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Article

Social Psychological and Personality Science
2026, Vol. 17(5) 653–664
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DOI: 10.1177/19485506251385007
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Feeling Well, Functioning Well: How Psychological Well-Being Predicts Later Self-Control, but Not the Other Way Around

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Abstract

Although self-control is commonly believed to contribute to greater well-being, current evidence is inconclusive due to methodological and statistical issues. Indeed, there are both theoretical and empirical grounds to expect the opposite causal relation: wellbeing could precede self-control. We aimed to clarify this debate with two three-wave longitudinal studies, one on an Asian and the other on an American sample. We applied the random intercept cross-lagged panel model (RI-CLPM) to disentangle the stable-trait-level associations and within-persons relations between self-control and well-being. We found that earlier levels of well-being positively predicted levels of self-control 1 month (Study 2) and 6 months (Study 1) later. However, self-control did not predict later well-being. Our findings emphasize the need to reconsider the interpretations of previous—mostly between-persons—findings about self-control and well-being. Implications for understanding trait self-control, alternative causal models between self-control and well-being, and the primacy of well-being are discussed.

Keywords

self-control, well-being, random intercept cross-lagged model, intraindividual, positive affect, bidirectionality

Introduction

Psychologists have long considered self-control a prized human capacity. While the traditional perspective considers effortful inhibition of impulses synonymous with self-control (Baumeister & Heatherton, 1996; Schmeichel & Zell, 2007), we align with a more recent consensus to broaden its scope and define self-control as the ability to pursue long-term goals and values at the expense of short-term desires (Fujita, 2011; Hoyle & Davisson, 2016). Self-control has consistently been shown to predict long-term outcomes such as health, career success, and financial security (de Ridder et al., 2012; Moffitt et al., 2011). One of the most extensively studied outcomes is well-being—which generally encompasses positive feelings, effective functioning, and psychological flourishing (Diener et al., 2010; Huppert & So, 2013). Findings echo the narrative that self-control positively predicts well-being (e.g., de Ridder, 2024; Hofmann et al., 2014; Wiese et al., 2018), with researchers generally assuming that self-control leads to increased well-being. However, the existing evidence for causality is fraught with methodological and statistical issues, and the directionality of the relations between self-control and well-being, thus, remains debatable. In this article, we contribute to the discussion by employing rigorous statistical methods on two three-wave data sets.

Does Self-Control Lead to Increased Well-Being?

A large body of work, across age groups and cultures, demonstrates that self-control positively predicts well-being. Among adolescents, those with more self-control are less depressed, less stressed, and experience better satisfaction across life domains (Finkenauer et al., 2005; Orkibi & Ronen, 2017). An extensive multi-method study involving

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more than 5,000 participants—including teenagers, young, and middle-aged adults—shows that well-being (i.e., positive affect and life satisfaction) increases as a linear function of self-control, without evidence of a plateau (Wiese et al., 2018). Another study involving an age-diverse sample shows that older adults are less distressed than younger adults, and differences in self-control predict this disparity (Butterworth et al., 2022). Similarly, cross-cultural research shows that self-control strongly predicts adolescents' mental well-being in both individualistic (Canadians) and collectivistic (Chinese) samples (Niu et al., 2023).

Scholars generally assume that the above findings stem from higher self-control leading to improved well-being. Several mechanisms have been suggested. First, individuals with high self-control are better at avoiding and responding to motivational conflicts. It is argued that individuals possessing high self-control excel at balancing conflicting goals; they experience fewer motivational conflicts and feel more positive during conflicts (Hofmann et al., 2014). This tendency in people with high self-control is likely supported by their productive habits (Adriaanse et al., 2014; Galla & Duckworth, 2015) and their use of effective self-control strategies (e.g., avoiding temptations; Ent et al., 2015). Consequently, less frequent conflicts are associated with greater momentary affective experiences and overall life satisfaction (Hofmann et al., 2014). Second, self-control predicts more rewarding, approach-oriented behaviors in goal pursuit. Experience sampling data find that people with high self-control engaged in daily tasks with greater autonomous motivation (Converse et al., 2018); they prefer working on tasks that are important and rewarding ("want-to" tasks) instead of doing something because of obligations and external demands ("have-to" tasks). This focus on acquiring positive gains leads to more frequent success in goal pursuit and greater happiness (Cheung et al., 2014). Third, individuals with high self-control are more proficient at coping strategies that promote well-being. One study has shown that individuals with high self-control are better at attentional control, downplaying distractions, and reappraising situations, all of which lead to higher subjective well-being (Nielsen et al., 2019). As such, promoting self-control has been exalted as an effective means of increasing well-being and life satisfaction (de Ridder, 2024).

