Supplemental Material

Model Equations

H1a and H2a

Model equation for the models related to H1a and H2a, in this example with positive affect (PA) as the outcome and social deprivation states (SDS) as the predictor of interest:

$$\begin{aligned} PA_{ti} =& \beta_{0i} + \beta_{1i} SDS_{ti} + \beta_{2i} weekend_{ti} + e_{ti} \\ \beta_{0i} =& \gamma_{00} + \gamma_{01} female_i + \gamma_{02} age_i + \upsilon_{0i} \\ \beta_{1i} =& \gamma_{10} + \upsilon_{1i} \\ \beta_{2i} =& \gamma_{20} \end{aligned} \tag{A1}$$

where at time t for participant i $e_{ti} \sim N(0, \sigma_e^2)$ and $\begin{bmatrix} \upsilon_{0i} \\ \upsilon_{1i} \end{bmatrix} \sim MVN \left(\begin{bmatrix} 0 \\ 0 \end{bmatrix} , \begin{bmatrix} \tau_{00} & \\ \tau_{10} & \tau_{11} \end{bmatrix} \right)$.

H3a, H3b, and H3c

Model equation for the models related to H3a, H3b, and H3c, in this example with positive affect (PA) as the outcome, social deprivation states (SDS) as the predictor of interest, and extraversion as the moderator (cross-level interaction):

$$\begin{aligned} PA_{ti} =& \beta_{0i} + \beta_{1i} SDS_{ti} + \beta_{2i} weekend_{ti} + e_{ti} \\ \beta_{0i} =& \gamma_{00} + \gamma_{01} female_i + \gamma_{02} age_i + \gamma_{03} extraversion_i + \upsilon_{0i} \\ \beta_{1i} =& \gamma_{10} + \gamma_{11} extraversion_i + \upsilon_{1i} \\ \beta_{2i} =& \gamma_{20} \end{aligned} \tag{A2}$$

where at time t for participant i $e_{ti} \sim N(0, \sigma_e^2)$ and $\begin{bmatrix} \upsilon_{0i} \\ \upsilon_{1i} \end{bmatrix} \sim MVN\left(\begin{bmatrix} 0 \\ 0 \end{bmatrix}, \begin{bmatrix} \tau_{00} & \\ \tau_{10} & \tau_{11} \end{bmatrix}\right)$.

Exploratory Models of Social Contact and Social Desire

Model equation for the basic exploratory models, in this example with positive affect (PA) as the outcome and desire to be alone alongside in-person contact duration as predictors (see Table 2):

$$
\begin{aligned}
PA_{ti} =& \beta_{0i} + \beta_{1i} inPersonWP_{ti} + \beta_{2i} desireAloneWP_{ti} + \beta_{3i} inPersonWP_{ti} * desireAloneWP_{ti} \\
&+ \beta_{4i} weekend_{ti} + e_{ti} \\
\beta_{0i} &= \gamma_{00} + \gamma_{01} female_i + \gamma_{02} age_i + \gamma_{03} inPersonBP_i + \gamma_{04} desireAloneBP_i \\
&+ \gamma_{05} inPersonBP_i * desireAloneBP_i + \upsilon_{0i} \\
\beta_{1i} &= \gamma_{10} + \gamma_{11} desireAloneBP_i + \upsilon_{1i} \\
\beta_{2i} &= \gamma_{20} + \gamma_{21} inPersonBP_i + \upsilon_{2i} \\
\beta_{3i} &= \gamma_{30} + \upsilon_{3i} \\
\beta_{3i} &= \gamma_{40}
\end{aligned}
\tag{A3}
$$

where at time t for participant i $e_{ti} \sim N(0, \sigma_e^2)$ and

$$
\begin{bmatrix} \upsilon_{0i} \\ \upsilon_{1i} \\ \upsilon_{2i} \\ \upsilon_{3i} \end{bmatrix} \sim MVN\left(\begin{bmatrix} 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}, \begin{bmatrix} \tau_{00} & & & \\ \tau_{10} & \tau_{11} & & \\ \tau_{20} & \tau_{21} & \tau_{22} & \\ \tau_{30} & \tau_{31} & \tau_{32} & \tau_{33} \end{bmatrix}\right).
$$

In this case, $inPersonWP_{ti}$ and $desireAloneWP_{ti}$ denote the person-mean-centered within-person components of the predictor variables, and $inPersonBP_i$ and $desireAloneBP_i$ the grand-mean-centered between-person components.

Specification Curve Analysis – Coding Choices

The specification curve analyses (SCA, see Simonsohn et al., 2020) served the purpose of scrutinizing the operationalization of social deprivation states (SDS) and social oversatiation states (SOS) and their confirmatory analytical models.

In general, these states were coded based on a mismatch between social contact and momentary social desire using variables from the experience sampling data. The condition of mismatch applied for SDS when participants reported low levels of social contact together with a high desire for social contact. For SOS, this was the case when participants reported substantial social contact while at the same time reporting a high desire to be alone. The effect sizes displayed in SCA plots correspond to the coefficient for SDS or SOS ($\hat{\gamma}_{10}$, see Fig. 1, 2, S2, & S3), or the coefficient of the cross-level interaction between SDS or SOS and each social trait ($\hat{\gamma}_{11}$, see Fig. S4-S23). Subplots **a** always show the ranked effect sizes of the different specifications including their 95% confidence intervals; subplots **b** show the frequency of occurrence of the respective social dynamics state (SDS or SOS) in the different specifications; and subplots **c** mark the options that define the different specifications.

We preregistered the specifications at https://osf.io/4syhg. In the table below, options in brackets indicate the combination of decisions that make up the specification that we thought was most sensible from a theoretical standpoint and that was used in confirmatory models (see Table 1).

Abbreviation	Options	Explanation
consec	1 / [2] / 3	Minimum number of consecutive ESM assessments in which the conditions for coding SDS/SOS have to apply (i.e., the mismatch between social contact status and momentary social desire). The set of specifications with *consec*=1 was added after the preregistration.

Abbreviation	Options	Explanation
cut_desire	[5] / 6	Cutoff value for high desire for social contact or high desire to be alone in the coding of SDS/SOS: either 5 or 6 on the 7-point scale.
cut_time	5 / [10] / 20	Minimum duration of self-reported social contact that is included (i.e., considered as meaningful) in the coding (in min).
exclude_val	[no] / yes	Exclude social contact from coding of states based on valence (below 3 for SDS / above 5 for SOS). If *exclude_val*=yes, only neutral or pleasant contact is considered for SDS. Unpleasant social contact is then not considered under the assumption that it may not meaningfully contribute to alleviating social deprivation. For SOS, only unpleasant or neutral social contact is considered if *exclude_val*=yes. In this case, we assume that additional pleasant social contact is irrelevant to define a spell of social oversatiation.
calls	[no] / yes	Include indirect contact duration in the form of self-reported calls and video calls as social contact.
two_days	[no] / yes	Allow states (SDS / SOS) to span the two days of the observation period. ESM assessments covered social contact roughly in the period between 8:00 a.m. and 9:00 p.m..

Abbreviation	Options	Explanation
trait_affect	[no] / yes	Include trait-level affect as a level-2 variable in the multilevel models to account for between-person differences in affective experiences. We assessed trait-level affect in the baseline survey using the same affect adjectives as for momentary affect but in reference to the last two weeks.
random_slope (not used)	no / [yes]	Include random slopes of SDS/SOS in the multilevel models. We deviated from our preregistration because we were unable to estimate random slopes in all specifications due to model nonconvergence of some of the specifications.

Robustness Checks

For additional, exploratory analyses we formed a composite social desire variable based on the reverse-scored desire to be alone (when participants were in in-person contact with others immediately before the ESM prompt), and the desire for social contact (when they were alone). This had the advantage of including all observations in one model (i.e., increased power) but the disadvantage of creating a psychometrically blurred variable. Models with this composite social desire variable supported the results of the main exploratory models: Higher than usual social desire was associated with increased PA, $\hat{\gamma}_{20} = 0.22$, 95% CI $[0.18, 0.25]$, $p < .001$, and decreased NA, $\hat{\gamma}_{20} = -0.14$, 95% CI $[-0.17, -0.11]$, $p < .001$ (see Table S10). For NA, we also found a significant interaction effect between the within-person components of in-person contact and social desire: When in a state of lower than usual social desire, participants with longer than usual in-person contact experienced increased NA, $\hat{\gamma}_{30} = -0.03$, 95% CI $[-0.05, 0.00]$, $p = .022$ (see Fig. S27c,d). This interaction effect supported our results for desire for social contact, but was not in line with the interaction effect involving desire to be alone described in the main text.

We also examined how the average valence of in-person contact reported in each state related to affect, and whether valence was a confound for the effect of momentary desire to be alone on affective well-being. In these models, we found significant within-person effects of valence on both PA, $\hat{\gamma}_{30} = 0.23$, 95% CI $[0.19, 0.27]$, $p < .001$, and NA, $\hat{\gamma}_{30} = -0.19$, 95% CI $[-0.23, -0.15]$, $p < .001$. Still, effects of desire to be alone reported earlier persisted even when controlling for valence in this way and were only slightly reduced in size (see Table S11; PA: $\hat{\gamma}_{20} = -0.18$, 95% CI $[-0.21, -0.14]$, $p < .001$; NA: $\hat{\gamma}_{20} = 0.12$, 95% CI $[0.08, 0.15]$, $p < .001$).

Supplementary Tables

Table S1

Mean, Standard Deviation, Median, Minimum, Maximum, Number of Observations, and Intra-Class Correlation of Level-1 Variables

	M	*SD*	*med.*	*min*	*max*	*n*	*ICC*
Based on ESM Self-Report							
Positive Affect	4.63	1.14	4.75	1.21	7.00	4,524	0.49
Negative Affect	1.94	1.06	1.50	1.00	5.20	4,524	0.52
Desire for Social Contact	3.30	1.48	3.50	1.00	7.00	1,934	0.42
Desire to be Alone	3.20	1.77	3.00	1.00	7.00	2,571	0.32
In-Person Contact Duration	25.77	29.26	10.00	0.00	98.52	4,524	0.22
Social Deprivation State	0.02	0.15	0.00	0.00	1.00	3,674	0.14
Social Oversatiation State	0.04	0.20	0.00	0.00	1.00	3,723	0.28
Based on Mobile Sensing							
Detected Conversation Proportion	0.10	0.17	0.00	0.00	0.97	3,198	0.25
Call Frequency	0.17	0.58	0.00	0.00	12.00	4,524	0.19
Call Duration	0.72	3.72	0.00	0.00	65.88	4,524	0.05
Communication Apps Frequency	4.96	6.21	3.00	0.00	68.00	4,524	0.41
Communication Apps Duration	3.42	6.12	1.05	0.00	86.14	4,524	0.24
Social Media Apps Frequency	1.73	3.58	0.00	0.00	56.00	4,524	0.38
Social Media Apps Duration	3.17	7.45	0.00	0.00	83.66	4,524	0.26

Note. Presented are the unstandardized variables. Duration variables are scaled in minutes. In-person contact duration was censored to the duration of the corresponding ESM episode. M = mean, SD = standard deviation, *med.* = median, *min* = minimum value, *max* = maximum value, n = number of observations, ICC = intra-class correlation, that is, the proportion of variance that lies at the between-person level.

Table S2

Fixed Effects of Social Dynamics on Momentary Affect (Alternative Predictor Centering).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Social Deprivation State								
Intercept, $\hat{\gamma}_{00}$	4.73	[4.59, 4.87]	66.42	$< .001$	2.04	[1.91, 2.17]	30.22	$< .001$
SDS (BP), $\hat{\gamma}_{03}$	-0.84	[-2.12, 0.44]	-1.29	.200	-0.08	[-1.29, 1.13]	-0.13	.899
SDS (WP), $\hat{\gamma}_{10}$	0.12	[-0.09, 0.33]	1.12	.261	-0.08	[-0.27, 0.11]	-0.84	.401
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-0.99	.320	-0.09	[-0.15, -0.03]	-3.12	.002
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.13]	-0.62	.536	-0.16	[-0.34, 0.01]	-1.85	.066
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.27	.001	-0.01	[-0.01, 0.00]	-1.65	.100
Social Oversatiation State								
Intercept, $\hat{\gamma}_{00}$	4.74	[4.60, 4.87]	67.92	$< .001$	2.04	[1.90, 2.17]	30.45	$< .001$
SOS (BP), $\hat{\gamma}_{03}$	-0.89	[-1.67, -0.10]	-2.23	.026	0.43	[-0.33, 1.18]	1.11	.268
SOS (WP), $\hat{\gamma}_{10}$	-0.27	[-0.44, -0.10]	-3.11	.002	0.42	[0.24, 0.59]	4.52	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.04]	-0.90	.370	-0.09	[-0.15, -0.04]	-3.17	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.24, 0.13]	-0.59	.553	-0.17	[-0.34, 0.01]	-1.87	.062
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.30	.001	-0.01	[-0.01, 0.00]	-1.70	.091

Note. Using the centering strategy for binary predictors described in Yaremych et al. (2021). Separate models were computed for each of the two types of states (SDS, SOS) and two affect outcomes (PA, NA). SDS = Social Deprivation State, SOS = Social Oversatiation State, CI = confidence interval, BP = between-person effect, WP = within-person effect.

Table S3

Fixed Effects of Social Dynamics on Momentary Affect as Moderated by Extraversion.

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Social Deprivation State								
Intercept, $\hat{\gamma}_{00}$	4.74	[4.61, 4.87]	70.07	$< .001$	2.02	[1.89, 2.14]	31.21	$< .001$
SDS, $\hat{\gamma}_{10}$	0.10	[-0.11, 0.30]	0.90	.369	-0.08	[-0.26, 0.11]	-0.84	.403
Extraversion, $\hat{\gamma}_{03}$	0.20	[0.11, 0.29]	4.38	$< .001$	-0.14	[-0.22, -0.05]	-3.07	.002
Extraversion * SDS, $\hat{\gamma}_{11}$	-0.09	[-0.26, 0.08]	-0.98	.326	-0.02	[-0.17, 0.13]	-0.22	.827
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-0.99	.320	-0.09	[-0.15, -0.03]	-3.12	.002
Female, $\hat{\gamma}_{01}$	-0.11	[-0.29, 0.07]	-1.17	.243	-0.12	[-0.30, 0.05]	-1.39	.164
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.20	.002	-0.01	[-0.01, 0.00]	-1.63	.103
Social Oversatiation State								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	71.42	$< .001$	2.02	[1.89, 2.14]	31.24	$< .001$
SOS, $\hat{\gamma}_{10}$	-0.28	[-0.45, -0.11]	-3.16	.002	0.41	[0.23, 0.59]	4.41	$< .001$
Extraversion, $\hat{\gamma}_{03}$	0.20	[0.11, 0.29]	4.47	$< .001$	-0.13	[-0.22, -0.05]	-3.02	.003
Extraversion * SOS, $\hat{\gamma}_{11}$	0.04	[-0.12, 0.19]	0.47	.638	-0.03	[-0.19, 0.14]	-0.31	.757
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.04]	-0.88	.378	-0.09	[-0.15, -0.04]	-3.17	.002
Female, $\hat{\gamma}_{01}$	-0.12	[-0.30, 0.06]	-1.31	.192	-0.12	[-0.30, 0.05]	-1.41	.159
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.28	.001	-0.01	[-0.01, 0.00]	-1.67	.096

Note. Separate models were computed for each of the two types of states (SDS, SOS) and two affect outcomes (PA, NA). SDS = Social Deprivation State, SOS = Social Oversatiation State, CI = confidence interval.

Table S4

Fixed Effects of Social Dynamics on Momentary Affect as Moderated by Affiliation Motive.

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Social Deprivation State								
Intercept, $\hat{\gamma}_{00}$	4.71	[4.58, 4.84]	71.06	$< .001$	2.04	[1.91, 2.16]	31.49	$< .001$
SDS, $\hat{\gamma}_{10}$	0.22	[-0.04, 0.47]	1.67	.095	-0.09	[-0.31, 0.14]	-0.75	.451
Affiliation Motive, $\hat{\gamma}_{03}$	0.24	[0.15, 0.33]	5.34	$< .001$	-0.10	[-0.19, -0.01]	-2.20	.028
Affiliation Motive * SDS, $\hat{\gamma}_{11}$	-0.22	[-0.44, 0.00]	-1.93	.054	0.02	[-0.18, 0.21]	0.20	.844
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-0.96	.335	-0.09	[-0.15, -0.03]	-3.14	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.56	.575	-0.16	[-0.34, 0.01]	-1.85	.065
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.94	$< .001$	-0.01	[-0.01, 0.00]	-1.92	.055
Social Oversatiation State								
Intercept, $\hat{\gamma}_{00}$	4.72	[4.59, 4.84]	72.27	$< .001$	2.04	[1.91, 2.16]	31.57	$< .001$
SOS, $\hat{\gamma}_{10}$	-0.35	[-0.54, -0.15]	-3.51	$< .001$	0.50	[0.30, 0.69]	5.03	$< .001$
Affiliation Motive, $\hat{\gamma}_{03}$	0.24	[0.15, 0.33]	5.42	$< .001$	-0.10	[-0.19, -0.01]	-2.21	.028
Affiliation Motive * SOS, $\hat{\gamma}_{11}$	-0.11	[-0.27, 0.05]	-1.39	.166	0.15	[-0.01, 0.31]	1.83	.067
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.04]	-0.82	.411	-0.09	[-0.15, -0.04]	-3.21	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.23, 0.11]	-0.66	.508	-0.17	[-0.34, 0.01]	-1.90	.059
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	4.04	$< .001$	-0.01	[-0.01, 0.00]	-1.96	.051

Note. Separate models were computed for each of the two types of states (SDS, SOS) and two affect outcomes (PA, NA). SDS = Social Deprivation State, SOS = Social Oversatiation State, CI = confidence interval.

Table S5

Fixed Effects of Social Dynamics on Momentary Affect as Moderated by Neuroticism.

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Social Deprivation State								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.54, 4.79]	73.27	$< .001$	2.08	[1.97, 2.20]	34.86	$< .001$
SDS, $\hat{\gamma}_{10}$	0.10	[-0.11, 0.31]	0.92	.355	-0.09	[-0.27, 0.10]	-0.90	.368
Neuroticism, $\hat{\gamma}_{03}$	-0.34	[-0.42, -0.25]	-7.82	$< .001$	0.33	[0.25, 0.41]	7.97	$< .001$
Neuroticism * SDS, $\hat{\gamma}_{11}$	-0.06	[-0.32, 0.19]	-0.48	.631	0.06	[-0.16, 0.29]	0.55	.581
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-1.01	.312	-0.09	[-0.15, -0.03]	-3.14	.002
Female, $\hat{\gamma}_{01}$	0.05	[-0.12, 0.21]	0.53	.600	-0.26	[-0.42, -0.10]	-3.14	.002
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.01]	2.80	.005	0.00	[-0.01, 0.00]	-1.13	.259
Social Oversatiation State								
Intercept, $\hat{\gamma}_{00}$	4.67	[4.54, 4.79]	74.78	$< .001$	2.08	[1.97, 2.20]	35.00	$< .001$
SOS, $\hat{\gamma}_{10}$	-0.30	[-0.47, -0.13]	-3.45	.001	0.41	[0.23, 0.59]	4.50	$< .001$
Neuroticism, $\hat{\gamma}_{03}$	-0.34	[-0.43, -0.26]	-8.05	$< .001$	0.33	[0.25, 0.41]	8.05	$< .001$
Neuroticism * SOS, $\hat{\gamma}_{11}$	0.02	[-0.16, 0.20]	0.25	.803	0.00	[-0.19, 0.19]	-0.02	.981
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.04]	-0.86	.388	-0.09	[-0.15, -0.04]	-3.20	.001
Female, $\hat{\gamma}_{01}$	0.04	[-0.13, 0.21]	0.47	.642	-0.26	[-0.42, -0.10]	-3.18	.002
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.01]	2.88	.004	0.00	[-0.01, 0.00]	-1.17	.243

Note. Separate models were computed for each of the two types of states (SDS, SOS) and two affect outcomes (PA, NA). SDS = Social Deprivation State, SOS = Social Oversatiation State, CI = confidence interval.

Table S6

Fixed Effects of Social Dynamics on Momentary Affect (Including Nonsignificant Cross-Level Interactions with Gender.and Age).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Social Deprivation State								
Intercept, $\hat{\gamma}_{00}$	4.71	[4.57, 4.84]	68.04	$< .001$	2.04	[1.91, 2.16]	31.24	$< .001$
SDS, $\hat{\gamma}_{10}$	0.14	[-0.14, 0.41]	0.97	.333	-0.06	[-0.30, 0.18]	-0.48	.632
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.14]	-0.49	.627	-0.16	[-0.34, 0.01]	-1.84	.067
Female * SDS, $\hat{\gamma}_{11}$	-0.15	[-0.59, 0.29]	-0.66	.509	-0.02	[-0.41, 0.36]	-0.11	.910
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.09	.002	-0.01	[-0.01, 0.00]	-1.60	.110
Age * SDS, $\hat{\gamma}_{12}$	0.01	[0.00, 0.03]	1.82	.068	-0.01	[-0.02, 0.01]	-0.99	.323
Weekend, $\hat{\gamma}_{20}$	-0.04	[-0.10, 0.03]	-1.02	.306	-0.09	[-0.15, -0.03]	-3.12	.002
Social Oversatiation State								
Intercept, $\hat{\gamma}_{00}$	4.71	[4.58, 4.84]	69.08	$< .001$	2.03	[1.91, 2.16]	31.20	$< .001$
SOS, $\hat{\gamma}_{10}$	-0.27	[-0.52, -0.02]	-2.10	.036	0.48	[0.22, 0.75]	3.56	$< .001$
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.55	.579	-0.16	[-0.34, 0.01]	-1.81	.071
Female * SOS, $\hat{\gamma}_{11}$	-0.06	[-0.40, 0.28]	-0.36	.721	-0.11	[-0.47, 0.24]	-0.62	.534
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.15	.002	-0.01	[-0.01, 0.00]	-1.67	.096
Age * SOS, $\hat{\gamma}_{12}$	0.01	[-0.01, 0.02]	1.15	.252	0.00	[-0.02, 0.01]	-0.24	.807
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.04]	-0.88	.381	-0.09	[-0.15, -0.04]	-3.17	.002

Note. Separate models were computed for each of the two types of states (SDS, SOS) and two affect outcomes (PA, NA). SDS = Social Deprivation State, SOS = Social Oversatiation State, CI = confidence interval.

Table S7

Fixed Effects of In-Person Contact Duration and Social Desire on Momentary Affect (Including Quadratic Effects of Social Desire).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.80	[4.63, 4.97]	56.74	$< .001$	2.00	[1.84, 2.16]	24.58	$< .001$
Weekend, $\hat{\gamma}_{50}$	-0.01	[-0.09, 0.06]	-0.38	.702	-0.10	[-0.17, -0.03]	-2.89	.004
Female, $\hat{\gamma}_{01}$	-0.07	[-0.24, 0.11]	-0.76	.449	-0.12	[-0.29, 0.05]	-1.39	.167
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.67	$< .001$	0.00	[-0.01, 0.00]	-1.43	.155
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.11	[0.01, 0.21]	2.07	.039	-0.05	[-0.15, 0.04]	-1.10	.273
[In-Person Contact (BP)]^2, $\hat{\gamma}_{04}$	-0.03	[-0.10, 0.05]	-0.70	.487	0.01	[-0.07, 0.08]	0.14	.886
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.07]	1.06	.289	0.00	[-0.05, 0.04]	-0.13	.893
[In-Person Contact (WP)]^2, $\hat{\gamma}_{20}$	0.00	[-0.03, 0.03]	0.07	.941	0.00	[-0.02, 0.03]	0.35	.727
Desire Alone (BP), $\hat{\gamma}_{05}$	-0.13	[-0.23, -0.04]	-2.81	.005	0.09	[0.00, 0.18]	1.99	.048
[Desire Alone (BP)]^2, $\hat{\gamma}_{06}$	-0.03	[-0.09, 0.03]	-0.94	.349	-0.02	[-0.08, 0.04]	-0.76	.446
Desire Alone (WP), $\hat{\gamma}_{30}$	-0.25	[-0.29, -0.21]	-11.90	$< .001$	0.18	[0.14, 0.22]	8.57	$< .001$
[Desire Alone (WP)]^2, $\hat{\gamma}_{40}$	-0.02	[-0.04, 0.01]	-1.22	.223	0.04	[0.02, 0.07]	3.56	$< .001$
Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.69	[4.48, 4.90]	43.05	$< .001$	2.11	[1.90, 2.31]	19.77	$< .001$
Weekend, $\hat{\gamma}_{50}$	-0.03	[-0.11, 0.06]	-0.60	.546	-0.08	[-0.16, 0.00]	-1.98	.047
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	-0.89	.376	-0.15	[-0.35, 0.05]	-1.43	.152
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.46	.001	-0.01	[-0.01, 0.00]	-1.81	.072
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.12	[-0.01, 0.25]	1.87	.063	-0.05	[-0.17, 0.08]	-0.75	.453
[In-Person Contact (BP)]^2, $\hat{\gamma}_{04}$	0.07	[-0.02, 0.16]	1.44	.151	-0.03	[-0.12, 0.05]	-0.75	.455
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.03	[-0.04, 0.11]	0.92	.359	0.05	[-0.03, 0.12]	1.25	.211
[In-Person Contact (WP)]^2, $\hat{\gamma}_{20}$	-0.05	[-0.11, 0.01]	-1.47	.141	0.01	[-0.05, 0.07]	0.41	.681
Desire Contact (BP), $\hat{\gamma}_{05}$	0.17	[0.07, 0.28]	3.27	.001	-0.07	[-0.17, 0.03]	-1.40	.163
[Desire Contact (BP)]^2, $\hat{\gamma}_{06}$	-0.09	[-0.16, -0.01]	-2.23	.027	0.02	[-0.05, 0.10]	0.59	.555
Desire Contact (WP), $\hat{\gamma}_{30}$	0.13	[0.09, 0.18]	5.38	$< .001$	-0.05	[-0.09, -0.01]	-2.55	.011
[Desire Contact (WP)]^2, $\hat{\gamma}_{40}$	-0.03	[-0.06, -0.01]	-2.79	.005	0.03	[0.01, 0.05]	2.69	.007

Note. CI = confidence interval, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S8

Fixed Effects of In-Person Contact Duration and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.72	< .001	2.10	[1.97, 2.22]	32.53	< .001
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-1.02	.307	-0.09	[-0.15, -0.04]	-3.24	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.64	.525	-0.19	[-0.36, -0.02]	-2.14	.033
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.52	.001	-0.01	[-0.01, 0.00]	-1.91	.057
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.11	[0.03, 0.20]	2.57	.011	-0.07	[-0.15, 0.01]	-1.62	.107
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.09	[0.06, 0.12]	6.38	< .001	-0.02	[-0.05, 0.00]	-1.98	.048
Restricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.71	[4.57, 4.84]	68.17	< .001	2.07	[1.94, 2.20]	30.58	< .001
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.11, 0.05]	-0.79	.430	-0.09	[-0.16, -0.02]	-2.41	.016
Female, $\hat{\gamma}_{01}$	-0.07	[-0.25, 0.11]	-0.72	.469	-0.16	[-0.34, 0.01]	-1.81	.071
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.42	.001	-0.01	[-0.01, 0.00]	-1.90	.059
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.13	[0.04, 0.22]	2.80	.005	-0.07	[-0.15, 0.02]	-1.46	.144
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.07	[0.04, 0.10]	3.95	< .001	-0.03	[-0.07, 0.01]	-1.53	.125
Adding Social Desire Variables								
Intercept, $\hat{\gamma}_{00}$	4.73	[4.60, 4.87]	70.12	< .001	2.02	[1.90, 2.15]	31.04	< .001
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.35	.726	-0.10	[-0.17, -0.03]	-2.90	.004
Female, $\hat{\gamma}_{01}$	-0.08	[-0.25, 0.10]	-0.84	.402	-0.11	[-0.28, 0.06]	-1.32	.189
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.56	< .001	-0.01	[-0.01, 0.00]	-1.67	.096
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.09	[0.00, 0.18]	1.93	.054	-0.05	[-0.13, 0.04]	-1.02	.310
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.02	[-0.01, 0.06]	1.38	.169	0.00	[-0.03, 0.04]	0.21	.834
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.15	[-0.24, -0.06]	-3.21	.001	0.10	[0.02, 0.19]	2.34	.020
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.25	[-0.29, -0.21]	-12.43	< .001	0.19	[0.15, 0.23]	9.36	< .001
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.73	[4.60, 4.87]	69.32	< .001	2.02	[1.89, 2.15]	30.69	< .001
Weekend, $\hat{\gamma}_{40}$	-0.02	[-0.09, 0.06]	-0.42	.673	-0.10	[-0.17, -0.04]	-2.99	.003
Female, $\hat{\gamma}_{01}$	-0.07	[-0.25, 0.11]	-0.76	.447	-0.11	[-0.28, 0.06]	-1.29	.199
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.50	.001	-0.01	[-0.01, 0.00]	-1.67	.097
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.09	[-0.01, 0.18]	1.85	.066	-0.03	[-0.12, 0.06]	-0.72	.474
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.02	[-0.01, 0.06]	1.27	.205	0.00	[-0.03, 0.04]	0.22	.825
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.13	[-0.22, -0.04]	-2.76	.006	0.10	[0.01, 0.19]	2.08	.038
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.21]	-10.75	< .001	0.20	[0.16, 0.25]	8.56	< .001
In-Person Contact (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	0.00	[-0.09, 0.09]	0.00	.999	0.00	[-0.09, 0.09]	0.08	.934

Table S8 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
In-Person Contact (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	-0.03	[-0.06, 0.01]	-1.26	.206	0.02	[-0.02, 0.06]	0.76	.449
In-Person Contact (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	-0.03	[-0.06, 0.01]	-1.51	.131	0.01	[-0.03, 0.04]	0.37	.711
In-Person Contact (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.02	[-0.02, 0.05]	1.09	.274	-0.04	[-0.07, 0.00]	-2.08	.037

Note. Four models were computed for each of the two affect outcomes (PA, NA): First, an unrestricted model with all available observations ($N = 306$, $N_{episodes} = 4524$). Second, a model with the same variables but restricted to assessments where desire to be alone was assessed (when in momentary contact; $N = 299$, $N_{episodes} = 2571$). Third, the model with desire to be alone added. Fourth, the model with added interaction terms of in-person contact and desire to be alone. CI = confidence interval, WP = within-person effect, Desire Alone = desire to be alone.

