

## SHORT COMMUNICATION

## Regulatory Flexibility and Psychological Health – Is More Always Better?

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### Abstract

Regulatory flexibility, defined as the ability to use strategies in accordance with contextual demands, is thought to be central to psychological health. In the current research, we test the boundaries of this claim by examining: (1) how broadly does regulatory flexibility relate to different facets of psychological health?, and (2) is more flexibility always better? Across six samples, participants ( $N = 2,939$ ) reported their ability to use strategies flexibly when managing impulses (e.g., temptations) and completed indicators of ill-being and well-being. Findings indicated that people who are more flexible report not only less anxiety and depression but also more positive functioning, including more life satisfaction, meaning, thriving, and positive mental health. There was some goal-to-goal variation, but the same pattern held when controlling for goal-specific covariates and replicated in both meta-analytic and mega-analytic approaches. Interestingly, there was a significant quadratic association between flexibility and well-being but not ill-being. This suggested diminishing returns, such that being more flexible was beneficial for well-being, but only to a certain point. Overall, these findings suggest that having the ability to use strategies flexibly has no apparent downside.

**Keywords:** regulatory flexibility, strategies, depression, anxiety, well-being, affect regulation

Even the most effective self-regulation strategy sometimes fails. Rather than focusing on the general benefits of individual strategies, recent theorizing suggests that the optimal approach to self-regulation would be to deploy the most effective strategy for a given context. And indeed, mounting evidence finds that regulatory flexibility – *a person's ability to use strategies in accordance with situational demands* – is central to psychological health. For example, flexibility can promote better psychological health and resilience in the face of stress and trauma, whereas a lack of flexibility may contribute to psychopathology (Bonanno et al., 2023).

It is intuitive that regulatory flexibility is generally salutary, but key questions remain regarding the scope of these benefits. Here, we address two such questions. First, how broadly does regulatory flexibility relate to different facets of psychological health, such as mood and well-being? Prior research has extensively examined the link between regulatory flexibility and ill-being (e.g., anxiety, depression), but positive functioning (i.e., well-being) has received comparatively less attention. Second, is more flexibility always better? Some flexibility is clearly beneficial, but prior work has suggested that “the relationship between flexibility and adjustment may not be linear but

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rather curvilinear” (Bonanno & Burton, 2013, p. 604), raising the possibility that beyond a certain point its benefits may diminish.

To answer these questions, we analyzed several datasets focused on self-control. Self-control is relevant for the present purposes because it is a form of affect regulation involving the regulation of impulses (e.g., temptations) that conflict with one’s personal goals (Gross, 2024; Werner et al., 2022; Werner & Ford, 2023). Importantly, just as flexibility is presumed to be the process underlying successful emotion regulation, recent theorizing and emerging empirical work suggests that flexibility can likewise be viewed as the process by which self-control operates in daily life – that is, how well people can align their regulatory efforts with situational demands (Werner & Berkman, 2024; Werner & Berkman, under review). And while flexibility in the context of self-control has yet to be directly linked to psychological health, research on self-control more broadly has been consistently associated with various indicators of both well-being and ill-being (e.g., Nielsen et al., 2020; Tangney et al., 2004).

Furthermore, a rapidly growing body of research has started to examine regulatory flexibility in daily life using ecological momentary assessment (EMA), focusing on indirect indicators such as repertoire or variability. These approaches provide valuable insights, but there remains debate about whether these constructs capture flexibility itself (e.g., Aldao et al., 2015; English & Eldesouky, 2020; Werner et al., 2025). In the present study, we take a complementary approach by focusing on the perceived ability to regulate flexibly, as initial evidence suggests that the ability to use strategies flexibly is particularly beneficial for psychological health (Troy et al., 2017; Westphal et al., 2010).

### Statement of Transparency

The data used in the present study were initially collected as part of several larger studies on self-regulation. None of the research questions or combinations of variables in the

following analyses have been previously analyzed or published. Neither the research questions nor the analyses were pre-registered. However, all relevant datasets collected by the lead author were included in the following analyses, thereby allowing us to conduct exploratory analyses on an initial dataset, confirm these results in the remaining individual datasets, and conduct summary analyses across all datasets (i.e., meta-analysis, mega-analysis). All study materials, data files, statistical code, and supplementary analyses are available on OSF. Project link: [osf.io/rm2ux/](https://osf.io/rm2ux/)

## Method

### Participants and Procedure

Across six samples (total  $N = 2,939$ ), participants were recruited from a psychology participant pool at different universities in Canada or Amazon’s Mechanical Turk (MTurk) via CloudResearch. Across all samples, participants were majority women (54%), White (62%) or Asian (20%), and were on average 36 years old ( $M = 36.21$ ,  $SD = 14.53$ ). Demographics for individual samples are summarized in Table 1S. In all samples, participants completed an online survey about a single target goal, including the goal to eat healthy (Samples A-B), to save money (Samples C-D), or to achieve a desired semester GPA (Samples E-F). Specifically, participants completed a series of questionnaires about their experience in pursuing the target goal, including their ability to flexibly use strategies and various indicators of psychological health.