However, the strong recommendation is not substantiated by equally strong causal evidence. Most, if not all, of the evidence cited above is correlational. An initially promising line of work showed that training individuals' self-control could improve their well-being (e.g., Denson et al., 2011; Muraven, 2010). Later investigations, however, questioned the strength of this evidence. Two meta-analyses published around the same time provided contradictory conclusions about the effectiveness of self-control training (Beames et al., 2017; Friese et al., 2017). While Beames and colleagues (2017) arrived at an estimate of $g = 0.28$, Friese and colleagues (2017) corrected for small-study effects and publication bias and reached a corrected estimate of $g = 0.13$, which was not significantly different from zero. They further argued that the prevalence of inactive control groups in self-control training studies severely reduced the ability to infer causality. Hence, the causal effects of self-control training (e.g., whether it influences well-being) remain debatable.

Another approach to infer causal relations is through establishing Granger-causality (Granger, 1969) in longitudinal or time-series analyses (Shulman et al., 2025; Wood et al., 2008). Granger-causality identifies cases where variable x predicts future values of variable y, thereby fulfilling two key criteria for causality: association and temporal precedence. Despite its limitations (see *Limitations*; Shojaie & Fox, 2022), establishing Granger-causality is widely accepted, especially when ecologically valid manipulations of key variables are lacking (Seth et al., 2015). To the best of our knowledge, only one study has attempted to establish Granger-causality between self-control and well-being. Q. Li and colleagues (2022) analyzed a two-wave data set with a cross-lagged panel model (CLPM) and found that self-control predicted later well-being but not vice versa.

However, the shortcomings of their methodology (Q. Li et al., 2022) render their conclusions premature. First, alternative causal models—such as reversed causality or reciprocal effects—can fit the same two-wave data equally well (Lucas, 2023). Conclusions about directionality are, thus, inherently ambiguous with just two waves of data. Second, CLPM does not decompose within-person and between-person variations. As a result, it cannot determine whether the association between self-control and well-being reflects actual changes within individuals (which is needed to support a causal claim) or if people with generally higher self-control also tend to feel better, making it prone to misinterpret stable individual differences for evidence of causal effects (Hamaker et al., 2015; Lucas, 2023). In summary, the two-wave data structure and the use of traditional CLPM limit Q. Li et al.'s (2022) ability to establish Granger-causality between self-control and well-being.

Does Well-Being Lead to Increased Self-Control?

Less scholarly attention has been paid to how well-being could promote self-control. Existing theories on positive emotions, an integral component and a necessary experience of well-being (Diener et al., 2010), provide reasonable grounds for this causal direction. According to the broaden-and-build theory (Fredrickson, 2004, 2013), positive emotions broaden an individual's momentary thought-action repertoire that subsequently allows one to build personal resources and reserves (e.g., physical, social, and psychological). Specifically, when individuals experience positive emotions, they are more open in their thoughts and have expanded awareness, which has been shown to promote resilience, resourcefulness, and social connections that build psychological reserves (Fredrickson, 2013). Such personal and psychological reserves have been posited to

Table 1. *Possible Outcomes of Studies and Their Corresponding Implications*

Scenario	Support for H1	Support for H2	Implications
1	Yes	No	Support the prevailing assumption that self-control causes well-being
2	Yes	Yes	Enrich the prevailing assumption with a mutually reinforcing, upward spiral between self-control and well-being
3	No	Yes	Call to revise the prevailing understanding; consider well-being as a driver of self-control
4	No	No	Call to revise the prevailing understanding; search for third variable factors

facilitate self-control successes (Pilcher & Bryant, 2016; Wills & Bantum, 2012). For instance, social support encourages individuals to practice autonomous decision-making (Wills & Bantum, 2012) and thereby develop better self-control.

Empirical evidence directly supports the notion that positive emotions aid self-control successes and negative emotions hamper self-control attempts. Research has shown that individuals experiencing positive emotions have greater cognitive flexibility (Isen et al., 1987), stronger intrinsic motivation (Isen & Reeve, 2005), and make more efficient decisions (Isen & Means, 1983)—all of which conceivably aid self-control. Positive affect strengthens one's resistance against temptations (Wenzel et al., 2016) and helps to counteract the fatigue from previous effortful self-control attempts (Egan et al., 2015). By contrast, negative emotions impair self-control. Functional magnetic resonance imaging (fMRI) studies demonstrate that negative emotions overwhelm the brain's regulatory resources (Chester et al., 2016) and heighten the attraction of temptations during self-control dilemmas (Maier et al., 2015). Experience sampling evidence shows that daily and chronic stress both have detrimental effects on self-control (Park et al., 2016; Wolff et al., 2021). Taken together, it stands to argue that well-being, of which positive emotions are an integral part, has a positive effect on self-control.

