

Emotion regulation during personal goal pursuit: Integration versus suppression of emotions

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Abstract

Objective: Goal pursuit may involve setbacks likely to elicit negative emotions. To continue pursuing the goal, an individual may need to regulate those emotions. In this study, we compared the unique contributions of two emotion regulation styles, integrative emotion regulation (IER) and suppressive emotion regulation (SER), to goal pursuit processes. We tested the hypotheses that IER and SER would be differentially related to goal progress and goal-related effort and goal-related depressed mood would mediate those relations.

Method: 255 Israeli participants completed five web questionnaires at two-week intervals. We examined the mediation hypothesis using multilevel structural equation modeling.

Results: At the within-person level, increases in IER predicted increases in goal progress at a given time point through increases in goal-related effort, while increases in SER predicted decreases in goal progress through increases in goal-related depressed mood. At the between-persons level, participants with higher IER reported more goal progress; this effect was mediated by goal-related effort. Participants with higher SER reported lower goal progress; this effect was mediated by higher goal-related depressed mood. The findings held after controlling for such factors as participants' perceived goal competence, goal stress, sex, and age.

Conclusions: IER promotes goal pursuit, but SER impedes it.

KEYWORDS

goal progress, goal-related depressed mood, goal-related effort, integrative emotion regulation, personal goal pursuit, suppressive emotion regulation

1 | INTRODUCTION

Throughout the life course, people pursue personal goals in multiple domains, including career, health, and relationships (Emmons, 1986, 2003). These goals provide structure and meaning to life (Klug & Maier, 2015; Sheldon & Vansteenkiste, 2005) but their pursuit can be a grueling process, replete with obstacles (Brandstätter et al., 2013) and eliciting negative emotions, such as sadness, anxiety, or embarrassment (Babij et al., 2020; Carver & Scheier, 1990). As a

result, people may detach themselves from a difficult goal and choose a more manageable one (Moberly & Watkins, 2010; Roberts et al., 2020). Thus, to overcome negative emotions and continue in goal pursuit, people are required to use effective ways to regulate their negative emotions (Gross, 1998b, 2015).

This study employed self-determination theory's (SDT; Ryan & Deci, 2017) view of emotion regulation to compare the effects of two distinct emotion regulation styles on goal pursuit processes. SDT presents a taxonomy of emotion

regulation styles differing in the degree to which people volitionally explore their emotions or avoid doing so (Ryan et al., 2006). Two such styles are integrative emotion regulation (IER) and suppressive emotion regulation (SER). IER is defined as differentiated awareness of emotions and intentional interest-taking in them once they arise (Benita, 2020; Roth et al., 2019), and SER refers to efforts to control or minimize emotional experience and expression (Gross & Levenson, 1993; Valentiner et al., 2006; Wegner, 1994). While IER is considered more adaptive than SER (e.g., Benita et al., 2020), no research has examined whether they are differentially related to distinct qualities of goal pursuit processes. To address this gap, this study compared how IER and SER uniquely contributed to individuals' progress toward goal attainment (i.e., goal progress) across four-time points, separated by two-week intervals. It also examined whether individuals' goal-related effort and goal-related depressed mood mediated the effects of IER and SER on goal progress.

1.1 | The SDT framework of emotion regulation

In the past decade, researchers have espoused SDT (Ryan & Deci, 2017) to explore emotion regulatory processes (for reviews, see Benita, 2020; Roth et al., 2019). In SDT's eudemonic understanding of wellness (Ryan & Deci, 2001; Ryan et al., 2006), emotions comprise informational inputs that guide action and growth, and the ability to assimilate all types of experiences, both negative and positive, constitutes psychological thriving. According to this view, optimal psychological functioning is achieved during an integrative process through which individuals assimilate and synthesize experiences (Ryan, 1995). Emotions play a key role in this process, as they are crucial to people's evaluation and processing of significant events (Benita, 2020).

Weinstein et al. (2013) offered a framework of the integrative process, highlighting the role of awareness in the experience of emotions, as well as other internal experiences, such as motives and values. Importantly, they suggested awareness does not necessarily require constant consciousness of internal emotional states; rather, such self-knowledge should be accessible and available if called upon, especially in emotionally arousing events. Thus, awareness is understood as an active process in which people explore their emotions once aroused and try to understand their meaning. In this view, healthy emotion regulation implies an interested (intentional) attention to and exploration of their emotional experiences.

SDT's taxonomy of emotion regulation styles accounts for the tension between the awareness of emotion or the lack thereof. IER is the emotion regulation style that represents the intentional exploration of emotions (taking interest) once they arise. Moreover, SER stands for the avoidance of the

exploration and expression of emotions once aroused. It involves attempts to ignore thoughts about emotion or to avoid expressing emotions.

The concept of SER is, in many respects, similar to the long-explored concept of *emotional suppression* (Gross & Levenson, 1993). Gross and his colleagues (Gross, 1998a; Gross & John, 2003) anchored the concept of emotional suppression in their influential process model of emotional regulation, defining it as a response-focused style, aimed at inhibiting ongoing emotion-expressive behavior (i.e., expressive suppression). Another definition of emotional suppression refers to the minimization of the experience of emotion or of thoughts about the negative event leading to that experience (i.e., thought suppression; Valentiner et al., 2006; Wegner, 1994). SDT construes this concept as comprising both expressive suppression and thought suppression (Benita et al., 2020; Roth et al., 2019). Hence, we use the term suppressive emotion regulation (SER), instead of emotional suppression, to denote this multifaceted concept.