Table S9

Fixed Effects of In-Person Contact Duration and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.72	$< .001$	2.10	[1.97, 2.22]	32.53	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-1.02	.307	-0.09	[-0.15, -0.04]	-3.24	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.64	.525	-0.19	[-0.36, -0.02]	-2.14	.033
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.52	.001	-0.01	[-0.01, 0.00]	-1.91	.057
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.11	[0.03, 0.20]	2.57	.011	-0.07	[-0.15, 0.01]	-1.62	.107
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.09	[0.06, 0.12]	6.38	$< .001$	-0.02	[-0.05, 0.00]	-1.98	.048
Restricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.63	[4.46, 4.80]	53.99	$< .001$	2.12	[1.96, 2.28]	26.06	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.05	[-0.14, 0.04]	-1.19	.233	-0.07	[-0.15, 0.01]	-1.75	.081
Female, $\hat{\gamma}_{01}$	-0.14	[-0.35, 0.06]	-1.36	.174	-0.13	[-0.33, 0.07]	-1.25	.211
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.53	$< .001$	-0.01	[-0.01, 0.00]	-1.96	.051
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.08	[-0.03, 0.20]	1.43	.155	-0.04	[-0.15, 0.07]	-0.74	.462
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.04	[-0.04, 0.12]	1.00	.316	0.05	[-0.03, 0.12]	1.15	.251
Adding Social Desire Variables								
Intercept, $\hat{\gamma}_{00}$	4.59	[4.43, 4.75]	55.05	$< .001$	2.13	[1.97, 2.29]	26.32	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.71	.480	-0.08	[-0.16, 0.00]	-1.96	.050
Female, $\hat{\gamma}_{01}$	-0.10	[-0.30, 0.11]	-0.91	.361	-0.14	[-0.34, 0.06]	-1.36	.173
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.53	$< .001$	-0.01	[-0.01, 0.00]	-1.89	.059
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.09	[-0.02, 0.20]	1.58	.114	-0.05	[-0.15, 0.06]	-0.85	.398
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.04	[-0.04, 0.11]	0.99	.322	0.04	[-0.03, 0.12]	1.12	.264
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.26]	2.86	.005	-0.07	[-0.17, 0.03]	-1.30	.195
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.19	$< .001$	-0.05	[-0.09, -0.01]	-2.33	.020
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.60	[4.43, 4.76]	54.37	$< .001$	2.13	[1.97, 2.29]	26.30	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	-0.69	.488	-0.08	[-0.16, 0.00]	-2.02	.044
Female, $\hat{\gamma}_{01}$	-0.10	[-0.31, 0.10]	-0.99	.324	-0.14	[-0.34, 0.06]	-1.35	.177
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.54	$< .001$	-0.01	[-0.01, 0.00]	-1.92	.056
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.10	[-0.02, 0.21]	1.70	.091	-0.05	[-0.15, 0.06]	-0.83	.405
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.04	[-0.04, 0.12]	1.02	.309	0.05	[-0.03, 0.12]	1.20	.231
Desire Contact (BP), $\hat{\gamma}_{04}$	0.13	[0.01, 0.25]	2.08	.038	-0.10	[-0.22, 0.02]	-1.63	.103

Table S9 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Desire Contact (WP), $\hat{\gamma}_{20}$	0.17	[0.08, 0.26]	3.74	$< .001$	-0.11	[-0.19, -0.04]	-3.12	.002
In-Person Contact (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.02	[-0.09, 0.14]	0.40	.688	-0.01	[-0.12, 0.10]	-0.24	.813
In-Person Contact (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.02	[-0.05, 0.09]	0.59	.559	-0.05	[-0.10, 0.01]	-1.65	.098
In-Person Contact (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	-0.03	[-0.11, 0.05]	-0.79	.430	-0.04	[-0.11, 0.03]	-1.07	.285
In-Person Contact (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.04	[-0.05, 0.13]	0.95	.343	-0.08	[-0.15, 0.00]	-2.01	.045

Note. Four models were computed for each of the two affect outcomes (PA, NA): First, an unrestricted model with all available observations ($N = 306$, $N_{episodes} = 4524$). Second, a model with the same variables but restricted to assessments where desire for social contact was assessed (when not in momentary contact; $N = 292$, $N_{episodes} = 1934$). Third, the model with desire for social contact added. Fourth, the model with added interaction terms of in-person contact and desire for social contact. CI = confidence interval, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S10

Fixed Effects of In-Person Contact Duration and Social Desire on Momentary Affect.

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.72	$< .001$	2.10	[1.97, 2.22]	32.53	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.10, 0.03]	-1.02	.307	-0.09	[-0.15, -0.04]	-3.24	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.64	.525	-0.19	[-0.36, -0.02]	-2.14	.033
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.52	.001	-0.01	[-0.01, 0.00]	-1.91	.057
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.11	[0.03, 0.20]	2.57	.011	-0.07	[-0.15, 0.01]	-1.62	.107
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.09	[0.06, 0.12]	6.38	$< .001$	-0.02	[-0.05, 0.00]	-1.98	.048
Adding Social Desire Variables								
Intercept, $\hat{\gamma}_{00}$	4.65	[4.52, 4.78]	71.16	$< .001$	2.09	[1.96, 2.21]	33.04	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.02	[-0.08, 0.04]	-0.51	.608	-0.11	[-0.16, -0.05]	-3.93	$< .001$
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.12]	-0.61	.542	-0.15	[-0.32, 0.01]	-1.80	.073
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.48	.001	0.00	[-0.01, 0.00]	-1.57	.118
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.05	[-0.04, 0.15]	1.10	.271	-0.04	[-0.13, 0.05]	-0.88	.378
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.01	[-0.01, 0.04]	1.02	.309	0.02	[0.00, 0.05]	1.71	.088
Social Desire (BP), $\hat{\gamma}_{04}$	0.16	[0.06, 0.26]	3.28	.001	-0.10	[-0.19, -0.01]	-2.14	.033
Social Desire (WP), $\hat{\gamma}_{20}$	0.22	[0.18, 0.25]	12.44	$< .001$	-0.14	[-0.17, -0.11]	-8.78	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.65	[4.51, 4.78]	69.00	$< .001$	2.09	[1.96, 2.22]	31.95	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.07, 0.04]	-0.49	.622	-0.11	[-0.16, -0.05]	-3.88	$< .001$
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.68	.498	-0.14	[-0.31, 0.03]	-1.66	.097
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.51	.001	0.00	[-0.01, 0.00]	-1.53	.126
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.05	[-0.05, 0.14]	0.98	.328	-0.02	[-0.12, 0.07]	-0.49	.626
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.01	[-0.02, 0.04]	0.86	.389	0.03	[0.00, 0.05]	2.12	.034
Social Desire (BP), $\hat{\gamma}_{04}$	0.16	[0.06, 0.25]	3.19	.002	-0.09	[-0.19, 0.00]	-1.97	.050
Social Desire (WP), $\hat{\gamma}_{20}$	0.21	[0.18, 0.25]	12.16	$< .001$	-0.13	[-0.16, -0.10]	-8.53	$< .001$
In-Person Contact (BP) * Social Desire (BP), $\hat{\gamma}_{05}$	0.00	[-0.08, 0.09]	0.10	.918	-0.01	[-0.09, 0.07]	-0.20	.845
In-Person Contact (BP) * Social Desire (WP), $\hat{\gamma}_{21}$	0.02	[-0.02, 0.05]	0.99	.321	-0.02	[-0.05, 0.01]	-1.29	.198
In-Person Contact (WP) * Social Desire (BP), $\hat{\gamma}_{11}$	0.02	[-0.01, 0.05]	1.24	.215	-0.02	[-0.04, 0.01]	-1.31	.189

Table S10 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
In-Person Contact (WP) * Social Desire (WP), $\hat{\gamma}_{30}$	0.02	[0.00, 0.05]	1.82	.069	-0.03	[-0.05, 0.00]	-2.29	.022

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, an unrestricted model with all available observations. Second, a model with composite social desire added. Third, the model with added interaction terms of in-person contact and social desire. CI = confidence interval, BP = between-person effect, WP = within-person effect.

Table S11

Fixed Effects of In-Person Contact Duration, Desire to be Alone, and Contact Valence on Momentary Affect.

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Restricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.71	[4.57, 4.84]	68.17	< .001	2.07	[1.94, 2.20]	30.58	< .001
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.11, 0.05]	-0.79	.430	-0.09	[-0.16, -0.02]	-2.41	.016
Female, $\hat{\gamma}_{01}$	-0.07	[-0.25, 0.11]	-0.72	.469	-0.16	[-0.34, 0.01]	-1.81	.071
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.42	.001	-0.01	[-0.01, 0.00]	-1.90	.059
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.13	[0.04, 0.22]	2.80	.005	-0.07	[-0.15, 0.02]	-1.46	.144
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.07	[0.04, 0.10]	3.95	< .001	-0.03	[-0.07, 0.01]	-1.53	.125
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.73	[4.60, 4.87]	70.12	< .001	2.02	[1.90, 2.15]	31.04	< .001
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.35	.726	-0.10	[-0.17, -0.03]	-2.90	.004
Female, $\hat{\gamma}_{01}$	-0.08	[-0.25, 0.10]	-0.84	.402	-0.11	[-0.28, 0.06]	-1.32	.188
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.56	< .001	-0.01	[-0.01, 0.00]	-1.67	.096
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.09	[0.00, 0.18]	1.93	.054	-0.05	[-0.13, 0.04]	-1.02	.309
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.02	[-0.01, 0.06]	1.38	.169	0.00	[-0.03, 0.04]	0.21	.835
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.15	[-0.24, -0.06]	-3.21	.001	0.10	[0.02, 0.19]	2.34	.020
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.25	[-0.29, -0.21]	-12.43	< .001	0.19	[0.15, 0.23]	9.36	< .001
Adding Valence								
Intercept, $\hat{\gamma}_{00}$	4.77	[4.65, 4.88]	81.46	< .001	2.00	[1.89, 2.12]	33.06	< .001
Weekend, $\hat{\gamma}_{40}$	0.01	[-0.06, 0.08]	0.23	.818	-0.10	[-0.17, -0.04]	-3.25	.001
Female, $\hat{\gamma}_{01}$	-0.15	[-0.30, 0.00]	-1.91	.057	-0.08	[-0.23, 0.08]	-0.98	.326
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.01]	3.49	.001	0.00	[-0.01, 0.00]	-1.47	.142
In-Person Contact (BP), $\hat{\gamma}_{03}$	0.06	[-0.02, 0.14]	1.49	.138	-0.03	[-0.11, 0.05]	-0.67	.502
In-Person Contact (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	-0.13	.896	0.02	[-0.01, 0.06]	1.44	.149
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.01	[-0.09, 0.07]	-0.31	.756	0.02	[-0.07, 0.10]	0.35	.725
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.18	[-0.21, -0.14]	-8.79	< .001	0.12	[0.08, 0.15]	6.28	< .001
Valence (BP), $\hat{\gamma}_{05}$	0.41	[0.33, 0.49]	10.41	< .001	-0.25	[-0.33, -0.17]	-6.20	< .001
Valence (WP), $\hat{\gamma}_{30}$	0.23	[0.19, 0.27]	11.02	< .001	-0.19	[-0.23, -0.15]	-9.27	< .001

Note. Three models were computed for each the two affect outcomes (PA, NA): First, a model with in-person contact duration based on the sample restricted to ESM episodes when people were in in-person contact with someone (2571 episodes from 299 participants). Second, a model with the same observations and desire to be alone added. Third, the full model with contact valence added. CI = confidence interval, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone.

Table S12

Fixed Effects of Detected Conversations and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
AWARE Subsample								
Intercept, $\hat{\gamma}_{00}$	4.67	[4.53, 4.81]	65.55	$< .001$	2.08	[1.94, 2.22]	29.50	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.10, 0.06]	-0.42	.675	-0.05	[-0.13, 0.02]	-1.50	.133
Female, $\hat{\gamma}_{01}$	-0.08	[-0.27, 0.11]	-0.84	.402	-0.20	[-0.39, -0.01]	-2.09	.038
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.74	.007	0.00	[-0.01, 0.00]	-1.06	.290
Conv. (BP), $\hat{\gamma}_{03}$	0.06	[-0.04, 0.15]	1.18	.241	-0.05	[-0.15, 0.04]	-1.05	.295
Conv. (WP), $\hat{\gamma}_{10}$	0.07	[0.04, 0.09]	4.66	$< .001$	0.00	[-0.03, 0.03]	-0.15	.884
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.76	[4.62, 4.90]	65.66	$< .001$	2.03	[1.89, 2.17]	28.44	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.06]	-0.69	.490	-0.05	[-0.14, 0.03]	-1.25	.211
Female, $\hat{\gamma}_{01}$	-0.09	[-0.29, 0.10]	-0.95	.343	-0.16	[-0.35, 0.03]	-1.68	.094
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.66	.008	0.00	[-0.01, 0.00]	-0.77	.440
Conv. (BP), $\hat{\gamma}_{03}$	0.04	[-0.06, 0.13]	0.75	.455	-0.03	[-0.12, 0.06]	-0.63	.532
Conv. (WP), $\hat{\gamma}_{10}$	0.05	[0.02, 0.09]	3.01	.003	0.00	[-0.04, 0.03]	-0.27	.784
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.07]	-3.34	.001	0.11	[0.01, 0.21]	2.26	.025
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.31, -0.21]	-10.74	$< .001$	0.20	[0.16, 0.25]	8.30	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.76	[4.62, 4.91]	65.83	$< .001$	2.04	[1.90, 2.18]	28.51	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.04	[-0.13, 0.06]	-0.75	.456	-0.06	[-0.15, 0.02]	-1.49	.137
Female, $\hat{\gamma}_{01}$	-0.10	[-0.30, 0.09]	-1.06	.288	-0.15	[-0.34, 0.04]	-1.53	.126
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.72	.007	0.00	[-0.01, 0.00]	-0.91	.365
Conv. (BP), $\hat{\gamma}_{03}$	0.02	[-0.07, 0.12]	0.47	.638	-0.01	[-0.11, 0.08]	-0.26	.795
Conv. (WP), $\hat{\gamma}_{10}$	0.05	[0.02, 0.09]	2.78	.006	0.00	[-0.03, 0.04]	0.24	.812
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.28, -0.08]	-3.54	$< .001$	0.12	[0.02, 0.21]	2.36	.019
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.31, -0.21]	-10.48	$< .001$	0.20	[0.15, 0.25]	8.00	$< .001$
Conv. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.04	[-0.15, 0.06]	-0.85	.397	0.05	[-0.05, 0.15]	0.97	.334
Conv. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	-0.02	[-0.06, 0.03]	-0.66	.511	0.01	[-0.03, 0.06]	0.53	.593
Conv. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.02	[-0.02, 0.06]	1.05	.294	0.00	[-0.04, 0.04]	0.13	.897

Table S12 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Conv. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.00	[-0.04, 0.04]	0.09	.926	0.02	[-0.02, 0.06]	1.11	.265

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model containing all ESM episodes with 5 or more AWARE Conversations samplings (3198 episodes, 279 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (1773 episodes, 260 participants). Third, a model with added interaction terms of detected conversations and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, Conv. = proportion of detected conversations in an episode, Desire Alone = desire to be alone.

Table S13

Fixed Effects of Detected Conversations and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
AWARE Subsample								
Intercept, $\hat{\gamma}_{00}$	4.67	[4.53, 4.81]	65.55	$< .001$	2.08	[1.94, 2.22]	29.50	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.10, 0.06]	-0.42	.675	-0.05	[-0.13, 0.02]	-1.50	.133
Female, $\hat{\gamma}_{01}$	-0.08	[-0.27, 0.11]	-0.84	.402	-0.20	[-0.39, -0.01]	-2.09	.038
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.74	.007	0.00	[-0.01, 0.00]	-1.06	.290
Conv. (BP), $\hat{\gamma}_{03}$	0.06	[-0.04, 0.15]	1.18	.241	-0.05	[-0.15, 0.04]	-1.05	.295
Conv. (WP), $\hat{\gamma}_{10}$	0.07	[0.04, 0.09]	4.66	$< .001$	0.00	[-0.03, 0.03]	-0.15	.884
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.56	[4.40, 4.73]	54.53	$< .001$	2.10	[1.94, 2.26]	25.95	$< .001$
Weekend, $\hat{\gamma}_{30}$	0.02	[-0.09, 0.12]	0.30	.763	-0.07	[-0.16, 0.03]	-1.41	.159
Female, $\hat{\gamma}_{01}$	-0.09	[-0.32, 0.14]	-0.76	.449	-0.20	[-0.42, 0.02]	-1.80	.073
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.34	.020	0.00	[-0.01, 0.00]	-0.82	.415
Conv. (BP), $\hat{\gamma}_{03}$	0.06	[-0.05, 0.18]	1.12	.263	-0.09	[-0.20, 0.02]	-1.61	.109
Conv. (WP), $\hat{\gamma}_{10}$	0.02	[-0.03, 0.07]	0.78	.433	0.03	[-0.02, 0.08]	1.08	.280
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.27]	2.61	.010	-0.07	[-0.18, 0.04]	-1.21	.228
Desire Contact (WP), $\hat{\gamma}_{20}$	0.12	[0.07, 0.18]	4.36	$< .001$	-0.05	[-0.10, -0.01]	-2.26	.024
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.56	[4.40, 4.72]	54.56	$< .001$	2.11	[1.95, 2.26]	26.00	$< .001$
Weekend, $\hat{\gamma}_{40}$	0.02	[-0.08, 0.12]	0.41	.679	-0.07	[-0.17, 0.02]	-1.51	.131
Female, $\hat{\gamma}_{01}$	-0.08	[-0.31, 0.14]	-0.72	.471	-0.21	[-0.43, 0.01]	-1.87	.063
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	2.36	.019	0.00	[-0.01, 0.00]	-0.82	.416
Conv. (BP), $\hat{\gamma}_{03}$	0.06	[-0.06, 0.17]	0.99	.323	-0.07	[-0.18, 0.03]	-1.33	.184
Conv. (WP), $\hat{\gamma}_{10}$	0.03	[-0.02, 0.08]	1.26	.208	0.02	[-0.03, 0.07]	0.77	.444
Desire Contact (BP), $\hat{\gamma}_{04}$	0.16	[0.04, 0.27]	2.67	.008	-0.07	[-0.18, 0.04]	-1.22	.222
Desire Contact (WP), $\hat{\gamma}_{20}$	0.12	[0.07, 0.18]	4.50	$< .001$	-0.05	[-0.09, 0.00]	-2.06	.040
Conv. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.06	[-0.05, 0.17]	1.05	.295	0.02	[-0.09, 0.13]	0.40	.690
Conv. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.03	[-0.02, 0.09]	1.20	.230	-0.03	[-0.08, 0.01]	-1.34	.179

Table S13 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Conv. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	-0.03	[-0.07, 0.02]	-1.03	.301	-0.02	[-0.07, 0.02]	-0.92	.356
Conv. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	-0.01	[-0.05, 0.04]	-0.23	.814	0.02	[-0.02, 0.07]	0.99	.322

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model containing all ESM episodes with 5 or more AWARE Conversations samplings (3198 episodes, 279 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1410 episodes, 260 participants). Third, a model with added interaction terms of detected conversations and desire for social contact. CI = confidence interval, Conv. = proportion of detected conversations in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S14

Fixed Effects of the Number of Calls, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.76	[4.63, 4.89]	< .001	2.03	[1.90, 2.15]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.08, 0.07]	.845	-0.09	[-0.16, -0.03]	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	.470	-0.13	[-0.30, 0.03]	.114
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	< .001	0.00	[-0.01, 0.00]	.149
Calls (BP), $\hat{\gamma}_{03}$	-0.05	[-0.13, 0.03]	.218	0.02	[-0.06, 0.10]	.643
Calls (WP), $\hat{\gamma}_{10}$	0.01	[-0.03, 0.04]	.689	0.02	[-0.01, 0.06]	.156
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	< .001	0.11	[0.03, 0.20]	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
Calls (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	0.04	[-0.05, 0.13]	.420	0.04	[-0.04, 0.13]	.329
Calls (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.02, 0.06]	.388	-0.02	[-0.06, 0.02]	.329
Calls (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[0.00, 0.08]	.037	-0.01	[-0.05, 0.02]	.531
Calls (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.03	[-0.01, 0.06]	.168	-0.02	[-0.05, 0.01]	.266
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.57	[4.42, 4.72]	< .001	2.09	[1.95, 2.24]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	.475	-0.07	[-0.15, 0.01]	.073
Female, $\hat{\gamma}_{01}$	-0.11	[-0.32, 0.09]	.277	-0.13	[-0.33, 0.07]	.192
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	< .001	-0.01	[-0.01, 0.00]	.074
Calls (BP), $\hat{\gamma}_{03}$	-0.01	[-0.12, 0.10]	.861	0.02	[-0.08, 0.13]	.690
Calls (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.07]	.279	0.02	[-0.03, 0.06]	.451
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.25]	.005	-0.06	[-0.16, 0.04]	.219
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	< .001	-0.05	[-0.09, -0.01]	.019
Calls (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	-0.07	[-0.16, 0.01]	.074	0.02	[-0.06, 0.10]	.557
Calls (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.06]	.654	0.00	[-0.04, 0.04]	.858
Calls (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.04, 0.04]	.905	-0.01	[-0.05, 0.03]	.631
Calls (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	-0.01	[-0.05, 0.03]	.728	0.01	[-0.03, 0.05]	.535

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S20 and S21. CI = confidence interval, Calls = number of calls in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S15

Fixed Effects of Call Duration, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.89]	< .001	2.02	[1.89, 2.15]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	.710	-0.09	[-0.16, -0.02]	.008
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	.483	-0.12	[-0.29, 0.05]	.156
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	0.00	[-0.01, 0.00]	.131
Call Duration (BP), $\hat{\gamma}_{03}$	0.01	[-0.07, 0.10]	.762	0.00	[-0.08, 0.08]	.961
Call Duration (WP), $\hat{\gamma}_{10}$	0.01	[-0.02, 0.04]	.634	0.03	[0.00, 0.07]	.079
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	< .001	0.11	[0.03, 0.20]	.008
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
Call Duration (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.01	[-0.09, 0.08]	.873	0.04	[-0.04, 0.12]	.361
Call Duration (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.01, 0.06]	.207	-0.03	[-0.07, 0.00]	.081
Call Duration (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.01	[-0.03, 0.04]	.631	0.00	[-0.04, 0.04]	.872
Call Duration (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.00	[-0.03, 0.03]	.995	0.00	[-0.05, 0.04]	.835
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.57	[4.42, 4.72]	< .001	2.09	[1.94, 2.24]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	.458	-0.07	[-0.15, 0.01]	.075
Female, $\hat{\gamma}_{01}$	-0.12	[-0.32, 0.09]	.264	-0.13	[-0.33, 0.07]	.198
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	< .001	-0.01	[-0.01, 0.00]	.050
Call Duration (BP), $\hat{\gamma}_{03}$	0.03	[-0.08, 0.13]	.629	-0.04	[-0.14, 0.07]	.463
Call Duration (WP), $\hat{\gamma}_{10}$	0.03	[-0.01, 0.07]	.124	0.02	[-0.02, 0.06]	.324
Desire Contact (BP), $\hat{\gamma}_{04}$	0.14	[0.04, 0.25]	.007	-0.06	[-0.16, 0.04]	.240
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	< .001	-0.05	[-0.09, -0.01]	.025
Call Duration (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	-0.12	[-0.22, -0.02]	.019	0.07	[-0.02, 0.17]	.145
Call Duration (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.06]	.740	0.01	[-0.04, 0.05]	.765
Call Duration (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.01	[-0.04, 0.05]	.746	-0.01	[-0.05, 0.03]	.527
Call Duration (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.01	[-0.05, 0.07]	.694	0.01	[-0.05, 0.08]	.654

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S22 and S23. CI = confidence interval, Call Duration = duration of all calls in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S16