The Present Study

We utilized three-wave data and the random intercept cross-lagged panel model (RI-CLPM) to examine the relations between self-control and well-being. With self-control and well-being measured at three time points, the RI-CLPM decomposed the between- and within-persons variance in their relations. By parsing out the between-persons covariance at the individual difference level, the analysis can better model the within-persons temporal dependency between variables than the traditional CLPM (Lucas, 2023). We simultaneously tested two hypotheses at the within-persons level: earlier self-control predicts later well-being (H1), and earlier well-being predicts later self-control (H2). Our investigation did not favor either hypothesis and allowed for both, neither, or one hypothesis to be supported. Each of the four possible outcomes of our investigation carries implications for understanding the relation between self-control and well-being (see Table 1). Supporting H1 but not H2 would validate the prevailing focus on self-control as the causal antecedent. Supporting both H1 and H2 would suggest a mutually reinforcing upward spiral between the two variables. Finding support for H2 but not H1 would challenge the prevailing assumption and suggest well-being as the primary driver of the duo. Finding no support for either hypothesis would necessitate a search for an alternative understanding of the observed association between self-control and well-being. A caveat is that failing to support either hypothesis is not evidence to refute the potential causal relation; absence of evidence is not evidence of absence (Altman & Bland, 1995). Nonetheless, simultaneously testing H1 and H2 provides diagnostic information on the relative primacy between self-control and well-being (Figure 1).

Method and Results

Analytic Plan

We used RI-CLPM with full information maximum likelihood estimation and robust standard errors to account for missing data and non-normality (Enders & Bandalos, 2001). This model decomposes the variance into between-persons and within-persons components. The between-persons (i.e., time-invariant) components are captured by the random intercepts. The within-person dynamics are captured by the latent within-person factors, while the residual variances represent occasion-specific disturbances not explained by the model. We modeled cross-lagged and autoregressive pathways between the within-person latent factors and constrained these pathways to be equal across time. The autoregressive pathway captures temporal stability—a person's current standing is a function of their previous standing. Controlling for this stability allows any remaining cross-lagged association between the Time 1 predictor and the Time 2 outcome to be interpreted as Granger-causal influence (Lucas, 2023; Zyphur et al., 2019). Hence, the cross-lagged pathways estimate the predictive influence of one variable on changes in another over time, beyond concurrent associations (Hamaker et al., 2015; Orth et al., 2021). To aid interpretation and model convergence, the residual covariances and grand means of the observed variables were constrained to be equal across time. Model fit was assessed based on standards set by Hu and Bentler (1999). Between-persons differences (i.e.,

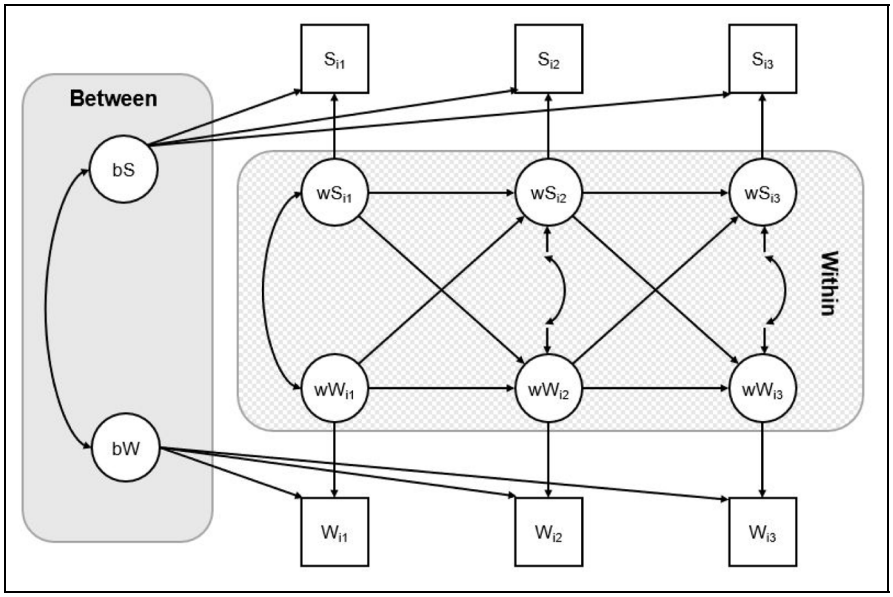


Figure 1. *Conceptual Diagram of the Model and Pathways That Are Being Examined Between Self-Control (S) and Well-Being (W) (Mulder & Hamaker, 2021).*

Note. Circles represent latent factors, and squares represent observed variables. The between-person factors are shown on the left panel, and within-person factors are shown on the right panel. Single-headed arrows signify regression paths and double-headed arrows represent interfactor and residual correlations. b = between-persons latent factor, w = within-persons latent factor, S = Self-control, W = Well-being. i1–i3 = Time 1 through Time 3.

random intercepts) were regressed onto the covariates in the adjusted models.

Transparency and Openness

We report sample size determination, exclusions, and measures. All data, analysis code, and materials are available at https://osf.io/a9rn2/?view_only=d00553efe0014d0bb36ba5c82cff4ce9. Data were analyzed using R, version 4.3.1 (R Core Team, 2023). Study 1 was not preregistered; Study 2's design and analysis were preregistered at https://osf.io/bzsqh/?view_only=de2d4193dbe542e08a2cf1538cd0bc0d. Both studies were approved by the university ethical review board.