1.2 | Integrative and suppressive emotion regulation as trait and state emotion regulation styles

Both IER and SER can be assessed as trait-like relatively stable characteristics and as state behavioral regulations. Studies assessing IER and SER as trait variables usually rely on the emotion regulation inventory developed by Roth and colleagues (Roth et al., 2009). Such studies support the assumption that IER facilitates the integration of negative emotional experiences and contributes to well-being, while SER undermines them. For example, Houle and Philippe (2020) recently showed participants with high levels of trait IER recalled more negative memories following a negative event but were also more likely to accept them and to experience well-being. Participants high on SER displayed the opposite pattern. Similarly, Benita et al. (2020) recently showed that across three countries (Israel, Peru, and Brazil), college students' IER positively predicted basic psychological need satisfaction (Chen et al., 2015) and psychological well-being (Ryff, 1989). SER, meanwhile, positively predicted psychological need frustration and negatively predicted psychological well-being. Finally, Brenning et al. (2015) found IER positively predicted adolescents' self-esteem, while SER negatively predicted it.

Several studies have modeled IER as a state condition in laboratory designs. These studies compared IER with emotion regulation tactics that reflect a tendency to suppress or avoid emotions once aroused, such as expressive suppression and emotional distancing (Roth et al., 2014, 2018). Participants were exposed to emotionally eliciting stimuli and were asked to either take interest in their emotions (IER), hide their emotions (expressive suppression), or alter their thoughts about their emotions (emotional

distancing). The outcome variable was emotional arousal during the exposure; other outcomes included the memory of the stimuli and level of defensiveness. Participants instructed to use IER showed the most adaptive coping pattern for emotional stimuli. Along the same lines, research has consistently found expressive suppression and thought suppression is related to poor emotion regulation (e.g., Dunn et al., 2009; Gross & John, 2003; Richards & Gross, 2000).

1.3 | Trait and state integrative versus suppressive emotion regulation and goal progress

This study examined the possibility that trait- and state-IER and SER differentially affect goal pursuit processes. A common view of emotions is that they serve as important informational inputs to help in the choice and self-guidance of actions (e.g., Frijda & Mesquita, 1994; Izard, 1989). For example, when people are pursuing a goal and a problem arises, the immediate reduction of negative emotions related to that problem may not always be useful. In other words, when avoiding goal-related emotions, either promptly after emotion has been aroused or consistently, people are less likely to use emotions as guides assisting in goal pursuit. Instead, the negative emotions might signal the need to reflect on the process and perhaps reconsider the strategy used to attain the goal. Thus, intentional interest-taking in emotions can enable people to use them as useful guides during goal pursuit processes.

To the best of our knowledge, the only study examining the effect of emotion regulation on goal progress was by Low et al. (2017). These researchers showed SER (expressive suppression and thought suppression) impedes goal progress. However, it remains unexplored whether certain emotion regulation styles positively predict goal progress.

We tested the assumption that IER, measured as either a state or trait variable, is such a style. Because it is characterized by an adaptive and interesting stance to emotions, especially negative ones, it can enable people to accept and integrate their emotions with other aspects of themselves. Such people are more likely to use a negative emotion as an important cue to the source of a setback and continue to pursue the goal. Otherwise stated, we explored whether IER would positively predict goal progress, while SER would negatively predict it.

1.4 | Goal-related effort and mood as potential mediators of the relations between emotion regulation styles and goal progress

We also examined the mechanisms underlying the relations of IER and SER with goal progress. We assumed that the

effect of IER and SER on goal progress would be explained by two possible mediators: goal-related effort and goal-related depressed mood. Motivation theory considered the effort to be the behavioral manifestation of an individual's motivation strengths or energization (Wright, 2016). Goal pursuit is almost by definition an effortful process, as people commonly strive to overcome distractions on their way to attain their goals (Baumeister et al., 2007). Thus, goal-related effort has often been used as an important predictor of goal progress and attainment (e.g., Sheldon & Elliot, 1998; Sheldon & Houser-Marko, 2001; Vasalampi et al., 2012). We argued that because IER involves taking an interest in one's emotions instead of blocking them, it consumes less regulatory effort than SER and requires more effort to pursue a goal. Low et al. (2017) recently found SER was negatively related to goal-related effort, and reduced goal-related effort mediated the negative relations of SER with goal progress. We, therefore, expected that IER would positively predict goal-related effort, and the opposite effects of IER and SER on goal progress would be mediated by differential goal-related effort levels.

Feelings of despair and hopelessness herein referred to as *goal-related depressed mood*, are almost synonymous with a lack of motivation and energy to engage in goal-related behavior, thus impairing goal-pursuit processes (Haefffel et al., 2008). An important aspect of such experiences is difficulty regulating negative emotions, often manifested by rumination and worry (Liverant et al., 2011). We suggested that because SER predicts poor capacity to manage emotional experiences, negative emotions can resurface, manifested by goal-related depressed mood. Indeed, Low et al. (2017) found goal-related depressed mood mediated the relations of SER with goal progress. Accordingly, we expected that goal-related depressed mood would mediate the positive and negative relations of IER and SER, respectively, with goal progress.

1.5 | The present research

In what follows, we report on a short-term longitudinal study examining the effect of emotion regulation styles (IER vs. SER) on personal goal pursuit. The research question was whether IER and SER differentially predict goal progress, and whether these relations are mediated by goal-related effort and goal-related depressed mood. Although Low et al. (2017) already explored the effect of SER on goal pursuit, we extended this work in several critical respects. First, unlike the previous study, we simultaneously compared the effects of SER and IER on goal pursuit outcomes. Second, while Low et al. (2017) focused on the between-participants effect of SER on goal pursuit, we examined the effects both

within- and between-participants. We assessed IER and SER primarily as state-variables. We followed Low et al.'s (2017) approach and asked participants about their IER and SER use over the past 2 weeks when facing goal-related setbacks. Thus, measurements at the within-participant level reflected state IER and SER levels. Yet given our multilevel approach, we also explored IER and SER as more stable trait-variables, or as between-participants variables.