### Measures

Descriptive statistics, correlations, and reliability metrics for individual samples are presented in Table 2S. There was sufficient reliability for all measures in all samples, with Cronbach’s  $\alpha$  ranging from .71 to .95.

**Regulatory Flexibility.** An adapted version of the Coping Flexibility Scale (13-items; Vrieze et al., 2012) assessed participants’ ability to switch between strategies according to

personal goals and situational demands. This measure captures peoples perceived ability to use strategies flexibly across contexts more generally, rather than focusing on any specific component (e.g., repertoire) or contexts. To adapt this measure to self-control, the following line was added to the original instructions: "When confronted with a temptation that conflicts with an important goal..." Example items include: "I immediately change my approach if a certain approach fails," "I easily think of a different approach that suits the changing situation," and "I have enough different options to quickly solve the problem." Responses were made on a five-point Likert scale ranging from 1 (*Never*) to 5 (*Almost Always*).

**Ill-Being.** As indicators of ill-being, participants completed the Center for Epidemiological Studies Depression Scale (CES-D; 20-items; Radloff, 1977) and the anxiety subscale from the Hospital Anxiety and Depression Scale (HADS; 7-items; Zigmond & Snaith, 1983). Responses for the CES-D were made on a Likert scale ranging from 0 (*rarely or none of the time*) to 4 (*most or all of the time*). For the anxiety subscale, participants were presented with four options for each item, which were re-coded according to the scoring manual (see supplementary materials). Items for each scale were summed, with higher scores indicating more depression and anxiety, respectively.

**Well-Being.** As indicators of well-being, participants completed the Satisfaction with Life Scale (5-items; Diener et al., 1985), the Meaning in Life Scale (3-items; Steger et al., 2006), the Brief Inventory of Thriving (Su et al., 2014), and a single-item self-rated mental health measure (Ahmad et al., 2014). Responses to the first three measures were made on a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Responses to the self-rated mental health item were made on a seven-point Likert scale ranging from 1 (*Very poor*) to 7 (*Excellent, could not be better*). Items for each

scale were averaged together to create a separate composite score, with higher scores indicating greater life satisfaction, meaning, thriving, and positive mental health, respectively.

## Results

### How Broadly Does Regulatory Flexibility Relate to Psychological Health?

We hypothesized that greater regulatory flexibility would be associated with better psychological health, including less ill-being and more well-being. To test this hypothesis, we first calculated correlations between flexibility and (a) ill-being (depression, anxiety) and (b) well-being (life satisfaction, meaning, thriving, positive mental health). Second, we conducted internal meta-analyses to determine the average association between flexibility and each outcome across all samples. Third, as a robustness check, we replicated findings using a mega-analysis that pooled individual-level data from all samples. Unlike meta-analysis, which relies on summary statistics, mega-analysis uses individual data, though both approaches yield comparable results under ideal conditions (Lin & Zeng, 2010). Finally, we re-ran all primary analyses controlling for goal commitment, goal difficulty, and reflective versatility.

### Regulatory Flexibility and Ill-Being

We first tested whether people who use strategies more flexibly reported less ill-being *within each sample* (Figure 1A-B). Pearson's correlations showed that flexibly using strategies was associated with less anxiety, with associations ranging from small to very large in all samples. A similar pattern emerged for depression, but only in the health and finance domains, where flexibility was associated with less depression, with medium to large associations. However, flexibility was unrelated to depression in the academic goal samples.

Next, we tested the average associations between regulatory flexibility and ill-being *across all samples* (Figure 1A-B). Results from internal meta-analyses suggest that flexibly

using strategies was associated with less depression and anxiety, with meta-analytic associations ranging from medium to large for each outcome. The same pattern of findings emerged for the mega-analyses, though the associations were slightly stronger than those in the meta-analyses. The same pattern of findings also emerged when controlling for additional covariates (Table 5S).