Study 1

Participants and Procedure. This study was part of a larger project that examined working adults' career development and lifelong learning. We planned to recruit 400 working adults (M_{age} = 30.28 years, SD_{age} = 5.08 years) from an Asian country. They were recruited via social media, alumni emails, word-of-mouth, and posters. After excluding participants who failed attention checks, 377 completed Wave 1, with retention rates of 95% at Wave 2 and 87% at Wave 3.[1] Participants were compensated with $400 for completing the study over 2 years. As trait self-control and well-being were measured in three sessions separated by 6-month intervals (T1-T3), we focused on this portion of data for the present analysis.

The sample size for the project was jointly determined by funding constraints and the need to exceed 250 participants for stable correlations (Schönbrodt & Perugini, 2013). Since we did not specifically plan to detect cross-lagged effects (Mulder, 2023), we provided supplementary analyses to corroborate our main results. More details of the larger project are available in Supporting Information (SI)—Section 1. We provided descriptive and demographic information in Table 2.

Measures

Self-Control. Participants responded to a 20-item capacity for self-control scale (Hoyle & Davisson, 2016). This scale (α = .86–.88) assessed holistic self-control comprising three facets: *inhibition* (e.g., "I am able to resist temptations."), *initiation* (e.g., "I waste a lot of time before getting down to work"), and *continuation* (e.g., "I find it easy to keep with good behavior.") with a Likert-type response scale (1 = *Hardly ever*, 5 = *Nearly always*). This scale aligned with our broader definition of self-control, allowing us to better capture the general construct through its subcomponents.

Well-Being. Given that the concept of well-being differs across cultures (Raudenská, 2023), we assessed participants' well-being using a culturally appropriate 16-item mental well-being scale designed specifically for Asians (α

Table 2. *Descriptive Statistics of Predictors, Covariates and Criterion Variables*

	Time 1			Time 2			Time 3		
Variable	*N*	*M* (*SD*)	Range	*n*	*M* (*SD*)	Range	*n*	*M* (*SD*)	Range
Study 1									
Self-control	377	3.39 (0.51)	1–5	359	3.25 (0.51)	1–5	327	3.27 (0.50)	1–5
Well-being	377	6.80 (1.01)	1–9	359	6.64 (1.10)	1–9	327	6.73 (1.04)	1–9
Age (years)	377	30.14 (5.07)	25–45						
Sex[a] (% female)	377	45.4%	0–1						
Education[b]	376	11.94 (0.67)	1–15						
Study 2									
Self-control (std)	1,299	0.65 (0.18)	0–1	1,144	0.63 (0.19)	0–1	1,011	0.65 (0.19)	0–1
Well-being (std)	1,299	0.66 (0.19)	0–1	1,144	0.66 (0.19)	0–1	1,011	0.66 (0.20)	0–1
Age (years)	1,299	41.15 (11.45)	19–78						
Sex[c] (% female)	1,299	47.9%	1–4						
Education[d]	1,299	6.52 (1.54)	1–9						

Note. All scores were recoded such that higher values indicated higher standing in each variable. (std) means standardized.
[a]0 = *Female*, 1 = *Male*, 2 = Others. [b]Education was indexed by the highest education level attained (1 = *no formal education*, 14 = *doctorate degree*, 15 = *professional qualifications*). [c]1 = *Male*, 2 = *Female*, 3 = *Non-binary*, 4 = *Prefer not to tell*. [d]Education was indexed by the highest education level attained (1 = *no formal education or elementary school*; 9 = *Doctoral degree/Professional*).

Table 3. *Zero-Order Correlations Between Self-Control and Well-Being*

		Study 1					Study 2				
No.	Variable and Timepoint	1	2	3	4	5	1	2	3	4	5
1	Self-control T1	-					-				
2	Self-control T2	**.71**	-				**.87**	-			
3	Self-control T3	**.68**	**.72**	-			**.86**	**.90**	-		
4	Well-being T1	**.47**	**.43**	**.33**	-		**.66**	**.61**	**.63**	-	
5	Well-being T2	**.39**	**.52**	**.39**	**.73**	-	**.61**	**.65**	**.64**	**.87**	-
6	Well-being T3	**.34**	**.37**	**.45**	**.69**	**.72**	**.60**	**.61**	**.68**	**.85**	**.87**

Note. T1–T3 = Time 1 through Time 3. Significant correlations are marked in boldface, $p < .05$.

= .92–.93; Fen et al., 2013). Sample items from this scale include "I am happy," "I appreciate my own self-worth," and "I am appreciative of life" (1 = *Never*, 9 = *Always*).

Covariates. Participants also provided demographic information, including age, gender, and educational attainment. These variables influenced our key variables of interest and are thus controlled for in the analyses (Fergusson et al., 2013; Wang et al., 2017). Notably, the findings remained the same even after the covariates were controlled for (SI—Section 3).