Figure 1 presents the study's conceptual model. At the within-participant level, we explored whether deviations in individuals' IER and SER were associated with deviations in goal progress at a given time point or over time (participants were examined five times: every 2 weeks for a total of 10 weeks) and whether these relations were mediated by goal-related effort and goal-related depressed mood. In other words, we examined both concurrent (relations between variables at Time *i*) and prospective effects of SER and IER on goal-related effort, goal-related depressed mood, and goal progress. Our hypothesis at the within-participant level was that when people use IER, they are more likely to make progress, and this is mediated by increased goal-related effort and reduced goal-related depressed mood. In contrast, when people use SER, their goal progress will decrease, mediated by reduced goal-related effort and increased goal-related depressed mood.

At the between-participants level, we explored whether individuals who are higher on IER are likely to report more significant goal progress, while those higher on SER will show less progress. Our hypothesis was that people with high IER are, on average, more likely to make progress, and this is mediated by high goal-related effort and low goal-related depressed mood. In contrast, we expected that people with high SER are, on average, less likely to make progress, and this would be mediated by high goal-related depressed mood and low goal-related effort.

2 | MATERIALS AND METHODS

2.1 | Participants

Participants ($N = 255$, 51% female, M age = 25.82, $SD = 3.33$) were Israeli Jewish adults recruited through online advertisements for a large prospective study of goal pursuit; 66% were undergraduate or graduate students from different institutions in Israel, and 69% percent held jobs. Of the nonworking participants, 89% were students. Participants were paid 25 USD for participation.

2.2 | Procedure

Participants filled in questionnaires online using Qualtrics at five-time points, each separated by 2 weeks. At Time 1, participants identified several important ongoing personal goals and ranked them by importance. The goals were: academic (highest ranked, 49% of participants), financial (18%), emotional (13%), fitness and health (11%), and other types of self-improvement (9%). Next, we asked participants to write a short passage on their highest ranked goal. Finally, they provided background information and completed a variety of questionnaires.

At the next three follow-ups (T2–T4), participants completed identical online surveys in which they reported on IER and SER with respect to their goal-related challenges and setbacks, efforts invested to attain the goal, goal-related depressed mood with respect to the goal, and goal progress. Participants also wrote a short passage about their goal progress and their feelings about it. At Time 5, participants completed a goal-progress scale. Compliance was high: of the 255 participants, 199 (78%) completed all five questionnaires, 14 (5%) completed four questionnaires, 18 (7%) completed three, and 24 (9%) completed two. We included those

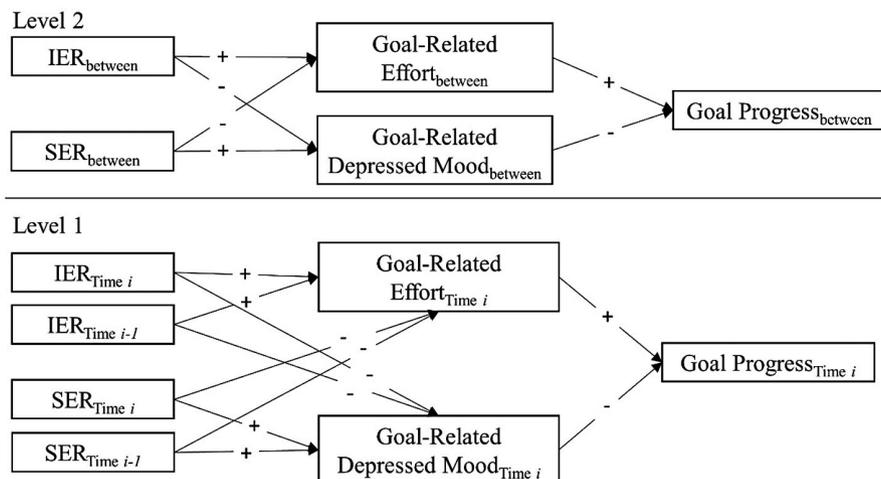


FIGURE 1 Hypothesized MSEM 1-1-1 mediation model for predicting goal progress from emotion regulation styles, goal-related effort, and goal-related depressed mood. IER, integrative emotion regulation; SER, suppressive emotion regulation

who completed any follow-up from T2 to T5. One participant reported abandoning his goal at Time 3, because he quit his studies. We, therefore, omitted his reports in Times 3 and 4 from our analyses. Seven other participants reported attaining their goal already in Time 4. We, therefore, omitted these participants' Time 5 reports from our analyses. For all other participants, we used their complete data. We used a multi-level analytic strategy to balance missing data by weighting the contribution of each participant's data to the overall effects based on the relative number of available data points (Raudenbush & Bryk, 2002). We excluded 36 participants who completed only the initial assessment (Time 1).

2.3 | Measures

All questionnaires were administered in Hebrew. Responses were on a 6-point scale from 1 (*strongly disagree*) to 6 (*strongly agree*). Table 1 presents the descriptive statistics for all variables. Reliability estimates for the within-participant and between-participants' levels were assessed using a multilevel confirmatory factor analysis framework (Geldhof et al., 2014). Geldhof et al. (2014) recommended reporting composite reliability (ω) in multilevel analyses.

2.3.1 | Integrative emotion regulation and suppressive emotion regulation

Five items assessed the degree to which participants tried to (1) take an interest in their emotions (IER) or (2) control and/or hide their feelings when faced with challenges and setbacks (SER) or. The two items assessing IER were derived from Roth et al.'s (2009) emotion regulation questionnaire (Over the past 2 weeks when I felt negative emotions about my goal... ["I tried to understand why I feel this way"]; ["I tried to observe my emotions and understand what they indicate about my situation"]). $\omega_{\text{within}} = .54$, $\omega_{\text{between}} = .89$. The three items assessing SER were taken from Low et al. (2017)

(Over the past 2 weeks when I felt negative emotions about my goal... ["I tried to hide my thoughts and feelings from people around me"]; ["I kept my negative emotions to myself"]; ["I tried to control or suppress any negative emotions"]). $\omega_{\text{within}} = .58$, $\omega_{\text{between}} = .98$.