Fixed Effects of Communication App Usage Frequency, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	< .001	2.02	[1.89, 2.14]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	.748	-0.09	[-0.16, -0.03]	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	.473	-0.10	[-0.27, 0.06]	.228
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	0.00	[-0.01, 0.00]	.142
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.03	[-0.06, 0.12]	.534	0.06	[-0.03, 0.15]	.197
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	.886	0.02	[-0.01, 0.05]	.241
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	< .001	0.12	[0.04, 0.21]	.004
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
Comm. Freq. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.12, 0.07]	.586	0.05	[-0.04, 0.14]	.261
Comm. Freq. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.00	[-0.04, 0.04]	.922	0.01	[-0.03, 0.05]	.590
Comm. Freq. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	-0.01	[-0.05, 0.02]	.461	0.01	[-0.02, 0.04]	.671
Comm. Freq. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.04]	.671	0.01	[-0.02, 0.04]	.622
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	< .001	2.12	[1.98, 2.27]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	.467	-0.08	[-0.16, 0.00]	.054
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	.375	-0.17	[-0.37, 0.03]	.089
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	< .001	-0.01	[-0.01, 0.00]	.079
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.05	[-0.06, 0.15]	.390	0.06	[-0.04, 0.17]	.215
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	.985	0.04	[0.00, 0.07]	.030
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	.007	-0.07	[-0.17, 0.03]	.146
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	< .001	-0.05	[-0.09, -0.01]	.011
Comm. Freq. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.00	[-0.10, 0.11]	.929	-0.05	[-0.15, 0.05]	.325
Comm. Freq. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	-0.01	[-0.06, 0.04]	.627	0.01	[-0.02, 0.05]	.460
Comm. Freq. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.02	[-0.02, 0.05]	.300	-0.01	[-0.05, 0.02]	.477
Comm. Freq. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	-0.02	[-0.05, 0.02]	.337	-0.02	[-0.05, 0.01]	.244

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S24 and S25. CI = confidence interval, Comm. Freq. = number of usage sessions of communication apps in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S17

Fixed Effects of Communication App Usage Duration, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.76	[4.63, 4.89]	< .001	2.02	[1.90, 2.15]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	.730	-0.10	[-0.16, -0.03]	.004
Female, $\hat{\gamma}_{01}$	-0.08	[-0.26, 0.10]	.387	-0.11	[-0.28, 0.06]	.203
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	0.00	[-0.01, 0.00]	.139
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.00	[-0.09, 0.09]	.968	0.06	[-0.02, 0.15]	.163
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.05]	.362	0.03	[-0.01, 0.07]	.102
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.26, -0.09]	< .001	0.12	[0.04, 0.21]	.004
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
Comm. Dur. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.12, 0.06]	.565	0.06	[-0.02, 0.15]	.153
Comm. Dur. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.02, 0.06]	.282	-0.02	[-0.05, 0.02]	.392
Comm. Dur. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.00	[-0.03, 0.04]	.842	0.00	[-0.04, 0.03]	.849
Comm. Dur. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.05]	.526	-0.01	[-0.05, 0.04]	.754
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.54	[4.39, 4.70]	< .001	2.12	[1.97, 2.26]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.02	[-0.11, 0.06]	.576	-0.09	[-0.17, -0.01]	.033
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.12]	.389	-0.16	[-0.36, 0.04]	.117
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	.001	-0.01	[-0.01, 0.00]	.066
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.02	[-0.08, 0.12]	.713	0.07	[-0.03, 0.16]	.178
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.01	[-0.03, 0.04]	.751	0.03	[-0.01, 0.07]	.161
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	.005	-0.08	[-0.18, 0.02]	.126
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	< .001	-0.05	[-0.08, -0.01]	.026
Comm. Dur. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.00	[-0.11, 0.12]	.957	-0.09	[-0.19, 0.02]	.128
Comm. Dur. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.03	[-0.02, 0.07]	.294	0.01	[-0.03, 0.05]	.514
Comm. Dur. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.04, 0.03]	.789	0.00	[-0.04, 0.03]	.827
Comm. Dur. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.06]	.513	-0.02	[-0.07, 0.03]	.508

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S26 and S27. CI = confidence interval, Comm. Dur. = duration of all usage sessions of communication apps in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S18

Fixed Effects of Social Media App Usage Frequency, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	< .001	2.01	[1.89, 2.14]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	.711	-0.09	[-0.15, -0.02]	.009
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	.495	-0.11	[-0.28, 0.05]	.189
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	0.00	[-0.01, 0.00]	.218
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.02	[-0.11, 0.07]	.740	0.07	[-0.02, 0.16]	.106
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.05, 0.04]	.907	-0.01	[-0.05, 0.03]	.602
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.08]	< .001	0.10	[0.02, 0.19]	.017
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
SocMed. Freq. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.15, 0.09]	.634	-0.06	[-0.17, 0.06]	.339
SocMed. Freq. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	-0.01	[-0.04, 0.03]	.790	0.03	[-0.01, 0.07]	.115
SocMed. Freq. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[-0.01, 0.09]	.168	-0.01	[-0.06, 0.03]	.573
SocMed. Freq. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.00	[-0.03, 0.04]	.772	0.00	[-0.04, 0.04]	.997
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	< .001	2.10	[1.96, 2.24]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.04	[-0.12, 0.04]	.356	-0.07	[-0.15, 0.00]	.066
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	.368	-0.13	[-0.32, 0.07]	.203
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	< .001	-0.01	[-0.01, 0.00]	.080
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.02	[-0.13, 0.08]	.654	0.10	[0.00, 0.20]	.059
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.02	[-0.05, 0.02]	.318	0.00	[-0.04, 0.04]	.997
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	.006	-0.07	[-0.17, 0.03]	.184
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	< .001	-0.05	[-0.08, -0.01]	.017
SocMed. Freq. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.07	[-0.06, 0.20]	.314	-0.12	[-0.25, 0.00]	.059
SocMed. Freq. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.02	[-0.03, 0.07]	.395	-0.02	[-0.06, 0.02]	.318
SocMed. Freq. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.01	[-0.03, 0.05]	.740	0.02	[-0.02, 0.06]	.243
SocMed. Freq. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.03	[-0.02, 0.07]	.249	-0.04	[-0.09, 0.01]	.082

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S28 and S29. CI = confidence interval, SocMed. Freq. = number of usage sessions of social media apps in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S19

Fixed Effects of Social Media App Usage Duration, Social Desire, and their Interaction on Momentary Affect.

	Positive Affect (PA)			Negative Affect (NA)		
Parameter	$\hat{\gamma}$	95% CI	p	$\hat{\gamma}$	95% CI	p
Desire to be Alone						
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	< .001	2.02	[1.89, 2.15]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.02	[-0.09, 0.06]	.655	-0.09	[-0.16, -0.03]	.005
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	.502	-0.12	[-0.28, 0.05]	.170
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	0.00	[-0.01, 0.00]	.153
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.08	[-0.17, 0.01]	.100	0.06	[-0.03, 0.15]	.185
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.06, 0.03]	.485	0.00	[-0.04, 0.04]	.949
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	< .001	0.11	[0.03, 0.20]	.010
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	< .001	0.19	[0.15, 0.23]	< .001
SocMed. Dur. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.05	[-0.15, 0.05]	.347	-0.02	[-0.12, 0.07]	.655
SocMed. Dur. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.00	[-0.04, 0.04]	.884	0.03	[-0.01, 0.06]	.172
SocMed. Dur. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[-0.01, 0.08]	.111	-0.01	[-0.05, 0.03]	.679
SocMed. Dur. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.02, 0.04]	.415	-0.01	[-0.05, 0.02]	.506
Desire for Social Contact						
Intercept, $\hat{\gamma}_{00}$	4.54	[4.39, 4.69]	< .001	2.12	[1.97, 2.26]	< .001
Weekend, $\hat{\gamma}_{40}$	-0.04	[-0.12, 0.05]	.399	-0.07	[-0.15, 0.00]	.065
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	.376	-0.16	[-0.36, 0.03]	.105
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	.001	-0.01	[-0.01, 0.00]	.106
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.15	[-0.26, -0.04]	.009	0.14	[0.04, 0.25]	.009
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.05, 0.02]	.357	0.00	[-0.02, 0.03]	.764
Desire Contact (BP), $\hat{\gamma}_{04}$	0.14	[0.04, 0.25]	.006	-0.06	[-0.16, 0.04]	.245
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.17]	< .001	-0.04	[-0.08, -0.01]	.026
SocMed. Dur. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.04	[-0.07, 0.15]	.506	-0.05	[-0.16, 0.05]	.328
SocMed. Dur. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.07]	.617	0.00	[-0.04, 0.04]	.913
SocMed. Dur. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.03, 0.03]	.862	0.02	[-0.01, 0.05]	.127
SocMed. Dur. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.02	[-0.01, 0.06]	.251	-0.03	[-0.06, 0.01]	.124

Note. Separate models were computed for each of the two affect outcomes (PA, NA). For the complete model building strategy, see Tables S30 and S31. CI = confidence interval, SocMed. Dur. = duration of all usage sessions of social media apps in an episode, BP = between-person effect, WP = within-person effect, Desire Alone = desire to be alone, Desire Contact = desire for social contact.

Table S20

Fixed Effects of the Number of Calls and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.38	$< .001$	2.09	[1.97, 2.22]	32.33	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.65	.513	-0.09	[-0.15, -0.03]	-3.15	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.12]	-0.61	.545	-0.19	[-0.37, -0.02]	-2.19	.029
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.48	.001	-0.01	[-0.01, 0.00]	-1.83	.069
Calls (BP), $\hat{\gamma}_{03}$	-0.04	[-0.12, 0.04]	-0.89	.376	0.03	[-0.05, 0.11]	0.76	.449
Calls (WP), $\hat{\gamma}_{10}$	0.01	[-0.01, 0.04]	0.97	.331	0.02	[0.00, 0.05]	1.92	.055
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.76	[4.63, 4.89]	71.11	$< .001$	2.02	[1.90, 2.15]	31.60	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.08, 0.07]	-0.20	.840	-0.09	[-0.16, -0.03]	-2.78	.005
Female, $\hat{\gamma}_{01}$	-0.07	[-0.24, 0.11]	-0.74	.462	-0.13	[-0.29, 0.04]	-1.50	.134
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.61	$< .001$	0.00	[-0.01, 0.00]	-1.53	.128
Calls (BP), $\hat{\gamma}_{03}$	-0.05	[-0.13, 0.03]	-1.31	.193	0.03	[-0.04, 0.11]	0.82	.416
Calls (WP), $\hat{\gamma}_{10}$	0.01	[-0.03, 0.05]	0.54	.591	0.02	[-0.02, 0.05]	1.03	.303
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.19	[-0.27, -0.10]	-4.22	$< .001$	0.12	[0.04, 0.20]	2.80	.005
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.19	$< .001$	0.19	[0.15, 0.23]	9.53	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.76	[4.63, 4.89]	71.05	$< .001$	2.03	[1.90, 2.15]	31.66	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.08, 0.07]	-0.20	.845	-0.09	[-0.16, -0.03]	-2.74	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.72	.470	-0.13	[-0.30, 0.03]	-1.58	.114
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.61	$< .001$	0.00	[-0.01, 0.00]	-1.45	.149
Calls (BP), $\hat{\gamma}_{03}$	-0.05	[-0.13, 0.03]	-1.23	.218	0.02	[-0.06, 0.10]	0.46	.643
Calls (WP), $\hat{\gamma}_{10}$	0.01	[-0.03, 0.04]	0.40	.689	0.02	[-0.01, 0.06]	1.42	.156
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	-3.94	$< .001$	0.11	[0.03, 0.20]	2.70	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.16	$< .001$	0.19	[0.15, 0.23]	9.60	$< .001$
Calls (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	0.04	[-0.05, 0.13]	0.81	.420	0.04	[-0.04, 0.13]	0.98	.329
Calls (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.02, 0.06]	0.86	.388	-0.02	[-0.06, 0.02]	-0.98	.329
Calls (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[0.00, 0.08]	2.08	.037	-0.01	[-0.05, 0.02]	-0.63	.531

Table S20 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Calls (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.03	[-0.01, 0.06]	1.38	.168	-0.02	[-0.05, 0.01]	-1.11	.266

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of number of calls and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, Calls = number of calls in an episode, Desire Alone = desire to be alone.

Table S21

Fixed Effects of the Number of Calls and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.38	$< .001$	2.09	[1.97, 2.22]	32.33	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.65	.513	-0.09	[-0.15, -0.03]	-3.15	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.12]	-0.61	.545	-0.19	[-0.37, -0.02]	-2.19	.029
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.48	.001	-0.01	[-0.01, 0.00]	-1.83	.069
Calls (BP), $\hat{\gamma}_{03}$	-0.04	[-0.12, 0.04]	-0.89	.376	0.03	[-0.05, 0.11]	0.76	.449
Calls (WP), $\hat{\gamma}_{10}$	0.01	[-0.01, 0.04]	0.97	.331	0.02	[0.00, 0.05]	1.92	.055
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.97	$< .001$	2.10	[1.96, 2.25]	28.16	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.70	.482	-0.07	[-0.15, 0.01]	-1.72	.086
Female, $\hat{\gamma}_{01}$	-0.10	[-0.30, 0.11]	-0.92	.356	-0.15	[-0.35, 0.05]	-1.49	.138
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.46	.001	-0.01	[-0.01, 0.00]	-1.92	.055
Calls (BP), $\hat{\gamma}_{03}$	-0.05	[-0.15, 0.04]	-1.10	.273	0.04	[-0.06, 0.13]	0.77	.444
Calls (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.06]	1.02	.309	0.02	[-0.02, 0.05]	0.92	.358
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.25]	2.86	.005	-0.07	[-0.17, 0.04]	-1.28	.201
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.18	$< .001$	-0.04	[-0.07, -0.01]	-2.38	.017
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.57	[4.42, 4.72]	59.08	$< .001$	2.09	[1.95, 2.24]	27.91	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	-0.71	.475	-0.07	[-0.15, 0.01]	-1.79	.073
Female, $\hat{\gamma}_{01}$	-0.11	[-0.32, 0.09]	-1.09	.277	-0.13	[-0.33, 0.07]	-1.31	.192
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.65	$< .001$	-0.01	[-0.01, 0.00]	-1.80	.074
Calls (BP), $\hat{\gamma}_{03}$	-0.01	[-0.12, 0.10]	-0.18	.861	0.02	[-0.08, 0.13]	0.40	.690
Calls (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.07]	1.08	.279	0.02	[-0.03, 0.06]	0.75	.451
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.25]	2.83	.005	-0.06	[-0.16, 0.04]	-1.23	.219
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.17	$< .001$	-0.05	[-0.09, -0.01]	-2.34	.019
Calls (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	-0.07	[-0.16, 0.01]	-1.79	.074	0.02	[-0.06, 0.10]	0.59	.557
Calls (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.06]	0.45	.654	0.00	[-0.04, 0.04]	0.18	.858

Table S21 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Calls (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.04, 0.04]	-0.12	.905	-0.01	[-0.05, 0.03]	-0.48	.631
Calls (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	-0.01	[-0.05, 0.03]	-0.35	.728	0.01	[-0.03, 0.05]	0.62	.535

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of number of calls and desire for social contact. CI = confidence interval, Calls = number of calls in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S22

Fixed Effects of Call Duration and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	68.94	$< .001$	2.09	[1.96, 2.22]	32.17	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.72	.469	-0.09	[-0.15, -0.04]	-3.23	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.63	.527	-0.18	[-0.35, 0.00]	-2.00	.046
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.41	.001	-0.01	[-0.01, 0.00]	-1.85	.065
Call Duration (BP), $\hat{\gamma}_{03}$	0.02	[-0.06, 0.10]	0.46	.646	-0.01	[-0.09, 0.07]	-0.23	.818
Call Duration (WP), $\hat{\gamma}_{10}$	0.01	[-0.01, 0.03]	0.94	.347	0.01	[-0.01, 0.03]	1.25	.210
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.89]	70.70	$< .001$	2.02	[1.89, 2.14]	31.31	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.31	.756	-0.09	[-0.16, -0.03]	-2.75	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.71	.478	-0.11	[-0.28, 0.05]	-1.32	.186
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.50	.001	0.00	[-0.01, 0.00]	-1.62	.106
Call Duration (BP), $\hat{\gamma}_{03}$	0.01	[-0.07, 0.09]	0.25	.800	0.02	[-0.06, 0.09]	0.45	.650
Call Duration (WP), $\hat{\gamma}_{10}$	0.01	[-0.02, 0.04]	0.69	.493	0.02	[-0.01, 0.06]	1.20	.230
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	-3.90	$< .001$	0.12	[0.03, 0.20]	2.71	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-12.98	$< .001$	0.19	[0.15, 0.23]	9.54	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.89]	70.39	$< .001$	2.02	[1.89, 2.15]	31.32	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	-0.37	.710	-0.09	[-0.16, -0.02]	-2.64	.008
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.70	.483	-0.12	[-0.29, 0.05]	-1.42	.156
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.47	.001	0.00	[-0.01, 0.00]	-1.51	.131
Call Duration (BP), $\hat{\gamma}_{03}$	0.01	[-0.07, 0.10]	0.30	.762	0.00	[-0.08, 0.08]	0.05	.961
Call Duration (WP), $\hat{\gamma}_{10}$	0.01	[-0.02, 0.04]	0.48	.634	0.03	[0.00, 0.07]	1.76	.079
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	-3.90	$< .001$	0.11	[0.03, 0.20]	2.67	.008
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.05	$< .001$	0.19	[0.15, 0.23]	9.67	$< .001$
Call Duration (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.01	[-0.09, 0.08]	-0.16	.873	0.04	[-0.04, 0.12]	0.92	.361
Call Duration (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.01, 0.06]	1.26	.207	-0.03	[-0.07, 0.00]	-1.75	.081
Call Duration (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.01	[-0.03, 0.04]	0.48	.631	0.00	[-0.04, 0.04]	-0.16	.872

Table S22 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Call Duration (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.00	[-0.03, 0.03]	0.01	.995	0.00	[-0.05, 0.04]	-0.21	.835

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of call duration and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, Call Duration = duration of all calls in an episode, Desire Alone = desire to be alone.

Table S23

Fixed Effects of Call Duration and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	68.94	$< .001$	2.09	[1.96, 2.22]	32.17	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.72	.469	-0.09	[-0.15, -0.04]	-3.23	.001
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.63	.527	-0.18	[-0.35, 0.00]	-2.00	.046
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.41	.001	-0.01	[-0.01, 0.00]	-1.85	.065
Call Duration (BP), $\hat{\gamma}_{03}$	0.02	[-0.06, 0.10]	0.46	.646	-0.01	[-0.09, 0.07]	-0.23	.818
Call Duration (WP), $\hat{\gamma}_{10}$	0.01	[-0.01, 0.03]	0.94	.347	0.01	[-0.01, 0.03]	1.25	.210
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.87	$< .001$	2.10	[1.96, 2.25]	28.18	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.76	.446	-0.07	[-0.15, 0.01]	-1.72	.086
Female, $\hat{\gamma}_{01}$	-0.10	[-0.30, 0.11]	-0.91	.363	-0.15	[-0.35, 0.05]	-1.50	.135
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.39	.001	-0.01	[-0.01, 0.00]	-1.91	.057
Call Duration (BP), $\hat{\gamma}_{03}$	-0.01	[-0.12, 0.09]	-0.26	.792	-0.02	[-0.12, 0.08]	-0.32	.749
Call Duration (WP), $\hat{\gamma}_{10}$	0.03	[0.00, 0.06]	1.72	.086	0.01	[-0.02, 0.04]	0.80	.425
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.25]	2.82	.005	-0.06	[-0.16, 0.04]	-1.20	.233
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.12	$< .001$	-0.04	[-0.07, -0.01]	-2.33	.020
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.57	[4.42, 4.72]	59.35	$< .001$	2.09	[1.94, 2.24]	27.96	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	-0.74	.458	-0.07	[-0.15, 0.01]	-1.78	.075
Female, $\hat{\gamma}_{01}$	-0.12	[-0.32, 0.09]	-1.12	.264	-0.13	[-0.33, 0.07]	-1.29	.198
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.70	$< .001$	-0.01	[-0.01, 0.00]	-1.96	.050
Call Duration (BP), $\hat{\gamma}_{03}$	0.03	[-0.08, 0.13]	0.48	.629	-0.04	[-0.14, 0.07]	-0.73	.463
Call Duration (WP), $\hat{\gamma}_{10}$	0.03	[-0.01, 0.07]	1.54	.124	0.02	[-0.02, 0.06]	0.99	.324
Desire Contact (BP), $\hat{\gamma}_{04}$	0.14	[0.04, 0.25]	2.72	.007	-0.06	[-0.16, 0.04]	-1.18	.240
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.23	$< .001$	-0.05	[-0.09, -0.01]	-2.24	.025
Call Duration (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	-0.12	[-0.22, -0.02]	-2.36	.019	0.07	[-0.02, 0.17]	1.46	.145
Call Duration (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.06]	0.33	.740	0.01	[-0.04, 0.05]	0.30	.765
Call Duration (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.01	[-0.04, 0.05]	0.32	.746	-0.01	[-0.05, 0.03]	-0.63	.527

Table S23 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Call Duration (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.01	[-0.05, 0.07]	0.39	.694	0.01	[-0.05, 0.08]	0.45	.654

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of call duration and desire for social contact. CI = confidence interval, Call Duration = duration of all calls in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S24

Fixed Effects of Communication App Usage Frequency and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.14	$< .001$	2.10	[1.97, 2.22]	32.44	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.77	.439	-0.09	[-0.15, -0.03]	-3.12	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.54	.587	-0.19	[-0.36, -0.02]	-2.17	.031
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.78	$< .001$	-0.01	[-0.01, 0.00]	-1.84	.066
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.05	[-0.04, 0.14]	1.01	.313	0.05	[-0.04, 0.14]	1.11	.270
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.02]	-0.07	.944	0.02	[0.00, 0.04]	1.60	.109
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.89]	70.81	$< .001$	2.02	[1.89, 2.14]	31.36	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.32	.750	-0.09	[-0.16, -0.03]	-2.70	.007
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.70	.486	-0.11	[-0.28, 0.05]	-1.32	.188
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.57	$< .001$	0.00	[-0.01, 0.00]	-1.51	.133
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.03	[-0.06, 0.12]	0.75	.456	0.05	[-0.04, 0.13]	1.12	.262
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	-0.07	.947	0.02	[-0.01, 0.05]	1.14	.255
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.08]	-3.82	$< .001$	0.12	[0.03, 0.20]	2.77	.006
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.04	$< .001$	0.19	[0.15, 0.23]	9.43	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	70.62	$< .001$	2.02	[1.89, 2.14]	31.33	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	-0.32	.748	-0.09	[-0.16, -0.03]	-2.73	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.72	.473	-0.10	[-0.27, 0.06]	-1.21	.228
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.51	.001	0.00	[-0.01, 0.00]	-1.47	.142
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.03	[-0.06, 0.12]	0.62	.534	0.06	[-0.03, 0.15]	1.29	.197
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	-0.14	.886	0.02	[-0.01, 0.05]	1.17	.241
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	-3.87	$< .001$	0.12	[0.04, 0.21]	2.89	.004
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.03	$< .001$	0.19	[0.15, 0.23]	9.52	$< .001$
Comm. Freq. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.12, 0.07]	-0.54	.586	0.05	[-0.04, 0.14]	1.13	.261
Comm. Freq. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.00	[-0.04, 0.04]	-0.10	.922	0.01	[-0.03, 0.05]	0.54	.590

Table S24 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Comm. Freq. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	-0.01	[-0.05, 0.02]	-0.74	.461	0.01	[-0.02, 0.04]	0.42	.671
Comm. Freq. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.04]	0.42	.671	0.01	[-0.02, 0.04]	0.49	.622

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of communication app usage frequency and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, Comm. Freq. = number of usage sessions of communication apps in an episode, Desire Alone = desire to be alone.

Table S25

Fixed Effects of Communication App Usage Frequency and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	69.14	$< .001$	2.10	[1.97, 2.22]	32.44	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.77	.439	-0.09	[-0.15, -0.03]	-3.12	.002
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.54	.587	-0.19	[-0.36, -0.02]	-2.17	.031
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.78	$< .001$	-0.01	[-0.01, 0.00]	-1.84	.066
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.05	[-0.04, 0.14]	1.01	.313	0.05	[-0.04, 0.14]	1.11	.270
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.02]	-0.07	.944	0.02	[0.00, 0.04]	1.60	.109
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.95	$< .001$	2.11	[1.97, 2.26]	28.50	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.79	.431	-0.07	[-0.15, 0.01]	-1.83	.068
Female, $\hat{\gamma}_{01}$	-0.10	[-0.31, 0.11]	-0.94	.349	-0.16	[-0.36, 0.04]	-1.59	.112
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.55	$< .001$	-0.01	[-0.01, 0.00]	-1.75	.081
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.05	[-0.06, 0.15]	0.86	.389	0.06	[-0.04, 0.16]	1.09	.275
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	0.00	$> .999$	0.04	[0.00, 0.07]	2.03	.042
Desire Contact (BP), $\hat{\gamma}_{04}$	0.14	[0.04, 0.25]	2.71	.007	-0.07	[-0.17, 0.03]	-1.30	.195
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.18	$< .001$	-0.05	[-0.09, -0.01]	-2.49	.013
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.71	$< .001$	2.12	[1.98, 2.27]	28.68	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.03	[-0.12, 0.05]	-0.73	.467	-0.08	[-0.16, 0.00]	-1.93	.054
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	-0.89	.375	-0.17	[-0.37, 0.03]	-1.71	.089
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.57	$< .001$	-0.01	[-0.01, 0.00]	-1.76	.079
Comm. Freq. (BP), $\hat{\gamma}_{03}$	0.05	[-0.06, 0.15]	0.86	.390	0.06	[-0.04, 0.17]	1.24	.215
Comm. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.03, 0.03]	-0.02	.985	0.04	[0.00, 0.07]	2.17	.030
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	2.74	.007	-0.07	[-0.17, 0.03]	-1.46	.146
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.16	$< .001$	-0.05	[-0.09, -0.01]	-2.56	.011
Comm. Freq. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.00	[-0.10, 0.11]	0.09	.929	-0.05	[-0.15, 0.05]	-0.99	.325
Comm. Freq. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	-0.01	[-0.06, 0.04]	-0.49	.627	0.01	[-0.02, 0.05]	0.74	.460

Table S25 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Comm. Freq. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.02	[-0.02, 0.05]	1.04	.300	-0.01	[-0.05, 0.02]	-0.71	.477
Comm. Freq. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	-0.02	[-0.05, 0.02]	-0.96	.337	-0.02	[-0.05, 0.01]	-1.17	.244

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of communication app usage frequency and desire for social contact. CI = confidence interval, Comm. Freq. = number of usage sessions of communication apps in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S26

Fixed Effects of Communication App Usage Duration and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	68.95	$< .001$	2.09	[1.97, 2.22]	32.34	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.75	.451	-0.09	[-0.15, -0.04]	-3.21	.001
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.59	.554	-0.19	[-0.36, -0.01]	-2.10	.037
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.45	.001	-0.01	[-0.01, 0.00]	-1.88	.061
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.00	[-0.09, 0.09]	0.06	.949	0.06	[-0.03, 0.14]	1.33	.184
Comm. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.03, 0.02]	-0.63	.529	0.02	[0.00, 0.05]	1.81	.071
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.89]	70.73	$< .001$	2.02	[1.90, 2.15]	31.47	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.32	.747	-0.10	[-0.16, -0.03]	-2.82	.005
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.70	.485	-0.12	[-0.28, 0.05]	-1.38	.168
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.50	.001	0.00	[-0.01, 0.00]	-1.59	.114
Comm. Dur. (BP), $\hat{\gamma}_{03}$	-0.01	[-0.10, 0.07]	-0.31	.759	0.08	[-0.01, 0.16]	1.84	.067
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.01	[-0.02, 0.04]	0.91	.361	0.03	[0.00, 0.06]	1.97	.049
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.26, -0.09]	-3.94	$< .001$	0.12	[0.03, 0.20]	2.72	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.03	$< .001$	0.19	[0.15, 0.23]	9.44	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.76	[4.63, 4.89]	70.83	$< .001$	2.02	[1.90, 2.15]	31.52	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	-0.34	.730	-0.10	[-0.16, -0.03]	-2.87	.004
Female, $\hat{\gamma}_{01}$	-0.08	[-0.26, 0.10]	-0.87	.387	-0.11	[-0.28, 0.06]	-1.28	.203
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.47	.001	0.00	[-0.01, 0.00]	-1.48	.139
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.00	[-0.09, 0.09]	0.04	.968	0.06	[-0.02, 0.15]	1.40	.163
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.02	[-0.02, 0.05]	0.91	.362	0.03	[-0.01, 0.07]	1.63	.102
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.26, -0.09]	-3.94	$< .001$	0.12	[0.04, 0.21]	2.87	.004
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-12.85	$< .001$	0.19	[0.15, 0.23]	9.37	$< .001$
Comm. Dur. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.12, 0.06]	-0.58	.565	0.06	[-0.02, 0.15]	1.43	.153
Comm. Dur. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.02	[-0.02, 0.06]	1.08	.282	-0.02	[-0.05, 0.02]	-0.86	.392

Table S26 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Comm. Dur. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.00	[-0.03, 0.04]	0.20	.842	0.00	[-0.04, 0.03]	-0.19	.849
Comm. Dur. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.05]	0.63	.526	-0.01	[-0.05, 0.04]	-0.31	.754

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of communication app usage duration and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, Comm. Dur. = duration of all usage sessions of communication apps in an episode, Desire Alone = desire to be alone.