Variables in Supplementary Analyses. As this study was part of a larger project, more variables such as positive and negative affect (Watson et al., 1988) were also assessed. The variables relevant to this study are described in SI—Section 4.1.2.

Results. Zero-order correlations between the variables are shown in Table 3. The model (Figure 2) has acceptable fit, $\chi^2(df = 24) = 69.24$, $p < .001$, root mean square error of approximation (RMSEA) = 0.071, 90% confidence interval [CI] = [0.052, 0.091], Standardized Root Mean Square Residual (SRMR) = 0.040, and Comparative Fit Index (CFI) = 0.97 (Hu & Bentler, 1999).

At the between-persons level, self-control and well-being were positively associated, Cov (RI_x, RI_y) = 0.167, SE = 0.03, $p < .001$, as expected. At the within-persons level, earlier self-control did not predict later well-being (B = 0.21, SE = 0.17, p = .210, 95% CI = [−0.119, 0.542], β = .10). Thus, H1 was not supported.[2] However, in support of H2, earlier well-being positively predicted later self-control (B = 0.09, SE = 0.04, p = .045, 95% CI = [0.002, 0.170], β = .18). Notably, the autoregressive relations were nonsignificant (βs < 0.14, ps > .21).

Supplementary Findings. We examined the extent to which earlier self-control and well-being predicted individuals' momentary affect—assessed through an experience sampling method (ESM) that participants in this study also underwent. Participants reported momentary levels of positive and negative affect three times a day for 7 days (see

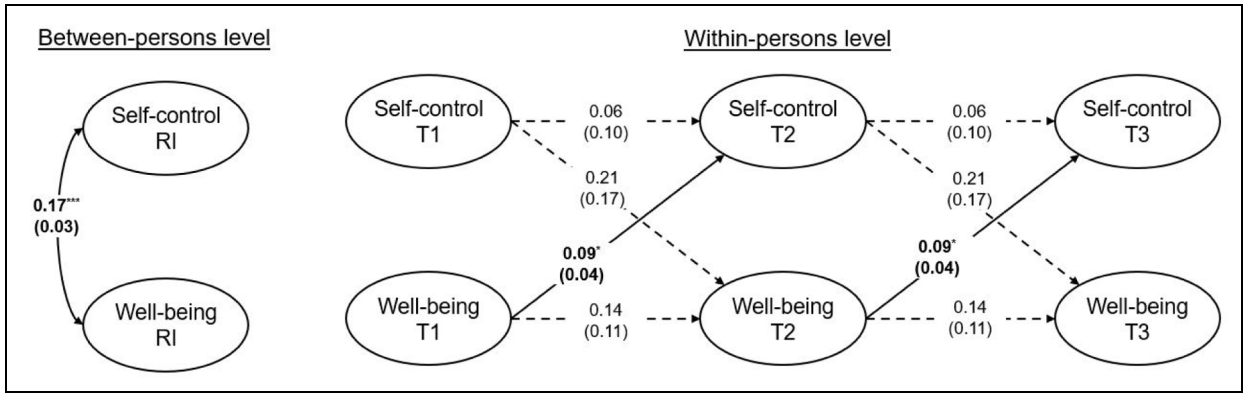


Figure 2. *Unstandardized Parameter Estimates of Random-Intercept Cross-Lagged Panel Model for Self-Control and Well-Being (Study 1)*
Note. Ellipses represent latent factors, whereby between-person factors are shown on the left panel, and within-person factors are shown on the right panel. Covariates and measurement models are omitted for visual succinctness. Values on the single-headed arrows signify unstandardized path coefficients, and values for double-headed arrows represent interfactor correlations. Solid and dotted lines represent significant and nonsignificant pathways, respectively. RI = random intercept. T1–T3 = Time 1 through Time 3.
$^{*}p < .05$. $^{***}p < .001$.

SI—Section 4.1 for detailed methods) within 1 month of completing T1. Using linear multilevel modeling, we examined whether T1 self-control and well-being predicted affect. When self-control was entered alone as a predictor, it indeed predicted increased positive affect ($b = 0.30$, $SE = 0.08$, $p < .001$) and reduced negative affect ($b = -0.26$, $SE = 0.07$, $p < .001$). But when both self-control and well-being were included, the effect of self-control disappeared for both positive ($b = 0.07$, $SE = 0.09$, $p = .465$) and negative affect ($b = -0.07$, $SE = 0.08$, $p = .364$); only well-being predicted positive ($b = 0.25$, $SE = 0.04$, $p < .001$) and negative ($b = 0.19$, $SE = 0.04$, $p < .001$) affect. Hence, self-control did not have unique predictability on momentary affect over and above general well-being.