2.3.2 | Goal-related effort

Three items derived from Low et al. (2017) assessed effort ("I put a lot of effort into achieving this goal over the last 2 weeks"; "I tried very hard to achieve this goal over the last 2 weeks"; "I did not put much energy into this goal over the last 2 weeks"). The third item (reverse coded) impaired the reliability, so we removed it from the analyses. $\omega_{\text{within}} = .80$, $\omega_{\text{between}} = .98$.

2.3.3 | Goal-related depressed mood

Three items adapted from Low et al. (2017) assessed goal-related depressed mood (Over the last 2 weeks... ["I felt depressed when thinking about my goal"]; ["I felt hopeless when thinking about my goal"]; ["I felt discouraged when thinking about my goal"]). $\omega_{\text{within}} = 0.79$, $\omega_{\text{between}} = .97$.

2.3.4 | Goal progress

We used Koestner et al. (2002) goal progress measure ("I have made a lot of progress toward this goal"; "I feel like I am on track with my goal plan"; "I feel like I have achieved this goal"). $\omega_{\text{within}} = .76$, $\omega_{\text{between}} = .88$.

2.3.5 | Goal competence and goal stress

These were assessed only at Time 1 and served as control variables to ensure IER and SER predicted goal progress,

TABLE 1 Descriptive statistics of repeated measures

Measure	Time 1—Week 0 M (SD)	Time 2—Week 2 M (SD)	Time 3—Week 4 M (SD)	Time 4—Week 6 M (SD)	Time 5—Week 8 M (SD)	ICC
Goal competence	4.67 (1.11)	—	—	—	—	—
Goal stress	3.52 (1.33)	—	—	—	—	—
IER	—	3.72 (1.04)	3.77 (1.02)	3.85 (1.07)	—	—
SER	—	2.96 (1.13)	2.72 (1.16)	2.81 (2.67)	—	—
Goal-related effort	—	4.39 (1.28)	4.38 (1.31)	4.29 (1.33)	—	.59
Goal-related depressed mood	—	2.75 (1.34)	2.52 (1.31)	2.81 (1.40)	—	.61
Goal progress	—	3.60 (1.05)	3.66 (1.11)	3.69 (1.17)	4.00 (1.16)	.54

Abbreviations: IER, integrative emotion regulation; SER, suppressive emotion regulation.

beyond participants' global perceived competence or goal stress at the time the goal was set. The scales were adapted from Low et al. (2017). Two items assessed goal competence ("I am confident in my ability to achieve this goal"; "I feel capable and effective regarding this goal"). The goal stress scale also included two items ("I worry I will not achieve this goal"; "I feel stressed about this goal"). $\omega = .86$, $\omega = .72$, for goal competence and goals stress, respectively.

2.4 | Data analysis

To analyze our data, we used the multilevel structural equation modeling (MSEM) framework (Preacher et al., 2011). We first calculated the intraclass correlations (ICC's) for the mediating (i.e., goal-related effort and goal-related depressed mood) and outcome (i.e., goal progress) variables. The ICC represents the homogeneity of measurement within clusters (i.e., participants). Values of 5% or above for ICC indicate reasonable homogeneity, justifying multilevel modeling (e.g., Gavin & Hofmann, 2002). ICCs are presented in Table 1. As can be seen, all ICCs were above .50, indicating that more than 50% of the variance in the mediating and outcome variables reflected differences between participants. It was, therefore, appropriate to use multilevel modeling.

Next, we examined correlations between the study variables. We explored whether each predicting variable was related to its potential mediator and the outcome, and whether the potential mediators were related to the outcome. We did this to justify the mediation analysis for each hypothesized path (see Figure 1). Because our focal variables (predictors, mediators, and outcomes) contained both within- and between-participants variance, we examined the correlations for both level 1 and level 2. At level 1, we examined correlations between person-mean centered variables, considering whether the two emotion regulation styles of interest (IER and SER) were related to goal progress both concurrently (at a given time point) and prospectively (across time points). At level 2, we examined correlations between averaged variables across time points.

Based on the obtained correlations, we continued to our MSEM analysis, with assessments (Time 2-Time 5) nested within individuals. MSEM provides an accurate estimation of indirect effects by decomposing the variance into two components: within-participant and between-participants (Muthén & Asparouhov, 2011). We assessed a lower level mediation model (i.e., a 1-1-1 model; Krull & Mackinnon, 1999), in which the uncentered focal predictors were entered simultaneously at level 1 and level 2. To examine effects across time, we used the lag approach described by Bolger et al. (2003). In our use of this approach, concurrent paths examined correlations between variables assessed at Time i , and prospective paths examined correlations between a variable assessed at

Time $i-1$ to a variable assessed at Time i . In all cases, the outcome variable (goal progress) was assessed at Time i . Our estimation method was maximum-likelihood with robust standard errors (MLR).

We adjusted the model for the auto-regression association between each of the mediators and the outcome at Time i to their association with the outcome at Time $i-1$. Values at Time $i-1$ were person-mean centered. We also adjusted the model for assessment time (i.e., Time 2 to Time 5) by including time as a predictor of the mediators and outcome. At level 2, we entered the same variables, now aggregated across time points. We controlled for several covariates (participants' age, sex, goal competence, and goal stress). We did so by including these variables as predictors of the mediators and goal progress at level 2. We tested the indirect effects using the Sobel test (the Mplus default). Model fit was evaluated using the comparative fit index (CFI), the root-mean-square error of approximation (RMSEA), and the standardized root-mean-square residual (SRMR), calculated separately for the within and between-class covariance matrices (SRMR_{within}, SRMR_{between}). CFI values above .90, RMSEA values below .05, and SRMR values below .08 are considered indicative of satisfactory to good model fit (Schumacker & Lomax, 2010). All analyses were conducted in Mplus Version 8.4 (Muthén & Muthén, 2017).