Table S27

Fixed Effects of Communication App Usage Duration and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.53, 4.79]	68.95	$< .001$	2.09	[1.97, 2.22]	32.34	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.02	[-0.09, 0.04]	-0.75	.451	-0.09	[-0.15, -0.04]	-3.21	.001
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.59	.554	-0.19	[-0.36, -0.01]	-2.10	.037
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.45	.001	-0.01	[-0.01, 0.00]	-1.88	.061
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.00	[-0.09, 0.09]	0.06	.949	0.06	[-0.03, 0.14]	1.33	.184
Comm. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.03, 0.02]	-0.63	.529	0.02	[0.00, 0.05]	1.81	.071
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.87	$< .001$	2.11	[1.96, 2.25]	28.36	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.70	.481	-0.08	[-0.16, 0.00]	-1.85	.065
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	-0.90	.369	-0.16	[-0.35, 0.04]	-1.53	.128
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.40	.001	-0.01	[-0.01, 0.00]	-1.81	.071
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.03	[-0.07, 0.13]	0.58	.560	0.05	[-0.05, 0.14]	0.93	.355
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.00	[-0.04, 0.03]	-0.19	.848	0.02	[-0.01, 0.06]	1.24	.214
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	2.77	.006	-0.07	[-0.17, 0.03]	-1.29	.197
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.17	$< .001$	-0.05	[-0.09, -0.01]	-2.35	.019
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.54	[4.39, 4.70]	58.76	$< .001$	2.12	[1.97, 2.26]	28.76	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.02	[-0.11, 0.06]	-0.56	.576	-0.09	[-0.17, -0.01]	-2.14	.033
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.12]	-0.86	.389	-0.16	[-0.36, 0.04]	-1.57	.117
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.42	.001	-0.01	[-0.01, 0.00]	-1.85	.066
Comm. Dur. (BP), $\hat{\gamma}_{03}$	0.02	[-0.08, 0.12]	0.37	.713	0.07	[-0.03, 0.16]	1.35	.178
Comm. Dur. (WP), $\hat{\gamma}_{10}$	0.01	[-0.03, 0.04]	0.32	.751	0.03	[-0.01, 0.07]	1.40	.161
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	2.80	.005	-0.08	[-0.18, 0.02]	-1.53	.126
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.11	$< .001$	-0.05	[-0.08, -0.01]	-2.23	.026
Comm. Dur. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.00	[-0.11, 0.12]	0.05	.957	-0.09	[-0.19, 0.02]	-1.53	.128
Comm. Dur. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.03	[-0.02, 0.07]	1.05	.294	0.01	[-0.03, 0.05]	0.65	.514

Table S27 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Comm. Dur. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.04, 0.03]	-0.27	.789	0.00	[-0.04, 0.03]	-0.22	.827
Comm. Dur. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.01	[-0.03, 0.06]	0.65	.513	-0.02	[-0.07, 0.03]	-0.66	.508

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of communication app usage duration and desire for social contact. CI = confidence interval, Comm. Dur. = duration of all usage sessions of communication apps in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S28

Fixed Effects of Social Media App Usage Frequency and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.65	[4.52, 4.78]	69.46	$< .001$	2.09	[1.96, 2.21]	32.37	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.78	.437	-0.09	[-0.15, -0.04]	-3.19	.001
Female, $\hat{\gamma}_{01}$	-0.03	[-0.21, 0.15]	-0.33	.744	-0.17	[-0.34, 0.00]	-1.94	.054
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.20	.002	0.00	[-0.01, 0.00]	-1.40	.162
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.01	[-0.10, 0.07]	-0.32	.750	0.08	[0.00, 0.17]	1.86	.063
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.04, 0.02]	-0.70	.484	-0.01	[-0.03, 0.02]	-0.42	.677
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	70.74	$< .001$	2.01	[1.89, 2.14]	31.33	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.01	[-0.09, 0.06]	-0.33	.741	-0.09	[-0.16, -0.03]	-2.75	.006
Female, $\hat{\gamma}_{01}$	-0.06	[-0.23, 0.12]	-0.64	.520	-0.10	[-0.27, 0.06]	-1.23	.221
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.22	.001	0.00	[-0.01, 0.00]	-1.33	.185
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.01	[-0.10, 0.08]	-0.31	.758	0.06	[-0.02, 0.15]	1.45	.147
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.05, 0.04]	-0.26	.792	-0.01	[-0.05, 0.03]	-0.37	.710
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.27, -0.09]	-4.03	$< .001$	0.12	[0.03, 0.20]	2.71	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-12.98	$< .001$	0.19	[0.15, 0.23]	9.33	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	70.73	$< .001$	2.01	[1.89, 2.14]	31.32	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.01	[-0.09, 0.06]	-0.37	.711	-0.09	[-0.15, -0.02]	-2.63	.009
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.11]	-0.68	.495	-0.11	[-0.28, 0.05]	-1.32	.189
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.22	.001	0.00	[-0.01, 0.00]	-1.23	.218
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.02	[-0.11, 0.07]	-0.33	.740	0.07	[-0.02, 0.16]	1.62	.106
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	0.00	[-0.05, 0.04]	-0.12	.907	-0.01	[-0.05, 0.03]	-0.52	.602
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.08]	-3.82	$< .001$	0.10	[0.02, 0.19]	2.41	.017
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-12.92	$< .001$	0.19	[0.15, 0.23]	9.51	$< .001$
SocMed. Freq. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.03	[-0.15, 0.09]	-0.48	.634	-0.06	[-0.17, 0.06]	-0.96	.339
SocMed. Freq. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	-0.01	[-0.04, 0.03]	-0.27	.790	0.03	[-0.01, 0.07]	1.58	.115

Table S28 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
SocMed. Freq. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[-0.01, 0.09]	1.38	.168	-0.01	[-0.06, 0.03]	-0.56	.573
SocMed. Freq. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.00	[-0.03, 0.04]	0.29	.772	0.00	[-0.04, 0.04]	0.00	.997

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of social media app usage frequency and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, SocMed. Freq. = number of usage sessions of social media apps in an episode, Desire Alone = desire to be alone.

Table S29

Fixed Effects of Social Media App Usage Frequency and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.65	[4.52, 4.78]	69.46	$< .001$	2.09	[1.96, 2.21]	32.37	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.78	.437	-0.09	[-0.15, -0.04]	-3.19	.001
Female, $\hat{\gamma}_{01}$	-0.03	[-0.21, 0.15]	-0.33	.744	-0.17	[-0.34, 0.00]	-1.94	.054
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.20	.002	0.00	[-0.01, 0.00]	-1.40	.162
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.01	[-0.10, 0.07]	-0.32	.750	0.08	[0.00, 0.17]	1.86	.063
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.04, 0.02]	-0.70	.484	-0.01	[-0.03, 0.02]	-0.42	.677
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	58.93	$< .001$	2.10	[1.96, 2.25]	28.31	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.79	.428	-0.07	[-0.15, 0.01]	-1.72	.086
Female, $\hat{\gamma}_{01}$	-0.10	[-0.31, 0.11]	-0.93	.353	-0.15	[-0.35, 0.05]	-1.43	.155
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.30	.001	-0.01	[-0.01, 0.00]	-1.55	.121
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.02	[-0.12, 0.09]	-0.32	.753	0.09	[-0.01, 0.20]	1.79	.074
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.02	[-0.05, 0.01]	-1.05	.293	0.00	[-0.03, 0.03]	0.24	.811
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.05, 0.25]	2.83	.005	-0.06	[-0.16, 0.04]	-1.23	.221
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.17	$< .001$	-0.04	[-0.07, -0.01]	-2.31	.021
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	59.53	$< .001$	2.10	[1.96, 2.24]	28.76	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.04	[-0.12, 0.04]	-0.92	.356	-0.07	[-0.15, 0.00]	-1.84	.066
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	-0.90	.368	-0.13	[-0.32, 0.07]	-1.28	.203
Age, $\hat{\gamma}_{02}$	0.01	[0.01, 0.02]	3.57	$< .001$	-0.01	[-0.01, 0.00]	-1.75	.080
SocMed. Freq. (BP), $\hat{\gamma}_{03}$	-0.02	[-0.13, 0.08]	-0.45	.654	0.10	[0.00, 0.20]	1.90	.059
SocMed. Freq. (WP), $\hat{\gamma}_{10}$	-0.02	[-0.05, 0.02]	-1.00	.318	0.00	[-0.04, 0.04]	0.00	.997
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	2.77	.006	-0.07	[-0.17, 0.03]	-1.33	.184
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.25	$< .001$	-0.05	[-0.08, -0.01]	-2.38	.017
SocMed. Freq. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.07	[-0.06, 0.20]	1.01	.314	-0.12	[-0.25, 0.00]	-1.90	.059
SocMed. Freq. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.02	[-0.03, 0.07]	0.85	.395	-0.02	[-0.06, 0.02]	-1.00	.318

Table S29 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
SocMed. Freq. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.01	[-0.03, 0.05]	0.33	.740	0.02	[-0.02, 0.06]	1.17	.243
SocMed. Freq. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.03	[-0.02, 0.07]	1.15	.249	-0.04	[-0.09, 0.01]	-1.74	.082

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of social media app usage frequency and desire for social contact. CI = confidence interval, SocMed. Freq. = number of usage sessions of social media apps in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Table S30

Fixed Effects of Social Media App Usage Duration and Desire to be Alone on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.52, 4.79]	69.43	$< .001$	2.09	[1.97, 2.22]	32.47	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.76	.445	-0.09	[-0.15, -0.04]	-3.26	.001
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.56	.575	-0.18	[-0.36, -0.01]	-2.10	.037
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.10	.002	0.00	[-0.01, 0.00]	-1.55	.121
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.10	[-0.19, -0.01]	-2.29	.023	0.08	[0.00, 0.17]	1.87	.062
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	0.00	[-0.02, 0.02]	-0.12	.908	0.00	[-0.02, 0.02]	-0.19	.849
Adding Desire to be Alone								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	70.66	$< .001$	2.02	[1.89, 2.15]	31.40	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.02	[-0.09, 0.06]	-0.41	.684	-0.10	[-0.16, -0.03]	-2.88	.004
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.12]	-0.61	.543	-0.11	[-0.28, 0.06]	-1.32	.188
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.28	.001	0.00	[-0.01, 0.00]	-1.40	.163
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.07	[-0.16, 0.02]	-1.62	.105	0.05	[-0.04, 0.13]	1.06	.292
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.05, 0.03]	-0.67	.505	0.01	[-0.03, 0.04]	0.30	.767
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.18	[-0.26, -0.09]	-3.95	$< .001$	0.12	[0.03, 0.20]	2.73	.007
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-13.06	$< .001$	0.19	[0.15, 0.23]	9.37	$< .001$
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.75	[4.62, 4.88]	70.74	$< .001$	2.02	[1.89, 2.15]	31.37	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.02	[-0.09, 0.06]	-0.45	.655	-0.09	[-0.16, -0.03]	-2.79	.005
Female, $\hat{\gamma}_{01}$	-0.06	[-0.24, 0.12]	-0.67	.502	-0.12	[-0.28, 0.05]	-1.38	.170
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.28	.001	0.00	[-0.01, 0.00]	-1.43	.153
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.08	[-0.17, 0.01]	-1.65	.100	0.06	[-0.03, 0.15]	1.33	.185
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.06, 0.03]	-0.70	.485	0.00	[-0.04, 0.04]	-0.06	.949
Desire Alone (BP), $\hat{\gamma}_{04}$	-0.17	[-0.26, -0.09]	-3.89	$< .001$	0.11	[0.03, 0.20]	2.61	.010
Desire Alone (WP), $\hat{\gamma}_{20}$	-0.26	[-0.30, -0.22]	-12.97	$< .001$	0.19	[0.15, 0.23]	9.43	$< .001$
SocMed. Dur. (BP) * Desire Alone (BP), $\hat{\gamma}_{05}$	-0.05	[-0.15, 0.05]	-0.94	.347	-0.02	[-0.12, 0.07]	-0.45	.655
SocMed. Dur. (BP) * Desire Alone (WP), $\hat{\gamma}_{21}$	0.00	[-0.04, 0.04]	-0.15	.884	0.03	[-0.01, 0.06]	1.37	.172
SocMed. Dur. (WP) * Desire Alone (BP), $\hat{\gamma}_{11}$	0.04	[-0.01, 0.08]	1.60	.111	-0.01	[-0.05, 0.03]	-0.41	.679

Table S30 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
SocMed. Dur. (WP) * Desire Alone (WP), $\hat{\gamma}_{30}$	0.01	[-0.02, 0.04]	0.81	.415	-0.01	[-0.05, 0.02]	-0.66	.506

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire to be alone added and restricted to assessments when in momentary contact (2571 episodes, 299 participants). Third, a model with added interaction terms of social media app usage duration and desire to be alone. CI = confidence interval, BP = between-person effect, WP = within-person effect, SocMed. Dur. = duration of all usage sessions of social media apps in an episode, Desire Alone = desire to be alone.

Table S31

Fixed Effects of Social Media App Usage Duration and Desire for Social Contact on Momentary Affect (Model Building Strategy).

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
Unrestricted Sample								
Intercept, $\hat{\gamma}_{00}$	4.66	[4.52, 4.79]	69.43	$< .001$	2.09	[1.97, 2.22]	32.47	$< .001$
Weekend, $\hat{\gamma}_{20}$	-0.03	[-0.09, 0.04]	-0.76	.445	-0.09	[-0.15, -0.04]	-3.26	.001
Female, $\hat{\gamma}_{01}$	-0.05	[-0.23, 0.13]	-0.56	.575	-0.18	[-0.36, -0.01]	-2.10	.037
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.10	.002	0.00	[-0.01, 0.00]	-1.55	.121
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.10	[-0.19, -0.01]	-2.29	.023	0.08	[0.00, 0.17]	1.87	.062
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	0.00	[-0.02, 0.02]	-0.12	.908	0.00	[-0.02, 0.02]	-0.19	.849
Adding Desire for Social Contact								
Intercept, $\hat{\gamma}_{00}$	4.55	[4.40, 4.70]	59.41	$< .001$	2.11	[1.97, 2.25]	28.52	$< .001$
Weekend, $\hat{\gamma}_{30}$	-0.03	[-0.12, 0.05]	-0.77	.441	-0.08	[-0.16, 0.00]	-1.98	.047
Female, $\hat{\gamma}_{01}$	-0.10	[-0.31, 0.10]	-0.98	.328	-0.14	[-0.34, 0.06]	-1.38	.168
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.19	.002	-0.01	[-0.01, 0.00]	-1.55	.123
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.14	[-0.25, -0.03]	-2.47	.014	0.14	[0.04, 0.25]	2.65	.009
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.02	[-0.05, 0.02]	-1.00	.319	0.00	[-0.03, 0.03]	0.20	.845
Desire Contact (BP), $\hat{\gamma}_{04}$	0.15	[0.04, 0.25]	2.79	.006	-0.06	[-0.16, 0.04]	-1.15	.251
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.18]	5.15	$< .001$	-0.05	[-0.09, -0.01]	-2.38	.017
Adding Interaction Terms								
Intercept, $\hat{\gamma}_{00}$	4.54	[4.39, 4.69]	59.45	$< .001$	2.12	[1.97, 2.26]	28.78	$< .001$
Weekend, $\hat{\gamma}_{40}$	-0.04	[-0.12, 0.05]	-0.84	.399	-0.07	[-0.15, 0.00]	-1.84	.065
Female, $\hat{\gamma}_{01}$	-0.09	[-0.30, 0.11]	-0.89	.376	-0.16	[-0.36, 0.03]	-1.63	.105
Age, $\hat{\gamma}_{02}$	0.01	[0.00, 0.02]	3.31	.001	-0.01	[-0.01, 0.00]	-1.62	.106
SocMed. Dur. (BP), $\hat{\gamma}_{03}$	-0.15	[-0.26, -0.04]	-2.65	.009	0.14	[0.04, 0.25]	2.62	.009
SocMed. Dur. (WP), $\hat{\gamma}_{10}$	-0.01	[-0.05, 0.02]	-0.92	.357	0.00	[-0.02, 0.03]	0.30	.764
Desire Contact (BP), $\hat{\gamma}_{04}$	0.14	[0.04, 0.25]	2.75	.006	-0.06	[-0.16, 0.04]	-1.16	.245
Desire Contact (WP), $\hat{\gamma}_{20}$	0.13	[0.08, 0.17]	5.16	$< .001$	-0.04	[-0.08, -0.01]	-2.23	.026
SocMed. Dur. (BP) * Desire Contact (BP), $\hat{\gamma}_{05}$	0.04	[-0.07, 0.15]	0.67	.506	-0.05	[-0.16, 0.05]	-0.98	.328
SocMed. Dur. (BP) * Desire Contact (WP), $\hat{\gamma}_{21}$	0.01	[-0.04, 0.07]	0.50	.617	0.00	[-0.04, 0.04]	-0.11	.913

Table S31 continued

	Positive Affect (PA)				Negative Affect (NA)			
Parameter	$\hat{\gamma}$	95% CI	t	p	$\hat{\gamma}$	95% CI	t	p
SocMed. Dur. (WP) * Desire Contact (BP), $\hat{\gamma}_{11}$	0.00	[-0.03, 0.03]	-0.17	.862	0.02	[-0.01, 0.05]	1.53	.127
SocMed. Dur. (WP) * Desire Contact (WP), $\hat{\gamma}_{30}$	0.02	[-0.01, 0.06]	1.15	.251	-0.03	[-0.06, 0.01]	-1.54	.124

Note. Three models were computed for each of the two affect outcomes (PA, NA): First, the basic model (4524 episodes, 306 participants). Second, a model with desire for social contact added and restricted to assessments when not in momentary contact (1934 episodes, 292 participants). Third, a model with added interaction terms of social media app usage duration and desire for social contact. CI = confidence interval, SocMed. Dur. = duration of all usage sessions of social media apps in an episode, BP = between-person effect, WP = within-person effect, Desire Contact = desire for social contact.

Supplementary Figures

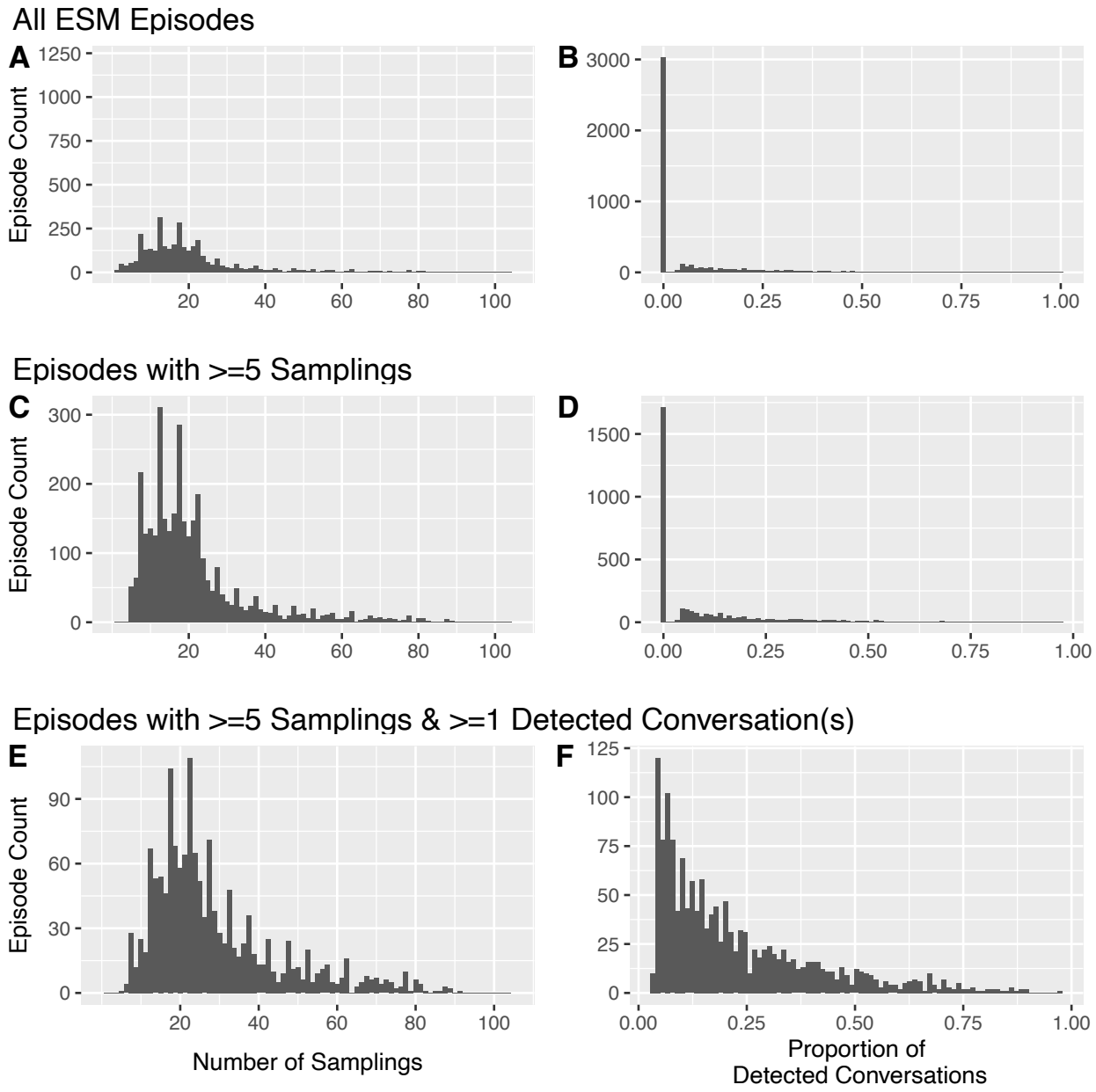

Figure S1

Distribution of the Number of Samplings (by the AWARE Conversations Plugin) and the Proportion of Detected Conversation.