### ***Regulatory Flexibility and Well-Being***

We first tested whether people who used strategies more flexibly reported greater well-being *within each sample* (Figure 2A-D). Pearson's correlations indicated that flexibly using strategies was associated with more life satisfaction, meaning, thriving, and positive mental health, with medium to very large associations in all samples.

Next, we tested the average associations between regulatory flexibility and well-being *across all samples* (Figure 2A-D). Results from internal meta-analyses suggest that flexibly using strategies was associated with more life satisfaction, meaning, thriving, and positive mental health, with meta-analytic associations ranging from large to very large for each outcome. The same pattern of findings emerged for the mega-analyses, with the associations being nearly identical to those in the meta-analyses. The same pattern of findings also emerged when controlling for additional covariates (Table 6S).

### ***Is More Flexibility Always Better?***

Our second research question addressed whether more flexibility is always better. Although flexibility is generally presumed to be adaptive, several theoretical perspectives have suggested that its benefits may have limits. For instance, it has been proposed that there may be an upper limit to flexible responding, such that the relationship between flexibility and adjustment could be curvilinear (Bonanno & Burton, 2013). Others have similarly cautioned that flexibility should not be defined in a way that assumes inherent adaptiveness, as

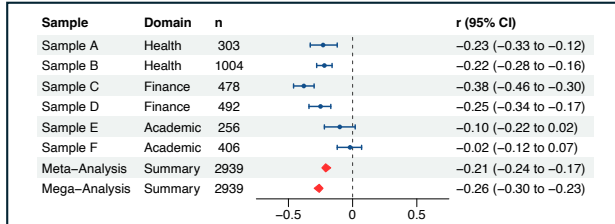
excessive adjustment may sometimes undermine stability or long-term goal pursuit (Aldao et al., 2015). This broader idea parallels the notion that many psychological strengths can show diminishing or even negative returns when taken to extremes – a “too much of a good thing” effect (Grant & Schwartz, 2011). And while initial findings from the self-control literature suggest that more self-control is always better (i.e., there is no evidence of curvilinear effects; Wiese et al., 2018), evidence from the emotion regulation literature suggests that strategic switching is not always advantageous and may sometimes backfire (Birk & Bonanno, 2016). Taken together, these perspectives highlight a central tension in the literature – whether regulatory capacities such as flexibility have only benefits or also potential limits. Building on this debate, we examined whether the ability to use strategies flexibly shows nonlinear associations with psychological health.

To test this exploratory question, we first examined the quadratic association between regulatory flexibility and each psychological health outcome. Specifically, we ran a series of regressions modeling each psychological health outcome on regulatory flexibility and its squared term in each sample. Second, as a first robustness check, we replicated these findings by conducting a mega-analysis that pooled data from all samples. Third, as a second robustness check, we re-ran all primary analyses controlling for goal commitment, goal difficulty, and reflective versatility.

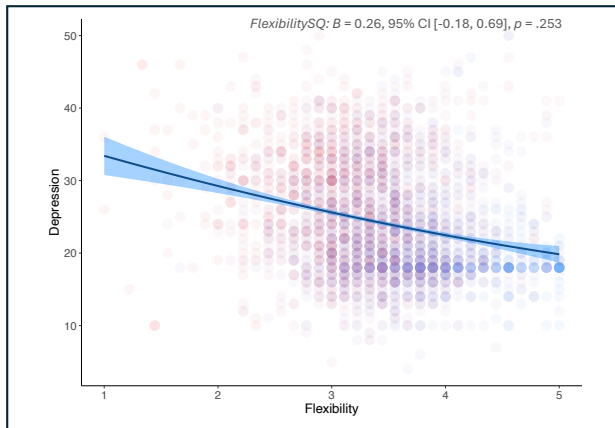
As indicated in Tables 3S-4S, there was no consistent evidence of a quadratic association between regulatory flexibility and psychological health among the individual samples. In the few instances where a quadratic association emerged, they were predominantly clustered within the well-being outcomes. However, rarely did these patterns replicate in the other sample within the specified domain or when including covariates (Tables 7S-8S).