3 | RESULTS

3.1 | Correlations among variables

Table 2 presents correlations for level 1. As expected, IER at Time i was positively associated with concurrently measured goal-related effort and goal progress. In contrast to our hypothesis, however, IER at Time i was positively related to goal-related depressed mood at Time i . Therefore, in our multilevel model, we controlled for the path from IER at Time i to concurrent goal-related depressed mood. However, we did not examine the indirect effect of IER on goal progress through goal-related depressed mood, because the direction of correlations implied inconsistent mediation. IER at Time $i-1$ was not related to any of the variables assessed at Time i . Therefore, we excluded IER at Time $i-1$ from our multilevel models.

As expected, SER was positively associated with goal-related depressed mood and negatively associated with goal progress at Time i . However, it was not negatively associated with goal-related effort. SER at Time $i-1$ was not related to goal-related effort or goal progress at Time i . Interestingly, and in contrast to our hypothesis, SER at Time $i-1$ was negatively associated with goal-related depressed mood at Time i . Thus, if a participant was high on SER at a given time point, s/he was less likely to

TABLE 2 Intercorrelations of study variables for level 1

Variable	1	2	3	4	5	6	7
1. IER _{Time<i>i</i>}	–						
2. IER _{Time<i>i</i>-1}	-.46**	–					
3. SER _{Time<i>i</i>}	.03	.07	–				
4. SER _{Time<i>i</i>-1}	-.13**	.03	-.51**	–			
5. Goal-related effort _{Time <i>i</i>}	.19**	-.09	-.03	.01	–		
6. Goal-related depressed mood _{Time<i>i</i>}	.10**	.03	.30**	-.26**	.01	–	
7. Goal progress _{Time<i>i</i>}	.13**	-.06	-.09*	.03	.32**	-.25**	–

Note: Numbers represent correlations between person-mean-centered variables at each time point.

Abbreviations: IER, integrative emotion regulation; SER, suppressive emotion regulation.

* $p < .05$;

** $p < .01$.

TABLE 3 Intercorrelations of study variables for level 2

Variable	1	2	3	4	5
1. IER _{between}	–				
2. SER _{between}	-.14**	–			
3. Goal-related effort _{between}	.30**	-.01	–		
4. Goal-related depressed mood _{between}	.05	.35**	-.03	–	
5. Goal progress _{between}	.23**	-.15*	.50**	-.51**	–

Note: Numbers represent averages of the correlations assessed at each time point.

Abbreviations: IER, integrative emotion regulation; SER, suppressive emotion regulation.

* $p < .05$;

** $p < .01$.

experience a goal-related depressed mood at the following time point. Given this finding, we controlled for the path from SER at Time $i-1$ to prospective goal-related depressed mood in our multilevel models, but we did not examine the indirect effect of SER at Time $i-1$ on prospective goal progress through goal-related depressed mood, because the direction of correlations implied inconsistent mediation. Finally, goal-related effort was positively related and goal-related depressed mood negatively related to concurrently measured goal progress.

Table 3 presents correlations for level 2. Note that correlations shown in the table are between variables averaged across time points and across participants. IER was positively associated with both goal-related effort and goal progress but uncorrelated with goal-related depressed mood. Therefore, we did not test the indirect effect of IER on goal progress through goal-related depressed mood. However, we included the path from IER to goal-related depressed mood in our multilevel model, because we had already examined it at level 1, and our MSEM approach necessitates examining the same paths at both levels. SER was positively related to goal-related depressed mood and negatively related to goal progress. Again, countering our hypothesis, but in accordance

with the findings for level 1, SER was not negatively related to goal-related effort. Therefore, we excluded the path from SER to goal-related effort at both levels.

Based on the correlations we found, for level 1, our final multilevel model included only the indirect paths between concurrently measured variables (at Time i). The indirect paths examined by the final model at both level 1 and level 2 were from IER and SER to goal progress through goal-related effort and goal-related depressed mood, respectively.

3.2 | Hypotheses testing

Our final model (including coefficients) is presented at Figure 2. Fit indices for the model were excellent, $\chi^2_{(14)} = 11.46$, $p < .489$; CFI = 1.00; RMSEA = .00; SRMR_{within} = .03; SRMR_{between} = .01.

3.2.1 | Within-participant effects

Table 4 presents the complete results for level 1. As can be seen, IER and SER (i.e., predictors) at Time i positively

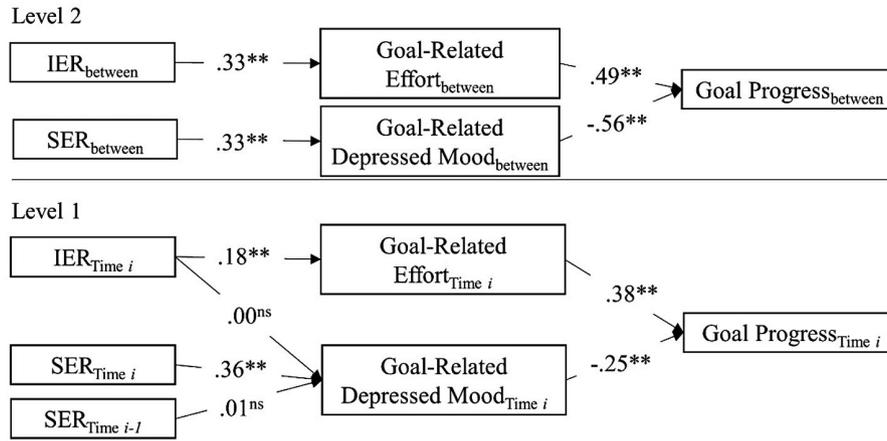


FIGURE 2 Actual MSEM 1-1-1 mediation model for predicting goal progress from emotion regulation styles, goal-related effort, and goal-related depressed mood. We controlled time of measurement, gender, age, goal competence, and goal stress. Covariates are not shown for the sake of clarity. IER, integrative emotion regulation; SER, suppressive emotion regulation. ** $p < .001$