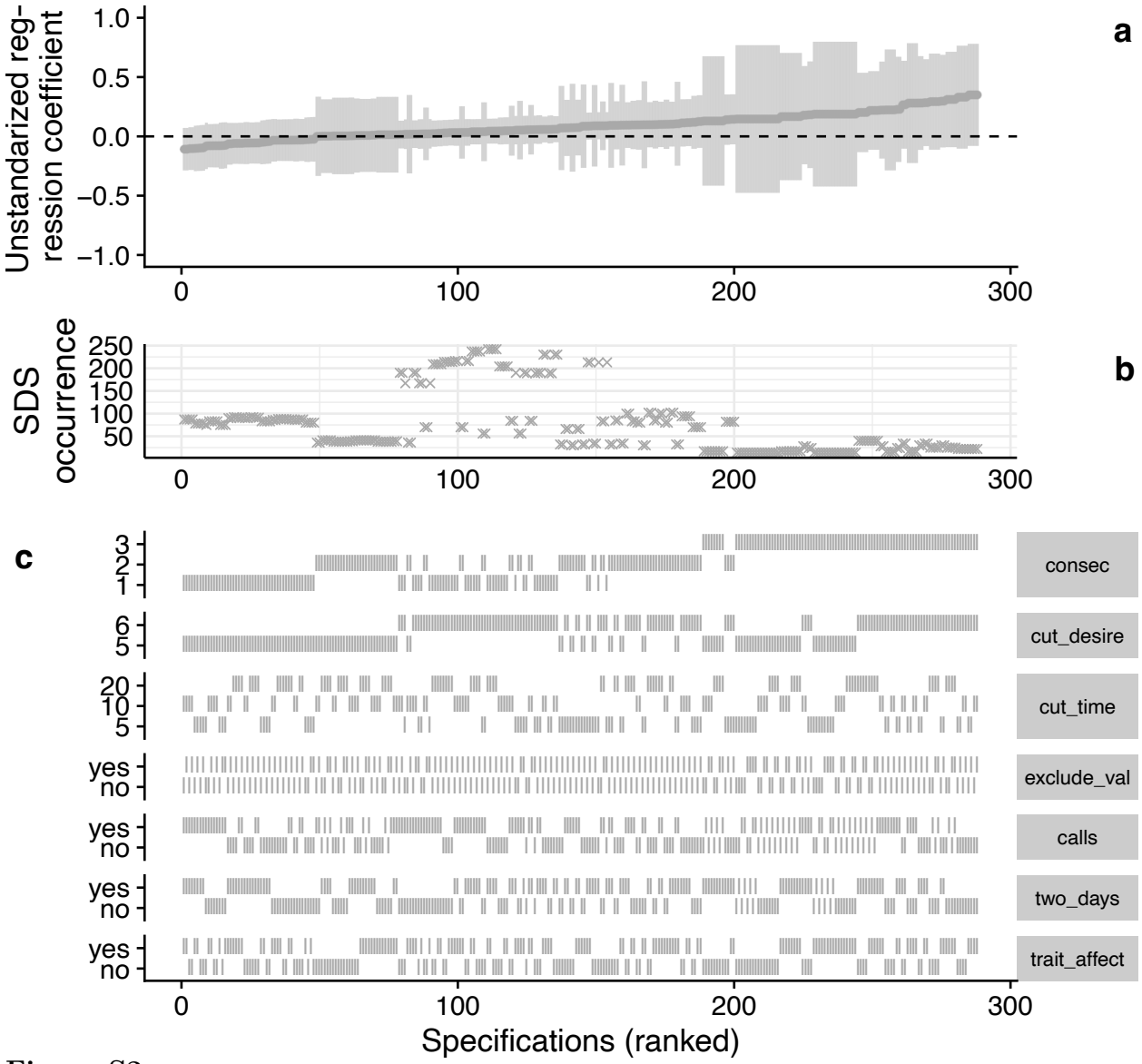

Figure S2

Specification Curve Analysis for the Effect of Social Deprivation States on Positive Affect. consec *(Options: 1, 2, 3) = minimum number of consecutive ESM assessments necessary for coding SDS;* cut_desire *(Options: 5, 6) = momentary social desire cutoff values of 5 vs. 6;* cut_time *(Options: 5, 10, 20) = minimum duration of contact that are included in the coding (in min);* exclude_val *(Options: no, yes) = exclude contact from coding of states based on pleasantness (below 3 for SDS);* calls *(Options: no, yes) = include calls and video calls as social contact;* two_days *(Options: no, yes) = allow states to span two days;* trait_affect *(Options: no, yes) = include trait-level affect as a level-2 variable. See the description in the* Supplemental Material *for details of the specifications coding.*

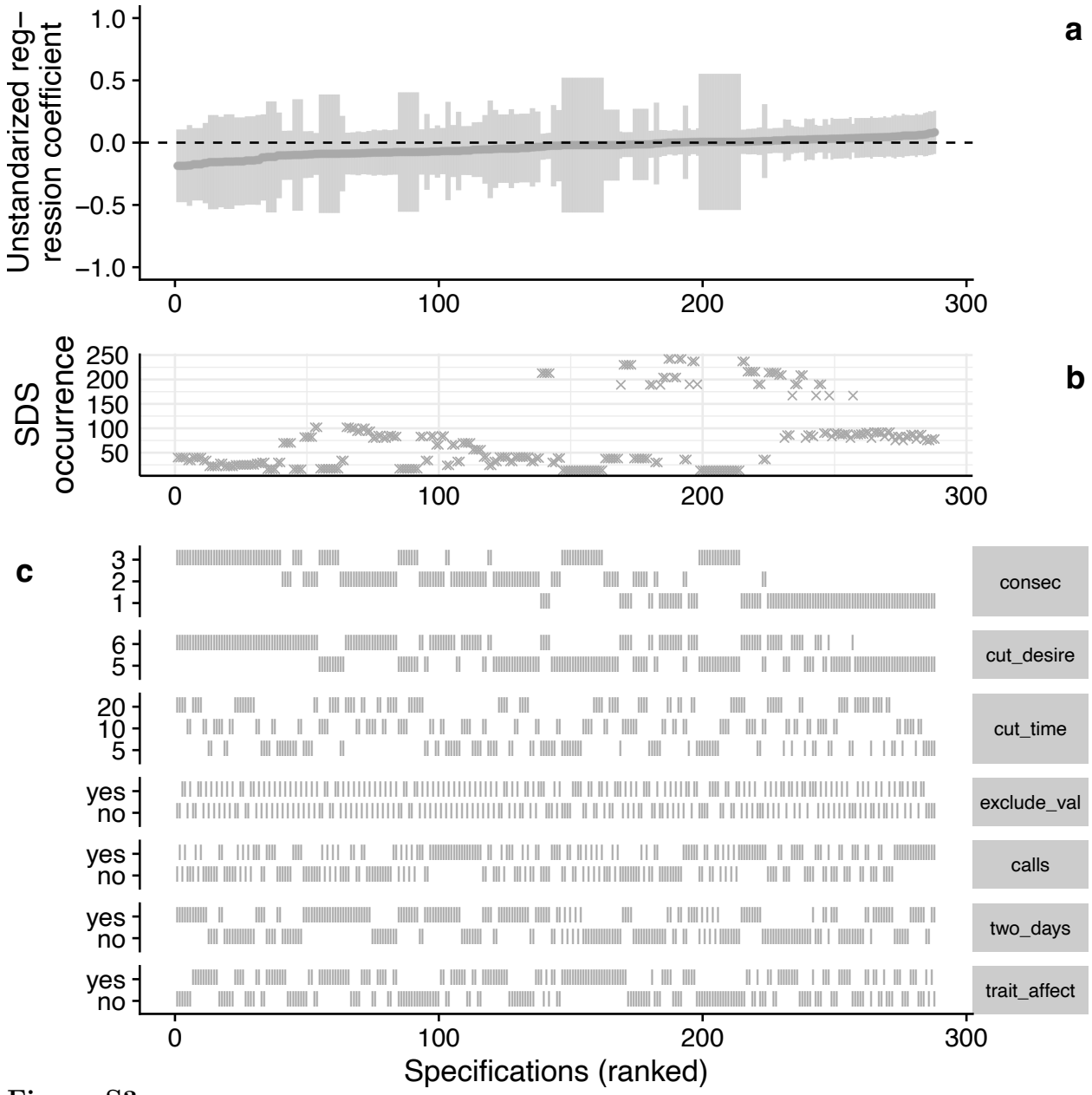

Figure S3

Specification Curve Analysis for the Effect of Social Deprivation States on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

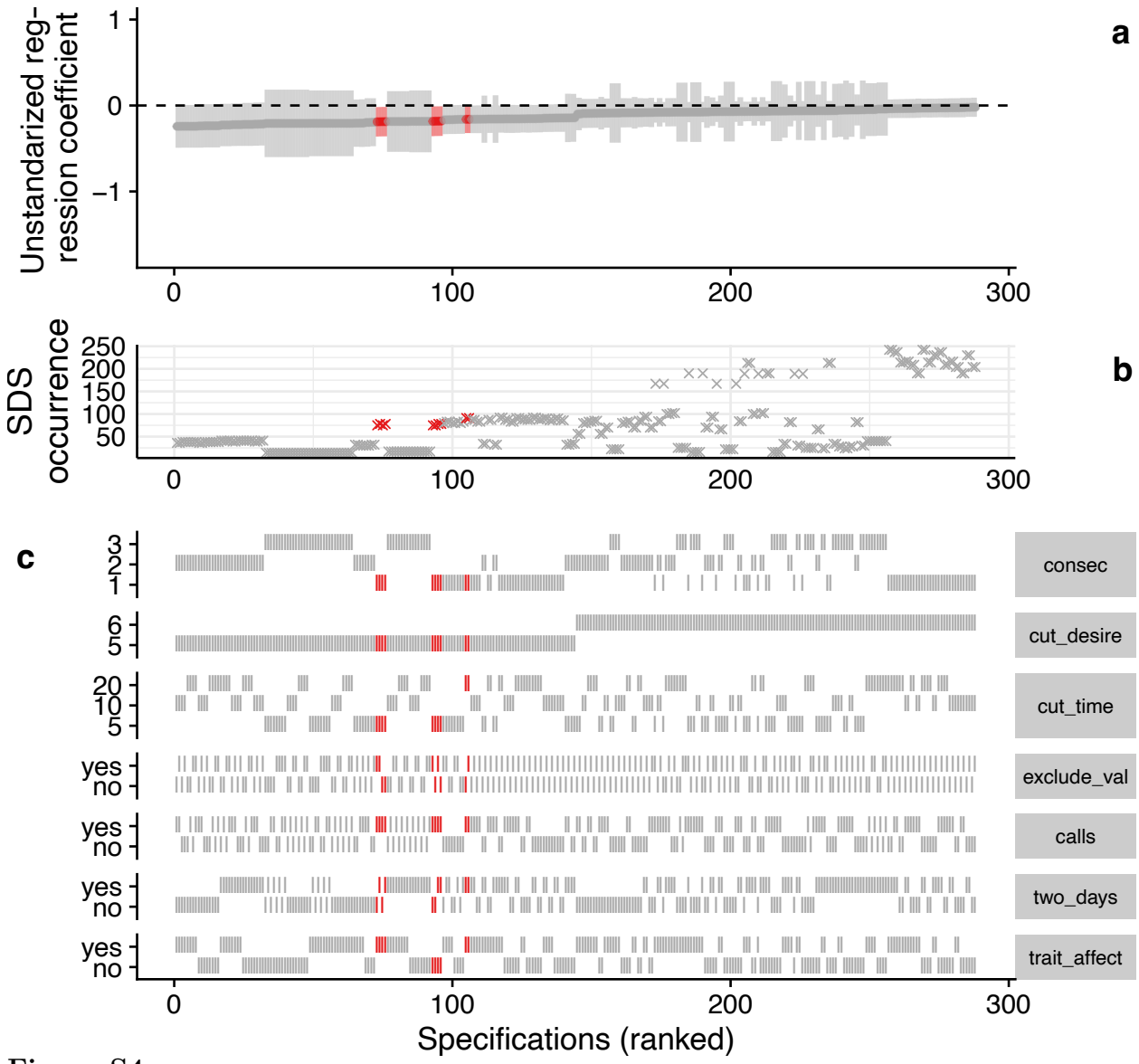

Figure S4

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Extraversion on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

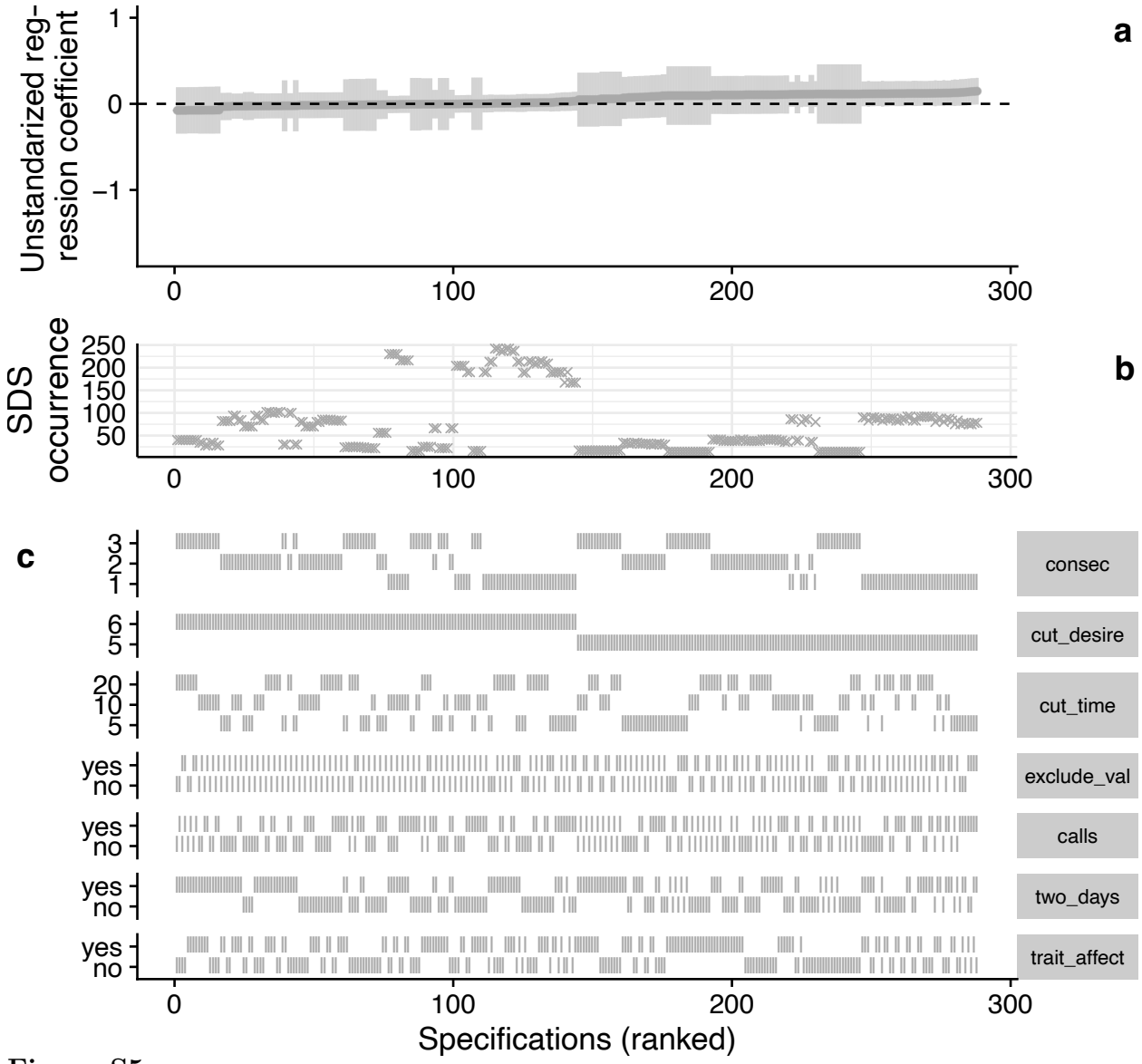

Figure S5

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Extraversion on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

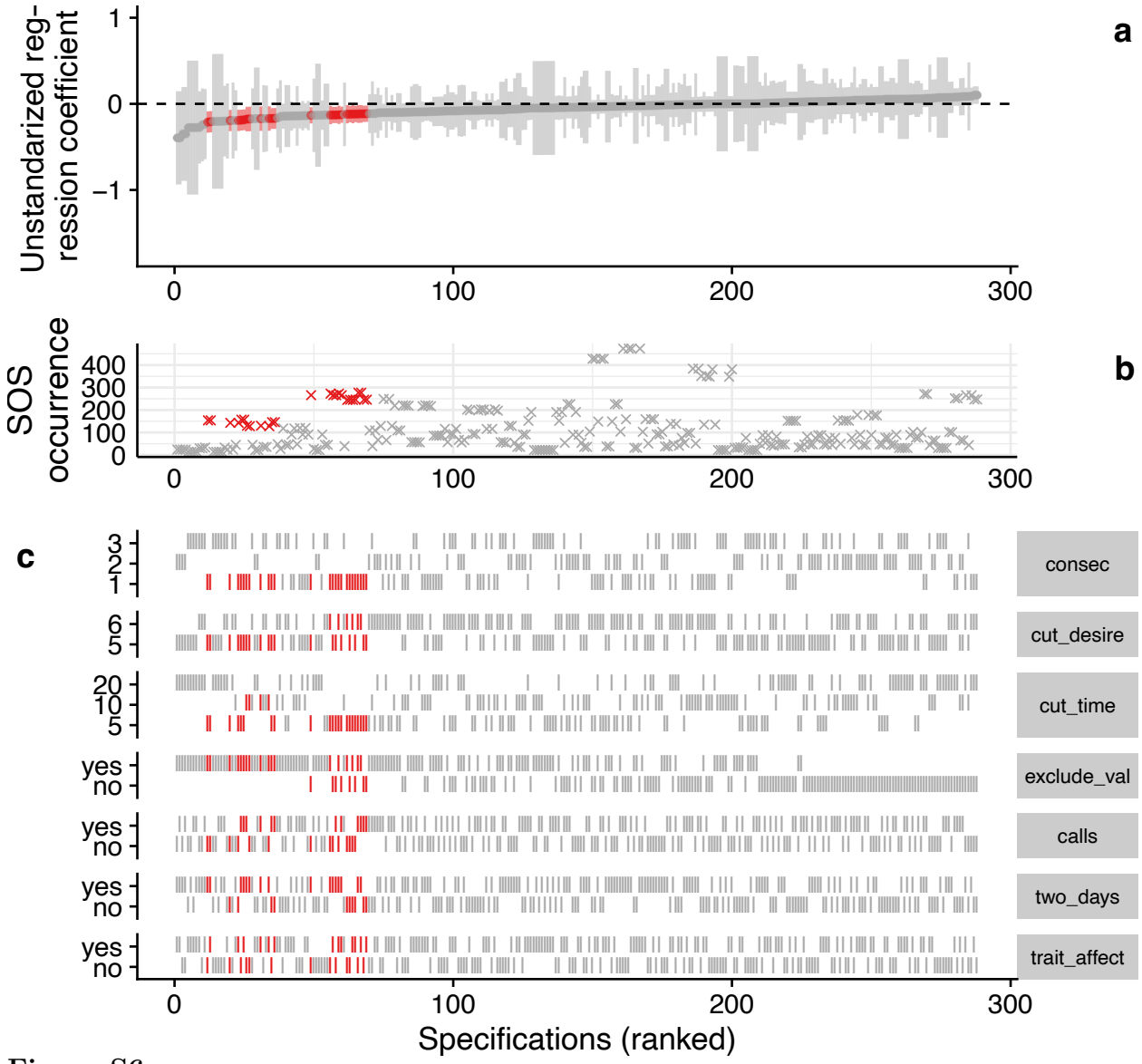

Figure S6

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Extraversion on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

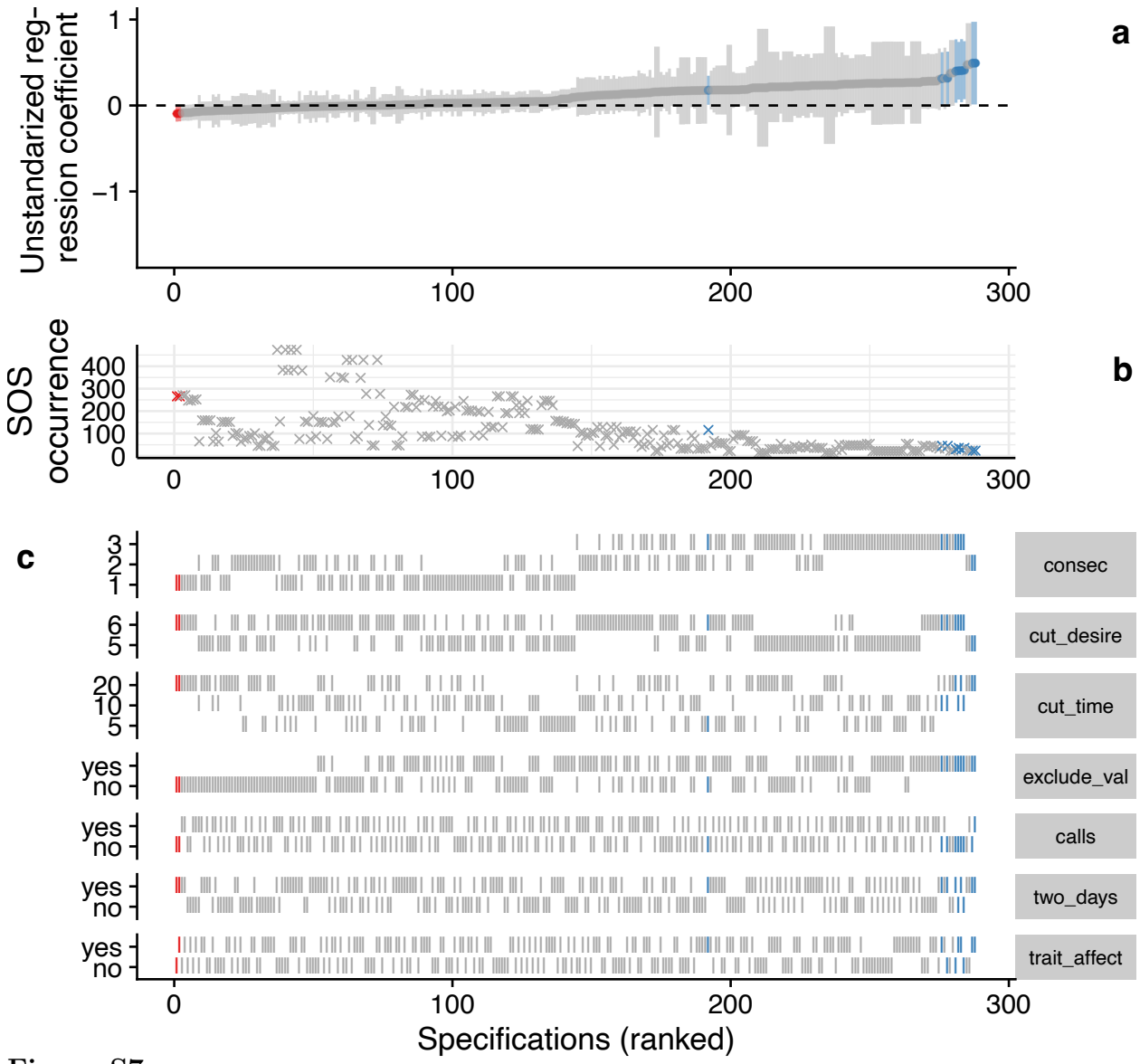

Figure S7

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Extraversion on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

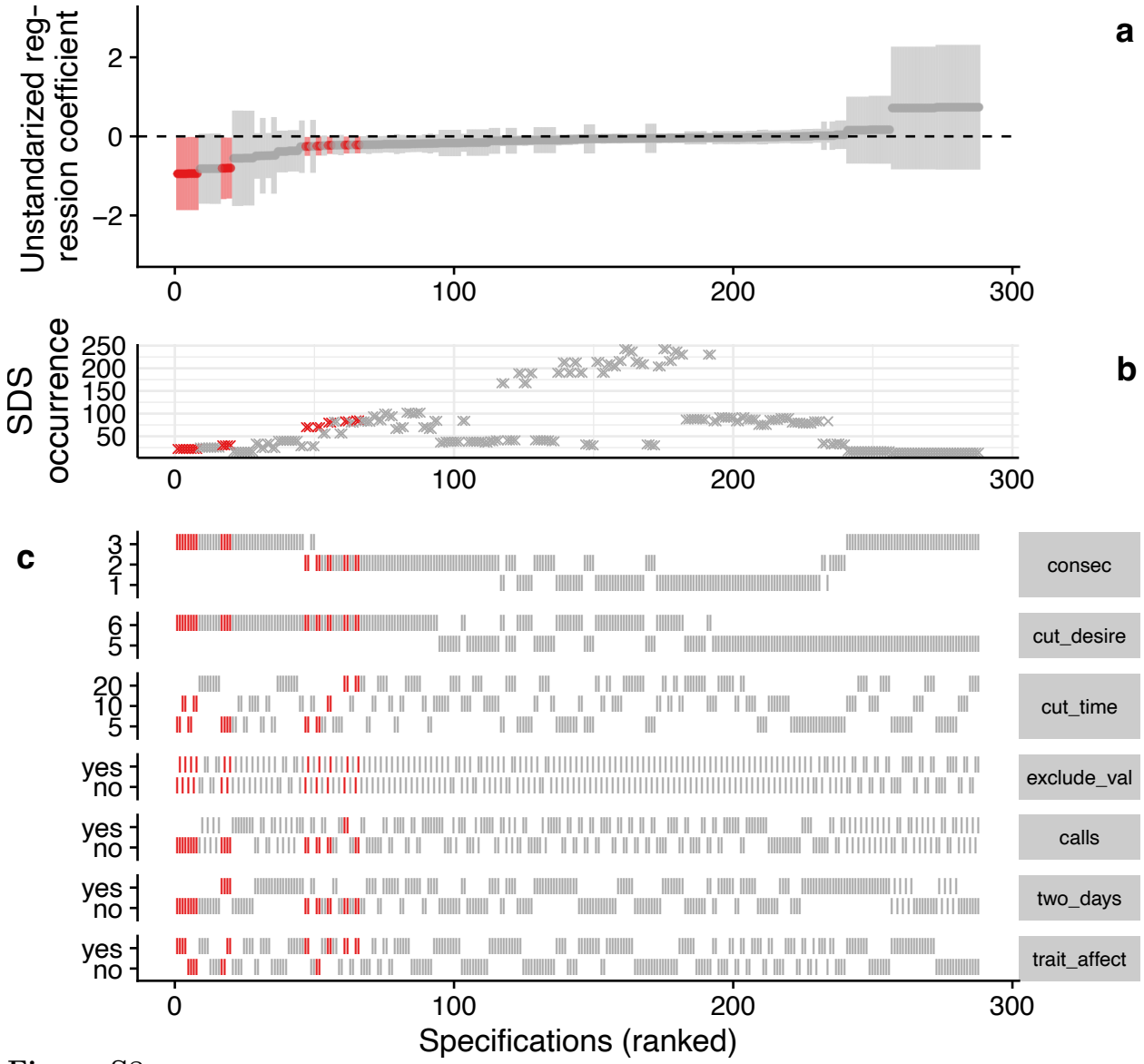

Figure S8

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Affiliation Motive on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

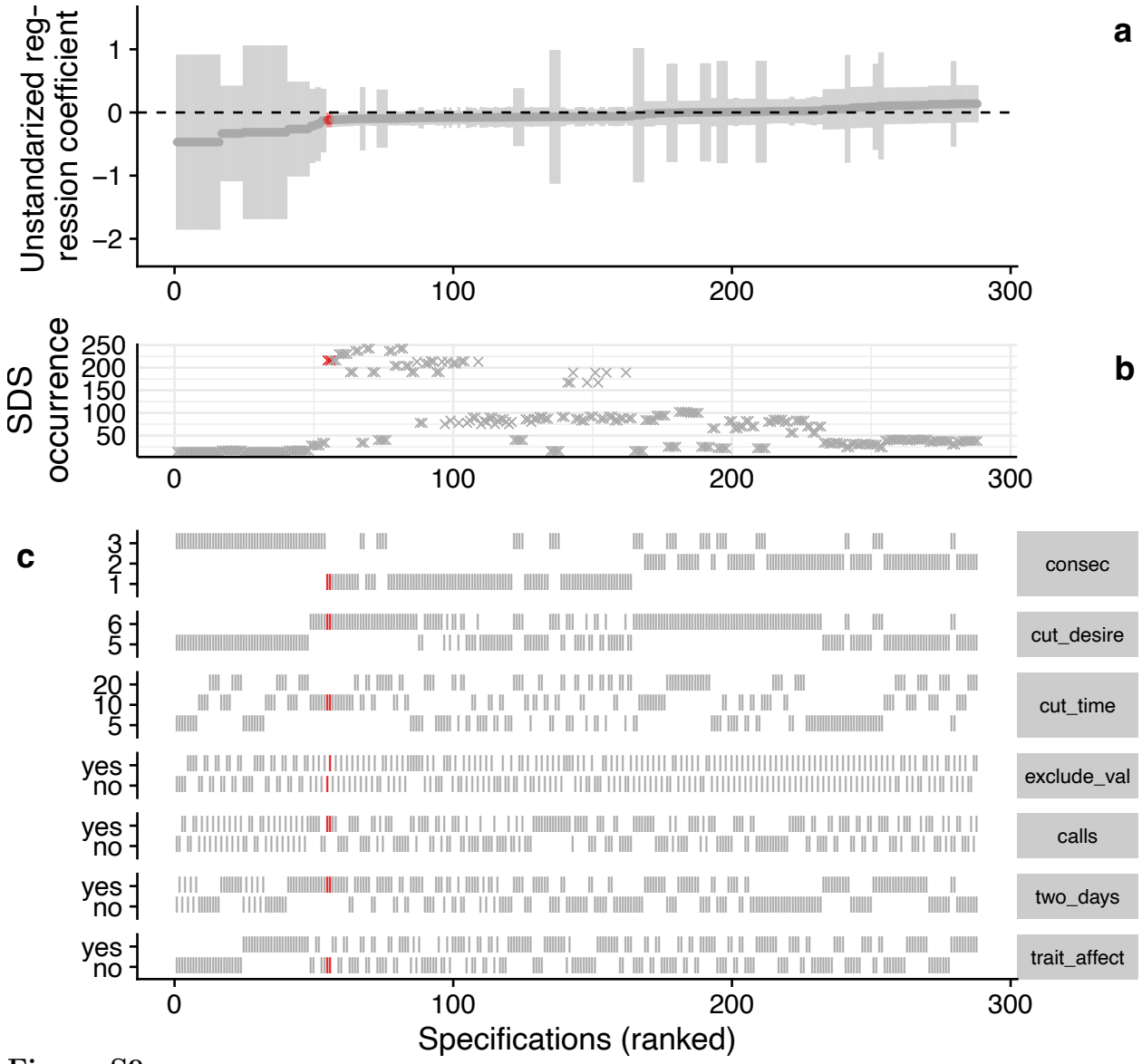

Figure S9

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Affiliation Motive on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

