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Almost there: Mindfulness and the intention–behavior gap in procrastination

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Abstract

Procrastination is often conceptualized as a failure of self-regulation in which individuals delay intended tasks despite anticipating negative consequences. Mindfulness has been proposed as a psychological process that may reduce procrastination by improving attentional regulation and reducing reactivity to unpleasant task-related emotions. The present study conceptually replicated and extended prior work by examining whether a brief mindfulness induction influences both intentions and behavioral initiation of a procrastinated task. Participants (N = 205) completed measures of trait mindfulness, ADHD, procrastination, and social desirability bias before being randomly assigned to either a three-minute mindfulness exercise or a control activity. Participants then reported their intention to work on a task they had been procrastinating on and were given a 15-minute opportunity to begin working on that task. Trait mindfulness was negatively associated with both procrastination and attentional difficulties, and attentional difficulties partially mediated the relationship between mindfulness and procrastination. Participants in the mindfulness condition reported stronger intentions to begin their procrastinated task when engagement with the exercise was taken into account. However, the mindfulness exercise did not influence whether participants used the 15-minute opportunity to initiate their procrastinated task; participants in both conditions initiated and completed their tasks at similar rates. Intentions to do the task significantly predicted task initiation and completion, and social desirability bias was unrelated to initiation behaviors. These findings suggest that brief mindfulness exercises may increase motivational readiness to act without necessarily producing immediate changes in behavior.

Introduction

Procrastination refers to the voluntary delay of an intended course of action despite expecting that the delay will lead to negative consequences (Steel, 2007). It is a common behavioral pattern that is associated with poorer academic performance, increased stress, and reduced well-being (Sirois & Pychyl, 2013; Steel, 2007). Contemporary accounts conceptualize procrastination as a failure of self-regulation in which individuals postpone goal-directed actions in favor of short-term mood repair or immediately rewarding alternatives (Sirois & Pychyl, 2013). Although delaying a task may temporarily reduce negative emotions associated with doing the activity, the delay itself often produces additional stress, guilt, and anxiety as deadlines approach (Lay, 1994; Sirois, 2014). Understanding psychological processes that help individuals initiate delayed tasks therefore represents an important direction for interventions targeting procrastination.

One mechanism that may contribute to procrastination is difficulty sustaining attention on goal-directed tasks. Tasks that require sustained concentration often evoke boredom, frustration, or anxiety, making it difficult to maintain focus and increasing the likelihood of distraction or avoidance. Empirical work supports this view: individuals who report higher levels of procrastination frequently show poorer attentional control and greater symptoms of attentional dysregulation, including ADHD-related symptoms (Barkley, 1997; Niermann & Scheres, 2014; Wypych et al., 2018). Difficulties in sustaining attention may therefore contribute to delays in task initiation, particularly when tasks are effortful or

emotionally aversive. In this sense, procrastination can partly reflect difficulty maintaining attention on goal-directed behavior in the presence of competing internal or external distractions.

Mindfulness may represent one psychological process that helps individuals regulate attention and remain engaged with effortful tasks. Mindfulness is commonly defined as the capacity to maintain present-moment awareness of one's thoughts, feelings, and bodily sensations with an attitude of openness and non-judgment (Brown & Ryan, 2003; Kabat-Zinn, 1994). Theoretical models propose that mindfulness enhances attentional monitoring and reduces automatic reactivity to distracting thoughts or emotional discomfort (Bishop et al., 2004; Malinowski, 2013). By fostering awareness of present-moment experience and reducing habitual avoidance of unpleasant internal states, mindfulness may help individuals remain engaged with challenging tasks rather than postponing them. Recent work has further suggested that mindfulness promotes both attention regulation and emotion regulation processes that are central to successful self-regulation (Chambers et al., 2009; Garland et al., 2011; Johnson et al., 2024; Mao et al., 2025).

Consistent with this theoretical perspective, a growing body of research has linked mindfulness with lower levels of procrastination. Cross-sectional studies have found that individuals higher in trait mindfulness report less procrastination and greater capacity to sustain attention during goal-directed activity (Sirois & Tosti, 2012; r = –.30 to –.50; Mao et al., 2025 meta-analysis, r = –.365). More recent research has continued to document negative associations between mindfulness and procrastination across different populations (Gautam et al., 2023; Li et al., 2023). Intervention studies also suggest that mindfulness-based programs can reduce procrastination and related negative emotional responses (Ilanloo et al., 2025; Rad et al., 2023). However, most of these interventions involve structured training programs delivered over several weeks, such as mindfulness-based cognitive therapy or other multi-session mindfulness interventions. Although these programs can be effective, their length makes it difficult to determine whether brief, momentary mindfulness states are sufficient to influence procrastination-related behavior.

To our knowledge, only one study has examined whether a quick, one-session mindfulness induction can influence procrastination-related outcomes. Schutte and del Pozo de Bolger (2020) tested the effects of a three-minute mindfulness exercise designed to increase nonjudgmental awareness of present-moment bodily sensations. Participants who completed the mindfulness exercise reported stronger intentions to begin working on a task they had been delaying compared with participants in a control condition. These findings suggest that even a brief mindfulness induction may influence motivational processes relevant to procrastination.

However, intentions and behavior correspond only modestly: meta-analytic evidence indicates that experimentally induced changes in intention produce only small-to-medium changes in behavior (Sheeran, 2002; Sheeran & Webb, 2016). Procrastination has itself been characterized as a manifestation of this intention–behavior gap, in which individuals form goal-relevant intentions but fail to act on them in a timely manner (Kroese & de Ridder, 2016). Because procrastination ultimately involves delaying

action rather than merely intending to act, behavioral measures of task initiation provide an important extension of this work.

The present study sought to conceptually replicate and extend the findings of Schutte and del Pozo de Bolger (2020). Participants completed measures of trait mindfulness, attentional capacity, and procrastination before being randomly assigned to either a brief mindfulness exercise or a control activity. We examined whether trait mindfulness was associated with attentional capacity and procrastination, whether attentional capacity mediated the relationship between mindfulness and procrastination, and whether participants in the mindfulness condition reported stronger intentions to begin a procrastinated task.

Extending prior work, we also included a behavioral measure of task initiation. Following the control or mindfulness intervention, participants were given a fifteen-minute period during which they were asked to begin working on their procrastinated task (Garg & Schooler, 2026). This design allowed us to examine whether a brief mindfulness induction influences not only intentions but also the likelihood that individuals initiate a procrastinated task. As the fifteen-minute window required participants to choose tasks they could complete in that time, the behavioral measure tested initiation of short, tractable procrastinated tasks. Because studies of procrastination and mindfulness often rely on self-report measures that may be influenced by socially desirable responding, we additionally included a measure of social desirability bias to test for potential response bias.