Predictor	Estimate	SE	p value	95% CI		R ²
				LL	UL	
Outcome variable: Goal-related effort						.14
IER _(Time<i>i</i>)	.18	.06	.001	.07	.29	
Goal-related effort _(Time<i>i</i>-1)	-.31	.05	.000	-.41	-.22	
Time	-.09	.05	.059	-.18	.01	
Outcome variable: Goal-related depressed mood						.26
SER _(Time<i>i</i>)	.35	.06	.000	.24	.47	
SER _(Time<i>i</i>-1)	.01	.05	.831	-.09	.11	
IER _(Time<i>i</i>)	.00	.07	.974	-.13	.14	
Goal-related depressed mood _(Time<i>i</i>-1)	-.30	.05	.000	-.39	-.21	
Time	.11	.04	.013	.02	.19	
Outcome variable: Goal progress						.34
IER _(Time<i>i</i>)	.14	.06	.014	.03	.25	
SER _(Time<i>i</i>)	-.09	.07	.198	-.22	.05	
Goal-related effort _(Time<i>i</i>)	.38	.05	.000	.27	.48	
Goal-related depressed mood _(Time<i>i</i>)	-.25	.06	.000	-.37	-.13	
Goal progress _(Time<i>i</i>-1)	-.24	.04	.000	-.32	-.16	
Time	.11	.04	.010	.02	.19	
Indirect Effects						
IER _(Time<i>i</i>) → Goal-related effort _(Time<i>i</i>) → Goal progress	.07	.03	.012			
SER _(Time<i>i</i>) → Goal-related depressed mood _(Time<i>i</i>) → Goal progress	-.09	.03	.002			

TABLE 4 Level 1 multilevel mediation models to predict goal progress from emotion regulation styles, goal-related effort, and goal-related depressed mood

Note: All values are standardized betas. Level 1 autoregressions are person-mean centered. All R² coefficients are significant at $p < .001$.

Abbreviations: IER, integrative emotion regulation; SER, suppressive emotion regulation.

predicted concurrently measured goal-related effort and goal-related depressed mood (i.e., mediators), respectively. The autoregressive paths of goal-related effort and goal-related depressed mood were both negative. Time negatively predicted goal-related effort and positively predicted goal-related depressed mood. SER at Time $i-1$ and IER at Time i did not predict goal-related depressed mood at Time i . Collectively, these variables explained 13% and 26% of the level 1 variance in goal goal-related effort and goal-related depressed mood, respectively.

We next examined the paths from the mediators to goal progress (i.e., outcome). Both goal-related effort and goal-related depressed mood at Time i predicted concurrently measured goal progress. As expected, goal-related effort positively predicted goal progress and goal-related depressed mood negatively predicted it. The autoregressive path of goal progress at Time $i-1$ was negative, and time positively predicted goal progress.

When we turned to the significance of the indirect effects, we found both effects were significant, suggesting that IER at Time i positively predicted concurrently measured goal progress through goal-related effort, and SER at Time i negatively predicted concurrently measured goal progress through goal-related depressed mood.

Finally, we examined the direct paths to goal progress to determine full versus partial mediation. The direct path from IER at Time i to concurrently measured goal progress was significant, indicating that goal-related effort partially mediated the relations between IER and goal progress. The direct path from SER at Time i to concurrently measured goal progress was nonsignificant, suggesting that goal-related depressed mood fully mediated the relations between concurrently measured SER and goal progress. Time positively predicted goal progress. Collectively, all variables explained 34% of the level 1 variance in goal progress.

3.2.2 | Between-participants effects

Table 5 presents the complete results for level 2. As can be seen in the table, IER and SER positively predicted goal-related effort and goal-related depressed mood, respectively. Goal competence positively predicted goal-related effort and negatively predicted goal-related depressed mood. Goal stress positively predicted goal-related depressed mood. Age negatively predicted goal-related effort, and sex positively predicted goal-related depressed mood (women were more likely to report goal-related depressed mood than men). Collectively, these variables explained 17% and 40% of the level 2 variance in goal goal-related effort and goal-related depressed mood, respectively. When we tested the paths from the mediators to goal progress, we found that as at level 1, goal-related effort positively predicted

goal progress and goal-related depressed mood negatively predicted it. None of the covariates significantly predicted goal progress.

We now turned to the significance of the indirect effects. As in level 1, IER positively predicted goal progress through goal-related effort, and SER negatively predicted goal progress through goal-related depressed mood. Direct paths from IER and SER to goal progress were nonsignificant, indicating full mediation. Collectively, all variables explained 59% of the level 2 variance in goal progress.

4 | DISCUSSION

In the research reported here, we examined the differential effect of IER and SER on goal progress and asked whether goal-related effort and goal-related depressed mood might mediate their respective effects. Overall, the results supported our hypotheses. As we expected, at the within-participant level (level 1), increases in IER within the same two-week period (i.e., concurrently) contributed to increases in goal progress through increased goal-related effort, but unexpectedly, not through goal-related depressed mood. Again, as expected, increases in SER contributed to decreases in goal progress through increases in goal-related depressed mood, but unexpectedly, not through goal-related effort. Thus, in weeks when participants used more IER than usual, they reported making more progress in their goals, and this was explained by their increased efforts to attain them. When participants used more SER than usual, they reported making less progress toward their goals, and this was explained by increases in goal-related depressed mood during these 2 weeks. All level 1 effects were significant, even when we controlled for autoregressive and time effects.