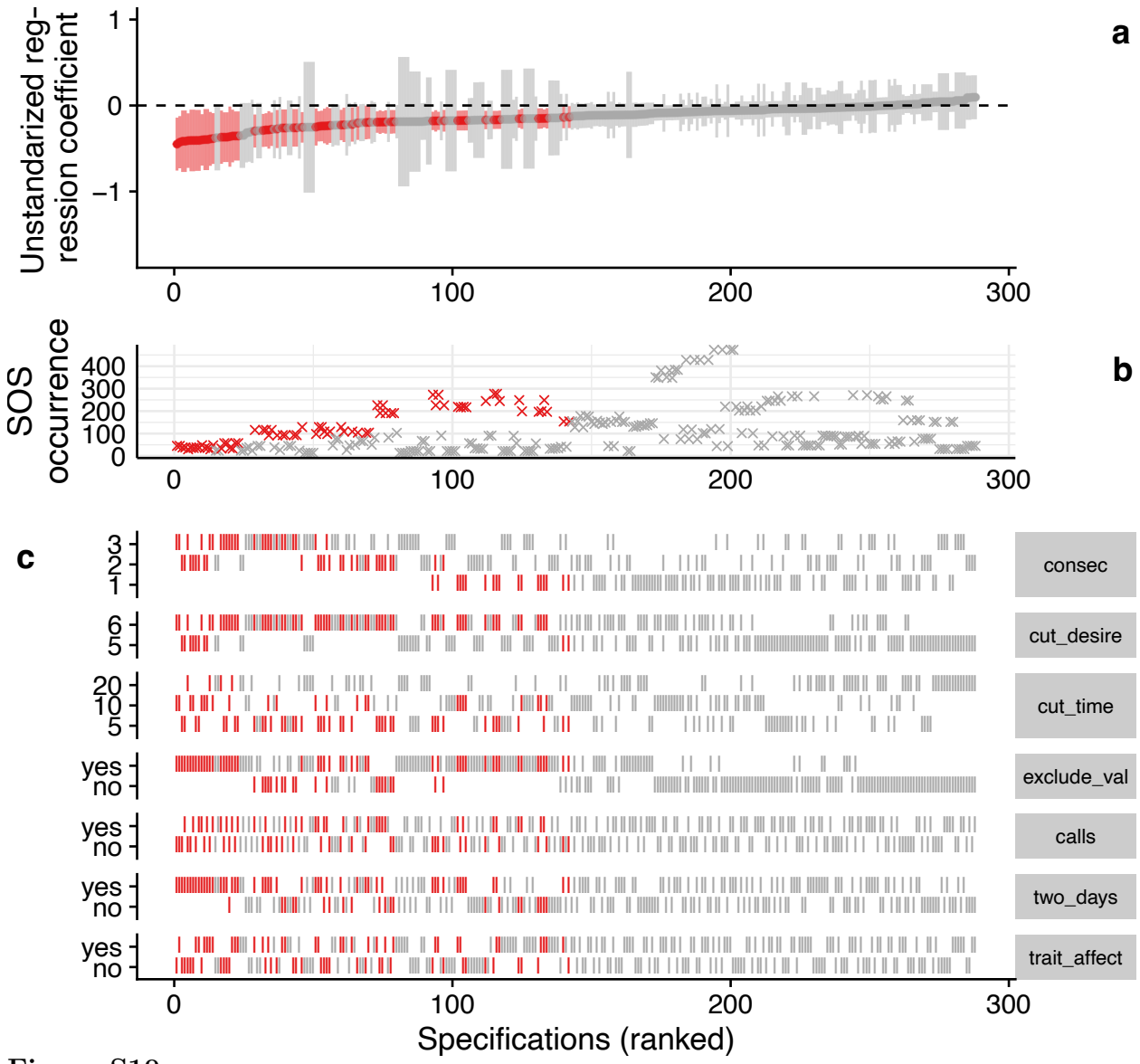

Figure S10

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Affiliation Motive on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

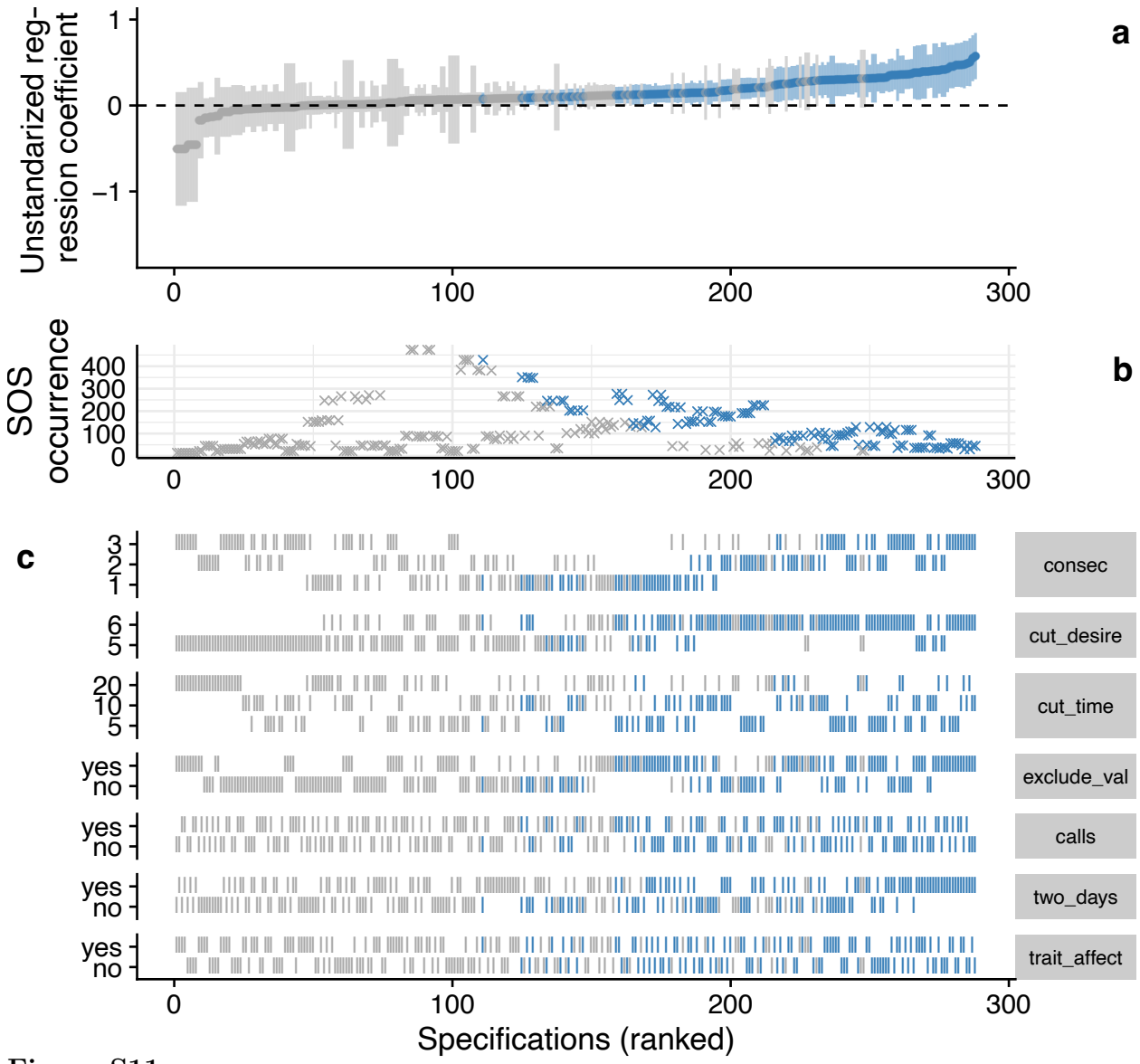

Figure S11

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Affiliation Motive on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

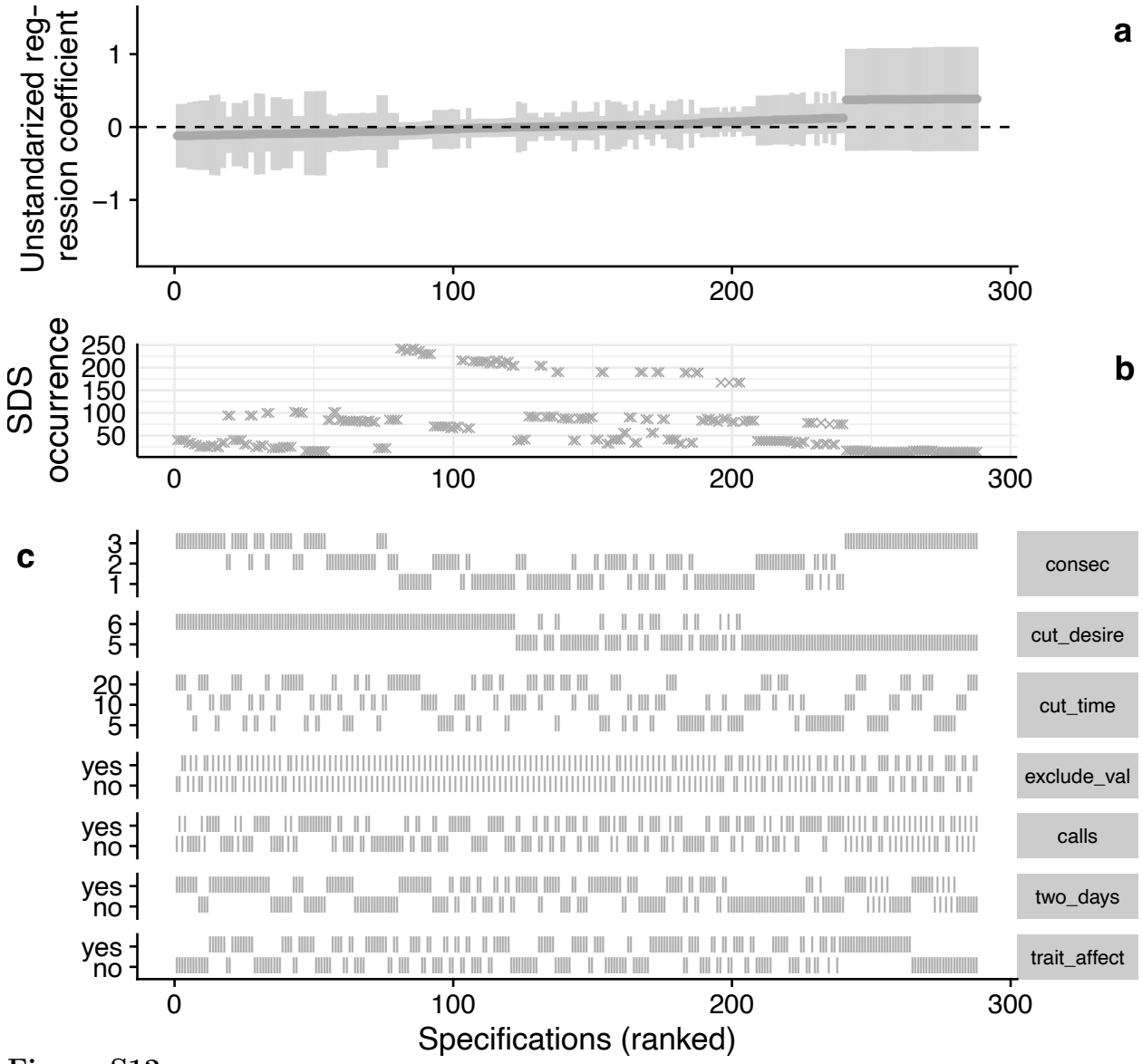

Figure S12

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Neuroticism on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

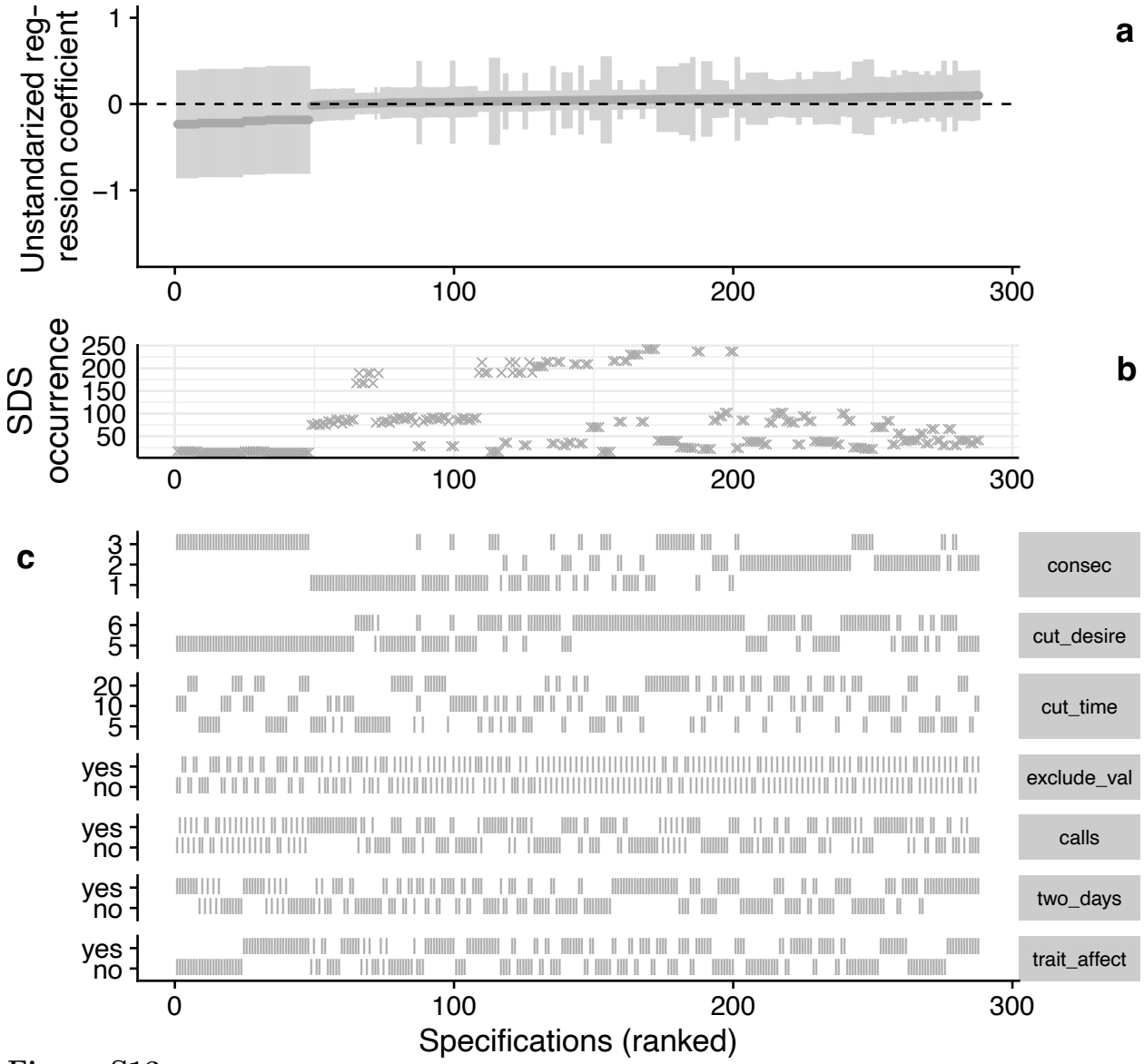

Figure S13

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Neuroticism on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

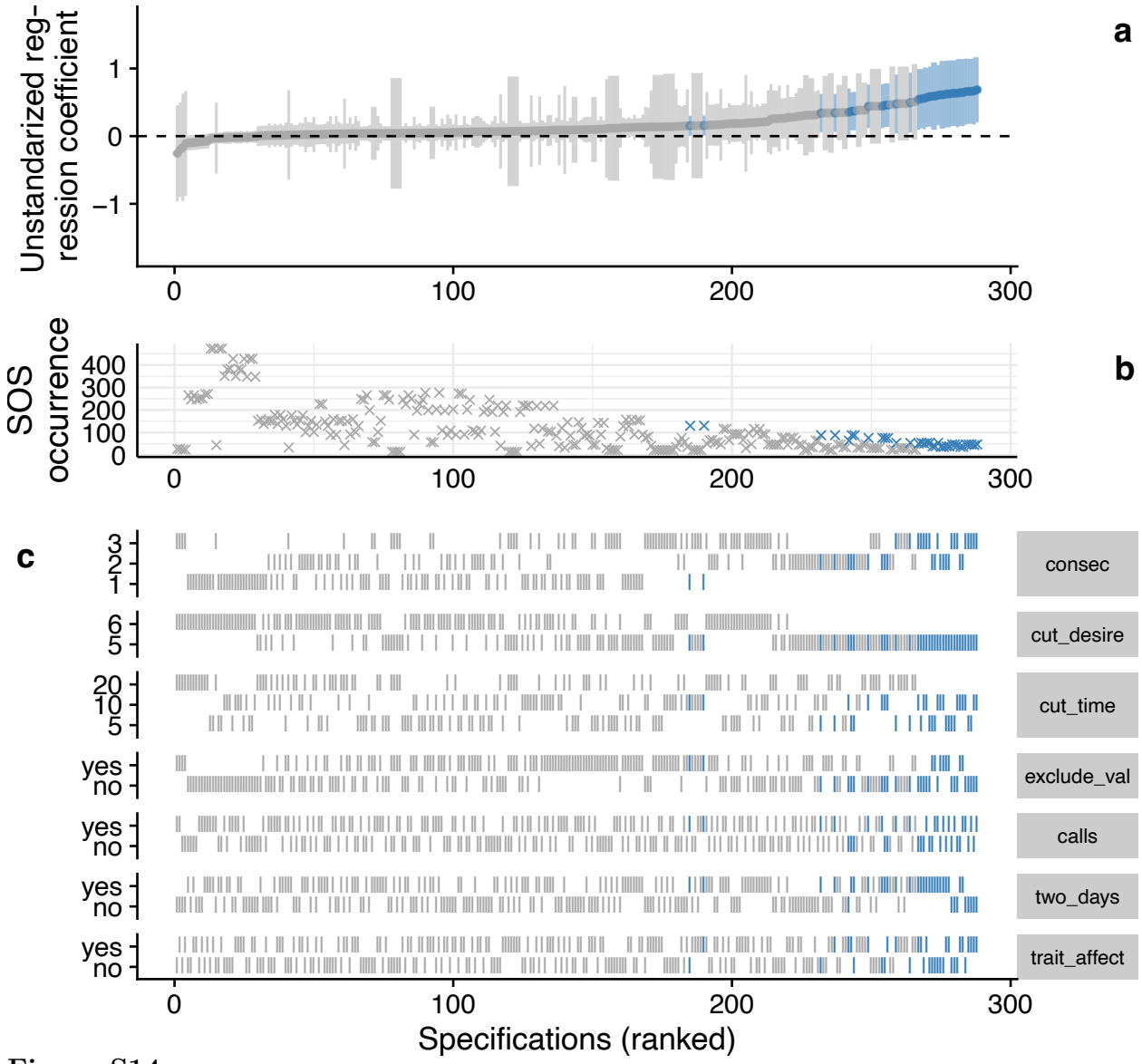

Figure S14

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Neuroticism on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

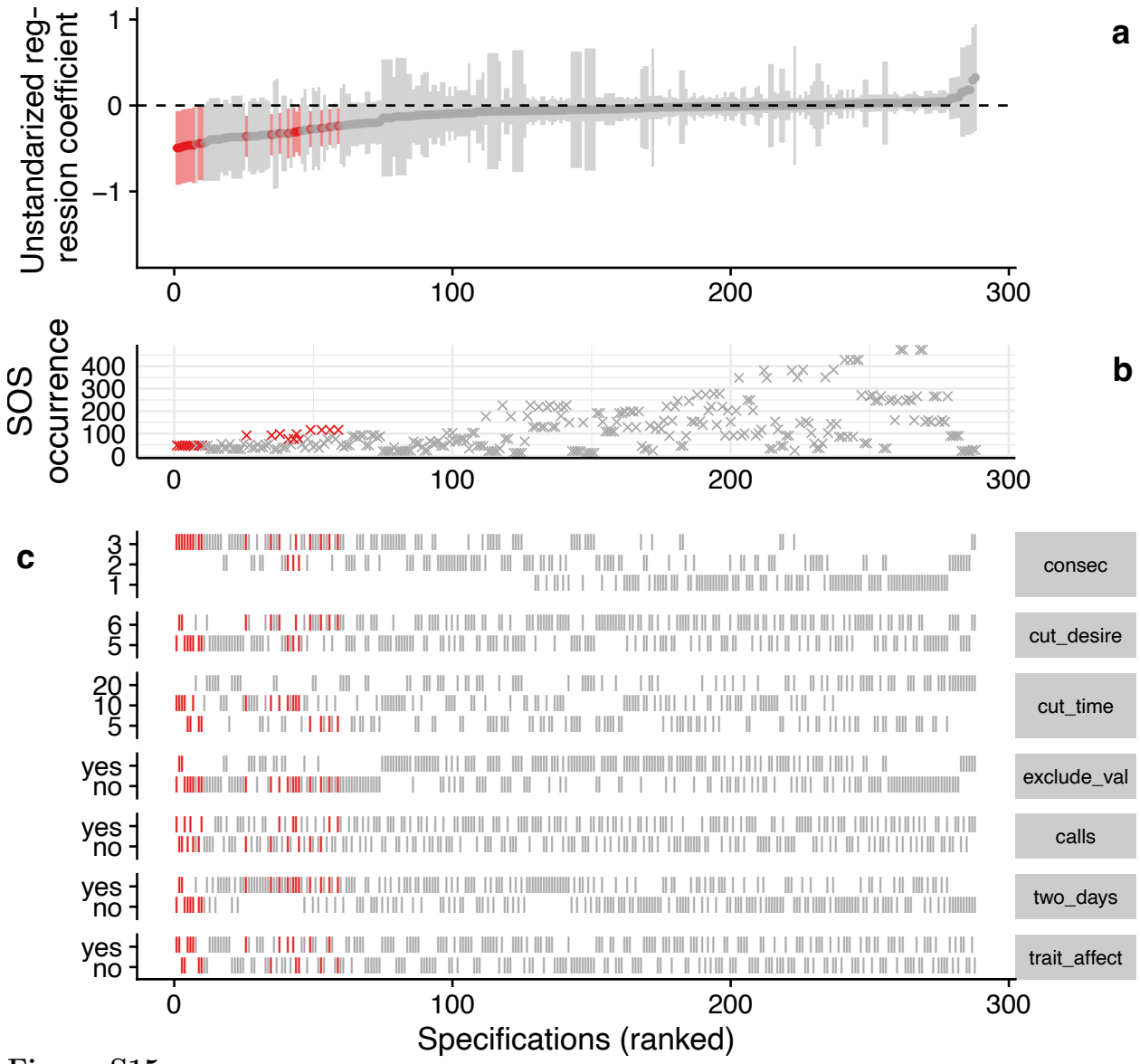

Figure S15

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Neuroticism on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

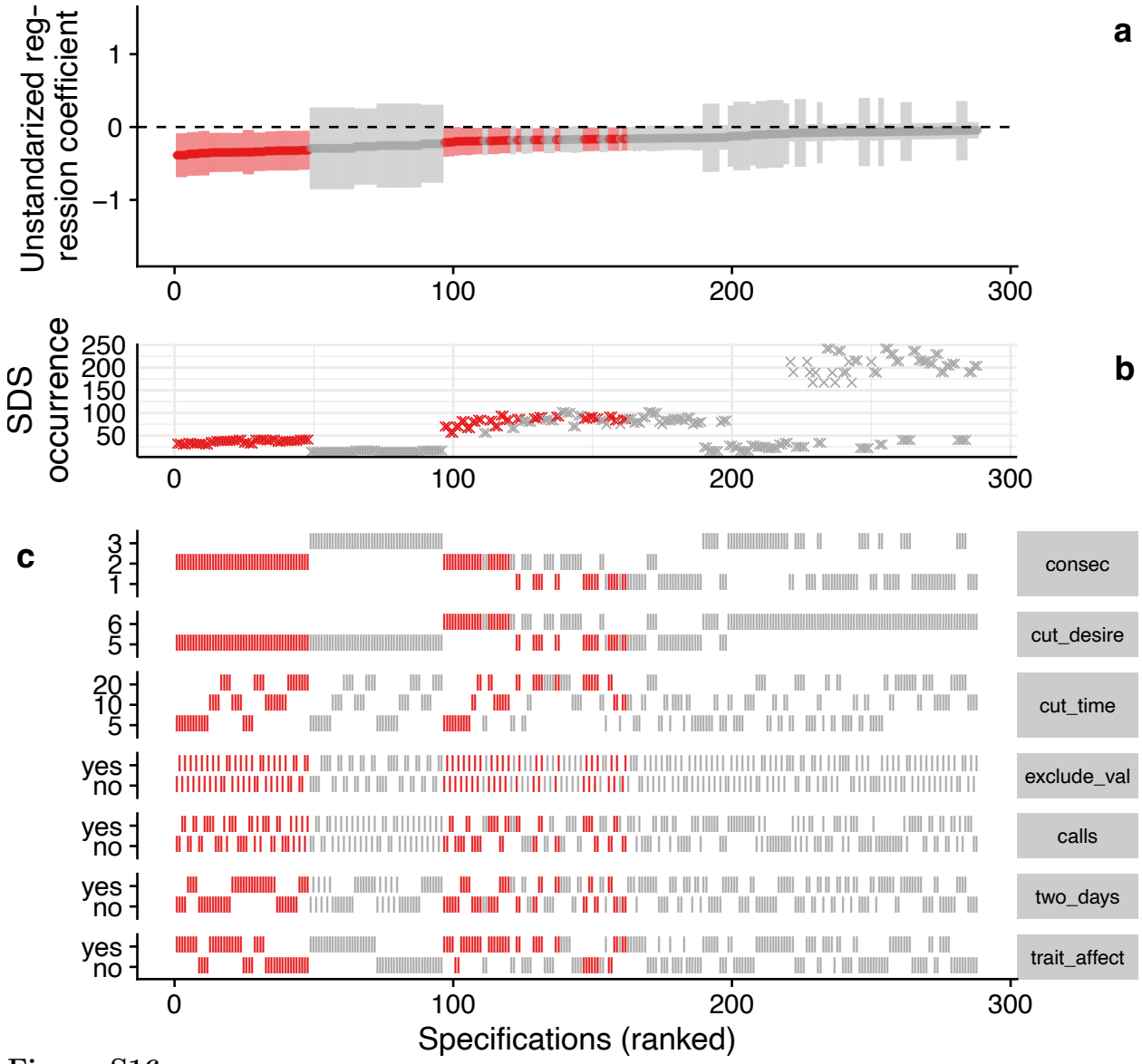

Figure S16

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Sociability on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

