Journal of Research in Personality 114 (2025) 104549

Contents lists available at ScienceDirect

Journal of Research in Personality

journal homepage: www.elsevier.com/locate/jrp

Exploring the dynamics of volitional personality change: A psychoeducational intervention study with young adults transitioning to the workforce

Erica Baranski [a,*], Ramona L. Martinez [b], Zihan Liu [c], Kevin Hoff [d]

[a] Department of Psychology, California State University, East Bay, 25800 Carlos Bee Blvd., Hayward, CA 94542, USA
[b] Department of Psychology, 900 University Ave., University of California, Riverside, Riverside, CA 92521, USA
[c] Department of Management, Marketing, and Operations, University of Illinois Springfield, UHB, Springfield, IL 62703, USA
[d] Department of Psychology, Michigan State University, 316 Physics Rd., East Lansing, MI 48824, USA

ARTICLE INFO

Keywords:
Volitional personality change
Motivation
Idiographic-nomothetic
Longitudinal

ABSTRACT

College graduates transitioning to the workforce completed a 13-week, light, psychoeducation intervention designed to increase volitional personality change motivation via weekly email newsletters. Contrary to expectations, the intervention did not significantly enhance overall change motivation or consistently inspire desired trait change goals following the study period or after 6 or 10 months. However, participants in the intervention group did report increased desire to change emotional stability at specific points during the study. These findings underscore the limitations of this particular psychoeducational intervention approach and help to fill in the boundary conditions of when and how personality change is possible. Additionally, using pre-registered analyses, we successfully replicated key findings in volitional personality change literature, effectively laying a foundation for future research.

1. Exploring the Dynamics of Volitional Personality Change

Across a variety of methodologies, researchers have found that most people around the world want to change at least one aspect of their personalities (Asadi et al., 2020; Baranski et al., 2020; Hudson & Fraley, 2015; Moore et al., 2021; Quintus et al., 2017; Robinson et al., 2015). Studies assessing whether people are able to accomplish their personality change goals have found that trait change is possible but requires the use of intensive, structured behavioral interventions (Hudson et al., 2020; Stieger et al., 2019; Stieger et al., 2023). These structured intervention approaches typically require participants to complete behavioral challenges on a weekly or bi-weekly basis, with researchers following up on participants' trait change progress each week (e.g., Allemand, et al., 2024; Hudson et al., 2020). However, in the absence of structured interventions that target specific behavioral changes, people's personality change goals often remain unrealized (Asadi et al., 2020; Baranski et al., 2017; Robinson et al., 2015).

The current study seeks to fill in the boundary conditions of personality change interventions by testing the effectiveness of a light, psychoeducation-based intervention designed to increase participants' motivation to change personality traits via weekly email newsletters about personality and work/life outcomes. The newsletters were designed to be interesting and relevant to young adults during the transition from college to the workforce, a particularly transformative period in which personality trait change is often observed (Bleidorn et al., 2022). In alignment with major components of Expectancy Value Theory (Wigfield & Eccles, 2000), the newsletters provided information about the nature of personality, empirical evidence on the effectiveness of volitional personality change interventions, behavioral strategies for changing traits, and the relations between personality traits and desirable work and life outcomes. Testing the efficacy of this psychoeducation-based intervention is useful because it reveals how *learning* about personality and personality change might influence people's motivation to change different traits, including both implicit and explicit motives toward self-improvement. Therefore, our research contributes to a conceptual understanding of the role of motivation throughout volitional personality change processes. Moreover, because participants are simply asked to read weekly newsletters without explicit instruction to change their behavior, this intervention can lead to easily scalable applications of personality change interventions if

* Corresponding author.
E-mail address: erica.baranski@csueastbay.edu (E. Baranski).

https://doi.org/10.1016/j.jrp.2024.104549
Received 3 February 2024; Received in revised form 8 November 2024; Accepted 10 November 2024
Available online 15 November 2024
0092-6566/© 2024 Elsevier Inc. All rights are reserved, including those for text and data mining, AI training, and similar technologies.

found to be effective.