Results at the between-participants level (level 2) supported our hypotheses, albeit with a few exceptions. Individuals with high IER reported more goal progress, and this was mediated by their greater goal-related effort. As at level 1 and countering our hypothesis, these relations were not mediated by goal-related depressed mood. Individuals with high SER reported lower goal progress, and this was explained by their higher goal-related depressed mood. As at level 1 and countering our hypothesis, these relations were not mediated by goal-related effort. All level 2 effects were significant, even when we controlled for participants' goal competence, goal stress, sex, or age.

4.1 | Effects of integrative emotion regulation on goal pursuit

This study was the first to demonstrate that IER predicts optimal goal pursuit. Our results join and extend the accumulating

Predictor	Estimate	SE	<i>p</i> value	95% CI		<i>R</i> ²
				LL	UL	
Outcome variable: Goal-related effort						.17
IER _{between}	.33	.09	.000	.15	.51	
Goal Competence _{between}	.19	.08	.017	.03	.34	
Goal Stress _{between}	.11	.07	.117	−.03	.25	
Sex	.01	.07	.873	−.13	.15	
Age	−.14	.06	.025	−.26	−.02	
Outcome variable: Goal-related depressed mood						.40
SER _{between}	.33	.07	.000	.19	.47	
IER _{between}	.05	.07	.487	−.09	.20	
Goal Competence _{between}	−.20	.07	.006	−.35	−.06	
Goal Stress _{between}	.24	.08	.003	.08	.39	
Sex	.23	.07	.001	.10	.36	
Age	.06	.06	.304	−.06	.18	
Outcome variable: Goal progress						.59
IER _{between}	.14	.08	.084	−.02	.29	
SER _{between}	.09	.08	.242	−.06	.25	
Goal-related effort _{between}	.49	.07	.000	.35	.63	
Goal-related depressed mood _{between}	−.56	.08	.000	−.73	−.41	
Goal Competence _{between}	.01	.07	.850	−.13	.16	
Goal Stress _{between}	.02	.07	.765	−.12	.16	
Sex	−.02	.07	.792	−.15	.11	
Age	−.01	.06	.831	−.12	.10	
Indirect Effects						
IER _{between} → Goal-related effort _{between} → Goal progress	.19	.06	.003			
SER _{between} → Goal-related depressed mood _{between} → Goal progress	−.19	.06	.001			

Note: All values are standardized betas. All *R*² coefficients are significant at *p* < .001.

Abbreviations: IER, integrative emotion regulation; SER, suppressive emotion regulation.

research pointing to the benefits of IER in various domains (Roth et al., 2019) and the first to show it promotes goal pursuit. These results support the assumption that IER plays an important role in the integrative process through which people achieve unified self-functioning (Weinstein et al., 2013). Specifically, they suggest IER enables people to assimilate goal-related stress and overcome setbacks nondefensively. As goals play an important role in the formation and development of the self (e.g., Dweck, 2017; McAdams, 2013), IER may play a crucial role in the process of “becoming oneself” (Sheldon, 2014).

A strength of this study was its multilevel design, as this permitted us to disentangle the processes as they occurred within and between individuals. At level 1, our finding that goal-related effort mediated the relations

TABLE 5 Level 2 multilevel mediation models to predict goal progress from emotion regulation styles, goal-related effort, and goal-related depressed mood

between IER and goal progress supported our hypothesis that when using IER, people are more likely to overcome goal-related setbacks and persist in their effort to achieve the desired goal. We did not directly examine whether IER helps people overcome goal-related setbacks, but this possibility could be approached through the concept of goal-related action crisis (Brandstätter & Herrmann, 2016; Brandstätter et al., 2013). A goal-related action crisis refers to a decisional conflict about whether to continue pursuing a goal or abandon it. It is possible that when people use IER during an action crisis, they are likely to resolve it in favor of continued goal pursuit, and this, in turn, predicts increased goal-related effort and goal progress. Future research should explore this assumption.

In addition, at level 1, IER predicted goal progress not only indirectly through goal-related effort but also directly (i.e., partial mediation). This suggests that when people use IER, they are likely to make progress toward their goals, even if they do not invest a high amount of effort in doing so. Recent work suggests adaptive goal pursuit processes are not necessarily accompanied by greater effort; they may actually involve a sense of ease (Werner et al., 2016). Thus, IER may enable a smoother goal pursuit process; instead of struggling with setbacks, people simply acknowledge them as natural byproducts of goal pursuit. Future research should explore this assumption.

An interesting and unexpected finding at level 1 was that IER was positively associated with goal-related depressed mood, although this association was mild. It seemed that on weeks when participants used more IER than usual, they were somewhat more likely to experience goal-related depressed mood than usual. This finding may be explained by the fact that IER involves taking an interest in one's emotions, especially negative ones. Thus, when a person experiences a setback, taking interest in the ensuing emotions is likely to increase his or her goal-related depressed mood, at least in the short term. Nevertheless, the results suggest IER enables people to overcome setbacks and continue pursuing their goals. In addition, the relations between IER and goal-related depressed mood vanished when we controlled for the effect of SER on this variable. Taken together, the findings indicate IER is likely to play a special role in building resilience by enabling people to encounter a setback, experience mild levels of depression, and then gather their resources to cope with the setback.

Results at the between-participants level (level 2) support previous findings showing that when regarded as a stable trait variable, IER is especially adaptive (e.g., Benita et al., 2017, 2020; Roth et al., 2017). People who use IER are more likely to make progress with their goals, and this is explained by their higher goal-related effort. However, trait variables might exert an effect over a longer time frame than we examined in this study. To explore the hypothesis that trait IER predicts consistent goal progress over time, other researchers should employ long-term prospective designs.