We predicted that trait mindfulness would be positively associated with attentional capacity and negatively associated with trait-level procrastination, with attentional capacity mediating this relationship. Consistent with Schutte and del Pozo de Bolger (2020), we further predicted that participants in the mindfulness condition would report stronger intentions to work on their task than participants in the control condition. Predictions for the behavioral extension were more tentative. Given the documented intention–behavior gap, we expected any effect of the mindfulness induction on behavioral initiation to be smaller than its effect on intentions. We further predicted that stronger intentions to work on the task would be associated with a greater likelihood of task initiation overall, independent of condition.

Method

Participants

Participants were recruited from the undergraduate participant pool at the University of California, Santa Barbara through the SONA research management system and received course credit for participation. The target sample size was modeled on Schutte and del Pozo de Bolger (2020), who recruited 174 participants and detected the intention effect; we aimed for a comparable sample to provide adequate power for this same comparison.

Participants were excluded in several stages. First, participants who did not provide informed consent were excluded (n = 3). Second, participants who did not complete the full study were removed (n = 41). Third, participants who failed a seriousness check—asking whether they had responded seriously, with the assurance that compensation would not be affected by their response—were excluded (n = 11). Fourth, participants were excluded if their estimated task completion time fell outside a 10–20 minute window (n = 13), as completion times outside this range were considered incompatible with the 15-minute behavioral task period. Finally, duplicate entries identified through case-insensitive matching of participant names were removed, retaining only the first submission (n = 8).

After applying these criteria, the final analytic sample consisted of N = 205 participants (Control: n = 101; Mindfulness: n = 104). An achieved power analysis conducted in G*Power (Faul et al., 2007) indicated that the final sample (N = 205; α = .05, two-tailed) provided 80% power to detect a minimum effect size of d = .39 for between-group comparisons (two-sample t test) and r = .19 for correlational analyses.

Demographic information was available for 175 participants. The mean age was 18.80 years (SD = .96, range = 17–24). The sample was 73.1% female. In terms of ethnicity, 41.1% identified as Caucasian, 22.9% as Asian/Pacific Islander, 17.1% as Latino/a or Hispanic, 16.6% as other, 1.7% as African American, and .6% declined to answer.

This study was approved by the University of California, Santa Barbara Human Subjects Committee (IRB approval number: 247-25-0605). This study was not preregistered.

Measures

Freiburg Mindfulness Inventory (FMI; Kohls et al., 2009; Walach et al., 2006). Trait mindfulness was assessed using the short form of the FMI, which measures present-moment awareness and nonjudgmental acceptance of experience. The 14-item scale asks respondents to reflect on their recent experiences using a 4-point scale ranging from *Rarely to Almost Always*. Sample items include “I am open to the experience of the present moment,” “I watch my feelings without getting lost in them,” and “In difficult situations, I can pause without immediately reacting.” One item (“I am impatient with myself and with others”) was reverse-scored. Scores were averaged such that higher values reflected greater trait mindfulness. The FMI has demonstrated good reliability and validity across samples with and without meditation experience (Kohls et al., 2009; Walach et al., 2006). In the present study, internal consistency was α = .80.

Lay’s General Procrastination Scale (GPS; Lay, 1986**).** The GPS consists of 16 items measuring general tendencies to delay intended actions. Participants rated each item on a 5-point scale ranging from *1 (Extremely Uncharacteristic) to 5 (Extremely Characteristic)*, with seven items reverse-scored. Sample items include “I often find myself performing tasks that I had intended to do days before,” “I generally delay before starting on work I have to do,” and “I am continually saying ‘I’ll do it tomorrow.’” Items were averaged to create a composite procrastination score, with higher scores indicating greater

procrastination tendencies. The scale has demonstrated strong reliability and validity in prior research (Lay, 1986; Sirois et al., 2019). Internal consistency in the present sample was α = .88.

Adult ADHD Self-Report Scale–V1.1 Screener (ASRS-V1.1; Kessler et al., 2005). Attentional difficulties were assessed using the 6-item screening version of the Adult ADHD Self-Report Scale (ASRS-V1.1). Participants indicated how often each symptom had occurred during the past six months using a 5-point Likert scale ranging from *0 (Never) to 4 (Very Often)*. Items assess common ADHD-related difficulties such as trouble completing final details of projects, organizing tasks, and avoiding activities requiring sustained mental effort.

Although the ASRS screener is commonly scored dichotomously for clinical screening purposes, researchers have increasingly recommended treating ADHD symptoms dimensionally when examining individual differences in attentional functioning (e.g., Seli et al., 2015). Following this approach, responses were averaged across the six items to create a continuous index of attentional difficulties, with higher scores indicating greater ADHD-related symptoms. Internal consistency in the present sample was α = .67.

Marlowe–Crowne Social Desirability Scale–Short Form (MCSD-SF; Vésteinsdóttir et al., 2017). Social desirability bias was measured using this 10-item measure that assesses the tendency to respond in socially desirable ways. Participants indicated whether each statement was True or False for them. Sample items include “I have never intensely disliked anyone” and “I’m always willing to admit when I make a mistake.” Five items were reverse-scored, and responses were summed to produce a total score ranging from *0 to 10*, with higher scores indicating greater social desirability bias. The scale has demonstrated adequate psychometric properties in population samples (Vésteinsdóttir et al., 2017). Internal consistency in the present sample was α = .67.

Intention to Work on the Task. Participants rated their intention to work on the task they had identified. The task name provided earlier in the survey was piped into the question stem to anchor responses to the specific procrastinated task. Participants indicated their agreement with three statements on a 5-point scale ranging from *1 (Strongly Disagree) to 5 (Strongly Agree)*: “I will work hard on completing this task,” “I will wait to start working towards this task” (reverse-scored), and “I will start working towards this task right now.” Responses were averaged after reverse-scoring the second item to create a composite intention score, with higher values indicating stronger intention to engage with the task. These three statements were adapted from Schutte and del Pozo de Bolger (2020). Internal consistency in the present study was α = .70, with a mean inter-item correlation of r = .44 (pairwise rs = .28, .49, and .56).

Engagement with the Exercise. Immediately following the experimental or control exercise, participants rated how engaged they were with the activity on a scale from *0 (Not at all) to 100 (A great deal)*.

Procedure

The study was administered entirely online using the Qualtrics survey platform. After providing informed consent, participants completed trait measures of mindfulness (FMI), general procrastination (GPS), attentional difficulties (ASRS-V1.1), and social desirability (MCSD-SF).

Following the trait measures, participants were provided with a definition of procrastination ("voluntarily delaying a course of action which should have been started or completed already, despite expecting to be worse off for the delay") and asked to identify a task they were currently procrastinating on that could realistically be completed in approximately 15 minutes and could, in principle, be started immediately using available resources. Participants entered the name of the task and provided an estimate of how long they expected it would take to complete.