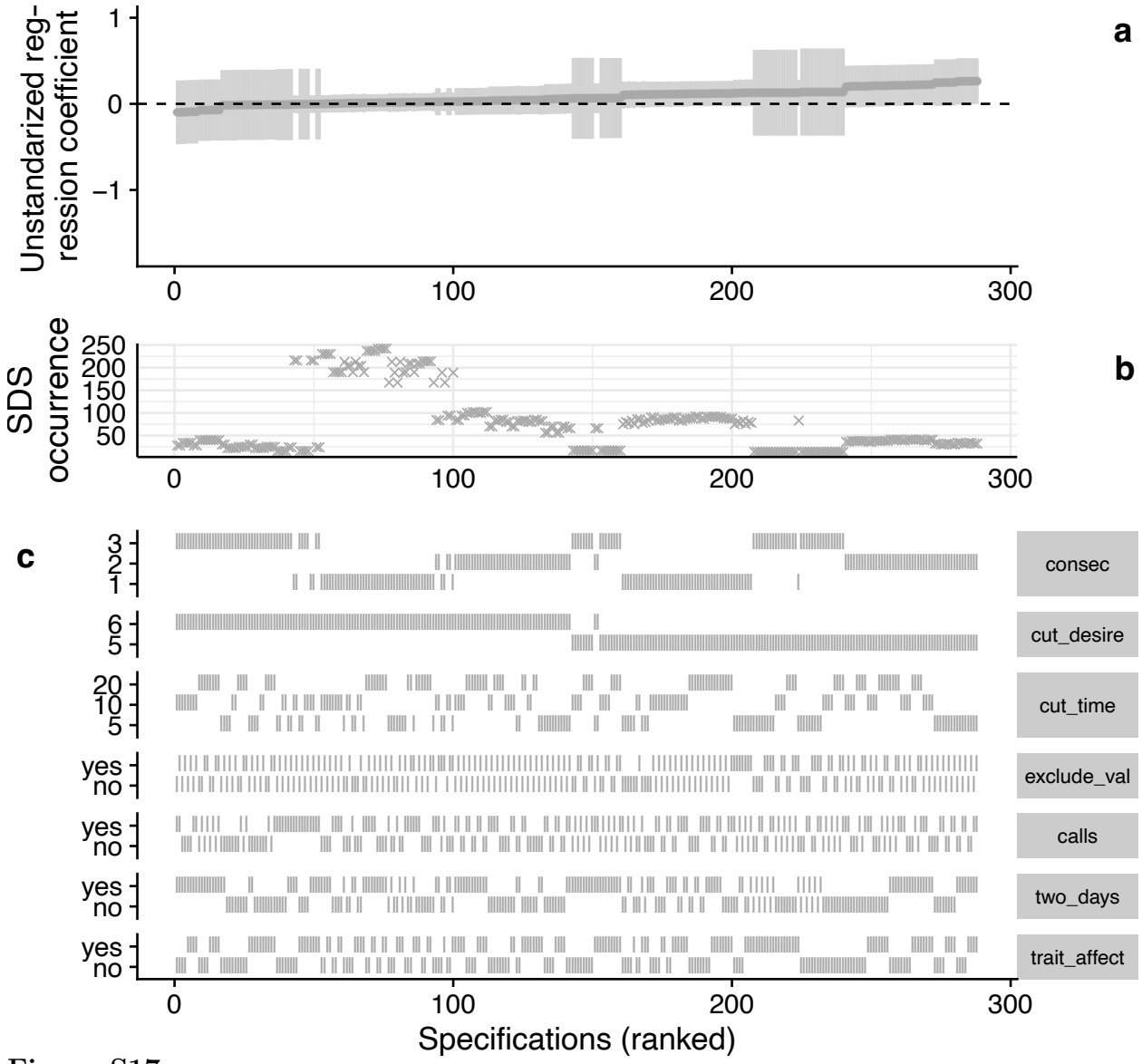

Figure S17

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Sociability on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

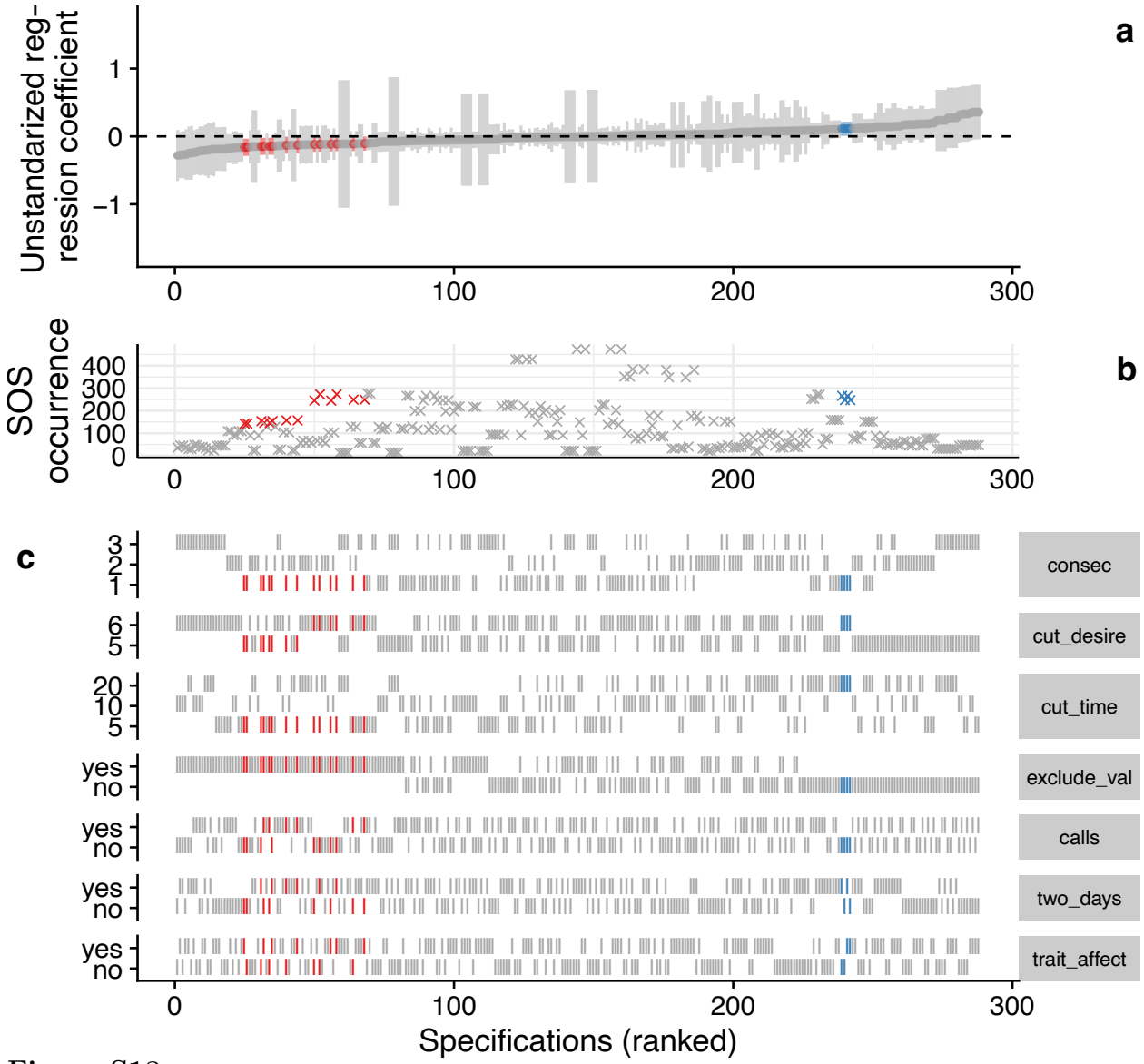

Figure S18

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Sociability on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

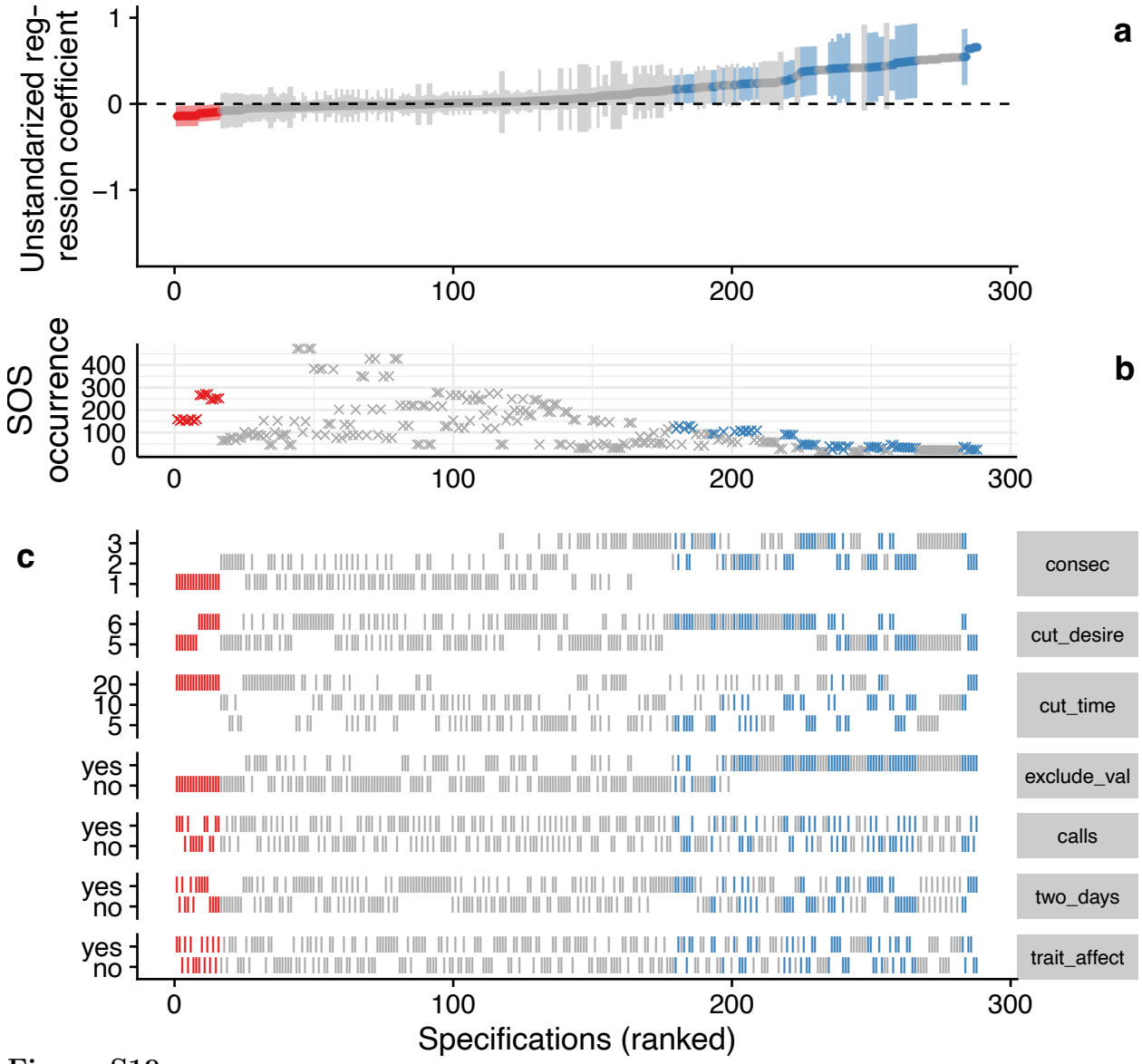

Figure S19

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Sociability on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

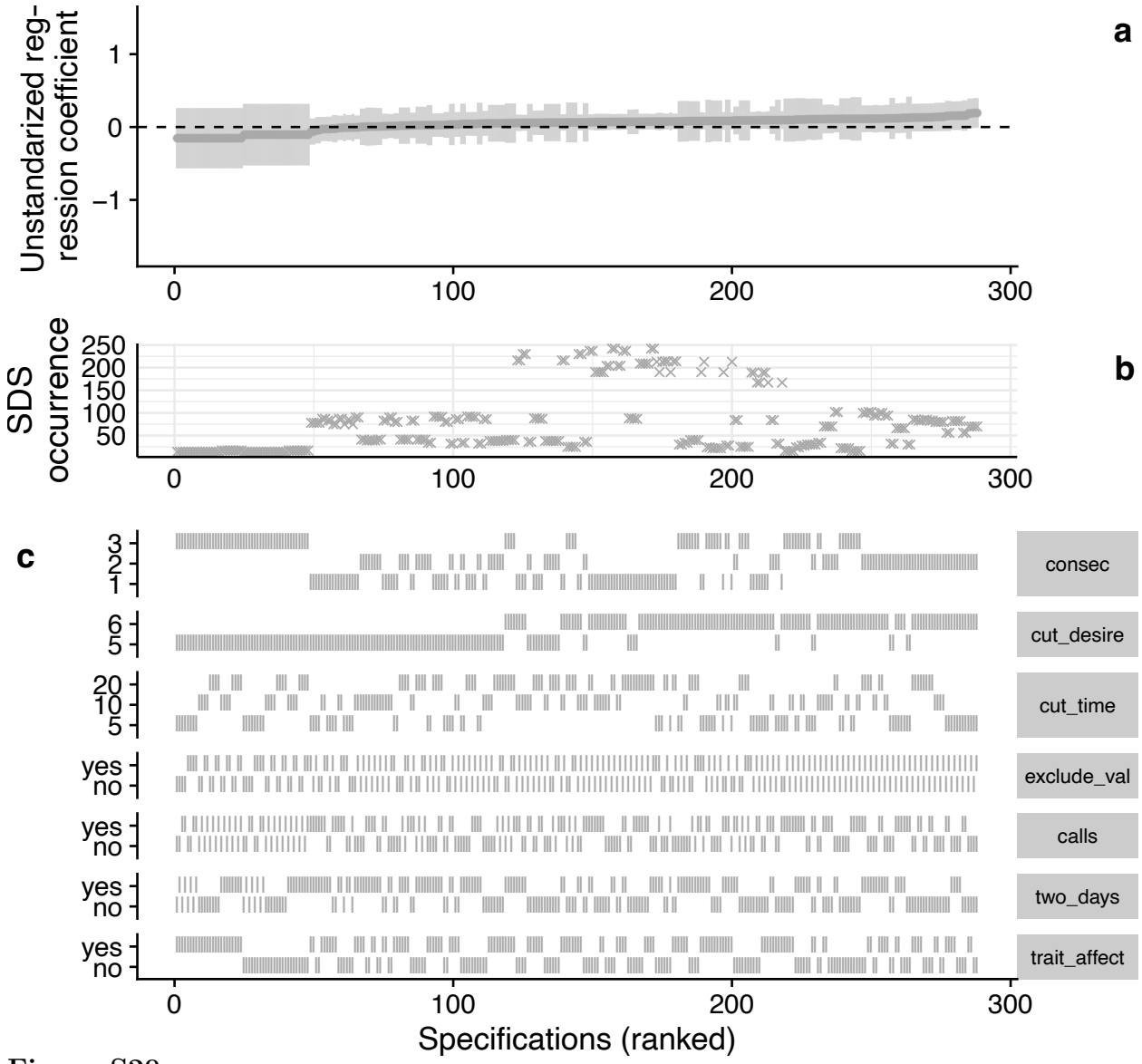

Figure S20

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Need to be Alone on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

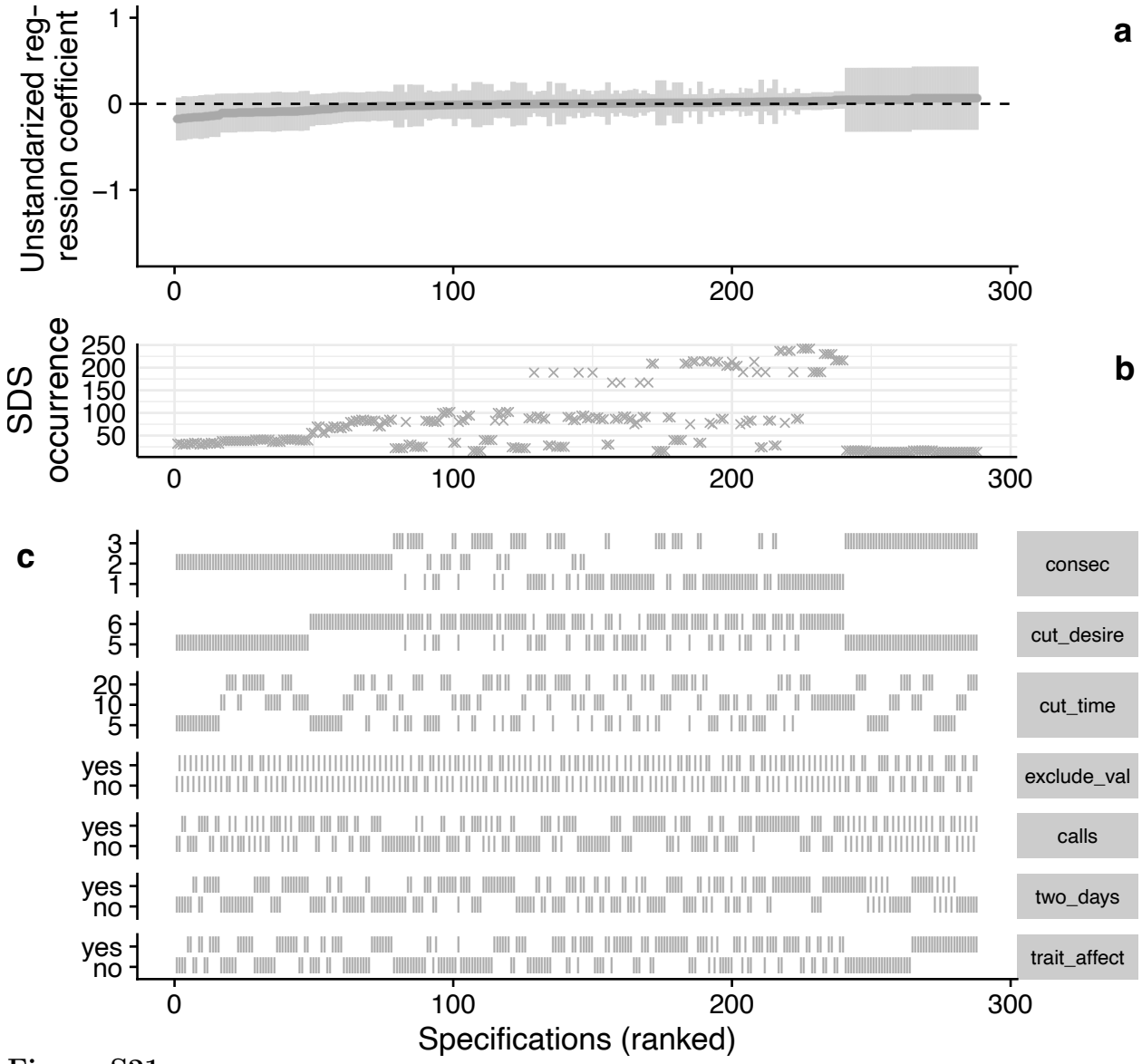

Figure S21

Specification Curve Analysis for the Moderation Effect of Social Deprivation States by Need to be Alone on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

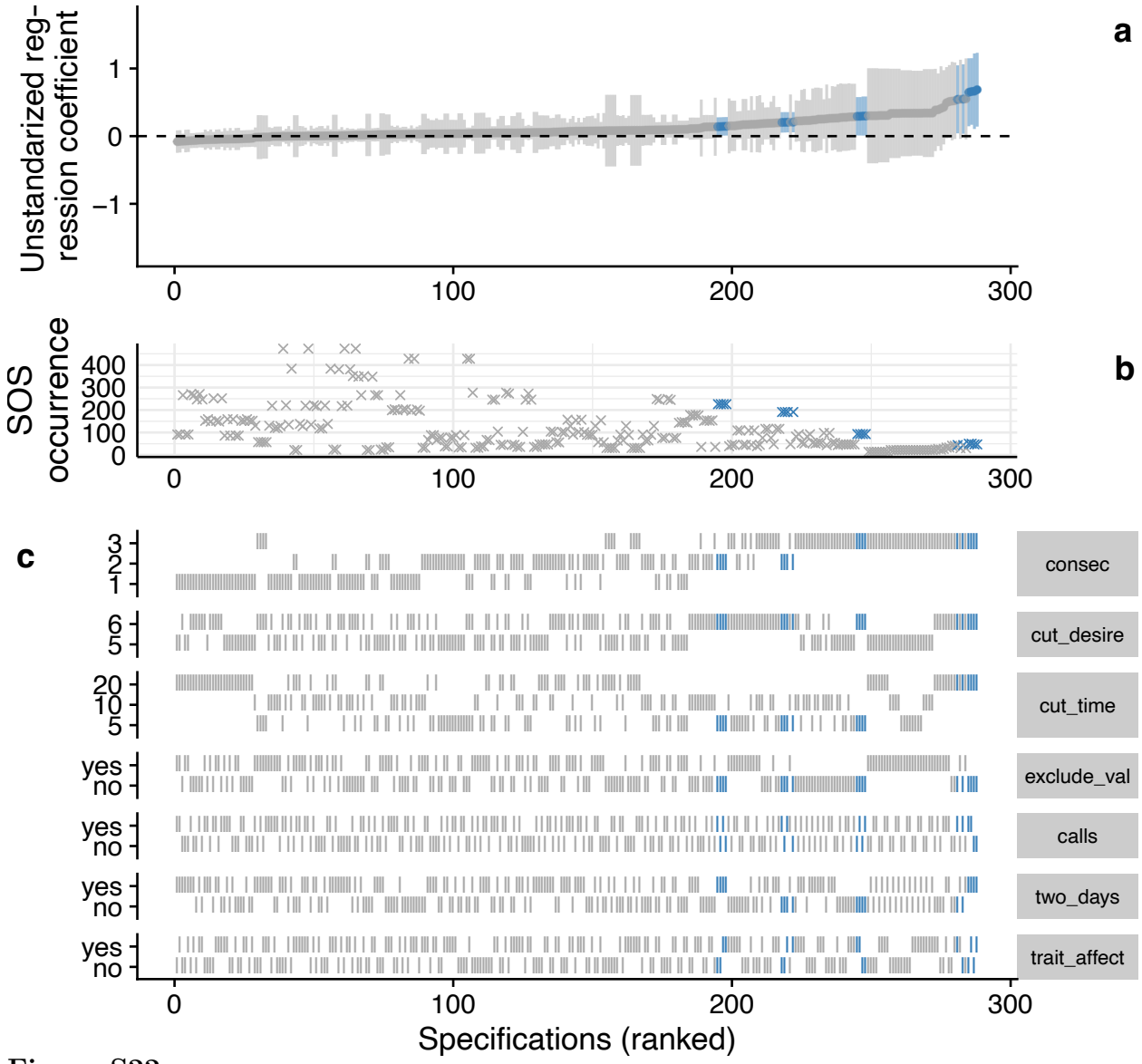

Figure S22

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Need to be Alone on Positive Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

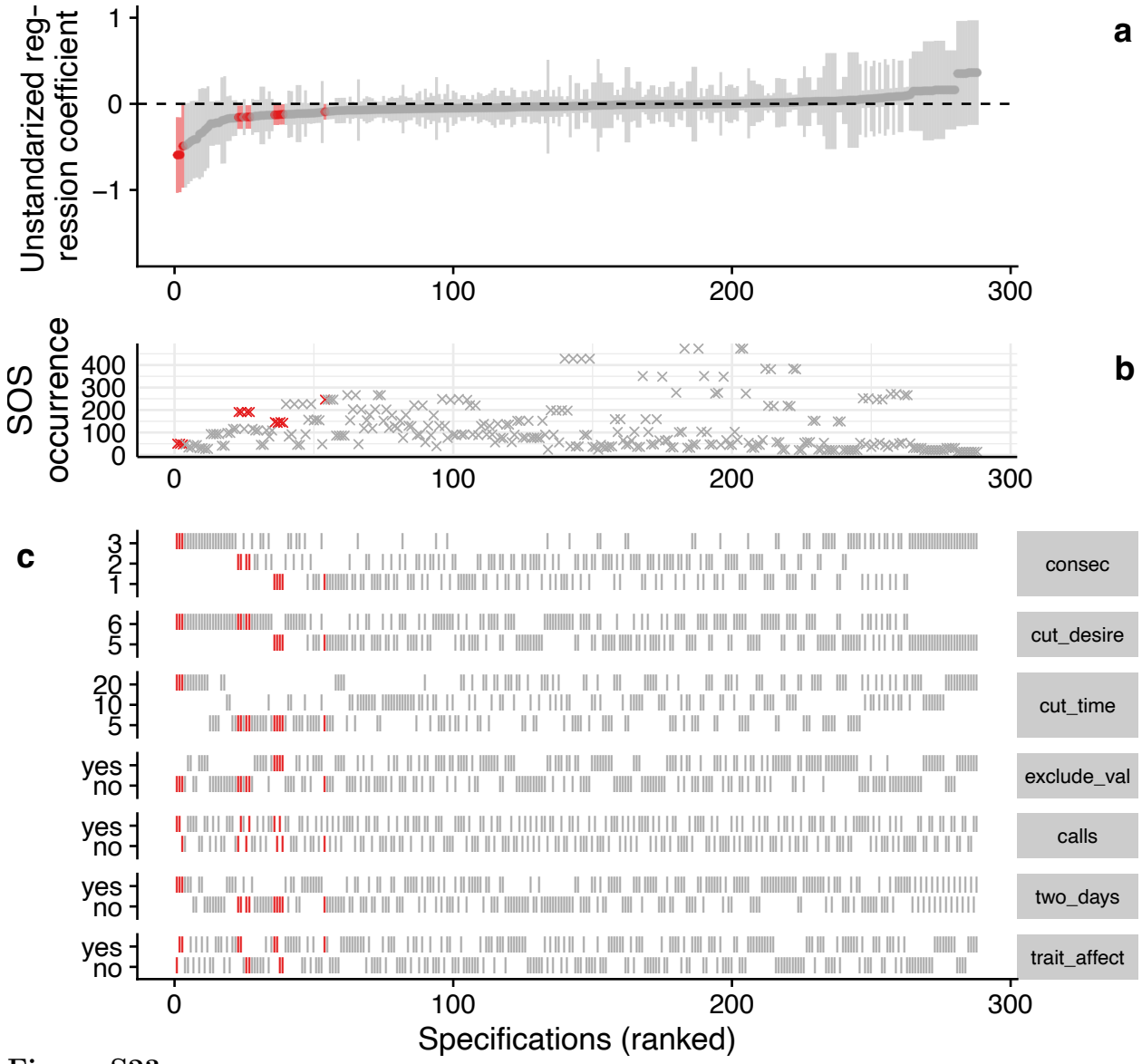

Figure S23

Specification Curve Analysis for the Moderation Effect of Social Oversatiation States by Need to be Alone on Negative Affect. See Figure S2 and the description in the Supplemental Material *for details of the specifications coding.*

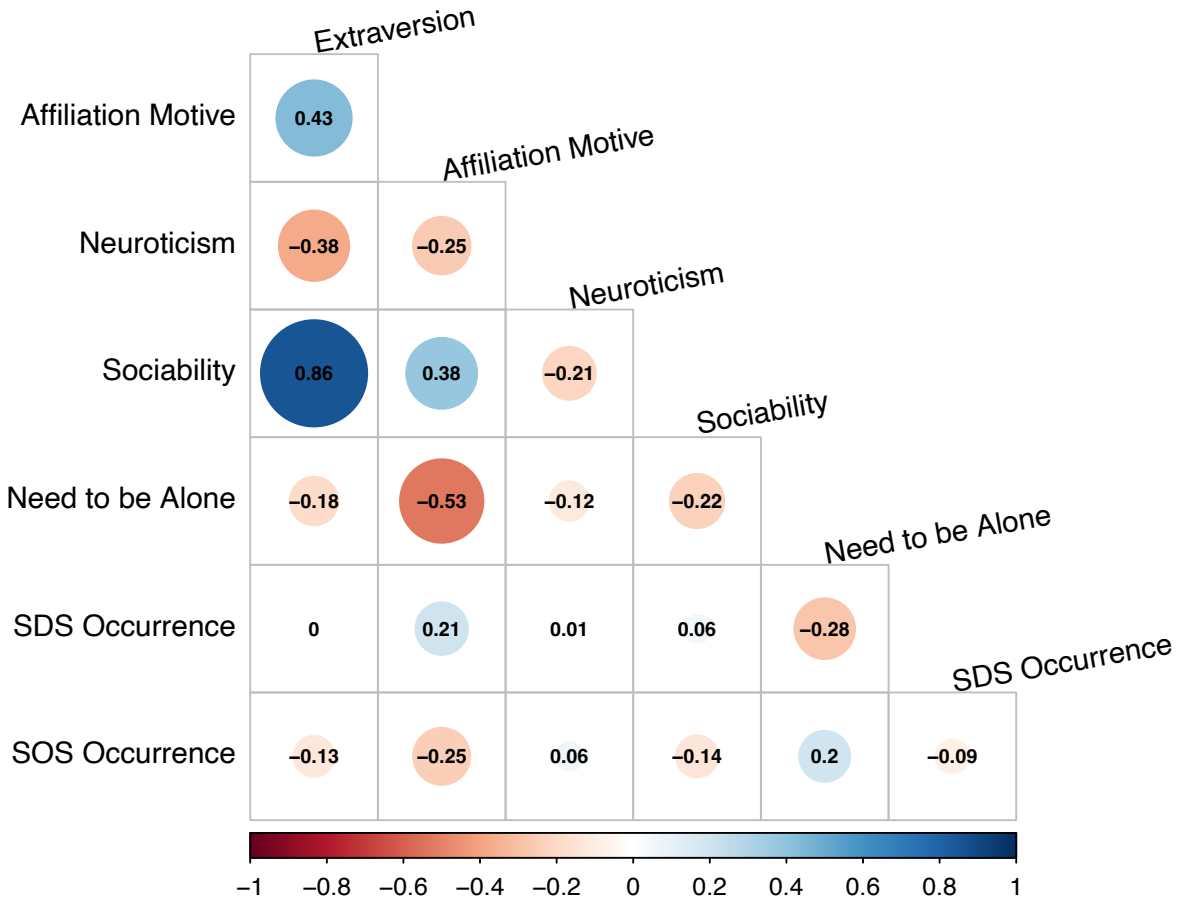

Figure S24

Raw correlation plots (Wei & Simko, 2017) between Social Deprivation State (SDS) and Social Oversatiation State (SOS) Occurrence and Social Traits (N = 306).