To this end, we carried out a randomized, controlled experiment and tested pre-registered hypotheses on the effectiveness of a 13-week psychoeducational intervention on (a) participants' motivation to change their personality, (b) the prevalence of personality trait goals, and (c) attainment of desired personality changes at immediate post-test and at 2 months and 10 months after the intervention, with the full study spanning 14 months in total. In addition to these main intervention objectives, we explored whether participants reported extrinsic vs. intrinsic reasons for changing a personality trait and assessed whether these different kinds of motivation impacted change goal attainment. Such investigations build on motivation theories (Deci & Ryan, 2000; Wigfield & Eccles, 2000) to provide novel information about the role of motivation in impacting volitional personality change. We also conducted a pre-registered replication of previous findings in the field of volitional personality change. Namely, we assessed the prevalence of trait change goals (prior to intervention) and the relationship between trait change goals, current levels of personality traits, the intellect facet of openness, and life satisfaction. This replication effort is meant to establish a foundation for this line of research, robust across methods and sample characteristics, from which future studies can build.

1.1. Personality change and development in emerging adulthood

Converging longitudinal research finds that personality traits change incrementally across the lifespan, with mean-level increases in conscientiousness, emotional stability, agreeableness, and assertiveness being especially prominent in young adulthood (Bleidorn et al., 2022; Roberts et al., 2006). These adaptive changes may in part be attributed to the adoption of new social roles in early adulthood (e.g., spouse, parent, employee) that call for people to become more dependable, assertive, hard-working, stress-resilient, and to develop lasting relationships in work, family, and community settings. For instance, new employees who increase in conscientiousness, extraversion, and emotional stability may better adapt to new work task demands, social opportunities, and life stressors (Bleidorn et al., 2018; Bühler et al., 2023; Lodi-Smith & Roberts, 2007; Roberts et al., 2005).

While personality trait changes across any one age period are relatively small in magnitude, findings from the research cited above underscore that the transition from school to work is a particularly transformative period in one's life. During this time of emerging adulthood, people often attempt to secure stable employment, financial independence, and housing separate from their parents or caretakers. More broadly, young adults navigating this transition are negotiating new social roles and obligations related to work and career success (Arnett, 2000). In addition to changes triggered by social role investments, many emerging adults actively pursue volitional personality change for self-improvement to get along or get ahead more effectively (Baranski et al., 2016; Hudson and Fraley, 2016; Miller et al., 2019). Thus, we intentionally carried out our intervention during this formative developmental period.

1.2. The Boundaries of successful volitional personality change

Intervention studies suggest that intentional trait change is possible, especially among college students (e.g., Hudson et al., 2019; Stieger et al., 2020). The boundary conditions delimiting intervention success or a lack thereof, however, have yet to be fully determined in this intervention domain. On the one hand, successful volitional personality change interventions share a common feature of relatively intense and structured "dosage" (i.e., frequency and timing) of intervention delivery in periods ranging from 2 weeks (Stieger et al., 2020) to upwards of 15 to 16 weeks (Hudson & Fraley, 2015; Hudson et al., 2019; Stieger et al., 2020; Stieger et al., 2023). For example, a 2-week personality intervention using a smartphone (Stieger et al., 2020) calls for twice daily intervention, involving a morning message and reminder to carry out implementation intentions set by the participant, and an evening message that includes a behavioral adherence check and reminders to carry out target behaviors at end-of-day. Stieger et al. (2021) then extended the original intervention to a 3-month period. A separate 15-week study (Hudson et al., 2019) asked participants to complete one to four behavioral challenges weekly of increasing difficulty, with weekly reminders and the opportunity to earn digital "medals" for their challenge completion. Both intervention types resulted in successful personality change in the desired direction, and in the case of Stieger et al. (2023), change was maintained 1 year after the initial 3-month intervention period.

In the absence of structured intervention, people's personality change goals often remain unrealized (Asadi et al., 2020; Baranski et al., 2017; Robinson et al., 2015). In one study, Baranski et al. (2017) asked participants to report personality change goals in an open-ended format. After the initial assessment, they followed up with participants after 6 months (college student sample) and 1 year (online sample). Results showed that personality change goals did not predict corresponding personality change. Interestingly, participants with goals to increase conscientiousness decreased in conscientiousness, and those with goals to increase extraversion increased in agreeableness. These results largely replicated a study conducted by Robinson et al. (2015) using Likert-scale methods of assessing trait change goals that followed participants for 6 months before to after college graduation. These researchers also did not find that personality change goals predicted actual changes, and those wanting to increase conscientiousness decreased in this trait.

