Social Anxiety and Emotion Regulation in the Everyday Life of Adolescents

An Ecological Momentary Assessment (EMA) Study

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Abstract: *Theoretical background:* Social anxiety during adolescence is often linked to deficits in emotion regulation, which can contribute to heightened negative affect and diminished positive affect in everyday life. *Objective:* This study investigated whether three emotion-regulation strategies – acceptance, suppression, and rumination – mediate the relationship between social anxiety and daily affect in adolescents. *Method:* A sample of 47 adolescents completed ecological momentary assessments over 14 days. Social anxiety was assessed as a trait, while daily positive and negative affect as well as emotion regulation strategies were measured multiple times per day. *Results:* Multilevel structural equation models showed that social anxiety was significantly associated with lower acceptance of positive and negative emotions, higher suppression of negative emotions, and increased rumination. Acceptance of positive emotions mediated the link between social anxiety and reduced positive affect, while rumination mediated the link with negative affect. *Discussion and conclusion:* These findings underscore the importance of addressing both positive and negative emotional experiences and their regulation in the field of social anxiety in adolescents.

Keywords: social anxiety, emotion regulation, positivity impairment, adolescence, ecological momentary assessment

Soziale Angst und Emotionsregulation im Alltag von Jugendlichen. Eine elektronische Tagebuchstudie

Zusammenfassung: *Theoretischer Hintergrund:* Soziale Ängste im Jugendalter hängen häufig mit Emotionsregulationsdefiziten zusammen, was zu verstärktem negativem Affekt und verringertem positivem Affekt im Alltag führen kann. *Fragestellung:* In dieser Studie wurde untersucht, ob Akzeptanz, Unterdrückung und Rumination den Zusammenhang zwischen sozialer Angst und Affekt bei Jugendlichen mediieren. *Methode:* 47 Jugendliche nahmen über 14 Tage an einer Tagebuchstudie teil. *Ergebnisse:* Multilevel Strukturgleichungsmodelle zeigten, dass soziale Angst mit geringerer Akzeptanz von positiven und negativen Emotionen sowie vermehrter Rumination und Unterdrückung negativer Emotionen verbunden war. Die Akzeptanz positiver Emotionen vermittelte die Beziehung zwischen sozialer Angst und reduziertem positivem Affekt, Rumination den Zusammenhang mit negativem Affekt. *Diskussion und Schlussfolgerung:* Diese Befunde verdeutlichen die Relevanz der Regulation positiver und negativer Emotionen im Jugendalter.

Schlüsselwörter: soziale Angst, Emotionsregulation, Adoleszenz, Tagebuchstudie

Social anxiety disorder (SAD) is characterized by intense fears in social or performance situations in which individuals may be observed and evaluated (American Psychiatric Association, 2013). SAD commonly manifests in adolescence, a period marked by increased sensitivity to social evaluation (Westenberg et al., 2007), making it one of the most prevalent anxiety disorders in this age group (Ollendick et al., 2014). Although heightened negative affect (NA) and physiological arousal have long been considered hallmark features of SAD (Clark & Watson, 1991), more recent studies have highlighted a unique feature that differentiates it from other anxiety disorders: its association with decreased positive affect (PA) and diminished positive social experiences (Gilboa-Schechtman et al., 2014). Moreover, social anxiety, in both clinical and subclinical forms, is associated with difficulties in *emotion regulation* (Golombek et al., 2020), a transdiagnostic construct that refers to an individual's efforts to

manage the occurrence, timing, intensity, and expression of their emotions (Gross, 2015). Specifically, studies with youth community samples have found links to specific strategies generally viewed as maladaptive, such as expressive suppression (Klemanski et al., 2017), lower acceptance (Mathews et al., 2014), and increased rumination (Jose et al., 2012).

While the rise in social fears during adolescence is partly a phenomenon of normative development (Westenberg et al., 2007), it may contribute to exacerbating social anxiety symptoms when connected with the general tendency to use maladaptive emotion regulation often observed in this age group (Cracco et al., 2017; Ollendick et al., 2014). The goal of this study was to employ ecological momentary assessment (EMA) to investigate whether acceptance, suppression, and rumination mediate the relationship between adolescents' social anxiety and their daily affect in a youth convenience sample. The findings of this study could inform the further development of targeted interventions aimed at equipping adolescents experiencing social anxiety with effective skills for managing their emotions.

Impaired Affect in Social Anxiety

Over three decades ago, in their tripartite model of anxiety and depression, Clark and Watson (1991) proposed that increased NA and physiological arousal are key features of anxiety disorders, while decreased PA is more specific to depression. In line with this idea, multiple studies across diverse populations have consistently established the link between social anxiety and these constructs (Anderson et al., 2010; Asbrand et al., 2017). However, other studies demonstrated that social anxiety is also linked to decreased global PA and, specifically, PA following a social interaction, above and beyond the impact of depressive symptoms on PA (Brown et al., 1998; Gilboa-Schechtman et al., 2014). Research suggests that cognitive factors, such as fear of positive evaluation (Weeks et al., 2008), a tendency to underestimate the likelihood of positive events while overestimating their negative consequences (Kashdan & Steger, 2006), and a propensity toward dismissal of positive social experiences when they do occur (Everaert et al., 2020), contribute to this reduced perceived positivity. These cognitive distortions, in turn, interact with emotional factors that play an important role as well; for instance, individuals experiencing social anxiety, both at clinical and subclinical levels, are less accepting of emotional experiences (Mathews et al., 2014), rely more strongly on expressive suppression (Dryman & Heimberg, 2018), and brood excessively over their own negative emotions and behaviors

(Brozovich & Heimberg, 2008). These phenomena converge into a broader feature of social anxiety, often referred to as positivity impairment (Gilboa-Schechtman et al., 2014). This framework underscores the role of emotional factors and emotion regulation in the maintenance of high NA and reduced PA in the daily life of individuals experiencing social anxiety, across both social and nonsocial situations.

Emotion Regulation

Emotion regulation reflects the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions (Gross, 1998, p. 275). In the context of social anxiety, an overreliance on mostly maladaptive emotion-regulation strategies, such as limited acceptance of emotions, emotional suppression, and rumination, have been identified as contributing factors to both the heightened NA and the diminished PA (Brozovich & Heimberg, 2008; Dryman & Heimberg, 2018; Kashdan, 2007; Spokas et al., 2009).

Regarding acceptance, research shows that socially anxious individuals often struggle with accepting their emotions, leading to discomfort when confronted with naturally occurring NA, which can often exacerbate it (Mathews et al., 2014). However, this phenomenon is not limited to negative emotions; socially anxious adults rather exhibit difficulties in accepting positive social experiences and the associated positive emotions (Kashdan & Breen, 2008). Similar challenges with accepting emotions have been observed in adolescents, with social anxiety often being associated with reduced emotional acceptance (Mathews et al., 2014; Young et al., 2019).