Participants were then randomly assigned with equal probability to either the mindfulness condition or the control condition. Participants in the mindfulness condition listened to a three-minute audio-guided exercise adapted from Penman (2011), which directed attention toward present-moment bodily sensations and the breath in a nonjudgmental and non-evaluative manner. Participants in the control condition spent three minutes making brief written notes reflecting on their activities from the previous day. Equal time was allotted to both conditions. The mindfulness audio and exercise for the control condition were the same as those used for the Schutte and del Pozo de Bolger (2020) experiment.

Immediately following the exercise, participants rated their engagement with the activity and the three-item intention measure. The name of the task they had previously identified was piped into the question stem, ensuring that responses were anchored to their specific procrastinated task.

Following the intention measure, participants were informed that they would have 15 minutes available and were encouraged to use this time to begin working on the task they had identified. Before the period began, participants were prompted to gather any necessary materials and to ensure that the survey screen remained accessible throughout the period. After the 15 minutes elapsed, participants returned to the survey and reported whether they had started the task (Yes/No) and, if so, estimated the percentage of the task they had completed.

Finally, participants completed a seriousness check (Aust et al., 2013), which asked them to indicate whether they were responding attentively or simply clicking through the survey. Participants were informed that their response would not affect their compensation. They were then debriefed regarding the purpose of the study, and received course credit for their participation.

Results

Task Descriptives

Participants identified a task they were currently procrastinating on that they could reasonably work on for approximately 15 minutes. The mean estimated task duration was 15.11 minutes (*SD* = 3.51). Tasks spanned several domains. To summarize the types of tasks selected, participants' open-ended task

descriptions were coded by the first author into thematic categories reflecting the primary activity described. The largest proportion were academic tasks (e.g., studying, completing assignments, reading), followed by household or chore-related tasks (e.g., cleaning, laundry, organizing), administrative or errand tasks (e.g., emails, paperwork, scheduling), personal or self-care activities (e.g., exercise, journaling, health-related tasks), and social or communication tasks (e.g., responding to messages, reaching out to someone). Task category distributions are shown in Fig. 1.

Note

Percentages are calculated as the proportion of total reported tasks within each category.

Preliminary Analyses

Conditions did not differ significantly on any baseline measure: trait mindfulness, $t(201.91) = .55$, $p = .581$; general procrastination, $t(202.60) = .02$, $p = .987$; social desirability bias, $t(202.92) = -.62$, $p = .539$; or ADHD symptom severity, $t(193.61) = .29$, $p = .771$. Engagement with the assigned activity did differ by condition, however: participants in the control condition reported higher engagement ($M = 81.06$, $SD = 14.55$) than participants in the mindfulness condition ($M = 71.80$, $SD = 19.71$), $t(189.5) = 3.84$, $p < .001$, $d = .53$.

Descriptive statistics and intercorrelations among study variables are presented in Table I. Participants reported moderate levels of trait mindfulness ($M = 35.74$, $SD = 6.09$) and general procrastination ($M = 50.20$, $SD = 10.83$). ADHD symptom severity averaged $M = 13.12$ ($SD = 3.90$). Engagement with the assigned exercise was relatively high ($M = 76.36$, $SD = 17.93$), and the mean intention composite score was 3.55 ($SD = .95$) on a 1–5 scale. Overall, 84.4% of participants ($n = 173$) began their procrastinated task during the 15-minute behavioral window.

Table I

Descriptive Statistics and Intercorrelations Among Variables

Variable	M	SD	1	2	3	4	5	6
1. Mindfulness (FMI)	35.74	6.09	—					
2. Procrastination (GPS)	50.20	10.83	0.39***	—				
3. ADHD Symptoms (ASRS)	13.12	3.90	0.26***	0.60***	—			
4. Social Desirability Bias (MCSD)	4.31	2.39	0.18**	0.23***	0.36***	—		
5. Engagement	76.36	17.93	0.18**	-0.11	-0.08	0.05	—	
6. Intention	3.55	0.95	0.15*	0.32***	-0.15*	0.14*	0.25***	—
Note. * p < .05. ** p < .01. *** p < .001.								

Associations among Mindfulness, Attentional Capacity, and Procrastination

Associations among mindfulness, ADHD symptom severity, and procrastination were examined using Pearson correlations.

Greater trait mindfulness was associated with lower ADHD symptom severity, $r(203) = -.26$, $p < .001$. Greater trait mindfulness was also associated with lower procrastination, $r(203) = -.39$, $p < .001$. ADHD symptom severity was positively associated with procrastination, $r(203) = .60$, $p < .001$.

Social Desirability Bias

To assess whether self-report responding was influenced by social desirability bias, we examined correlations between scores on the Marlowe–Crowne Social Desirability Scale (MCSD-SF; $M = 4.31$, $SD = 2.39$) and key study variables. Social desirability bias was significantly associated with trait mindfulness ($r(203) = .18$, $p = .009$), general procrastination ($r(203) = -.23$, $p = .001$), ADHD symptom severity ($r(203) = -.36$, $p < .001$), and intention to work on the task ($r(203) = .14$, $p = .044$). This pattern suggests that participants higher in social desirability bias tended to report more favorable self-evaluations.

Importantly, social desirability bias was unrelated to either behavioral outcome—task initiation ($r(203) = .01$, $p = .937$) or task completion among those who began the task ($r(171) = .12$, $p = .109$). These results suggest that the behavioral measures were not influenced by self-presentation bias. To account for potential reporting tendencies, MCSD-SF scores were included as a covariate in all logistic regression models predicting task initiation.

To assess whether the substantive associations among study variables were artifacts of social desirability bias, we recomputed the key correlations from Table 1 partialling out MCSD-SF scores. The pattern of associations was largely preserved: greater trait mindfulness remained associated with lower trait procrastination, partial $r(202) = -.36$, $p < .001$, and with lower ADHD symptom severity, partial $r(202)$

= − .21, p = .003. ADHD symptom severity remained positively associated with trait procrastination, partial $r(202)$ = .57, p < .001. The association between intention and task initiation was unchanged, partial $r(202)$ = .23, p = .001. The correlation between trait mindfulness and intention, however, became marginal when social desirability was held constant, partial $r(202)$ = .13, p = .067, suggesting that part of this association reflected shared variance with social desirability bias.

Attentional Capacity as a Pathway between Mindfulness and Procrastination

ADHD symptom severity was tested as a mediator of the relationship between trait mindfulness and procrastination using a simple mediation model estimated in *lavaan* with 5,000 bootstrap samples. Trait mindfulness negatively predicted ADHD symptom severity (path a: b = − .17, SE = .04, β = −.26, p < .001). In turn, ADHD symptom severity positively predicted procrastination after controlling for mindfulness (path b: b = 1.48, SE = .16, β = .53, p < .001).