4.2 | Effects of emotional suppression on goal pursuit

This study found SER impedes goal pursuit and thus joins the vast body of knowledge demonstrating the costs of SER (e.g., Benita et al., 2020; Dalgleish et al., 2009; Gross & John, 2003). Specifically, we replicated Low et al.'s (2017) findings by showing that SER negatively predicts goal progress, and goal-related depressed mood mediates these

relations. Just as IER is likely to facilitate the integrative process, SER can actively forestall it by actively compartmentalizing certain emotions and experiences (see also Benita et al., 2020). Specifically, during goal pursuit, the compartmentalization of emotional experiences prevents people from attaining their goals, not allowing them to learn from their experiences and grow.

Our finding at level 1 that goal-related depressed mood mediated the relations between SER and reduced goal progress coincided with our hypothesis that when using SER, people are more likely to experience goal-related depressed mood; their goal-related depressed mood or their tendency to ruminate about the goal, in turn, depletes their energy to continue pursuing a goal and reduces goal progress. Thus, reduced energy to pursue a goal might serve as a more proximal predictor of goal progress than goal-related depressed mood. To validate this assumption, other research should use more direct measures of people's available energy to pursue a goal.

SER was not negatively related to goal-related effort, and our hypothesis was not supported. The result suggests that while SER increases goal-related depressed mood, it does not necessarily impede goal-related effort. Importantly, Low et al. (2017) found this relationship was significant. The discrepant findings may reflect the studies' different populations (Israeli vs. New Zealanders participants). The detrimental effects of SER vary across cultures, arguably because of different emotional display rules in distinct cultures (for a review, see Tsai & Lu, 2018). Otherwise stated, cultural variations may account for the differences between the two studies. It would be worth testing this assumption using a cross-cultural design.

At level 2, we found goal-related depressed mood mediated the relations between SER and goal progress, suggesting that chronic goal-related depressed mood plays an important role in explaining why SER impedes goal progress. To explore the hypothesis that trait SER predicts chronic levels of goal-related depressed mood, which, in turn, predicts long-term reductions in goal progress, future work should employ long-term prospective designs.

4.3 | Impact of time of measurement on the relations between emotion regulation strategies and outcomes

At level 1, both IER and SER predicted outcomes at a given time point, but not across time-points. A possible reason for this finding is that participants' reports were retrospective recollections of their experiences in the prior 2 weeks. Thus, the use of IER may have enabled participants to resolve goal-related conflicts and proceed with their efforts, despite the difficulties experienced in this

two-week period. Moreover, the use of SER following a setback apparently increased goal-related depressed mood relatively promptly. This, in turn, was accompanied by the sense that the setback was unsolvable, and goal progress was consequently undermined. To shed more light on these dynamic processes, future research should explore them as they unfold in a shorter time frame using intensive longitudinal methods, such as daily diary or experience sampling methods.

It is also possible that the effects of IER and SER did not spill over to the next time point because reports on the mediators and outcome pertained to the time frame of the previous 2 weeks, not to overall progress and goal-related effort. The reports reflected participants' experiences only within a given time point, not across time-points. To investigate this claim, researchers are advised to use global measurements of goal-related effort, goal-related depressed mood, and goal progress.

Low et al. (2017) found SER positively predicted prospective goal-related depressed mood and goal progress. However, their findings are not comparable to ours, because our variables at level 1 were person-mean centered, whereas Low et al.'s (2017) were not. Thus, our findings reflect within-person variations in the relations between emotion regulation styles and outcomes, whereas Low et al.'s reflect between-participants prospective effects of SER on outcomes. To support this interpretation, we examined the correlations between uncentered IER and SER at Time $i-1$ and uncentered reports of goal-related effort, goal-related depressed mood, and goal progress at Time i . IER was positively related to prospective goal-related effort and goal progress ($r = .18$, $r = .14$, respectively, $ps < .001$), and SER was positively related to prospective goal-related depressed mood and negatively to goal progress ($r = .17$, $r = -.15$, respectively, $ps < .001$). These findings coincide with Low et al.'s and support our interpretation.

4.4 | Limitations

Admittedly, the study has a few limitations. First, despite our longitudinal design, we cannot infer causality. Specifically, because our findings at both level 1 and level 2 do not establish time order between variables, different causal chains, and even reciprocal effects are highly plausible. Future research should seek to establish causality between variables. Second, we relied solely on self-reports, thus increasing the risk of shared-method bias. Other work should use more objective measures of goal progress and emotion regulation styles, such as other-reports, behavioral measures, or experimental manipulations.

Another limitation concerns the operationalization of IER. While theoretical definitions of this concept refer to it as comprising two components, awareness of emotions and intentional interest-taking in them, most

operationalizations, including ours, only assess the interest-taking aspect. We note that our view of awareness relies on Weinstein et al.'s (2013) suggestion that to be aware, it is not necessary to always be conscious of emotions. Rather, such self-knowledge must be accessible and available if called upon. The practice of volitional interest-taking, in our view, is an important way to get such access. Yet it might also require an earlier stage of *receptive awareness* of emotions, as evident in such practices as mindfulness or acceptance (Brown & Ryan, 2003; Ford et al., 2017). This assumption should be supported by empirical evidence, however, and future research endeavors should continue to explore IER as a multifaceted concept.

Further, the scales' within-participant reliabilities for IER and SER were mediocre. Importantly, because we used relatively short scales to ease the participants' burden and had relatively few measurement points (small clusters), the within-participant reliability estimates were likely biased (Geldhof et al., 2014). Future research should use longer scales and more measurement points to establish the scales' reliabilities.

4.5 | Conclusion

This study was the first to examine the role of IER versus SER in predicting goal progress and to probe the mediating role of goal-related effort and mood in these relations. Our pattern of results suggests that to overcome goal-related obstacles and setbacks, people should adopt an interested and accepting stance to their emotions, instead of trying to minimize or ignore their presence.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

ETHICAL STATEMENTS

All study procedures involving human participants were in accordance with the ethical standards of the institutional research committee or comparable ethical standards. Informed consent was obtained from all participants. All authors consented to the submission of this manuscript.

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