Suppression, the voluntary inhibition of verbal and behavioral expression of emotions (Gross, 2015), has also consistently been associated with social anxiety in both adults (Dryman & Heimberg, 2018) and adolescents (Klemanski et al., 2017). This emotion-regulation strategy is considered to be *relatively* maladaptive, since the suppression of negative emotions tends to exacerbate emotional distress (Dryman & Heimberg, 2018), whereas the suppression of positive emotions dampens their intensity and may thus contribute to the aforementioned positivity impairment (Blalock et al., 2016; Farmer & Kashdan, 2012).

Lastly, rumination, often referred to as repetitive negative thinking, typically manifests as post-event processing in individuals with social anxiety: It involves dwelling on perceived inadequacies and negative outcomes from past social interactions (Brozovich & Heimberg, 2008), focusing on the perceived causes of the experienced

negative affect (McLaughlin & Nolen-Hoeksema, 2011). This tendency to selectively recall negative aspects of past behaviors can reinforce NA and dampen PA (Everaert et al., 2020; Sackl-Pammer et al., 2019).

Taken together, these three emotion-regulation strategies (i.e., acceptance, suppression, and rumination) appear to be of particular importance for social anxiety in adolescents, given their hypothesized links with fears of evaluation, which also peak during this developmental stage (Westenberg, 2007). The association between nonacceptance of positive and negative emotional experiences and social anxiety in adolescence has been theorized to stem from a fear of drawing attention to oneself (Mathews et al. 2014). Similarly, Jazaieri and colleagues (2015) proposed that a comparable process may apply to the suppression of both positive and negative emotions. Lastly, rumination appears to be especially relevant in this context, as it tends to focus on perceived personal inadequacies and the anticipation of evaluation by others (Brozovich & Heimberg, 2008). Therefore, these three emotion-regulation strategies warrant particular attention when examining social anxiety in adolescence.

The Current Study

In summary, social anxiety is linked to both heightened NA and decreased PA (Gilboa-Schechtman et al., 2014) as well as challenges in regulating emotions (Sackl-Pammer et al., 2019). More specifically, suppression and rumination have been shown to increase negative emotions and decrease positive emotions (Brozovich et al., 2015; Dryman & Heimberg, 2018; Everaert et al., 2020), whereas the nonjudgmental acceptance of emotions has the opposite effect (Lindsay & Creswell, 2017). These strategies may thus serve as key mechanisms linking social anxiety to its associated emotional difficulties.

This study examined whether these three strategies mediate the relationship between social anxiety and daily affect in adolescents – an area that, to our knowledge, has not yet been investigated. By capturing real-time emotional experiences, EMA provides insights into these processes in adolescents' everyday lives, offering a more nuanced understanding of how social anxiety is linked to emotion regulation (Kaurin & Kolar, 2022; Shiffman et al., 2008).

Our preregistered hypotheses (https://osf.io/srvj3; see Research Question 4) were as follows: Social anxiety is associated with (1) increased suppression of both positive and negative affect, (2) decreased acceptance of positive and negative affect, and (3) increased rumination. We also expected that (4) the effect of social anxiety on PA is mediated by higher suppression and lower acceptance of

positive emotions, while (5) the effect on NA is mediated by higher suppression and lower acceptance of negative emotions, as well as increased rumination.

In addition to our preregistered analyses, we conducted a sensitivity analysis to partial out the effects of depressive symptoms on our outcome measures, given the frequent comorbidity between social anxiety and depression (Adams et al., 2016) and the known impact of depression on daily affect (Griffith et al., 2023).

Method

Sample

This study is part of a larger ongoing project to investigate the role of fears of evaluation in adolescents' emotional reactions and emotion regulation in response to social evaluation in their daily lives. A convenience sample of 47 ($N_{datapoints}$ = 1,998) German-speaking adolescents aged 14 to 18 (M_{age} = 16.15, 75 % female) was drawn from Austria (34 participants) and Germany (13 participants). Inclusion criteria required adequate German language skills, as determined by self-assessment, active school attendance, and the ability to use smartphones during breaks between classes. The sample represented a variety of school types with 27 participants attending regular middle or high schools, nine attending vocational schools, and others attending different types, such as international schools. Strikingly, over half of the participants exceeded the thresholds for clinically significant depression (M = 12.06, SD = 6.59, participants over the cut-off = 55.3 %) and social anxiety (M = 25.55, SD = 14.36, participants over the cut-off = 53.2 %), as determined by the Patient Health Questionnaire (PHQ-9; cut-off score: 11; Richardson et al., 2010) and the Social Phobia Inventory (SPIN; cut-off score: 24; Ranta et al., 2007), both validated in adolescent samples. Despite these high levels of distress, only 12.8 % of participants reported receiving psychiatric or psychotherapeutic treatment at the time; one participant reported suffering from long-COVID.

Procedure

Data collection took place between 1 December 2023 and 30 June 2024, before pausing for the summer holidays, using the SoSci Survey platform (Leiner, 2024). We carried out recruitment via social media, youth centers, and through direct outreach to participants from previous studies. Interested participants accessed the study through a QR code or direct link and received detailed

information regarding the study's purpose, procedures, and data-protection policies. An electronic informed consent process followed, and we conducted eligibility screening to confirm that the participation criteria were met. Eligible participants provided an email address to receive further communication. We stored these email addresses separately from the participants' answers to the baseline and daily questionnaires. We used randomly generated alphanumeric codes to link responses from the same participant, but this code could not be connected to the participants' email addresses. Thus, data collection was fully anonymized, ensuring that participants' personal information could not be linked to their responses.

Participants completed a baseline assessment lasting about 10 minutes, followed by a trial assessment to familiarize them with the EMA process and items. This trial assessment included clear definitions and examples of the assessed emotion-regulation strategies to ensure participants interpreted these concepts consistently. The 14-day diary phase commenced the following day, during which participants received four daily survey prompts at set intervals (9:00, 13:00, 17:00, and 21:00) via email. Each survey, which took 1–2 minutes to complete, focused on the participant's emotional state and emotion-regulation strategies since waking or since the previous timepoint. Participants were required to respond within 2 hours of each prompt. A total of 118 participants completed the baseline survey and opted to participate in the diary phase. Of these, we excluded 21 participants because of suspicions of nonserious participation, resulting in a final sample of 97 participants. Among these, 50 participants completed fewer than half of the scheduled timepoints, which did not meet the preregistered minimum threshold for inclusion in the analyses. Consequently, the final dataset consisted of 47 participants with a total of 1,998 data points. Figure E1 in the electronic supplement illustrates the EMA procedure, along with a detailed description of the data exclusion process and the attrition analysis.