The direct effect of mindfulness on procrastination remained significant after accounting for ADHD symptoms (path c': b = − .45, SE = .10, β = −.25, p < .001), indicating partial mediation. The bootstrapped indirect effect was significant (b = − .24, SE = .06, β = −.14, 95% CI [− .38, − .13]). The total effect of mindfulness on procrastination was b = − .70 (β = −.39). Together, mindfulness and ADHD symptom severity accounted for 41.7% of the variance in procrastination (R^2 = .42).

Effect of the Mindfulness Exercise on Intention to Work on the Task

It was predicted that participants who completed the mindfulness exercise would report stronger intentions to begin working on their procrastinated task than those in the control condition. Following the analytic approach of Schutte and del Pozo de Bolger (2020), engagement with the assigned activity was included as a covariate, both because engagement is theoretically relevant to whether a brief intervention exerts its intended effect and because engagement was positively associated with intention in the present sample, $r(203)$ = .25, p < .001. As reported in the preliminary analyses, participants in the control condition reported higher engagement with their assigned activity than participants in the mindfulness condition; the mindfulness manipulation therefore produced its effect on intention against, rather than because of, an engagement advantage.

An analysis of covariance (ANCOVA) with condition as the independent variable, engagement as the covariate, and intention as the dependent variable revealed a significant main effect of condition, F(1, 202) = 9.41, p = .002, partial η^2 = .045, d = .42, as well as a significant effect of engagement, F(1, 202) = 18.89, p < .001. Estimated marginal means indicated that participants in the mindfulness condition reported greater intention to work on their task (M = 3.75, 95% CI [3.57, 3.93]) than those in the control condition (M = 3.35, 95% CI [3.17, 3.53]).

Without the engagement covariate, the condition difference narrowly missed conventional significance, $t(201.78) = -1.93$, $p = .055$, 95% CI [− .51, .01], $d = .27$. This unadjusted-versus-adjusted pattern directly replicates that reported by Schutte and del Pozo de Bolger (2020), who likewise observed a non-significant unadjusted comparison, $F(1, 168) = 2.19$, $p = .14$, alongside a significant engagement-adjusted effect.

To assess whether the condition effect on intention depended on the specific choice of covariate, we ran sensitivity analyses including engagement alongside three additional covariates one at a time (social desirability, trait mindfulness, baseline trait procrastination) and all four covariates simultaneously. The condition effect was stable across every specification, with F values between 8.86 and 9.42 (all ps ≤ .003) and partial η^2 between .042 and .045. Adjusted means by condition are displayed in Fig. 2.

Figure 2

Engagement-Adjusted Mean Intention by Condition

Note

Error bars represent 95% confidence intervals. Means are adjusted for engagement with the exercise.

Effects of the Mindfulness Exercise on Task Initiation

Because null effects were theoretically informative for the behavioral outcomes, complementary Bayesian analyses were conducted to quantify evidence for and against the null hypothesis. Bayes factors below .33 ($BF_{01} > 3$) were interpreted as moderate evidence in favor of the null hypothesis.

In the mindfulness condition, 87.5% of participants began the task, compared with 81.2% in the control condition. A logistic regression with condition, engagement, and social desirability bias as predictors indicated that condition did not significantly predict task initiation, $b = .65$, $SE = .41$, $z = 1.57$, $p = .116$, $OR = 1.62$, 95% CI [.85, 4.41]. Neither engagement nor social desirability significantly predicted initiation (both $ps > .14$).

The observed initiation rates yielded an odds ratio of 1.62 in the direction predicted, but the present study was substantially underpowered to detect an effect of this magnitude. A sensitivity power analysis indicated that with the obtained sample size and observed baseline rates, the minimum odds ratio detectable at 80% power was 4.13; power to detect the observed OR of 1.62 was only 23.5%. The behavioral test was therefore better suited to detecting large effects than the small-to-moderate effects that might be expected from a brief intervention.

A Bayesian contingency table analysis provided moderate evidence in favor of the null hypothesis of no association between condition and task initiation, $BF_{01} = 3.71$. Initiation rates by condition are displayed in Fig. 3.

Among participants who began the task (n = 173; Control n = 82, Mindfulness n = 91), the proportion of the task completed did not differ between conditions (Control: M = 82.27%, SD = 21.03; Mindfulness: M = 81.77%, SD = 20.70), $t(168.54) = .16$, $p = .875$, $d = .02$, 95% CI [− .28, .32]. A Bayesian t-test provided moderate evidence in favor of the null hypothesis, $BF_{01} = 6.00$.

Figure 3

Percentage of Task Initiation by Condition

Note

Percentage of participants who started their procrastinated task during the 15-minute window, by condition. Error bars represent 95% confidence intervals based on the binomial standard error.

Association between Intention and Task Initiation

Higher intention scores predicted greater likelihood of beginning the procrastinated task. In a logistic regression model, each one-unit increase in intention was associated with higher odds of starting the task, $b = .65$, $SE = .21$, $z = 3.15$, $p = .002$, $OR = 1.92$, 95% CI [1.29, 2.91].

This association remained significant after controlling for condition, engagement, and social desirability bias, $b = .61$, $SE = .22$, $z = 2.79$, $p = .005$, $OR = 1.83$, 95% CI [1.20, 2.85].

Among participants who began the task, higher intention was also associated with greater task completion, $r(171) = .19$, $p = .012$. The predicted probability of task initiation as a function of intention score is illustrated in Fig. 4.

Figure 4

Predicted Probability of Task Initiation by Intention Scores

Note

Predicted probability of starting the procrastinated task as a function of intention mean score, based on logistic regression. Shaded region represents 95% confidence interval. Points are jittered vertically for visibility (*0 = did not start, 1 = started*).

Discussion

The present study examined the relationship between mindfulness and procrastination at both the trait and state levels. We tested whether trait mindfulness was associated with attentional capacity and trait-level procrastination tendencies. We also examined whether attentional capacity mediated the relationship between trait mindfulness and general procrastination. Finally, we tested whether a brief mindfulness exercise would increase both intentions to work on a procrastinated task and actual initiation of that task during a fifteen-minute work period.

Several findings emerged. First, replicating prior work, higher trait mindfulness was associated with fewer ADHD-related attentional difficulties and lower trait-level procrastination; attentional difficulties were in turn positively associated with trait procrastination. Second, participants who completed a brief mindfulness exercise reported stronger intentions to work on their procrastinated task when engagement with the exercise was taken into account. Third, despite this effect on intentions, the mindfulness exercise did not influence whether participants actually initiated their task during the fifteen-minute work period; participants in both conditions initiated and completed their tasks at similar rates. Taken together, these results further illustrate the association between trait mindfulness and trait procrastination, and suggest that a brief mindfulness exercise can increase participants' willingness to initiate a task on which they have been procrastinating without necessarily producing immediate changes in initiation behavior.