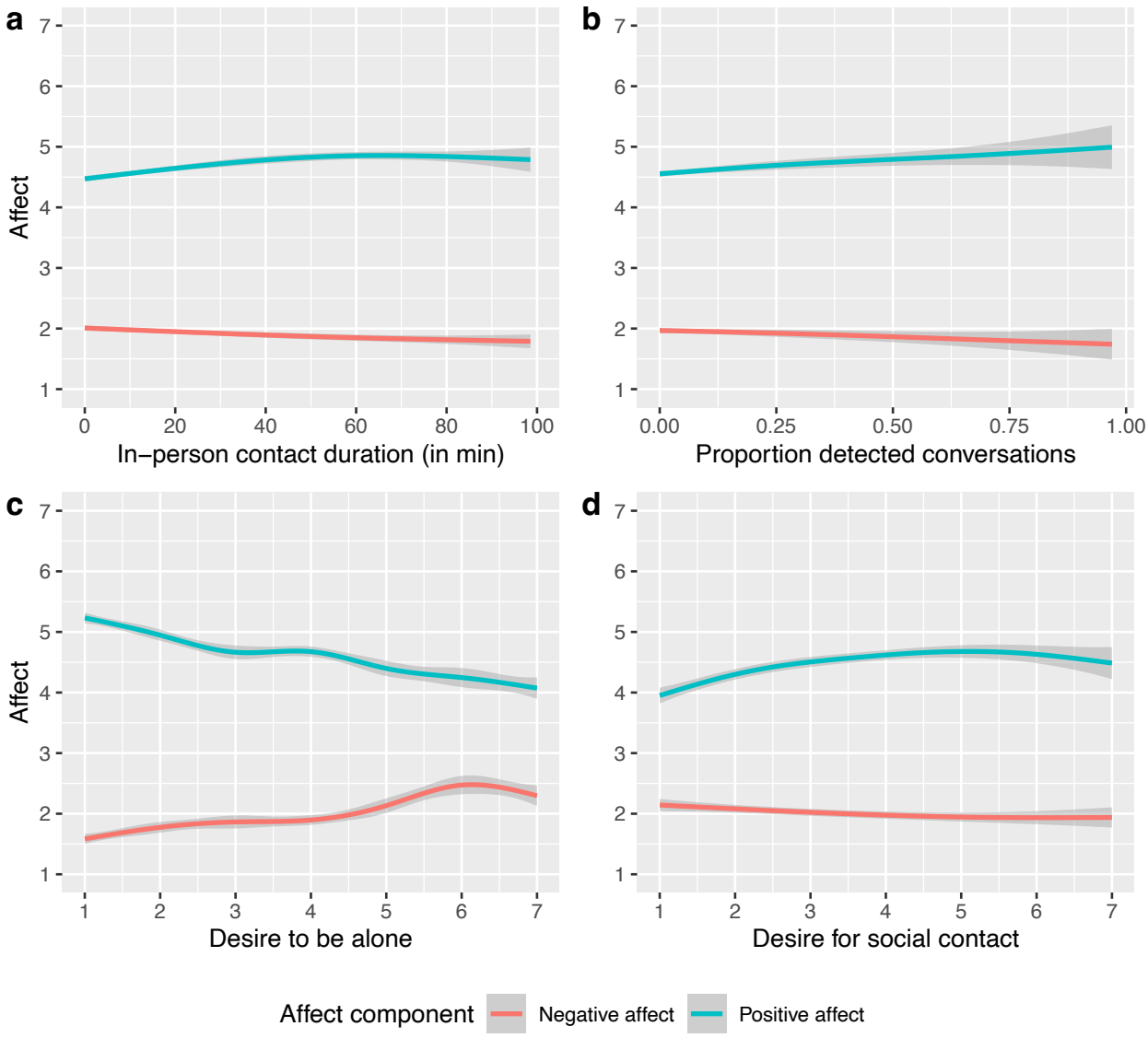

Figure S25

Smoothed Regression Lines (GAM) Showing the Relationships of Social Contact per ESM Episode (a, b) and Social Desire (c, d) with Affect Using the Uncentered Variables. Note that in the ESM questionnaires desire to be alone was administered when in in-person contact with someone just before answering ($N_{episodes}$ = 2571), and desire for social contact when not in in-person contact ($N_{episodes}$ = 1934). The proportion on detected conversations is computed on a slightly reduced sample of $N_{episodes}$ = 3198.

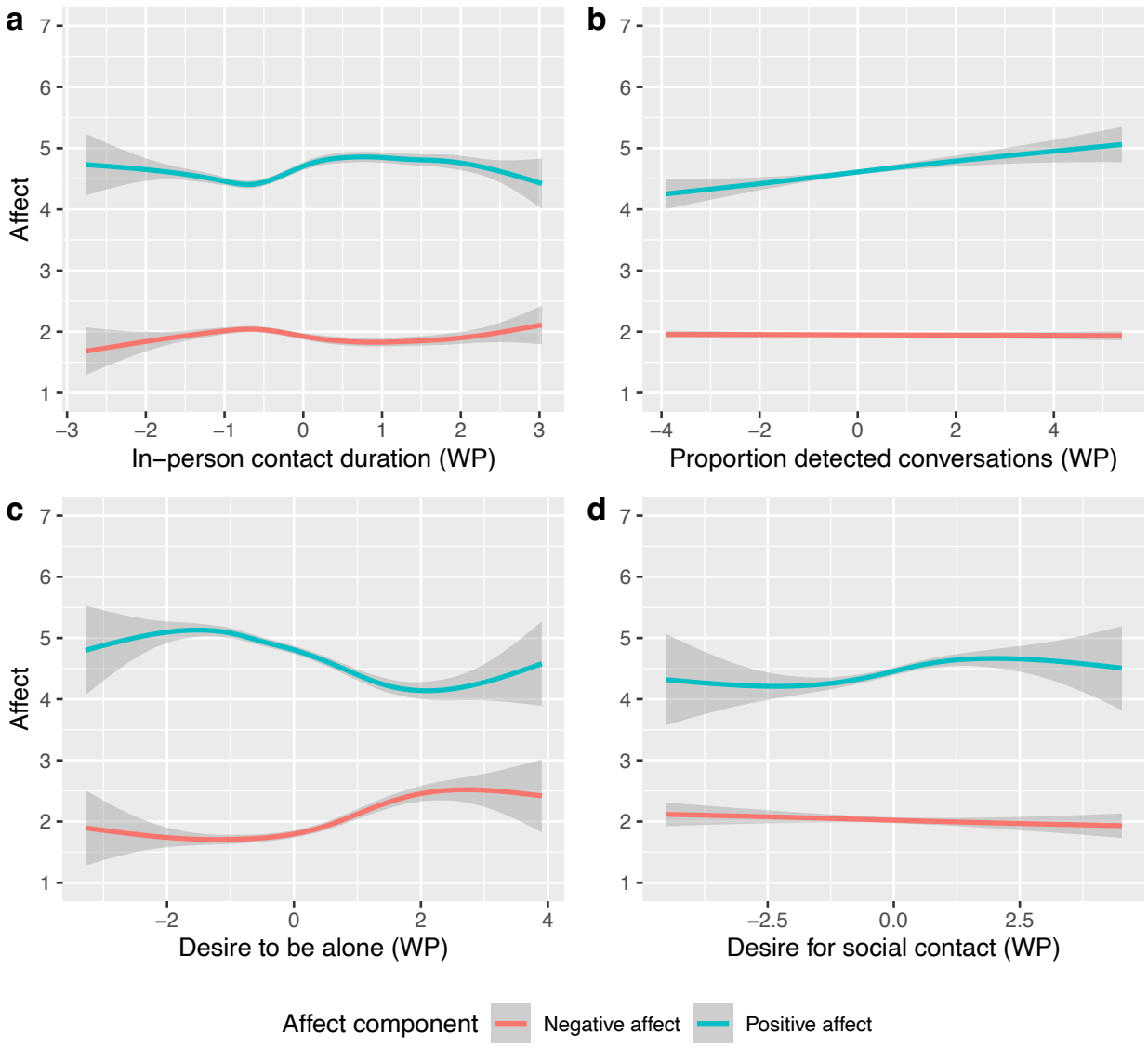

Figure S26

Smoothed Regression Lines (GAM) Showing the Relationships of Social Contact per ESM Episode (a, b) and Social Desire (c, d) with Affect Using the Person-Mean Centered Variables. Note that in the ESM questionnaires desire to be alone was administered when in in-person contact with someone just before answering ($N_{episodes}$ = 2571), and desire for social contact when not in in-person contact ($N_{episodes}$ = 1934). The proportion on detected conversations is computed on a slightly reduced sample of $N_{episodes}$ = 3198. WP = z-standardized within-person deviation from person-mean.

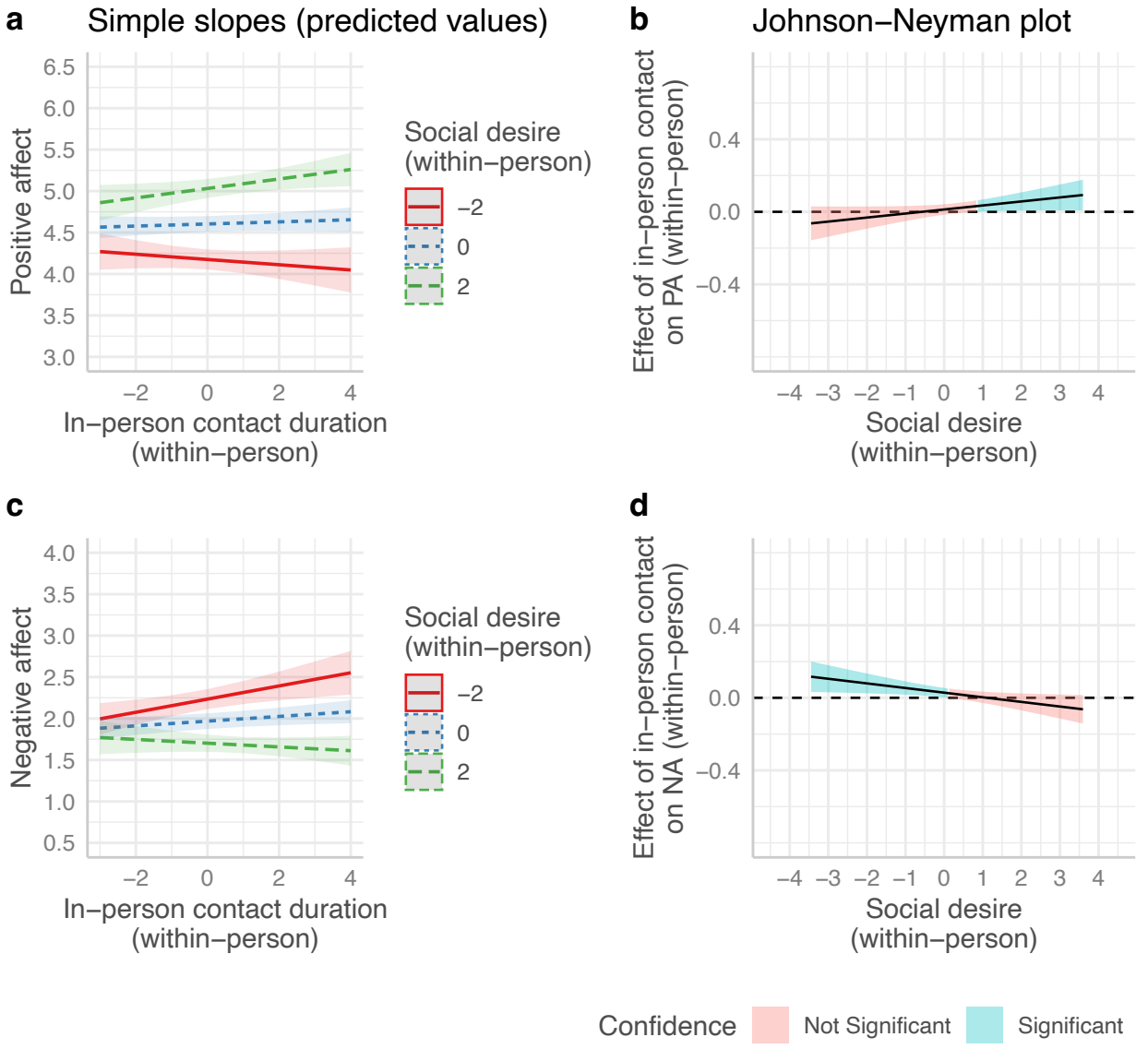

Figure S27

Simple-slopes plots (a, c) and Neyman-Johnson regions-of-significance plots (b, d) for within-person interaction effects (using the composite social desire variable) predicting positive affect (PA) and negative affect (NA). Note that the interaction effect for PA is overall nonsignificant. Confidence bands represent 95% confidence intervals. Variables presented on the X-axis are person-mean centered and standardized.

Complete Software and Session Information

We used R (Version 4.2.1; R Core Team, 2022) and the R-packages *bayestestR* (Version 0.12.1; Makowski et al., 2019), *correlation* (Version 0.8.2; Makowski et al., 2020b), *corrplot2021* (Wei & Simko, 2021), *cowplot* (Version 1.1.1; Wilke, 2020), *datawizard* (Version 0.5.1; Patil et al., 2022), *dplyr* (Version 1.0.9; Wickham, François, et al., 2022), *easystats* (Version 0.5.2; Lüdecke et al., 2022), *effectsize* (Version 0.7.0.5; Ben-Shachar et al., 2020), *forcats* (Version 0.5.1; Wickham, 2021), *ggplot2* (Version 3.3.6; Wickham, 2016), *insight* (Version 0.18.2; Lüdecke et al., 2019), *lme4* (Version 1.1.29; Bates et al., 2015), *lubridate* (Version 1.8.0; Grolemund & Wickham, 2011), *Matrix* (Version 1.4.1; Bates et al., 2022), *modelbased* (Version 0.8.5; Makowski et al., 2020a), *nlme* (Version 3.1.157; Pinheiro & Bates, 2000), *papaja* (Version 0.1.1; Aust & Barth, 2022), *parameters* (Version 0.18.2; Lüdecke et al., 2020), *performance* (Version 0.9.2; Lüdecke, Ben-Shachar, et al., 2021), *purrr* (Version 0.3.4; Henry & Wickham, 2020), *readr* (Version 2.1.2; Wickham, Hester, et al., 2022), *report* (Version 0.5.5; Makowski et al., 2021), *scales* (Version 1.2.0; Wickham & Seidel, 2022), *see* (Version 0.7.2; Lüdecke, Patil, et al., 2021), *sjPlot* (Version 2.8.10; Lüdecke, 2021), *specr* (Version 0.2.1; Masur & Scharkow, 2019), *stringr* (Version 1.4.0; Wickham, 2019), *tidyr* (Version 1.2.0; Wickham & Girlich, 2022), and *tinylabels* (Version 0.2.3; Barth, 2022) for data wrangling, analyses, and plots. We used *renv* to create a reproducible environment for this R-project (Version 0.15.5, Ushey, 2022).

The following is the output of R's *sessionInfo()* command, which shows information to aid analytic reproducibility of the analyses.

R version 4.2.1 (2022-06-23) Platform: x86_64-apple-darwin17.0 (64-bit) Running under: macOS Big Sur ... 10.16

Matrix products: default BLAS: /Library/Frameworks/R.framework/Versions/4.2/Resources/lib/libRblas.0.dylib LAPACK:

1198 /Library/Frameworks/R.framework/Versions/4.2/Resources/lib/libRlapack.dylib

1199 locale: [1]

1200 en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8

1201 attached base packages: [1] stats graphics grDevices datasets utils methods base

1202 other attached packages: [1] scales_1.2.0 forcats_0.5.1 specr_0.2.1 sjPlot_2.8.10

1203 [5] report_0.5.5 correlation_0.8.2 modelbased_0.8.5 effectsize_0.7.0.5 [9]

1204 parameters_0.18.2 performance_0.9.2 bayestestR_0.12.1 datawizard_0.5.1

1205 [13] insight_0.18.2 easystats_0.5.2 see_0.7.2 corrplot_0.92

1206 [17] cowplot_1.1.1 lme4_1.1-29 Matrix_1.4-1 nlme_3.1-157

1207 [21] purrr_0.3.4 ggplot2_3.3.6 readr_2.1.2 tidyr_1.2.0

1208 [25] stringr_1.4.0 lubridate_1.8.0 dplyr_1.0.9 papaja_0.1.1

1209 [29] tinylabels_0.2.3

1210 loaded via a namespace (and not attached): [1] tools_4.2.1 backports_1.4.1

1211 utf8_1.2.2 R6_2.5.1

1212 [5] sjlabelled_1.2.0 DBI_1.1.3 colorspace_2.0-3 withr_2.5.0

1213 [9] mnormt_2.1.0 tidyselect_1.1.2 emmeans_1.7.5 compiler_4.2.1

1214 [13] cli_3.3.0 sandwich_3.0-2 bookdown_0.27 mvtnorm_1.1-3

1215 [17] psych_2.2.5 digest_0.6.29 minqa_1.2.4 rmarkdown_2.15

1216 [21] pkgconfig_2.0.3 htmltools_0.5.3 fastmap_1.1.0 rlang_1.0.4

1217 [25] rstudioapi_0.13 generics_0.1.3 zoo_1.8-10 magrittr_2.0.3

1218 [29] Rcpp_1.0.9 munsell_0.5.0 fansi_1.0.3 lifecycle_1.0.1 [33] stringi_1.7.8

1219 multcomp_1.4-23 yaml_2.3.5 MASS_7.3-57

1220 [37] grid_4.2.1 parallel_4.2.1 sjmisc_2.8.9 crayon_1.5.1

1221 [41] lattice_0.20-45 ggeffects_1.1.2 splines_4.2.1 sjstats_0.18.1

1222 [45] hms_1.1.1 knitr_1.39 pillar_1.8.0 igraph_1.3.4

1223 [49] boot_1.3-28 estimability_1.4 codetools_0.2-18 glue_1.6.2

1224 [53] evaluate_0.16 renv_0.15.5 modelr_0.1.8 vctrs_0.4.1

1225 [57] nloptr_2.0.3 tzdb_0.3.0 gtable_0.3.0 assertthat_0.2.1 [61] xfun_0.32

1226 xtable_1.8-4 broom_1.0.0 coda_0.19-4

1227 [65] survival_3.3-1 tibble_3.1.8 TH.data_1.1-1 ellipsis_0.3.2

References

Aust, F., & Barth, M. (2022). *papaja: Prepare reproducible APA journal articles with R Markdown*. https://github.com/crsh/papaja

Barth, M. (2022). *tinylabels: Lightweight variable labels*. https://cran.r-project.org/package=tinylabels

Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, *67*(1), 1–48. https://doi.org/10.18637/jss.v067.i01

Bates, D., Maechler, M., & Jagan, M. (2022). *Matrix: Sparse and dense matrix classes and methods*. https://CRAN.R-project.org/package=Matrix

Ben-Shachar, M. S., Lüdecke, D., & Makowski, D. (2020). effectsize: Estimation of effect size indices and standardized parameters. *Journal of Open Source Software*, *5*(56), 2815. https://doi.org/10.21105/joss.02815

Grolemund, G., & Wickham, H. (2011). Dates and times made easy with lubridate. *Journal of Statistical Software*, *40*(3), 1–25. https://www.jstatsoft.org/v40/i03/

Henry, L., & Wickham, H. (2020). *Purrr: Functional programming tools*. https://CRAN.R-project.org/package=purrr

Lüdecke, D. (2021). *sjPlot: Data visualization for statistics in social science*. https://CRAN.R-project.org/package=sjPlot

Lüdecke, D., Ben-Shachar, M. S., Patil, I., & Makowski, D. (2020). Extracting, computing and exploring the parameters of statistical models using R. *Journal of Open Source Software*, *5*(53), 2445. https://doi.org/10.21105/joss.02445

Lüdecke, D., Ben-Shachar, M. S., Patil, I., Waggoner, P., & Makowski, D. (2021). performance: An R package for assessment, comparison and testing of statistical models. *Journal of Open Source Software*, *6*(60), 3139. https://doi.org/10.21105/joss.03139

Lüdecke, D., Ben-Shachar, M. S., Patil, I., Wiernik, B. M., & Makowski, D. (2022).

Easystats: Framework for easy statistical modeling, visualization, and reporting. *CRAN*. https://easystats.github.io/easystats/

Lüdecke, D., Patil, I., Ben-Shachar, M. S., Wiernik, B. M., Waggoner, P., & Makowski, D. (2021). see: An R package for visualizing statistical models. *Journal of Open Source Software*, *6*(64), 3393. https://doi.org/10.21105/joss.03393

Lüdecke, D., Waggoner, P., & Makowski, D. (2019). insight: A unified interface to access information from model objects in R. *Journal of Open Source Software*, *4*(38), 1412. https://doi.org/10.21105/joss.01412

Makowski, D., Ben-Shachar, M. S., & Lüdecke, D. (2019). bayestestR: Describing effects and their uncertainty, existence and significance within the bayesian framework. *Journal of Open Source Software*, *4*(40), 1541. https://doi.org/10.21105/joss.01541

Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2020a). Estimation of model-based predictions, contrasts and means. *CRAN*. https://github.com/easystats/modelbased

Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2020b). Methods and algorithms for correlation analysis in r. *Journal of Open Source Software*, *5*(51), 2306. https://doi.org/10.21105/joss.02306

Makowski, D., Ben-Shachar, M. S., Patil, I., & Lüdecke, D. (2021). Automated results reporting as a practical tool to improve reproducibility and methodological best practices adoption. *CRAN*. https://github.com/easystats/report

Masur, P. K., & Scharkow, M. (2019). *Specr: Statistical functions for conducting specification curve analyses (version 0.2.1)*. https://github.com/masurp/specr

Patil, I., Makowski, D., Ben-Shachar, M. S., Wiernik, B. M., Bacher, E., & Lüdecke, D. (2022). Datawizard: An r package for easy data preparation and statistical transformations. *CRAN*. https://easystats.github.io/datawizard/

Pinheiro, J. C., & Bates, D. M. (2000). *Mixed-effects models in s and s-PLUS*. Springer. https://doi.org/10.1007/b98882

R Core Team. (2022). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. https://www.R-project.org/

Simonsohn, U., Simmons, J. P., & Nelson, L. D. (2020). Specification curve analysis. *Nature Human Behaviour*, *4*(11), 1208–1214. https://doi.org/10.1038/s41562-020-0912-z

Ushey, K. (2022). *Renv: Project environments* [R package version 0.15.2]. https://rstudio.github.io/renv/

Wei, T., & Simko, V. (2017). *R package "corrplot": Visualization of a correlation matrix* [R package version 0.84]. https://github.com/taiyun/corrplot

Wei, T., & Simko, V. (2021). *R package 'corrplot': Visualization of a correlation matrix*. https://github.com/taiyun/corrplot

Wickham, H. (2016). *ggplot2: Elegant graphics for data analysis*. Springer-Verlag New York. https://ggplot2.tidyverse.org

Wickham, H. (2019). *Stringr: Simple, consistent wrappers for common string operations*. https://CRAN.R-project.org/package=stringr

Wickham, H. (2021). *Forcats: Tools for working with categorical variables (factors)*. https://CRAN.R-project.org/package=forcats

Wickham, H., François, R., Henry, L., & Müller, K. (2022). *Dplyr: A grammar of data manipulation*. https://CRAN.R-project.org/package=dplyr

Wickham, H., & Girlich, M. (2022). *Tidyr: Tidy messy data*. https://CRAN.R-project.org/package=tidyr

Wickham, H., Hester, J., & Bryan, J. (2022). *Readr: Read rectangular text data*. https://CRAN.R-project.org/package=readr

Wickham, H., & Seidel, D. (2022). *Scales: Scale functions for visualization*. https://CRAN.R-project.org/package=scales

Wilke, C. O. (2020). *Cowplot: Streamlined plot theme and plot annotations for 'ggplot2'*. https://CRAN.R-project.org/package=cowplot

158 Yaremych, H. E., Preacher, K. J., & Hedeker, D. (2021). Centering categorical predictors
159 in multilevel models: Best practices and interpretation. *Psychological Methods*, Advance
160 online publication. https://doi.org/10.1037/met0000434