We offered incentives based on survey completion rates, with participants receiving 20 Euros for completing 50 % of the surveys, 30 Euros for 75 %, and 40 Euros for completing 90 % or more. The Ethics Committee of the University of Vienna approved the protocol of this study before the start of data collection (protocol number 01076, 28 November 2023).

Measures

Baseline Assessment
Social Anxiety

We assessed social anxiety using the German version of the Social Phobia Inventory (SPIN; von Consbruch et al., 2016; original version by Connor et al., 2000). The SPIN is a self-report questionnaire consisting of 17 items. Participants completed each item on a 5-point rating scale (0 = *not at all*, 1 = *a little bit*, 2 = *somewhat*, 3 = *very much*, 4 = *extremely*), indicating the degree to which they were affected by social anxiety symptoms during the past week. In the current study, the SPIN showed high internal consistency, with a Cronbach's alpha of α = .91.

Depressive Symptoms

We assessed depressive symptoms using the depression module of the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001; German version by Gräfe et al., 2004). The PHQ-9 includes 9 items, each rated on a 4-point frequency scale (0 = *not at all*, 1 = *on several days*, 2 = *on more than half the days*, 3 = *nearly every day*), yielding a total score ranging from 0 to 27. In the current study, the PHQ-9 showed strong internal consistency, with a Cronbach's alpha of α = .88.

Ecological Momentary Assessment

During the diary study, participants rated their current levels of positive and negative affect as well as their attempts to regulate emotions since waking or the last timepoint, using visual analogue scales from 0 to 100. Items assessing state affect were adapted from Cloos et al. (2023) and presented without anchors (e.g., "To what extent are you experiencing positive/negative emotions in this moment?"). The authors recommend using single items without anchors when the goal is to investigate associations between momentary affect and other constructs of interest, as they provide sufficient explanatory power compared to composite scores derived from multiple items. Emotion-regulation items were partly self-developed and adapted from McMahon and Naragon-Gainey (2019), focusing on participants' attempts to regulate emotions (i.e., "Since the last timepoint, to what extent do the following statements apply to your positive/negative emotions?"). Five items assessed emotion regulation: two for positive emotions and three for negative emotions. For both, we measured acceptance ("I accepted how I felt without judging myself") and suppression ("I tried not to show how I felt"). For negative emotions, an additional item assessed rumination ("I couldn't stop thinking about how bad I felt or why I felt this way"). We defined acceptance as the nonjudgmental tolerance of emotional states, aligning with definitions in mindfulness

research and addressing a core difficulty frequently associated with social anxiety (Lindsay & Creswell, 2017; Mathews et al., 2014). We defined suppression based on Gross's concept of expressive suppression in the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003; German version by Abler & Kessler, 2009), referring specifically to the inhibition of emotional expression. Rumination, as defined in this study, corresponds to the conceptualization of McLaughlin and Nolen-Hoeksema (2011), who described it as a cognitive process in which individuals unproductively dwell on their mood, along with its symptoms, causes, and consequences.

Data Analysis

We employed an intensive longitudinal design with repeated measures (Level 1) nested within individuals (Level 2), clustering the data by individual. To account for this nonindependence, we used mixed linear modeling. We prepared sample descriptions, descriptive analyses, and the calculation of intraclass correlation coefficients (ICC) for mediators and dependent variables in SPSS (Version 29). For the multilevel structural equation models (MSEM), we used Mplus 8.5 (Muthén & Muthén, 2018–2017) with Bayesian estimation. We used MSEM to disaggregate between- and within-person effects by decomposing observed variables into latent within-person (Level 1) and between-person (Level 2) components. This method subjects all Level 1 variables to a latent decomposition, which involves estimating intercepts from observations while accounting for differences in the reliability of scores, which can vary because of the number of observations per participant. By incorporating this latent decomposition, MSEM provides more reliable and less biased estimates at the between-person level (Sadikaj et al., 2021).

We specified two models: one for PA as the outcome, with social anxiety as a predictor, suppression and acceptance of positive emotions as mediators; and one for NA, where social anxiety predicted NA, mediated by suppression, acceptance of negative emotions, and rumination. We evaluated significant effects using 95 % credible intervals. To account for depressive symptoms, given their known associations with social anxiety and affect fluctuations (Griffith et al., 2023), we re-ran the models with depressive symptoms as a Level 2 covariate.

Results

The supplemental materials (see ESM 1, Table E2) provide a table summarizing the means, standard deviations, and correlations of the main study variables.

Positive Affect Model

The null model showed an ICC of .29 for PA ($M = 53.96$, $SD = 14.82$), indicating 29 % of variance was because of between-person differences. The ICCs for suppression ($M = 21.06$, $SD = 14.57$) and acceptance ($M = 69.35$, $SD = 22.77$) of positive emotions were .32 and .57, respectively. We found no direct effect of social anxiety on PA ($b = 0.24$, 95 % CI [–6.55, 7.11]). However, social anxiety was linked to lower acceptance of positive emotions ($b = –13.17$, 95 % CI [–20.89, –5.90]), which, in turn, was related to PA at the between-person level ($b = 0.27$, 95 % CI [0.06, 0.54]). At the within-person level, acceptance was associated with higher PA ($b = 0.21$, 95 % CI [0.07, 0.31]), while suppression was related to lower PA ($b = –0.09$, 95 % CI [–0.017, –0.01]). Mediation analysis showed a significant indirect effect of social anxiety on PA through acceptance of positive emotions ($b = –3.11$, 95 % CI [–7.99, –0.68]). Table 1 shows the full results.

Negative Affect Model

The null model showed an ICC of .17 for NA ($M = 29.40$, $SD = 10.34$), meaning between-person differences explained 17 % of variance. The ICCs for suppression ($M = 39.65$, $SD = 19.28$), acceptance ($M = 58.46$, $SD = 22.93$) of negative emotions, and rumination ($M = 29.26$, $SD = 17.51$) were .33, .52, and .33, respectively. At the between-person level, social anxiety negatively affected acceptance of negative emotions ($b = –12.39$, 95 % CI [–20.89, –4.58]), but had a positive effect on rumination ($b = 10.37$, 95 % CI [4.00, 15.98]) and suppression ($b = 8.11$, 95 % CI [0.86, 15.16]). Social anxiety and rumination were also associated with negative affect, $b = 4.44$, 95 % CI (1.70, 7.46) and $b = 0.24$, 95 % CI (0.06, 0.42), respectively. Indirect effects showed that rumination mediated the effect of social anxiety on NA ($b = 2.48$, 95 % CI [0.50, 5.00]). At the within-person level, suppression ($b = 0.07$, 95 % CI [0.01, 0.12]) and rumination ($b = 0.31$, 95 % CI [0.22, 0.43]) were positively associated with NA, whereas acceptance ($b = –0.09$, 95 % CI [–0.17, –0.02]) showed a negative association with NA. Table 2 shows the full results.