Trait Mindfulness, Attention, and Procrastination

The correlational results showed the expected relationships among mindfulness, attentional functioning, and procrastination. Participants reporting higher trait mindfulness also reported fewer ADHD-related attentional difficulties and lower levels of procrastination, whereas attentional difficulties were positively associated with procrastination. This pattern is consistent with the view that mindfulness involves improved attentional regulation and meta-awareness (Bishop et al., 2004; Chambers et al., 2009). From this perspective, mindfulness may relate to procrastination through better-sustained attention on task-relevant goals and reduced reactivity to distracting or aversive internal experiences. Because these variables were measured cross-sectionally, however, the direction of these associations cannot be determined from the present data; alternative accounts, such as shared variance with broader executive functioning processes (Rabin et al., 2011), remain compatible with the observed pattern.

These relationships closely parallel those reported by Schutte and del Pozo de Bolger (2020), who also found that mindfulness was associated with both attentional functioning and procrastination. Although the strength of the associations differed somewhat between studies, the overall pattern was consistent across samples, supporting the robustness of the link between mindfulness, attentional functioning, and procrastination.

Further analyses indicated that attentional difficulties statistically mediated the relationship between mindfulness and procrastination. Individuals higher in mindfulness tended to report fewer ADHD-related attentional difficulties, which in turn were associated with lower levels of procrastination. This pattern aligns with theoretical perspectives suggesting a role for attentional functioning in linking mindfulness with procrastination (Bishop et al., 2004; Chambers et al., 2009; Malinowski, 2013; Sirois & Pychyl, 2013), though the cross-sectional design precludes causal interpretation of the mediation.

Effects of the Mindfulness Induction on Intention

The brief mindfulness exercise also influenced participants' intentions to work on their procrastinated task. Consistent with the findings reported by Schutte and del Pozo de Bolger (2020), participants in the

mindfulness condition reported stronger intentions to begin their procrastinated task than those in the control condition when engagement with the exercise was included as a covariate. Without accounting for engagement, the difference between conditions was only marginal. This unadjusted-versus-adjusted pattern matches Schutte and del Pozo de Bolger's (2020) results in both direction and magnitude, supporting the robustness of the effect across samples. Notably, participants in the control condition reported higher engagement with their assigned activity than participants in the mindfulness condition, indicating that the mindfulness manipulation produced its effect on intention against, rather than because of, an engagement advantage.

The intention effect emerged despite some procedural differences from the original study, including differences in Likert scale format, small changes to item wording, and the way the procrastinated task was framed. This suggests that the effect may reflect a relatively robust motivational response rather than a study-specific artifact. One possible explanation is that mindfulness temporarily reduces avoidance-related reactions to unpleasant tasks by encouraging non-judgmental awareness of thoughts and feelings associated with the task. Within the emotion regulation framework of procrastination (Sirois & Pychyl, 2013), people often delay tasks to repair negative mood in the short term. By reducing the intensity of these aversive reactions, even a brief mindfulness exercise may make a task feel more psychologically approachable and increase willingness to begin working on it.

Behavioral Effects

Although the mindfulness exercise increased intentions, it did not influence behavior during the task period. Participants in both conditions initiated and completed their tasks at similarly high rates. One plausible explanation is a ceiling effect. More than 80% of participants began working on their task regardless of condition, leaving little room for the intervention to further increase initiation rates (Garg & Schooler, 2026).

This ceiling effect likely reflects more than a statistical limitation. It may also be related to how the tasks were selected. Participants were asked to choose a task they had been procrastinating on that could be started immediately and completed within about 15 minutes. As a result, many participants may have selected tasks that were already relatively approachable. Tasks that can be completed in a short time frame are structurally different from the kinds of open-ended or complex activities people often struggle to begin. For example, replying to an email is quite different from starting a term paper. The former may not evoke the same avoidance reactions that mindfulness is theoretically positioned to reduce. Future work could test whether brief mindfulness inductions affect initiation of longer or more aversive procrastinated tasks, where avoidance reactions are more pronounced and baseline initiation rates are presumably lower.

The structure of the task period may also have limited variability in behavior. Participants were explicitly instructed to begin working on their chosen task during the 15-minute timer, and most appeared to comply with this instruction. As a result, the structured work window may have constrained opportunities

for differences in task initiation or disengagement to emerge across conditions. Future studies using more flexible or open-ended work periods may provide a more sensitive test of whether brief mindfulness exercises influence spontaneous task initiation or sustained engagement.

These findings also reflect the well-known intention–behavior gap. Although intentions predict behavior, the relationship between the two is often modest (Sheeran, 2002). Consistent with this literature, Bayesian analyses provided moderate evidence against an effect of the size the study was equipped to detect. However, as noted in the Results, achieved power to detect the observed condition difference was low (23.5%); the behavioral test was therefore better suited to ruling out large effects than the smaller effects more plausible given the brief nature of the manipulation. Importantly, Schutte and del Pozo de Bolger (2020) examined only motivational outcomes and did not assess behavior directly. By measuring both intentions and behavior, the present study shows that brief mindfulness exercises can increase willingness to begin a task without necessarily producing immediate changes in behavior.

Despite the absence of condition differences in behavior, intention remained a meaningful predictor of task engagement. Participants who reported stronger intentions were more likely to begin working on their task. Among those who started, stronger intentions were also associated with completing a greater portion of the task.The intention–initiation association is important for two reasons. First, it shows that the intention measure captured meaningful differences in motivational readiness rather than simply reflecting socially desirable responses. Second, it demonstrates that intentions and behavior were linked within the study even though the experimental manipulation did not produce differences between conditions. The null behavioral effect therefore is unlikely to be attributable to an insensitive behavioral measure. Rather, it suggests that the mindfulness exercise increased intentions without producing a large enough shift to detectably change initiation rates given the already high baseline.

It is also notable that social desirability bias was associated with several self-report measures, including trait mindfulness, procrastination, ADHD symptom severity, and intention. Participants higher in social desirability bias tended to report more favorable self-evaluations across these domains. However, social desirability bias was unrelated to the behavioral outcomes of task initiation and task completion. This pattern suggests that although self-reported motivational and personality measures may partly reflect self-presentational tendencies, the behavioral measures were less susceptible to such bias. The absence of a relationship between social desirability and task initiation therefore strengthens confidence that the behavioral outcomes reflected actual engagement rather than demand characteristics or socially desirable responding. The pattern of associations among trait variables was also preserved when social desirability was held constant, with the trait mindfulness–intention correlation as the one exception in which the zero-order association became marginal (see Results). Taken together, three features of the data support the meaningfulness of the behavioral measure used here: intention predicted both initiation and completion, social desirability was unrelated to either behavioral outcome, and the experimental manipulation moved intention without moving behavior—indicating that the behavioral measure was not simply tracking the intention measure.