**Figure 1. Sample-Level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Ill-Being.**

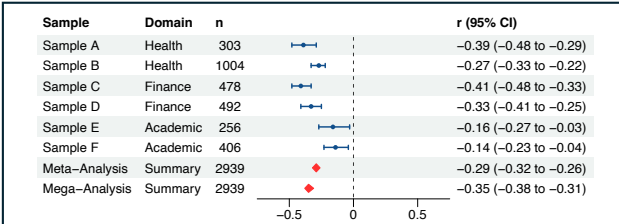
**A. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Depression.**



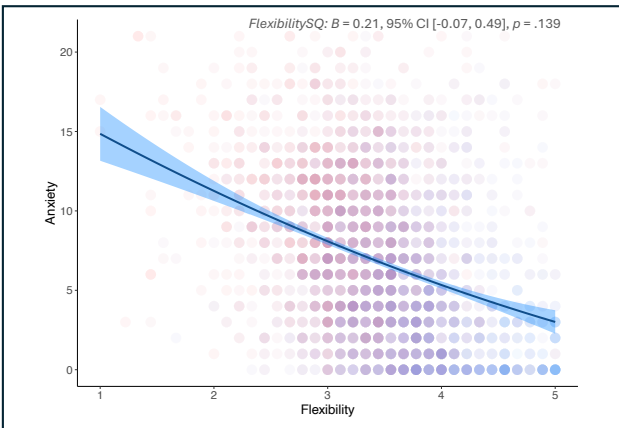
**C. Test of the Curvilinear Association Between Regulatory Flexibility and Depression (Mega-Analysis, N = 2939).**

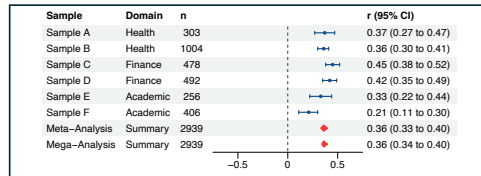
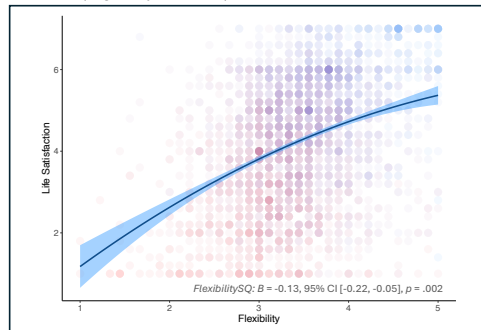
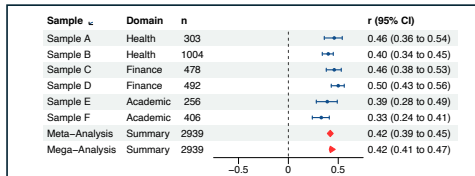
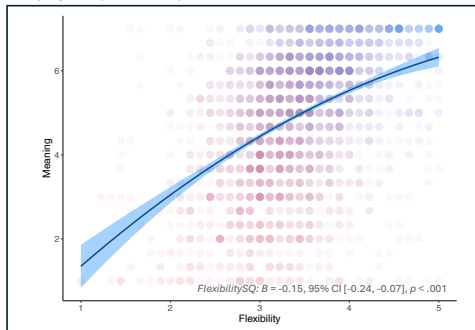
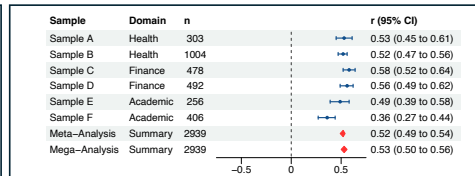
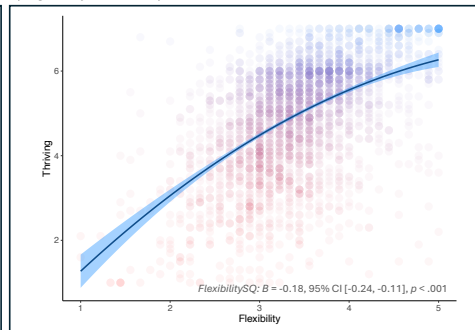
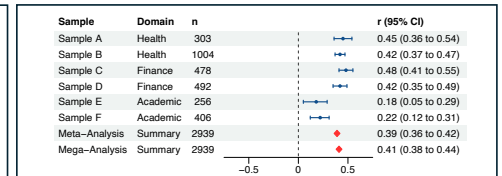
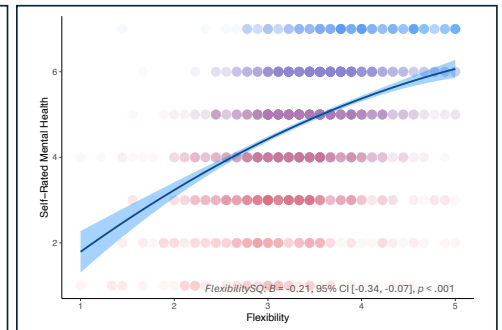