Although the current literature signals the positive impact of structured, frequent interventions on desired trait change relative to their absence, the field is mixed in the methodological approaches used to assess volitional personality change. These methodological differences highlight important distinctions in the literature that may partially explain disparate findings on whether trait change goals predict desired volitional personality change. For instance, Hudson and colleagues (2020) assessed personality change weekly across 16-week waves and found that trait change goals robustly predicted trait change across 12 studies. Other studies that did not observe trait change aligned with goals followed up with participants after baseline once or twice across 6 months or a year (Asadi et al., 2020; Baranski et al., 2017; Robinson et al., 2015). The frequency of personality and goal assessment may serve as a reminder of participants' goals and may foster corresponding behavioral change or exert demand characteristics. Moreover, some studies use Likert-scale items to assess personality change goals (e.g., Asadi et al., 2020; Hudson et al., 2020; Robinson et al., 2017), while other studies (e.g., Baranski et al., 2017) use an open-ended, content-coded approach in which a personality change goal is dichotomously coded (i.e., 0 = goal is not present; 1 = goal present). While volitional personality change measures with several items more reliably capture trait-specific goals, they may also over-estimate participants' goals, forcing people to choose a goal for every trait (or item), even if a given change goal is not their top priority. This scale approach is in contrast to the open-ended, qualitative approach that captures goals that are top-of-mind, and thus, more autonomously motivated and freely endorsed.

In spite of methodological differences, this body of work has begun to sketch the boundary conditions by which people are able to effectively change their personalities. In line with the 'all or nothing' behavioral investment tendency, simply endorsing personality change goals without engaging in behavior change is not enough to facilitate desired personality change (Hudson et al., 2019a). In addition, simply asking individuals to identify a few behaviors they can carry out in daily life in service of their personality change goals seems inefficacious, as participants tend to propose vague, unactionable plans (Hudson & Fraley, 2015). By contrast, carrying out counter-dispositional behavior might require repeated reminders and encouragement to create implementation intentions (specific if-then plans someone can activate based on situational cues; Hudson et al., 2019a; Hudson & Fraley, 2015; Stieger et al., 2018). However, important questions remain about the

appropriate amount of scaffolding and behavioral activation needed to help individuals achieve personality change. Accordingly, below, we first describe the theoretical basis of a new 'light-touch' intervention that helps bridge the gap between intensive behavioral interventions and the absence of any intervention. We then outline a series of hypotheses focusing on the effectiveness of this intervention approach.

1.3. Testing the effectiveness of a psychoeducational volitional personality change intervention

We designed a relatively light, psychoeducation-based volitional personality change intervention that does not explicitly ask participants to change their behavior. The design and structure of the newsletter component of our intervention followed the logic outlined by Expectancy Value Theory (EVT). Originally proposed by Atkinson (1957) and adapted by Wigfield and Eccles (2000), EVT posits that individuals' motivation to accomplish goals is driven by the *expectancy* they have for success and the intrinsic *value* the goal-oriented task has in terms of importance, utility, and potential cost (Eccles-Parsons et al., 1983). In other words, individuals are more motivated to accomplish a goal if they feel capable of succeeding and appreciate the benefit of success. We utilized EVT to both strengthen participants' expectancy that they can achieve their self-improvement goals and to educate them on the potential value of personality trait change in various aspects of their lives.

Specifically, in the first half of our intervention (i.e., the first 8 weeks), we demonstrated the possibility of achieving personality change goals (see Table 1 below for a list and description of the newsletter topics). After providing brief background information about personality in the first 3 weeks, the next five newsletters focused on the ability of individuals to change aspects of their personality by summarizing results of previous research (e.g., Hudson et al., 2016) and presenting participants with evidence-based behavioral strategies they could use to help achieve their personality change goals (i.e., weeks 7–8). The latter half of the intervention period (i.e., weeks 9–13) focused on demonstrating the potential value of accomplishing personality trait change goals. Specifically, we presented participants with information on how personality traits are related to career success, physical health, life satisfaction, and leadership. In line with previous research utilizing EVT to predict increases in college course enrollment (Abraham & Barker, 2015) and physical skill and health behavior development (Shang et al., 2023), we anticipated that this design would aid in (a) the development of personality change goals, and (b) the increased motivation needed to accomplish new and existing goals.