Implications

The findings suggest that mindfulness may primarily influence psychological processes that occur before action begins. Procrastination can involve several stages, including forming the intention to act, initiating the task, and maintaining engagement over time (Steel, 2007; Tuckman, 1991). The present results indicate that brief mindfulness exercises may affect the earlier stages of this process by increasing willingness to engage with a task that has been avoided. In other words, mindfulness may increase motivational readiness to act without necessarily producing immediate behavioral change.

This interpretation is consistent with emotion regulation accounts of procrastination, which propose that people delay tasks to avoid negative emotions associated with them (Sirois & Pychyl, 2013). By encouraging individuals to observe these reactions without immediately responding to them, mindfulness may reduce avoidance and make tasks feel more psychologically approachable (Kabat-Zinn, 1994; Bishop et al., 2004).

However, increased willingness may not be sufficient to produce immediate changes in behavior, as the present findings suggest. Beginning a task often requires additional processes such as deciding where to start or organizing steps. Interventions that directly support these processes may therefore help translate motivation into action. For example, implementation intentions facilitate task initiation across many self-regulation domains (Adriaanse et al., 2011; Gollwitzer & Sheeran, 2006), and strategies such as breaking tasks into smaller subtasks or providing progress feedback can reduce the activation cost of beginning work (Bandura & Schunk, 1981; Garg & Schooler, 2026; Garg et al., 2025; Harkin et al., 2016).

Taken together, these findings suggest that mindfulness and behavioral structuring strategies may play complementary roles in reducing procrastination. Mindfulness may address emotional barriers that precede action, whereas planning and task-structuring strategies help translate motivation into behavior. Future research could test whether combining these approaches produces stronger behavioral effects than either strategy alone.

Limitations and Future Directions

Several limitations should be considered when interpreting the present findings. First, the high rate of task initiation across participants likely limited the ability to detect behavioral differences between conditions. As discussed above, the task selection criteria and the structured 15-minute work period may have reduced variability in task initiation. Future studies using more challenging or open-ended tasks may provide a more sensitive test of whether brief mindfulness exercises influence behavioral engagement.

Second, although the behavioral measure provided an extension beyond intention-only paradigms, future work could refine it through objective indicators of task engagement such as activity logging or screen monitoring. These approaches could complement self-reported initiation and completion by corroborating participants' accounts and providing finer-grained information about how individuals engage with their chosen tasks. Social desirability bias was measured and was unrelated to the

behavioral outcomes in the present study, suggesting that self-presentational tendencies were unlikely to have driven the behavioral findings.

Finally, attentional functioning was assessed using the six-item ASRS-V1.1 screener rather than the full 18-item ASRS used by Schutte and del Pozo de Bolger (2020). The screener is widely used and has demonstrated good validity as a brief measure of ADHD-related attentional difficulties (Kessler et al., 2005). However, two features of the measure warrant consideration. First, because the screener includes fewer items and captures a narrower range of symptoms, it may provide a less sensitive measure of individual differences in attentional functioning than the full scale. Second, internal consistency in the present sample was modest (α = .67), below the conventional threshold of .70 for research use. Both features may have introduced measurement error that attenuated the observed associations among mindfulness, attentional difficulties, and procrastination, and may partly explain why these associations were somewhat weaker in the present study than in the original. Future research could examine whether similar patterns emerge when using the full ASRS or other comprehensive measures of attentional control.

Conclusion

The present study examined the relationship between mindfulness and procrastination while also testing whether a brief mindfulness exercise could influence engagement with a procrastinated task. The results showed that mindfulness was associated with lower procrastination and fewer attentional difficulties, and that a brief mindfulness exercise increased participants' intentions to work on a task they had been avoiding. However, these increases in intention did not translate into differences in task initiation or completion during the structured work period. These findings suggest that mindfulness may influence motivational readiness to act without necessarily producing immediate changes in behavior. Mindfulness sets the stage for action, but actually completing the task requires a further step. Understanding what fosters that final step to completion represents an important next step for the science of procrastination.

Declarations

Author Contribution

All authors - Anusha Garg, Shivang Shelat, and Jonathan W. Schooler contributed to the study conception and design. Material preparation, data collection and analysis were performed by Anusha Garg. The first draft of the manuscript was written by Anusha Garg and all authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