Table 1. Fixed direct and indirect effects of the model examining positive affect

Between-person effects					
Outcome	Predictors	*b*	*Posterior SD*	95% credible intervals	
				LL	UL
Acceptance of PA					
	SA	−13.17	2.84	−20.89	−5.90
Suppression of PA					
	SA	4.47	2.84	−1.42	9.65
PA (between)					
	SA	0.24	3.06	−6.55	7.11
	SP	0.32	0.18	−0.02	0.75
	ACP	0.27	0.12	0.06	0.54
Within-person effects					
Outcome	Predictors	*b*	*Posterior SD*	95% credible intervals	
				LL	UL
Acceptance of PA					
	Intercept	68.54	3.60	61.96	75.69
	Time	0.13	0.03	0.09	0.20
Suppression of PA					
	Intercept	20.14	2.43	15.33	24.73
	Time	−0.21	0.03	−0.27	−0.14
PA (within)					
	Intercept	28.49	11.00	4.12	48.94
	Time	0.06	0.03	0.003	0.11
	ACP	0.21	0.06	0.07	0.31
	SP	−0.09	0.04	−0.17	−0.01
Between-person indirect effects					
Path		*b*	*Posterior SD*	95% credible intervals	
				LL	UL
SA → ACP → PA		−3.11	1.82	−7.99	−0.68
SA → SP → PA		1.48	1.35	−0.47	5.23

Note. SA = social anxiety; PA = positive affect; ACP = acceptance of positive emotions; SP = suppression of positive emotions. Path coefficients (*b*) are unstandardized. Significant effects are in **bold.**

Controlling for Depressive Symptoms

In the PA model, depressive symptoms were linked with lower PA (*b* = −8.50, 95% CI [−14.43, −0.71]) but did not predict emotion-regulation strategies. The direct effect of social anxiety on acceptance and the indirect effect on PA remained significant.

In the NA model, the effects of social anxiety on acceptance of negative emotions and rumination remained significant, though its effects on suppression were no longer significant. Social anxiety continued to predict NA, while depressive symptoms did not significantly affect the mediators or NA. Additionally, the indirect effect of social anxiety on negative affect through rumination was not significant after controlling for depressive symptoms, albeit by a very small margin (*b* = 1.46, 95% CI [−0.02, 4.34]). The relatively strong correlation between

social anxiety and depressive symptoms (*r* = .60) raised concerns about multicollinearity, potentially weakening the individual contributions of each predictor and making it challenging to disentangle their unique effects. Tables E3 and E4 in the supplemental materials (ESM 1) provide the full results.

Discussion

This study examined the mediating role of three emotion-regulation strategies – acceptance, suppression, and rumination – in the link between social anxiety and positive and negative affect in adolescents' daily lives. We measured social anxiety symptoms as a trait, while we assessed affect and emotion regulation at the state level

Table 2. Fixed direct and indirect effects of the model examining negative affect

Between-person effects					
Outcome	Predictors	*b*	*Posterior SD*	95% credible intervals	
				LL	UL
Acceptance of NA					
	SA	−12.39	4.18	−20.89	−4.58
Suppression of NA					
	SA	8.11	3.71	0.86	15.16
Rumination					
	SA	10.37	2.93	4.00	15.98
NA (between)					
	SA	4.44	1.48	1.70	7.46
	ACN	0.06	0.06	−0.05	0.18
	SN	0.12	0.08	−0.05	0.27
	RUM	0.24	0.08	0.06	0.42
Within-person effects					
Outcome	Predictors	*b*	*Posterior SD*	95% credible intervals	
				LL	UL
Acceptance of NA					
	Intercept	57.31	3.70	49.96	65.41
	Time	0.07	0.03	0.01	0.13
Suppression of NA					
	Intercept	38.77	3.26	31.98	44.64
	Time	−0.07	0.04	−0.14	−0.004
Rumination					
	Intercept	28.05	2.64	23.01	32.87
	Time	−0.16	0.04	−0.23	−0.10
NA (within)					
	Time	0.00	0.03	−0.06	0.05
	Intercept	13.74	5.91	2.36	25.00
	ACN	−0.09	0.03	−0.17	−0.02
	SN	0.07	0.03	0.01	0.12
	RUM	0.31	0.05	0.22	0.43
Between-person indirect effects					
Path		*b*	*Posterior SD*	95% credible intervals	
				LL	UL
SA → ACN → NA		−0.67	0.87	−2.62	0.75
SA → SN → NA		0.76	0.86	−0.43	2.1
SA → RUM → NA		2.48	1.15	0.50	5.00

Note. SA = social anxiety; NA = negative affect; ACN = acceptance of negative emotions; SN = suppression of negative emotions; RUM = rumination. Path coefficients (*b*) are unstandardized. Significant effects are in **bold.**

using EMA through multiple daily assessments. We assessed state-level variables (i.e., emotion regulation and affect) independently of specific social situations or events. Thus, they reflect general tendencies in the use of these three emotion-regulation strategies across both social and nonsocial contexts, while affect reflects momentary emotional states without being tied to a particular situation. Variance of these was decomposed into within-person and between-person components, with the latter used for mediation analyses. Thus, our findings primarily reflect between-person differences and capture habitual patterns in adolescents' daily emotion regulation and daily affect.

First, we observed a negative effect of social anxiety symptoms on acceptance of positive emotions, which aligns with research showing that socially anxious individuals disqualify positive experiences (Alden et al., 2008; Weeks, 2010), reducing positive affect and reinforcing

negative interpretations (Everaert et al., 2020). This nonacceptance predicted lower PA and mediated the relationship between social anxiety and reduced PA. While social anxiety did not directly affect PA, these findings indicate that nonacceptance plays a key role in the positivity impairment seen in socially anxious individuals, who may struggle to experience or maintain positive emotions, not only because they suppress them, but because they struggle to accept them in the first place. Importantly, the indirect effect of social anxiety on PA through the nonacceptance of positive emotions remained significant after controlling for depression. This finding suggests that the impact of social anxiety on positivity impairment operates beyond depressive symptoms, highlighting the unique role of nonacceptance in this context. We also found a significant relationship between social anxiety symptoms and difficulties accepting negative emotions, which is consistent with research indicating that socially anxious individuals view these emotions as inherently negative and uncontrollable (De Castella et al., 2018).