Conversely, momentary affect predicted self-control 5–6 months (T2) and 1 year later (T3), as compared to the baseline. We computed a score of momentary (positive) affect by averaging positive affect and reverse-coded negative affect. Our results showed that between-persons differences in momentary affect predicted self-control at T2 ($b = 0.21$, $SE = 0.02$, $p < .001$) and T3 ($b = 0.21$, $SE = 0.02$, $p < .001$) while controlling for self-control at T1. Although these findings do not offer causal inferences, to the extent that momentary affect is an index of well-being (Diener et al., 2010), they corroborate our main findings for the primacy of well-being over self-control. Details and results of these analyses can be found in the SI (Section 4.2).

Discussion. Contrary to the prevailing assumption, preceding self-control did not predict well-being; instead, earlier well-being predicted improvement in later self-control (Table 1, Scenario 3). In addition, supplementary analyses on momentary affect corroborate the asymmetrical causal relation and the primacy of well-being over self-control. Two aspects of our results warrant further investigation. First, we observed nonsignificant autoregressive pathways, suggesting that the 6-month interval between the measurements might be too long for self-control and well-being to have meaningful carry-over effects on themselves (Lucas, 2023). Would our results still hold for shorter intervals, whereby autoregressive results might be significant? We also observed a nonsignificant but directional effect of self-control on well-being, suggesting that the sampling variability of Study 1 might be too high to reliably detect the effect. In Study 2, we replicated our three-wave design with shorter time intervals (1 month) with a larger American sample. We preregistered the hypothesis that well-being would have a positive cross-lagged effect on self-control at a within-persons level.[3]

Study 2

Participants and Procedure. Working adults in the United States were recruited through Cloud Research for a three-wave survey conducted over 3 months. Participants completed an online survey three times, each 1 month apart. They received compensation of 2, 3, and 4 USD for completing each respective wave. To achieve 80% power to detect a cross-lagged effect size of 0.12 (Mulder, 2023), we aimed to recruit at least 1,200 participants. After excluding participants who failed at least 2 out of 4 attention checks, 1,299 participants completed Wave 1 ($M_{age} = 41.2$ years, $SD_{age} = 11.5$ years), with 88% of participants retained from Wave 1 to Wave 2 and 78% from Wave 1 to Wave 3.

The study was part of a larger data collection effort (see SI—Section 1 for examples of other constructs).

Measures

Self-Control. The same items from Study 1 assessed participants' self-control ($\alpha = .93$–$.94$; Hoyle & Davisson, 2016).

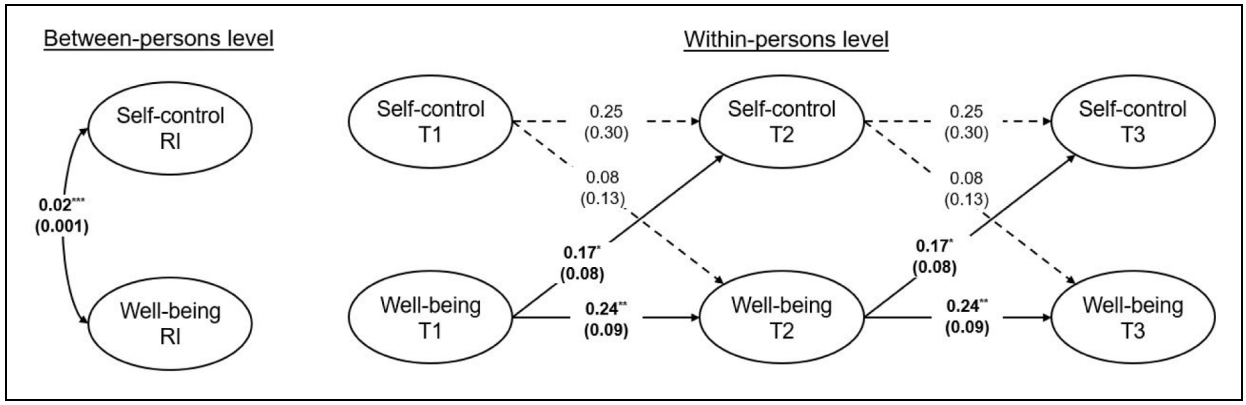


Figure 3. *Unstandardized Parameter Estimates of Random-Intercept Cross-Lagged Panel Model for Self-Control and Well-Being (Study 2)*
Note. Ellipses represent latent factors, whereby between-person factors are shown on the left panel, and within-person factors are shown on the right panel. Covariates and measurement models are omitted for visual succinctness. Values on the single-headed arrows signify unstandardized path coefficients, and values for double-headed arrows represent interfactor correlations. Solid and dotted lines represent significant and nonsignificant pathways, respectively. RI = random intercept. T1–T3 = Time 1 through Time 3.
*$p < .05$. **$p < .01$. ***$p < .001$.