Data Availability

Data available upon request

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Figures

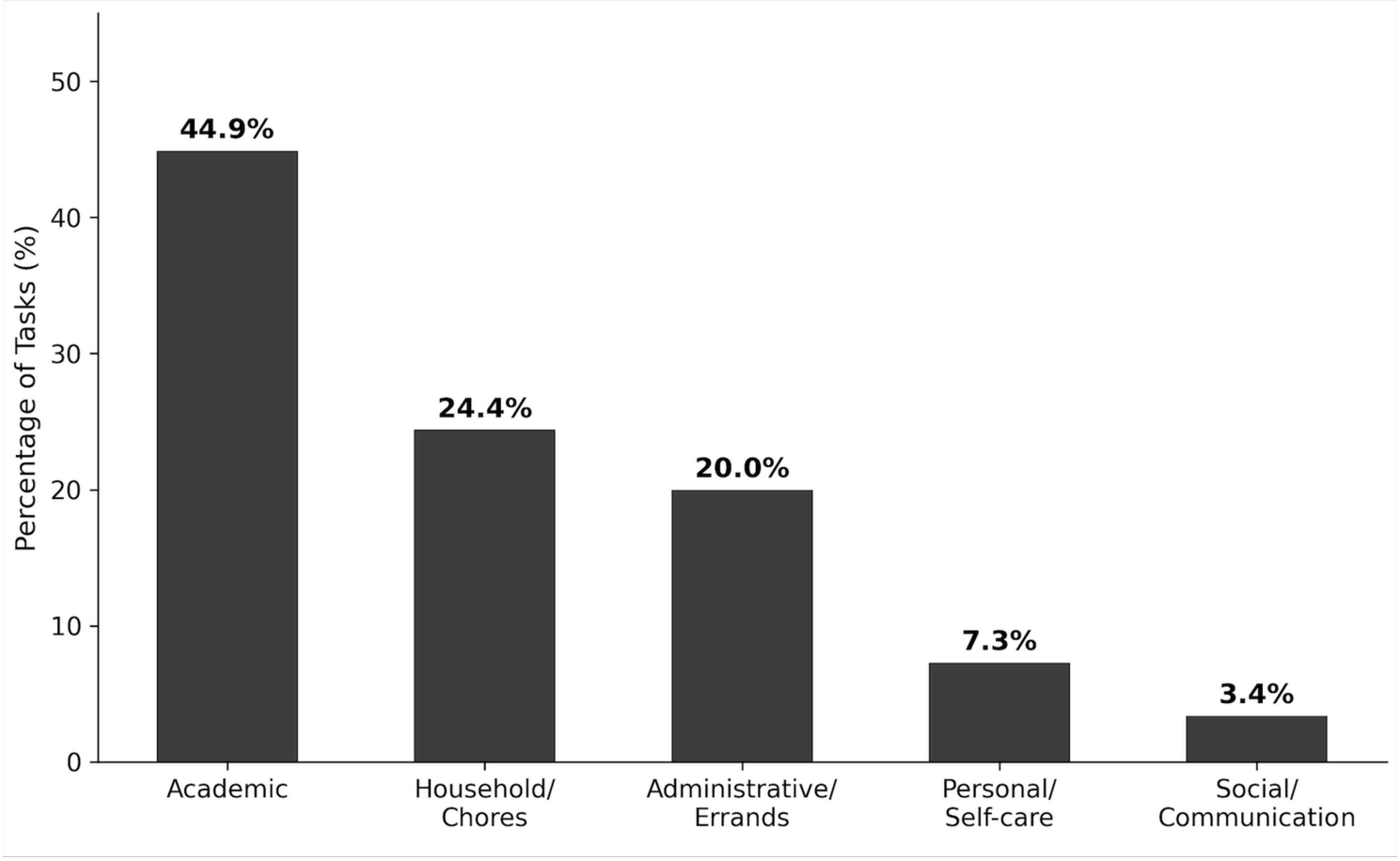


Figure 1

Percentage Distribution of Self-Reported Procrastinated Tasks Across Thematic Categories.

Note. Percentages are calculated as the proportion of total reported tasks within each category.

Preliminary Analyses

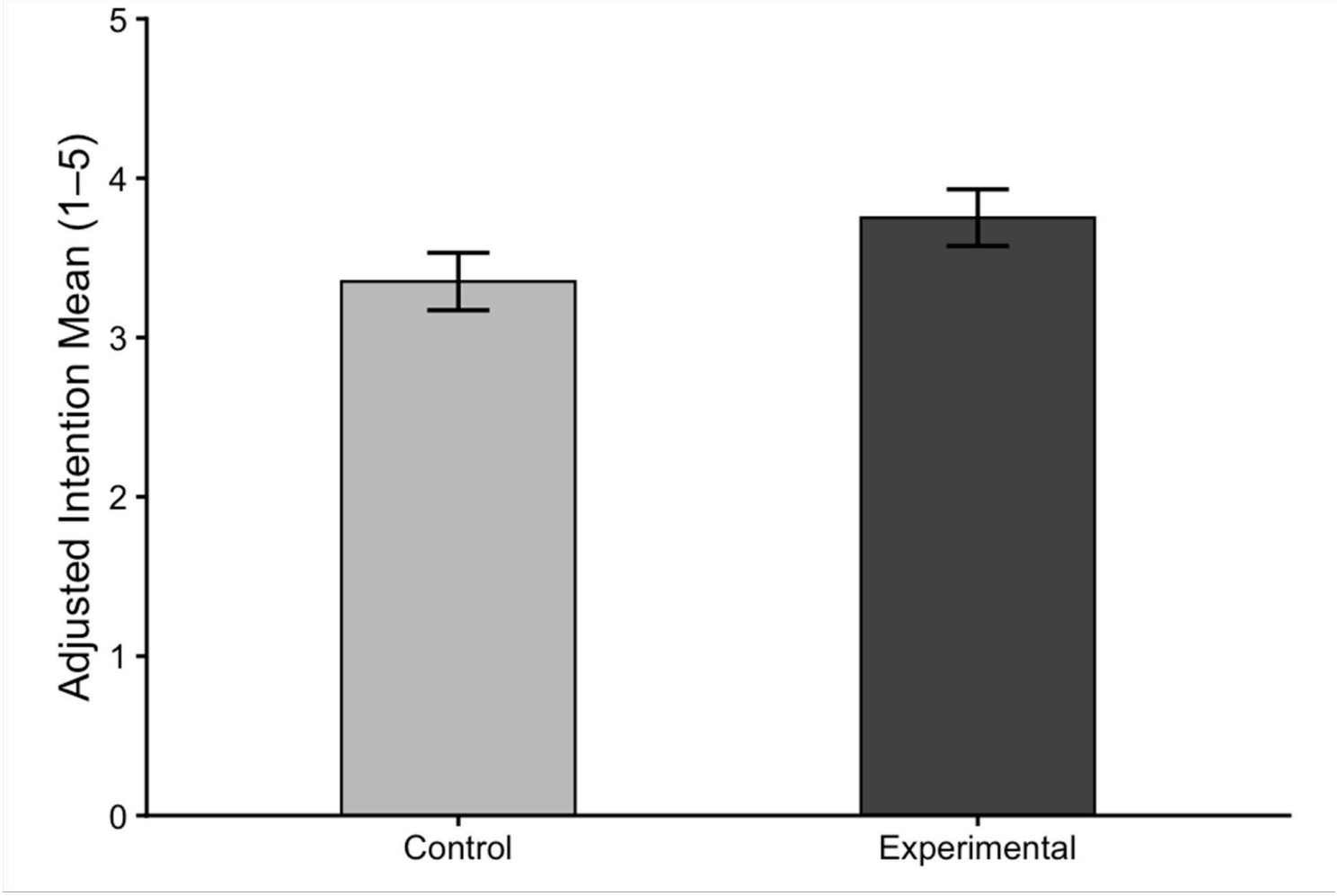


Figure 2

Engagement-Adjusted Mean Intention by Condition

Note. Error bars represent 95% confidence intervals. Means are adjusted for engagement with the exercise.