Second, regarding suppression, we found that social anxiety symptoms are linked to the suppression of negative emotions, which is consistent with our hypothesis and prior research (Dryman & Heimberg, 2018). However, contrary to our expectations, they were not associated with the suppression of positive emotions (Kashdan & Steger, 2006). One interpretation of this finding is that negative emotionality may be more pervasive for socially anxious adolescents (Cracco et al., 2017), making suppression a more frequent and salient coping mechanism for managing NA than PA. Additionally, since socially anxious individuals often disqualify positive outcomes (Weeks, 2010), they may not report suppressing positive emotions because they fail to recognize them. Some studies suggest that this disqualification may transform positive emotions into negative experiences before they can be fully felt or suppressed (Everaert et al., 2020).

Finally, our findings confirmed the expected link between social anxiety symptoms and rumination (Schmitz et al., 2011). Social anxiety directly affected NA, consistent with the tripartite model of anxiety and depression (Clark & Watson, 1991), and this effect was primarily mediated by rumination. The central role of rumination in this link is unsurprising, as repetitive negative thinking is a key feature of social anxiety: Individuals who fear social evaluation often ruminate on perceived failures or inadequacies in social interactions, reinforcing negative self-perceptions and increasing NA (Brozovich & Heimberg, 2008).

Regarding the within-person findings, independent of social anxiety or depression, our results align with previous research on various emotion-regulation strategies and their momentary effects. Specifically, acceptance was associated with reduced negative affect and increased positive affect (Ford et al., 2018; Lindsay & Creswell, 2017). Conversely, suppression in our data demonstrated the commonly observed paradoxical effect of reducing positive affect while increasing negative affect in the moment (Dryman & Heimberg, 2018). Lastly, we found that rumination was linked to higher levels of negative affect, which is consistent with existing literature. (McLaughlin et al., 2007).

Implications for Research and Practice

Our findings demonstrate that social anxiety is associated with lower acceptance of both positive and negative emotions, increased suppression of negative emotions, and greater rumination in adolescence. This developmental stage is characterized by heightened emotional reactivity, difficulties with regulating emotions (Cracco et al., 2017), and an increased fear of social evaluation (Westenberg et al., 2007), creating a fertile environment for the development of social anxiety disorder. These insights highlight the importance of addressing emotion-regulation deficits in adolescence to disrupt chronification processes and prevent maladaptive strategies from becoming entrenched (Golombek et al., 2020). In fact, targeting emotion regulation in adolescence has been shown to be beneficial in both clinical and healthy populations, reducing symptoms and buffering the onset of psychological disorders (Saccaro et al., 2024).

Programs aimed at reducing social anxiety in youth have demonstrated success both at the individual level (e. g., Cognitive-Behavioral Therapy; Scaini et al., 2016) and the institutional level (e. g., Skills for Social and Academic Success [SSAS]; Fisher et al., 2004). Such interventions typically focus on psychoeducation, cognitive restructuring, and the regulation of fear and anxiety, among other therapeutic approaches (Melfsen & Warnke, 2009). While these components are undeniably important, our findings, along with recent research on the positivity impairment in social anxiety, suggest that interventions that neglect positive emotions may not be addressing the full spectrum of emotional difficulties faced by socially anxious adolescents. Notably, Weeks and colleagues (2020) showed that interventions enhancing the acceptance of positive social outcomes (e. g., engaging in self-promotion, accepting compliments) reduced fears of positive evaluation and lowered overall social anxiety symptoms. By addressing this key, yet previously neglected, component of social anxiety, interventions may become better suited to meet the needs of affected individuals. Moreover, teachers participating in school-based

mental health programs (e.g., SSAS; Fisher et al., 2004) could learn how social anxiety affects their students' ability to embrace positive emotions, even after receiving positive feedback. Greater awareness could help create more supportive classrooms, fostering emotional well-being and reducing the risk of persistent social anxiety symptoms.

Strengths and Limitations

The EMA methodology employed in this study moves beyond the limitations of cross-sectional designs, offering real-world validation for previously established associations between social anxiety and emotion regulation (Shiffman et al., 2008). By examining these processes in real-time, we gain insights that reflect daily emotional experiences more accurately. By disentangling between- and within-person associations, we determined not only the average effects of social anxiety symptoms on participants' emotion regulation and affect, but also the individual fluctuations in these associations over time. However, studying emotion regulation in everyday life presents its own challenges: McMahon and Naragon-Gainey (2020) caution that the discriminant validity of emotion-regulation items in daily life is not always ensured, and that associations between daily and trait measures can vary across samples. Because most prior research is based on trait measures, it is important to recognize the limitations in comparing these with daily measures. With the increasing use of EMA in recent studies, it becomes essential to validate scales that measure emotion regulation in daily life.

While we did assess the effectiveness of emotion-regulation strategies by linking them to momentary affect following their use, we did not account for other contextual factors that could influence these processes. As Gross (2015) and Aldao et al. (2015) highlight, the effectiveness of emotion regulation goes beyond simply reducing NA or increasing PA. Categorizing strategies as purely adaptive or maladaptive oversimplifies their complexity, as certain strategies may be helpful in the short term but reinforce problematic behaviors over time, and vice versa. For instance, Westenberg (2007) postulated that fears of social evaluation coincide with differential and sexual maturation. Some have theorized that these fears serve as regulatory forces, protecting against conflict with others and potential group exclusion (Fredrick & Luebbe, 2020). Additionally, adolescence is marked by an increased ability to understand both one's own and others' emotions and reflect on personal perceptions and evaluations (Zimmermann & Iwanski, 2014). In light of this, expressive suppression because of concerns about social evaluation could be an adaptive response in certain contexts, such as a school setting, where it might help prevent group exclusion and even increase the likelihood of forming romantic relationships – especially given the nonclinical nature of our sample. This is reflected in our finding that, while expressive suppression did not predict overall positive affect, it appeared to momentarily dampen positive affect and increase negative affect. Future research should explore how broader contextual factors impact the effectiveness of emotion-regulation strategies.

Furthermore, we assessed PA and NA using single-item measures. While these are reliable for analyses investigating momentary affect (Cloos et al., 2023), we can draw no conclusions regarding emotion-specific regulation. Although social anxiety may relate differently to emotions like pride, joy, or contentment (Gilboa-Schechtman et al., 2014), our findings do not capture these nuances.