Well-Being. Participants completed a 10-item scale assessing positive feeling and positive functioning, optimism, positive emotions, and vitality (Huppert & So, 2013; Marsh et al., 2020). As the materials relevant to this paper were part of a larger, collaborative data collection, this scale was chosen for its cultural appropriateness and brevity. Participants answered five items (e.g., "*I am always optimistic about my future*.") on a 5-point Likert-type scale (1 = *Strongly disagree*, 5 = *Strongly agree*); one item (e.g., "*Taking all things together, how happy would you say you are?*") on an 11-point scale (0 = *Extremely unhappy*, 10 = *Extremely happy*); and four items (e.g., *"How much time in the past week did you have a lot of energy?"*) on a 4-point scale (1 = *None or almost none of the time*, 4 = *All or almost all of the time*). We standardized each item response before creating an average score (α = .90–.91).

Covariates. The same covariates, age, gender, and education, were controlled for in Study 2's analyses. Key findings remained the same after controlling for covariates (SI—Section 3).

Results. The model has acceptable fit, $\chi^2(df = 24) = 139.442$, $p < .001$, RMSEA = 0.061, 90% CI = [0.051, 0.071], SRMR = 0.021, and CFI = 0.99 (see Figure 3; Hu & Bentler, 1999).

At the between-persons level, self-control and well-being were again positively associated, Cov (RI_x, RI_y) = 0.019, SE = 0.001, $p < .001$. At a within-persons level, earlier self-control did not predict later well-being (B = 0.08, SE = 0.13, p = .526, 95% CI = [−0.170, 0.333], β = .08). As preregistered, earlier well-being positively predicted later self-control (B = 0.17, SE = 0.08, p = .038, 95% CI = [0.009, 0.324], β = .17). The autoregressive relations among self-control were not significant (β = .25, SE = 0.30, p = .392, 95% CI = [−0.328, 0.836]) but significant among well-being (β = .24, SE = 0.09, p = .005, 95% CI = [0.072, 0.404]).

General Discussion

Using two three-wave data sets and the RI-CLPM, we offered rigorous tests for the directionality of the relations between self-control and well-being. We found no within-persons evidence that self-control reliably predicted subsequent well-being (H1 not supported). In contrast, individuals who reported greater well-being (e.g., feeling happy, appreciating life, having lots of energy) reported better self-control either 1 (Study 2) or 6 (Study 1) months later (H2 supported). The standardized cross-lagged effects (Schuurman et al., 2016) from well-being to later self-control were small to moderate (Orth et al., 2024) and highly similar across both studies ($\beta \approx .18$). Furthermore, supplementary ESM results (Study 1) corroborated the primacy of well-being over self-control: self-control did not have unique predictability for the daily experience of well-being—positive affect; conversely, daily positive affect predicted self-control up to 12 months later. Our results aligned with Scenario 3 in Table 1 and call for rethinking the prevailing assumption that self-control leads to greater well-being.

The Primacy of Well-Being

Our findings suggest that well-being is the primary driver of the bivariate relations. Consistent with the broaden-and-build perspective (Fredrickson, 2004, 2013), feeling well may build critical resources and skills that contribute to self-control successes. Future research may consider the kind of effortless self-control processes (de Ridder et al., 2012) that well-being promotes. For example, positive mood accelerates habit development (de Wit & Dickinson,

2009), which may serve as a mediator for the causal effect of well-being on self-control. Another candidate could be cognitive flexibility (Isen et al., 1987), which could underlie a flexible use of self-regulatory strategies in goal pursuit (Bürgler et al., 2021).

Indeed, well-being may be an underappreciated way of improving self-control. This is particularly true because our findings were observed when autoregressive effects were not significant between earlier and later instances of self-control (Studies 1 and 2) and well-being (Study 1). Earlier well-being predicted later self-control over long intervals, even when self-control did not have a within-persons carry-over effect. Improving well-being may prove more potent than practicing the core processes of self-control, which have shown limited success as a key element of self-control intervention (Friese et al., 2017).

Theoretical Implications for Self-Control

The lack of a cross-lagged effect of self-control on well-being is surprising, and we offer two directions for future thinking. First, alternative causal relations between self-control and well-being can be considered. While we failed to detect a within-persons causal effect, which is the most common conception of a causal relation in a longitudinal design, a between-persons effect may exist (Hamaker et al., 2015; Lucas, 2023). For instance, it is possible that the *chronicity* of high trait self-control, not state self-control per se, leads to chronic well-being (a between-persons effect); any fluctuation in state self-control does not translate to fluctuation in state well-being (a within-persons effect). RI-CLPM cannot test such an effect, as it treats between-level covariance, which we consistently observed, as stable-trait-level associations (Lucas, 2023). Inzlicht and Roberts (2024) discuss the distinction between trait and state self-control, and our findings lend strength to this perspective. Future work involving more intense data collection, complex modeling, and a new conceptualization of the long-term impact of self-control is encouraged.