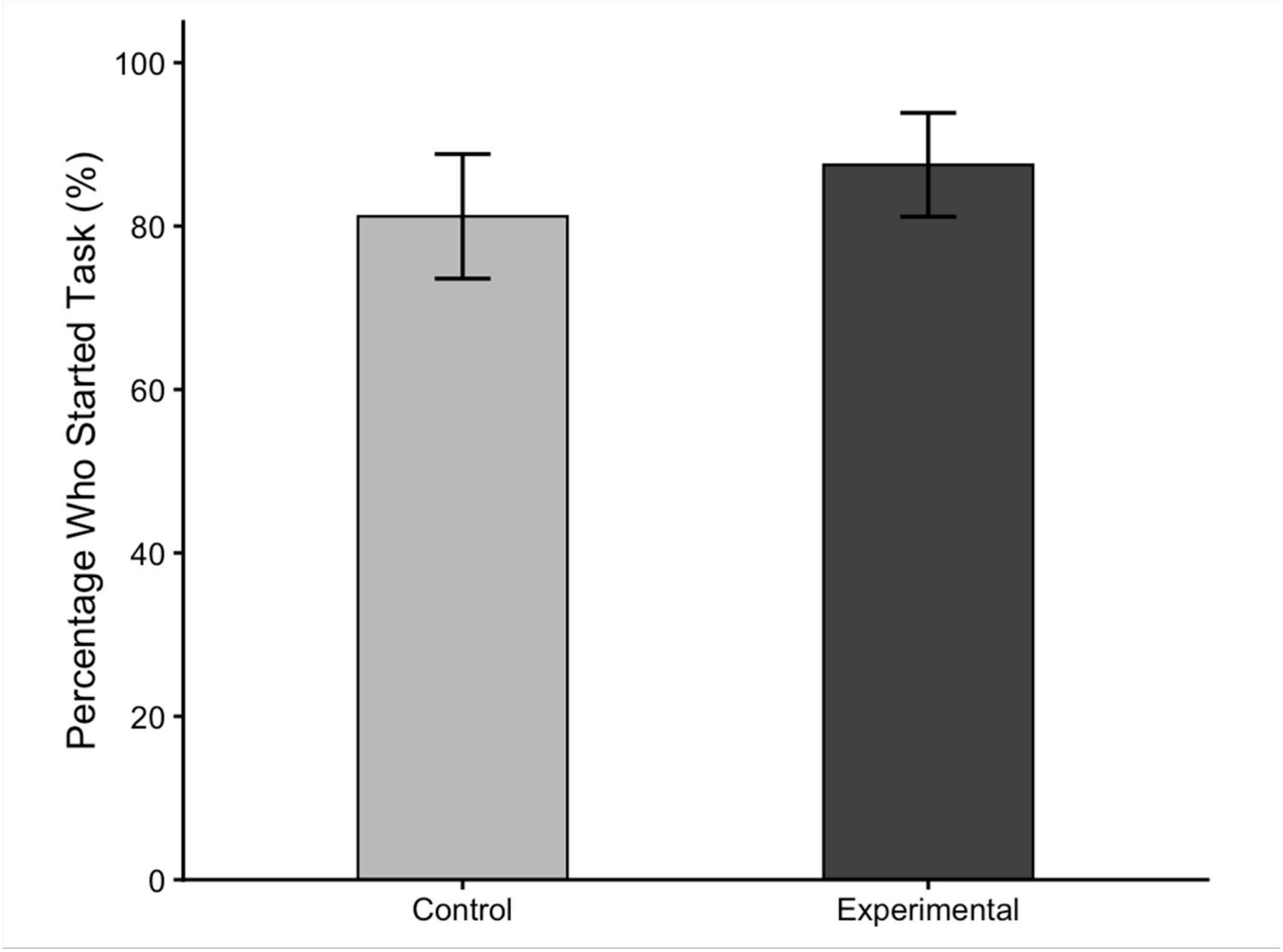


Figure 3

Percentage of Task Initiation by Condition

Note. Percentage of participants who started their procrastinated task during the 15-minute window, by condition. Error bars represent 95% confidence intervals based on the binomial standard error.

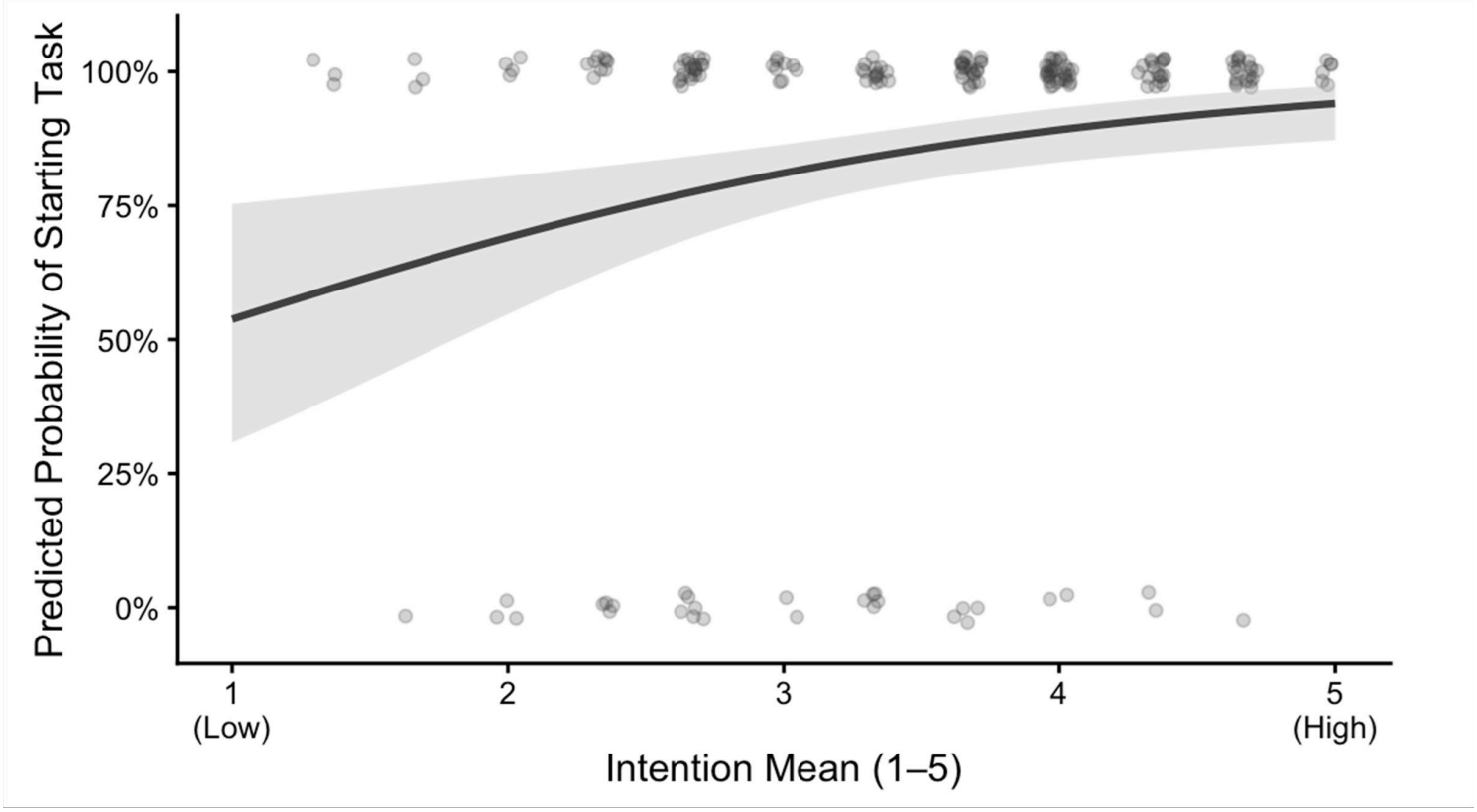


Figure 4

Predicted Probability of Task Initiation by Intention Scores

Note. Predicted probability of starting the procrastinated task as a function of intention mean score, based on logistic regression. Shaded region represents 95% confidence interval. Points are jittered vertically for visibility (*0 = did not start, 1 = started*).