Another limitation of this study concerns the gender distribution of our sample, with 75% of participants identifying as female. This limits the generalizability of our results to a broader, more gender-diverse population. Additionally, this study relied on a convenience sample, which presents challenges related to selection bias and the representativeness of the sample (Chandler & Shapiro, 2016). Although the prevalence of social anxiety symptoms in our sample was high, no diagnostic information was collected by a clinical expert, which restricts the ability to make meaningful group comparisons based on clinical status.

Additionally, the high drop-out rate of 51.55% warrants critical consideration. We found no significant differences between completers and attritors in depression, social anxiety, or most sociodemographic variables. However, the results of chi-square tests indicated that nonnative German speakers were more likely to drop out compared to native German speakers.

Lastly, as this study is part of a larger ongoing project, the sample size reported here differs from the preregistered sample size for the overall project ($N = 80$). While this deviation may have implications for statistical power, the sample size remained sufficient to detect small to moderate effects at the within-person level and moderate to large effects at the between-person level. A robust body of literature reporting similar effect sizes supports these findings (e.g., Boemo et al., 2022; Golombek et al., 2020) and highlights the role of emotion dysregulation in social anxiety and its associations with impaired daily affect.

Conclusion

This study highlights the complex role of different emotion-regulation strategies – i.e., acceptance, suppression,

and rumination – in the association between social anxiety and daily affect in adolescents. The findings suggest that nonacceptance of positive emotions plays a key role in reducing positive affect, while rumination significantly mediates the link between social anxiety and negative affect. These insights underscore the importance of addressing both positive and negative emotional experiences in interventions for young people who suffer from social anxiety. Future research should further explore the broader contextual factors that influence emotion regulation and refine treatment approaches targeting these deficits.

Electronic Supplementary Material

The electronic supplementary material is available with the online version of this article at https://doi.org/10.1026/0942-5403/a000492

ESM 1. Procedure, attrition and missing data, data analysis, and further results.

References

Abler, B., & Kessler, H. (2009). Emotion Regulation Questionnaire – Eine deutschsprachige Fassung des ERQ von Gross und John [Emotion Regulation Questionnaire – A German version of the ERQ by Gross and John]. *Diagnostica*, *55*(3), 144–152. https://doi.org/10.1026/0012-1924.55.3.144

Adams, G. C., Balbuena, L., Meng, X., & Asmundson, G. J. G. (2016). When social anxiety and depression go together: A population study of comorbidity and associated consequences. *Journal of Affective Disorders*, *206*, 48–54. https://doi.org/10.1016/j.jad.2016.07.031

Aldao, A., Sheppes, G., & Gross, J. J. (2015). Emotion regulation flexibility. *Cognitive Therapy and Research*, *39*(3), 263–278. https://doi.org/10.1007/s10608–014-9662-4

Alden, L. E., Taylor, C. T., Mellings, T. M. J. B., & Laposa, J. M. (2008). Social anxiety and the interpretation of positive social events. *Journal of Anxiety Disorders*, *22*(4), 577–590. https://doi.org/10.1016/j.janxdis.2007.05.007

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Author. https://doi.org/10.1176/appi.books.9780890425596

Anderson, E. R., Veed, G. J., Inderbitzen-Nolan, H. M., & Hansen, D. J. (2010). An evaluation of the applicability of the tripartite constructs to social anxiety in adolescents. *Journal of Clinical Child & Adolescent Psychology*, *39*(2), 195–207. https://doi.org/10.1080/15374410903532643

Asbrand, J., Blechert, J., Nitschke, K., Tuschen-Caffier, B., & Schmitz, J. (2017). Aroused at home: Basic autonomic regulation during orthostatic and physical activation is altered in children with social anxiety disorder. *Journal of Abnormal Child Psychology*, *45*(1), 143–155. https://doi.org/10.1007/s10802-016-0147-7

Blalock, D. V., Kashdan, T. B., & Farmer, A. S. (2016). Trait and daily emotion regulation in social anxiety disorder. *Cognitive Therapy and Research*, *40*(3), 416–425. https://doi.org/10.1007/s10608-015-9739-8dr

Boemo, T., Nieto, I., Vazquez, C., & Sanchez-Lopez, A. (2022). Relations between emotion-regulation strategies and affect in daily life: A systematic review and meta-analysis of studies using ecological momentary assessments. *Neuroscience & Biobehavioral Reviews*, *139*, Article 104747. https://doi.org/10.1016/j.neubiorev.2022.104747

Brown, T. A., Chorpita, B. F., & Barlow, D. H. (1998). Structural relationships among dimensions of the DSM-IV anxiety and mood disorders and dimensions of negative affect, positive affect, and autonomic arousal. *Journal of Abnormal Psychology*, *107*(2), 179–192. https://doi.org/10.1037/0021-843X.107.2.179

Brozovich, F. A., Goldin, P., Lee, I., Jazaieri, H., Heimberg, R. G., & Gross, J. J. (2015). The effect of rumination and reappraisal on social anxiety symptoms during cognitive-behavioral therapy for social anxiety disorder. *Journal of Clinical Psychology*, *71*(3), 208–218. https://doi.org/10.1002/jclp.22132

Brozovich, F., & Heimberg, R. G. (2008). An analysis of postevent processing in social anxiety disorder. *Clinical Psychology Review*, *28*(6), 891–903. https://doi.org/10.1016/j.cpr.2008.01.002

Chandler, J., & Shapiro, D. (2016). Conducting clinical research using crowdsourced convenience samples. *Annual Review of Clinical Psychology*, *12*(1), 53–81. https://doi.org/10.1146/annurev-clinpsy-021815-093623

Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: Psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology*, *100*(3), 316–336. https://doi.org/10.1037//0021-843x.100.3.316

Cloos, L., Ceulemans, E., & Kuppens, P. (2023). Development, validation, and comparison of self-report measures for positive and negative affect in intensive longitudinal research. *Psychological Assessment*, *35*(3), 189–204. https://doi.org/10.1037/pas0001200

Connor, K. M., Davidson, J. R. T., Churchill, L. E., Sherwood, A., Weisler, R. H., & Foa, E. (2000). Psychometric properties of the Social Phobia Inventory (SPIN): New self-rating scale. *British Journal of Psychiatry*, *176*(4), 379–386. https://doi.org/10.1192/bjp.176.4.379

Cracco, E., Goossens, L., & Braet, C. (2017). Emotion regulation across childhood and adolescence: Evidence for a maladaptive shift in adolescence. *European Child & Adolescent Psychiatry*, *26*(8), 909–921. https://doi.org/10.1007/s00787-017-0952-8

De Castella, K., Platow, M. J., Tamir, M., & Gross, J. J. (2018). Beliefs about emotion: Implications for avoidance-based emotion regulation and psychological health. *Cognition and Emotion*, *32*(4), 773–795. https://doi.org/10.1080/02699931.2017.1353485