**B. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Anxiety.**



**D. Test of the Curvilinear Association Between Regulatory Flexibility and Anxiety (Mega-Analysis, N = 2939).**



**Figure 2. Sample-Level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Well-Being.****A. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Life Satisfaction.****E. Test of the Curvilinear Association Between Regulatory Flexibility and Life Satisfaction (Mega-Analysis, N = 2939).****B. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Meaning.****F. Test of the Curvilinear Association Between Regulatory Flexibility and Meaning in Life (Mega-Analysis, N = 2939).****C. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Thriving.****G. Test of the Curvilinear Association Between Regulatory Flexibility and Thriving (Mega-Analysis, N = 2939).****D. Sample-level, Meta-Analytic, and Mega-Analytic Associations Between Regulatory Flexibility and Self-Rated Mental Health.****H. Test of the Curvilinear Association Between Regulatory Flexibility and Self-Rated Mental Health (Mega-Analysis, N = 2939).**



Results from the mega-analysis provide a much clearer picture. When pooling all samples, there was once again no evidence of a quadratic association between regulatory flexibility and ill-being. As observed in Figure 1C-D, flexibility was linearly associated with ill-being, such that the ability to use strategies flexibly was associated with less depression and anxiety with no apparent downside of being “too flexible.” As observed in Figure 2E-H, a consistent quadratic pattern emerged for well-being, such that greater ability to use strategies flexibly was associated with higher life satisfaction, meaning, thriving, and positive mental health. However, this pattern reflected diminishing returns at the upper end of the observed range. That is, the association remained positive across all measured levels of flexibility, but the incremental gains in well-being became smaller at very high levels, suggesting a potential plateau rather than a reversal in outcomes.

### Discussion

Regulatory flexibility is widely presumed to be beneficial, but is more always better? Here, we found that having the ability to flexibly use strategies is broadly related to better psychological health – specifically, people who are more flexible not only report less anxiety and depression but also more positive functioning, including more life satisfaction, meaning, thriving, and positive mental health. As to whether more is better, we found different answers for different outcomes. For ill-being, more flexibility does seem to be better. For well-being, however, we found a quadratic association, suggesting diminishing returns.

These findings suggest that flexibility may play different roles for well-being and ill-being. One possibility is that the ability to use strategies flexibly may linearly buffer against distress by helping people manage stressors and avoid maladaptive responses, whereas promoting higher well-being could depend on additional approach-oriented processes, such as sustained goal engagement and meaning-making, that extend beyond merely reducing

discomfort or conflict (Tamnes et al., 2025; Werner & Ford, 2023). This interpretation aligns with perspectives proposing that flexibility should not be defined as inherently adaptive but rather examined in terms of when the strategies a person uses support meaningful goals (Aldao et al., 2015). Future research should therefore consider how people’s regulation goals – such as reducing negative emotions versus cultivating positive states – shape when flexibility promotes well-being versus merely protecting against ill-being.

The current findings are encouraging and provide additional evidence for the benefits of flexibility. The quadratic pattern observed here suggests that increases in flexibility are associated with higher well-being across the observed range, while the potential for diminishing returns may be limited to extremely high levels not well represented in the current data. However, it is important to acknowledge that regulating flexibly is not universally beneficial in all circumstances (e.g., Aldao et al., 2015; Troy et al., 2017). Optimal self-regulation involves knowing both *when* and *how* to be flexible for the current context, ensuring that regulatory efforts are adaptive rather than excessive or misaligned with situational demands. For example, switching strategies can have negative consequences depending on the order in which strategies are used (Birk & Bonanno, 2016). People also tend to use more strategies in intensely negative emotion episodes (Ladis et al., 2023). Though using multiple strategies can be advantageous when they are complementary, people can also rapidly cycle through strategies in moments of distress in the hopes that anything will work. Thus, while having the *ability* to regulate flexibly is beneficial, as shown here, it is also important to examine how flexibility is implemented in daily life. Future research will therefore benefit from integrating global measures of ability with real-world indicators of enacted regulation (e.g., using EMA). Each approach has unique strengths and limitations – EMA captures variability and situational fit in daily life, while global measures assess trait-level capacities

that may scaffold dynamic flexibility. Together, these complementary methods can advance our understanding of how flexibility operates across levels of analysis (e.g., Koval et al., 2023).

Finally, although the current data focus on regulating impulses that conflict with important personal goals, we hypothesize that these findings may generalize to other forms of affect regulation (e.g., emotions, stressors; see Werner & Ford, 2023 for discussion of the conceptual overlap between self-control and emotion regulation). Another particularly interesting future direction is to examine the link between flexibility and positive functioning in more severe forms of distress, such as adversity or psychopathology (Troy et al., 2023).

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