Person Associations, Random Effects, and Variances of the Time Spent Using Social Media (SMU) in an Active Private, Passive Private, and Passive Public Way, and Affective Well-Being (AWB)

	<i>B</i>	β	<i>p</i>	95% CI
Within-Person Effects				
Active Private SMU → AWB [H1]	0.005	.005	.351	[-.020, .033]
Passive Private SMU → AWB [H2]	-0.010	-.009	.198	[-.036, .013]
Passive Public SMU → AWB [H3]	-0.006	-.003	.367	[-.021, .016]
AWB (t-1) → AWB (t)	0.272	.272	.000	[.256, .285]
Between-Person Associations				
Active Private SMU & AWB	0.123	.120	.369	[-.359, .477]
Passive Private SMU & AWB	-0.263	-.257	.272	[-.586, .316]
Passive Public SMU & AWB	0.005	.005	.484	[-.263, .285]
	σ^2	<i>p</i>		95% CI
Random Effects				
Active Private SMU → AWB [H4]^a	0.011	.000		[0.005, 0.021]
Passive Private SMU → AWB [H4]^a	0.005	.000		[0.002, 0.012]
Passive Public SMU → AWB [H4]^a	0.020	.000		[0.010, 0.039]
AWB (t-1) → AWB (t)	0.050	.000		[0.042, 0.061]
Other Variances				
Active Private SMU (within-person)	0.858	.000		[0.845, 0.871]
Active Private SMU (between-person)	0.882	.000		[0.764, 1.025]
Passive Private SMU (within-person)	0.920	.000		[0.907, 0.933]
Passive Private SMU (between-person)	0.865	.000		[0.748, 1.002]
Passive Public SMU (within-person)	0.716	.000		[0.705, 0.727]
Passive Public SMU (between-person)	0.623	.000		[0.538, 0.728]
AWB (within-person)	1.071	.000		[1.054, 1.089]
AWB (between-person)	1.318	.000		[1.020, 2.338]

Note. SMU = social media use; AWB = affective well-being; β s are standardized using the STDYX Standardization in Mplus. *p*-values are one-tailed Bayesian *p*-values (see McNeish & Hamaker, 2020).

^aThe random within-person effects of social media use on affective well-being (H4) reflect the between-person variance around the within-person effect of active private, passive private, and passive public social media use on affective well-being.

Table B3

DSEM Estimates and 95% Bayesian Credible Intervals for the Within-Person Effects, Between-Person Associations, Random Effects, and Variances of the Time Spent Using Social Media (SMU) in an Active Private, Passive Private, and Passive Public Way, and Affective Well-Being (AWB) Excluding Participants Who Provided Potentially Untrustworthy Responses to the ESM Questions (n=8)

	Active Private SMU Model 1				Passive Private SMU Model 2				Passive Public SMU Model 3			
	<i>B</i>	β	<i>p</i>	95% CI	<i>B</i>	β	<i>p</i>	95% CI	<i>B</i>	β	<i>p</i>	95% CI
Within-Person Effects												
SMU → AWB [H1/2/3; beta]	-0.011	-.009	.175	[-.026, .010]	-0.009	-.008	.156	[-.025, .009]	-0.013	-.009	.176	[-.026, .010]
AWB (t-1) → AWB (t)	0.275	.273	.000	[.258, .287]	0.274	.273	.000	[.258, .287]	0.276	.276	.000	[.261, .290]
Between-Person Associations												
SMU & AWB	-0.121	-.129	.008	[-.233, -.022]	-0.122	-.132	.008	[-.236, -.025]	-0.092	-.116	.016	[-.222, -.008]
SMU & beta ^a	0.000	.000	.499	[-0.150, .150]	-0.003	-.025	.375	[-.177, .129]	-0.001	-.013	.425	[-.160, .131]
AWB & beta ^a	-0.015	-.123	.076	[-.282, .044]	-0.020	-.179	.019	[-.341, -.009]	-0.020	-.139	.051	[-.303, .026]
	σ^2	<i>p</i>	95% CI		σ^2	<i>p</i>	95% CI		σ^2	<i>p</i>	95% CI	
Random Effects												
SMU → AWB [H4]^b	0.016	.000	[0.010, 0.025]		0.012	.000	[0.008, 0.020]		0.021	.000	[0.013, 0.033]	
AWB (t-1) → AWB (t)	0.051	.000	[0.042, 0.062]		0.052	.000	[0.043, 0.062]		0.051	.000	[0.042, 0.061]	
Other Variances												
SMU (within-person)	0.843	.000	[0.830, 0.856]		0.903	.000	[0.890, 0.917]		0.704	.000	[0.693, 0.715]	
SMU (between-person)	0.885	.000	[0.765, 1.026]		0.867	.000	[0.750, 1.005]		0.630	.000	[0.540, 0.735]	
AWB (within-person)	1.070	.000	[1.053, 1.087]		1.072	.000	[1.055, 1.089]		1.068	.000	[1.052, 1.086]	
AWB (between-person)	0.993	.000	[0.857, 1.154]		0.993	.000	[0.859, 1.154]		0.993	.000	[0.862, 1.148]	

Note. SMU = social media use; AWB = affective well-being; β s are standardized using the STDYX Standardization in Mplus. *p*-values are one-tailed Bayesian *p*-values (see McNeish & Hamaker, 2020).

^abeta reflects the within-person effect of active private (H1; Model 1), passive private (H2; Model 2), and passive public (H3; Model 3) social media use on affective well-being. The between-person associations between SMU & beta and AWB & beta reflect the extent to which the within-person effect of active private (Model 1), passive private (Model 2), and passive public (Model 3) social media use on affective well-being depends on adolescents' average level of social media use (SMU & beta) and on adolescents' average level of affective well-being (AWB & beta). ^bThe random within-person effect of social media use on affective well-being (H4) reflects the between-person variance around the within-person effect of active private (Model 1), passive private (Model 2), and passive public (Model 3) social media use on affective well-being.