Dryman, M. T., & Heimberg, R. G. (2018). Emotion regulation in social anxiety and depression: A systematic review of expressive suppression and cognitive reappraisal. *Clinical Psychology Review*, *65*, 17–42. https://doi.org/10.1016/j.cpr.2018.07.004

Everaert, J., Bronstein, M. V., Castro, A. A., Cannon, T. D., & Joormann, J. (2020). When negative interpretations persist, positive emotions don't! Inflexible negative interpretations encourage depression and social anxiety by dampening positive emotions. *Behaviour Research and Therapy*, *124*, Article 103510. https://doi.org/10.1016/j.brat.2019.103510

Farmer, A. S., & Kashdan, T. B. (2012). Social anxiety and emotion regulation in daily life: Spillover effects on positive and negative social events. *Cognitive Behaviour Therapy*, *41*(2), 152–162. https://doi.org/10.1080/16506073.2012.666561

Fisher, P. H., Masia-Warner, C., & Klein, R. G. (2004). Skills for social and academic success: A school-based intervention for social anxiety disorder in adolescents. *Clinical Child and Family Psychology Review*, *7*(4), 241–249. https://doi.org/10.1007/s10567–004-6088-7

Ford, B. Q., Lam, P., John, O. P., & Mauss, I. B. (2018). The psychological health benefits of accepting negative emotions and thoughts: Laboratory, diary, and longitudinal evidence. *Journal of Personality and Social Psychology*, *115*(6), 1075–1092. https://doi.org/10.1037/pspp0000157

Fredrick, J. W., & Luebbe, A. M. (2020). Fear of positive evaluation and social anxiety: A systematic review of trait-based findings. *Journal of Affective Disorders*, *265*, 157–168. https://doi.org/10.1016/j.jad.2020.01.042

Gilboa-Schechtman, E., Shachar, I., & Sahar, Y. (2014). Positivity impairment as a broad-based feature of social anxiety. In J. W. Weeks (Ed.), *The Wiley Blackwell handbook of social anxiety disorder* (pp. 409–432). Wiley Blackwell. https://doi.org/10.1002/9781118653920.ch19

Golombek, K., Lidle, L., Tuschen-Caffier, B., Schmitz, J., & Vierrath, V. (2020). The role of emotion regulation in socially anxious children and adolescents: A systematic review. *European Child & Adolescent Psychiatry*, *29*(11), 1479–1501. https://doi.org/10.1007/s00787-019-01359-9

Gräfe, K., Zipfel, S., Herzog, W., & Löwe, B. (2004). Screening psychischer Störungen mit dem "Gesundheitsfragebogen für Patienten (PHQ-D)" [Screening for mental disorders using the "Patient Health Questionnaire (PHQ-D)"]. *Diagnostica*, *50*(4), 171–181. https://doi.org/10.1026/0012-1924.50.4.171

Griffith, J. M., Farrell-Rosen, T. S., & Hankin, B. L. (2023). Daily life positive affect regulation in early adolescence: Associations with symptoms of depression. *Emotion*, *23*(3), 664–677. https://doi.org/10.1037/emo0001129

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299. https://doi.org/10.1037/1089-2680.2.3.271

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, *26*(1), 1–26. https://doi.org/10.1080/1047840X.2014.940781

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, *85*(2), 348–362. https://doi.org/10.1037/0022-3514.85.2.348

Jazaieri, H., Morrison, A. S., Goldin, P. R., & Gross, J. J. (2015). The role of emotion and emotion regulation in social anxiety disorder. *Current Psychiatry Reports*, *17*(1), Article 1. https://doi.org/10.1007/s11920-014-0531-3

Jose, P. E., Wilkins, H., & Spendelow, J. S. (2012). Does social anxiety predict rumination and co-rumination among adolescents? *Journal of Clinical Child & Adolescent Psychology*, *41*(1), 86–91. https://doi.org/10.1080/15374416.2012.632346

Kashdan, T. B. (2007). Social anxiety spectrum and diminished positive experiences: Theoretical synthesis and meta-analysis. *Clinical Psychology Review*, *27*(3), 348–365. https://doi.org/10.1016/j.cpr.2006.12.003

Kashdan, T. B., & Breen, W. E. (2008). Social anxiety and positive emotions: A prospective examination of a self-regulatory model with tendencies to suppress or express emotions as a moderating variable. *Behavior Therapy*, *39*(1), 1–12. https://doi.org/10.1016/j.beth.2007.02.003

Kashdan, T. B., & Steger, M. F. (2006). Expanding the topography of social anxiety: An experience-sampling assessment of positive emotions, positive events, and emotion suppression. *Psychological Science*, *17*(2), 120–128. https://doi.org/10.1111/j.1467-9280.2006.01674.x

Kaurin, A., & Kolar, D. R. (2022). Ambulantes Assessment in der klinischen Kinder- und Jugendpsychologie. [Ambulatory assessment in clinical child and adolescent psychology.]. *Die Psychotherapie*, *67*(6), 486–492. https://doi.org/10.1007/s00278-022-00605-x

Klemanski, D. H., Curtiss, J., McLaughlin, K. A., & Nolen-Hoeksema, S. (2017). Emotion regulation and the transdiagnostic role of repetitive negative thinking in adolescents with social anxiety and depression. *Cognitive Therapy and Research*, *41*(2), 206–219. https://doi.org/10.1007/s10608-016-9817-6

Kroenke, K., Spitzer, R. L., & Williams, J. B. W. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, *16*(9), 606–613. https://doi.org/10.1046/j.1525-1497.2001.016009606.x

Leiner, D. J. (2024). *SoSci Survey* (Version 3.5.01) [Computer software]. Available at https://www.soscisurvey.de

Lindsay, E. K., & Creswell, J. D. (2017). Mechanisms of mindfulness training: Monitor and acceptance theory (MAT). *Clinical Psychology Review*, *51*, 48–59. https://doi.org/10.1016/j.cpr.2016.10.011

Mathews, B. L., Kerns, K. A., & Ciesla, J. A. (2014). Specificity of emotion regulation difficulties related to anxiety in early adolescence. *Journal of Adolescence*, *37*(7), 1089–1097. https://doi.org/10.1016/j.adolescence.2014.08.002

McLaughlin, K. A., Borkovec, T. D., & Sibrava, N. J. (2007). The effects of worry and rumination on affect states and cognitive activity. *Behavior Therapy*, *38*(1), 23–38. https://doi.org/10.1016/j.beth.2006.03.003