Second, scrutiny of self-control as a trait construct should be continued. Recent studies highlight the domain- and process-specific nature of self-control (see Dang & Jia, 2024 for a review). Evidence shows that over 85% of the variance in goal progress lies at the within-persons level (Werner et al., 2016). It seems less the case that some people are better at self-control than others. Instead, people seem to be better at self-control in some domains than others. Furthermore, people employ a variety of strategies to promote goal pursuit (Wenzel et al., 2024), and individuals vary in the strategies they prefer (Peetz & Davydenko, 2021). In other words, two individuals reporting the same level of trait self-control may differ in their domains of strengths and specific strategies they utilize; this heterogeneity in what trait self-control captures could underlie its weak predictive power on well-being. If so, the usefulness of trait self-control as a construct needs to be reconsidered.

Limitations

Our findings are constrained by the assumptions and limitations of the Granger-causality framework. Granger-causality does not account for unmeasured time-varying third variables that may simultaneously influence both constructs within individuals over time. Thus, future work should consider potential time-varying confounds such as daily stress, sleep quality, or social conflict (Alquist et al., 2018; Liu et al., 2020; Wolff et al., 2021), which may independently influence both well-being and self-control within individuals. Furthermore, more intensive data collection and advanced modeling are needed to verify the assumptions of linearity and stationarity (i.e., that relationships between variables are time-invariant) behind Granger-causality for more rigorous interpretation (Shojaie & Fox, 2022). Most importantly, replicable paradigms to manipulate self-control should be developed so that conclusive causal evidence can be accrued from experiments.

Absence of evidence does not equal evidence of absence (Altman & Bland, 1995). We might have failed to detect a true effect of self-control on well-being due to various issues. First, the sampling variability in our studies might have been too high to reliably detect the cross-lagged effect of self-control on well-being, which was positive in both studies. Future work with a much larger sample size may be able to detect a bidirectional cross-lag pattern. Second, our studies only examined cross-lagged effects over 3 months and 1.5 years, which might not have provided sufficient observation windows. It may take a considerable time for self-control success to translate into more lasting forms of heightened well-being (e.g., it takes 4 years to obtain a college degree and a good job). Indeed, some studies have examined how childhood self-control influences outcomes in adolescence (for a review, see Peake, 2017).

Third, the specific measures of self-control and well-being we have employed might not have been well-suited for identifying the effect of self-control. We believe, however, this is unlikely. The most widely used brief self-control scale (BSCS; Tangney et al., 2004) has been criticized for its narrow emphasis on inhibition, inclusion of items non-specific to self-control (e.g., "I am lazy") and high susceptibility to social desirability (Dang & Jia, 2024). Instead, we employed a scale that is congruent with our broader definition, offering a more comprehensive assessment, but is still highly correlated with the popular scale[4] (r = .75; Hoyle & Davisson, 2017). Similarly, we chose the specific measures of well-being due to concerns related to cultural appropriateness (Studies 1 and 2) and the length of the instrument (Study 2). They are also well correlated with other well-known scales such as the Warwick Mental Wellbeing Scale, PERMA, life satisfaction, and happiness (Fen et al., 2013; Marsh et al., 2020). Although evidence suggests that behavioral assessments might be less susceptible to reporting biases (Jia et al., 2023), our choice of employing self-reported measures is justified by

investigations demonstrating the superiority of self-reported measures, especially in the domain of self-regulation (Enkavi et al., 2019). Nonetheless, changing study instruments could help uncover the effect of self-control in future research.

Finally, the effect of self-control may somehow be weak in the two cultures (i.e., Asian and American) we examined. Cultures can offer different interpretive frameworks to organize people's mental representation of self-control. For instance, one study shows that individualism and collectivism have, respectively, a negative and positive correlation with trait self-control (J.-B. Li et al., 2018). Another study indicates that Indians find the exertion of willpower—a notion that is related to self-control—energizing, while Americans find it tiring (Savani & Job, 2017). Hence, the impact of self-control on well-being may be stronger in specific cultures that we have not explored.

Conclusion

For years, scholars and practitioners have lauded the goodness of self-control for success and well-being. The lack of convincing causal evidence stands in stark contrast to the strong recommendations. The present results and the ambiguity of past causal evidence call for scrutiny of the assumed effect of self-control and a recognition of the primacy of well-being in the relation between two important variables of human thriving.

Acknowledgments

We would like to acknowledge Titus Quek Wei Yang, Suqi Chia, Carrisa Yow, and Charmaine Sak Hao Yean for their help and support in data collection.

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Ismaharif Ismail: Investigation, Data curation, Methodology, Project administration, and Writing—review & editing.
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Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The research is partially funded by the Workforce Development Applied Research Fund (GA18-03) from the SkillsFuture Singapore Agency (SSG), awarded to L.J.

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Supplemental Material

The supplemental material is available in the online version of the article.

Notes

1. In both studies, our findings remained the same when analyzing only participants with complete data (see SI—Section 2).
2. SI—Section 5 reports analyses involving the subcomponents of self-control. None of the subcomponents predicted later well-being. Well-being predicted later initiation most reliably.
3. SI—Section 1 explains an additional hypothesis in the preregistration, which is beyond the scope of the current manuscript.
4. Analyses with related BSCS items yielded consistent results (see SI—Section 6).

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Handling Editor: Lora Park