McLaughlin, K. A., & Nolen-Hoeksema, S. (2011). Rumination as a transdiagnostic factor in depression and anxiety. *Behaviour Research and Therapy*, *49*(3), 186–193. https://doi.org/10.1016/j.brat.2010.12.006

McMahon, T. P., & Naragon-Gainey, K. (2019). The multilevel structure of daily emotion-regulation-strategy use: An examination of within- and between-person associations in naturalistic Settings. *Clinical Psychological Science*, *7*(2), 321–339. https://doi.org/10.1177/2167702618807408

McMahon, T. P., & Naragon-Gainey, K. (2020). Ecological validity of trait emotion-regulation strategy measures. *Psychological Assessment*, *32*(8), 796–802. https://doi.org/10.1037/pas0000827

Melfsen, S., & Warnke, A. (2009). Soziale Phobie [Social phobia]. In S. Schneider & J. Margraf (Eds.), *Lehrbuch der Verhaltenstherapie* (pp. 531–553). Springer. https://doi.org/10.1007/978-3-540-79545-2_31

Muthén, L.K. and Muthén, B.O. (1998–2017). *Mplus User's Guide. Eighth Edition.* Author.

Ollendick, T. H., Benoit, K. E., & Grills-Taquechell, A. E. (2014). Social anxiety disorder in children and adolescents. In J. W. Weeks (Ed.), *The Wiley Blackwell handbook of social anxiety disorder* (pp. 181–200). Wiley Blackwell.

Ranta, K., Kaltiala-Heino, R., Rantanen, P., Tuomisto, M. T., & Marttunen, M. (2007). Screening social phobia in adolescents from the general population: The validity of the Social Phobia Inventory (SPIN) against a clinical interview. *European Psychiatry*, *22*(4), 244–251. https://doi.org/10.1016/j.eurpsy.2006.12.002

Richardson, L. P., McCauley, E., Grossman, D. C., McCarty, C. A., Richards, J., Russo, J. E., Rockhill, C., & Katon, W. (2010). Evaluation of the Patient Health Questionnaire-9 Item for detecting major depression among adolescents. *Pediatrics*, *126*(6), 1117–1123. https://doi.org/10.1542/peds.2010–0852

Saccaro, L. F., Giff, A., De Rossi, M. M., & Piguet, C. (2024). Interventions targeting emotion regulation: A systematic umbrella review. *Journal of Psychiatric Research*, *174*, 263–274. https://doi.org/10.1016/j.jpsychires.2024.04.025

Sackl-Pammer, P., Jahn, R., Özlü-Erkilic, Z., Pollak, E., Ohmann, S., Schwarzenberg, J., Plener, P., & Akkaya-Kalayci, T. (2019). Social anxiety disorder and emotion regulation problems in adolescents. *Child and Adolescent Psychiatry and Mental Health*, *13*(1), 37. https://doi.org/10.1186/s13034-019-0297-9

Sadikaj, G., Wright, A. G. C., Dunkley, D. M., Zuroff, D. C., & Moskowitz, D. S. (2021). Multilevel structural equation modeling for intensive longitudinal data: A practical guide for personality researchers. In J. F. Rauthmann (Ed.), *The handbook of personality dynamics and processes* (pp. 855–885). Elsevier. https://doi.org/10.1016/B978-0-12-813995-0.00033-9

Scaini, S., Belotti, R., Ogliari, A., & Battaglia, M. (2016). A comprehensive meta-analysis of cognitive-behavioral interventions for social anxiety disorder in children and adolescents. *Journal of Anxiety Disorders*, *42*, 105–112. https://doi.org/10.1016/j.janxdis.2016.05.008

Schmitz, J., Krämer, M., & Tuschen-Caffier, B. (2011). Negative postevent processing and decreased self-appraisals of performance following social stress in childhood social anxiety: An experimental study. *Behaviour Research and Therapy*, *49*(11), 789–795. https://doi.org/10.1016/j.brat.2011.09.001

Shiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology*, *4*, 1–32. https://doi.org/10.1146/annurev.clinpsy.3.022806.091415

Spokas, M., Luterek, J. A., & Heimberg, R. G. (2009). Social anxiety and emotional suppression: The mediating role of beliefs. *Journal of Behavior Therapy and Experimental Psychiatry*, *40*(2), Article 2. https://doi.org/10.1016/j.jbtep.2008.12.004

von Consbruch, K., Stangier, U., & Heidenrich, T. (2016). *Skalen zur sozialen Angststörung: Soziale-Phobie-Inventar (SPIN), Soziale-Interaktions-Angst-Skala (SIAS), Liebowitz-Soziale-Angst-Skala* [Scales for social anxiety disorder: Social Phobia Inventory (SPIN), Social Interaction Anxiety Scale (SIAS), Liebowitz Social Anxiety Scale]. Hogrefe.

Weeks, J. W. (2010). The Disqualification of Positive Social Outcomes Scale: A novel assessment of a long-recognized cognitive tendency in social anxiety disorder. *Journal of Anxiety Disorders*, *24*(8), 856–865. https://doi.org/10.1016/j.janxdis.2010.06.008

Weeks, J. W., Heimberg, R. G., & Rodebaugh, T. L. (2008). The Fear of Positive Evaluation Scale: Assessing a proposed cognitive component of social anxiety. *Journal of Anxiety Disorders*, *22*(1), 44–55. https://doi.org/10.1016/j.janxdis.2007.08.002

Weeks, J. W., Wilmer, M. T., Potter, C. M., Waldron, E. M., Versella, M., Kaplan, S. C., Jensen, D., & Heimberg, R. G. (2020). Targeting fear of positive evaluation in patients with social anxiety disorder via a brief cognitive behavioural therapy protocol: A proof-of-principle study. *Behavioural and Cognitive Psychotherapy*, *48*(6), 745–750. https://doi.org/10.1017/S1352465820000491

Westenberg, P. M., Gullone, E., Bokhorst, C. L., Heyne, D. A., & King, N. J. (2007). Social evaluation fear in childhood and adolescence: Normative developmental course and continuity of individual differences. *British Journal of Developmental Psychology*, *25*(3), 471–483. https://doi.org/10.1348/026151006X173099

Young, K., Sandman, C., & Craske, M. (2019). Positive and negative emotion regulation in adolescence: Links to anxiety and depression. *Brain Sciences*, *9*(4), 76. https://doi.org/10.3390/brainsci9040076

Zimmermann, P., & Iwanski, A. (2014). Emotion regulation from early adolescence to emerging adulthood and middle adulthood: Age differences, gender differences, and emotion-specific developmental variations. *International Journal of Behavioral Development*, *38*(2), 182–194. https://doi.org/10.1177/0165025413515405

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