In sum, with EVT as a theoretical foundation, our psychoeducational intervention first educated participants about the possibility of changing their personalities and then described the potential value of making these changes. Taken together, our intervention tested the following hypotheses:

Table 1
Newsletter topic schedule.

Week	Newsletter topic	Measurement occasion
1	Introduction/instructions	T_1: baseline
2	What is personality and why does it matter?	
3	The Big Five Personality Traits	
4	Personality and school performance	
5	Can personality traits change?	
6	Do personality changes matter?	
7	Can people choose to change their personality?	
8	Behavioral strategies for changing personality traits	T_2: mid-test
9	Personality and work performance	
10	Personality and career success	
11	Personality and health	
12	Personality and life satisfaction	
13	Personality and leadership	T_3: post-test

H1: Participants randomized into the experimental condition will be more motivated to change their personality over time relative to those in the control condition.
H2: Participants randomized into the experimental condition will be more likely to report a personality change goal over time relative to those in the control condition.
H3: Participants randomized into the experimental condition who report having a volitional personality change (VPC) goal will change more in their desired direction relative to those in the control condition and those in the experimental condition who did not report having a VPC goal.
H4: Regardless of whether participants have a VPC goal, those in the experimental condition will experience more change in any personality trait relative to participants in the control condition.

In addition, we tested whether intrinsic motivation bolsters the attainment of desired personality change. According to Self-Determination Theory (SDT; Deci & Ryan, 2000), goals are more likely to persist and be attained if they are autonomously pursued, rather than pursued due to external influences. Despite this prevalent argument, the importance of explicit and implicit personality change motives remains largely unexplored, although previous research alludes to their relevance. Thus, we propose:

H5: Participants who express intrinsic motivation to pursue personality change goals will experience greater personality change goal achievement relative to those who express extrinsic motivation.

1.4. Convergent findings of volitional personality change during emerging adulthood

In addition to testing the impact of our novel psychoeducation intervention, we aimed to further replicate previous findings on volitional personality change in a sample of emerging adults. Previous research using a variety of methodological approaches has demonstrated that most college students either want to change an aspect of their personalities or are currently pursuing personality change goals (Baranski et al., 2017; Hudson and Fraley, 2016; Miller et al., 2019). Moreover, students are generally able to articulate what exactly they want to change, the strategies they use to enact changes, and the events or circumstances that led them to want to change in the first place (Baranski et al., 2017).

The idea that emerging adults have the desire to actively change their personalities, potentially in response to changing circumstances, again speaks to the major tenets of self-determination theory (SDT). Specifically, SDT proposes that striving towards personal goals is universal and fundamental for self-growth (Deci & Ryan, 2000). From the SDT perspective, individuals want to improve their lives and develop specific goals in alignment with a broader self-improvement motivation. SDT additionally specifies that goals that fulfill the basic psychological needs of competence, autonomy, and relatedness are conducive to increases in well-being. Indeed, research suggests that accomplishing personality change goals predicts increases in well-being (Moore et al., 2021; Hudson et al., 2020).

Individuals transitioning from college to the workforce may be particularly invested in personal goals that satisfy these broader self-improvement goals. Research using both idiographic-nomothetic (i.e., coded open-ended responses) or Likert scale methods demonstrates that college students indicate wanting to be more extraverted, emotionally stable, and conscientious and that these goals correspond negatively to current personality trait levels (e.g., people who are low in extraversion tend to report goals to increase extraversion; Baranski et al., 2017; Hudson et al., 2015). Moreover, wanting to change anything about one's personality is positively related to neuroticism and the intellectual curiosity facet of openness, and negatively related to happiness (Baranski et al., 2020). Thus, many emerging adults are trying to change specific

traits that may aid them in improving aspects of themselves in terms of competence, relatedness, and well-being (i.e., low levels of conscientiousness, agreeableness, extraversion, and emotional stability).

To establish a foundation for future volitional personality change research to build from, the current study conducted a pre-registered replication of three major hypotheses previously explored by researchers in this field:

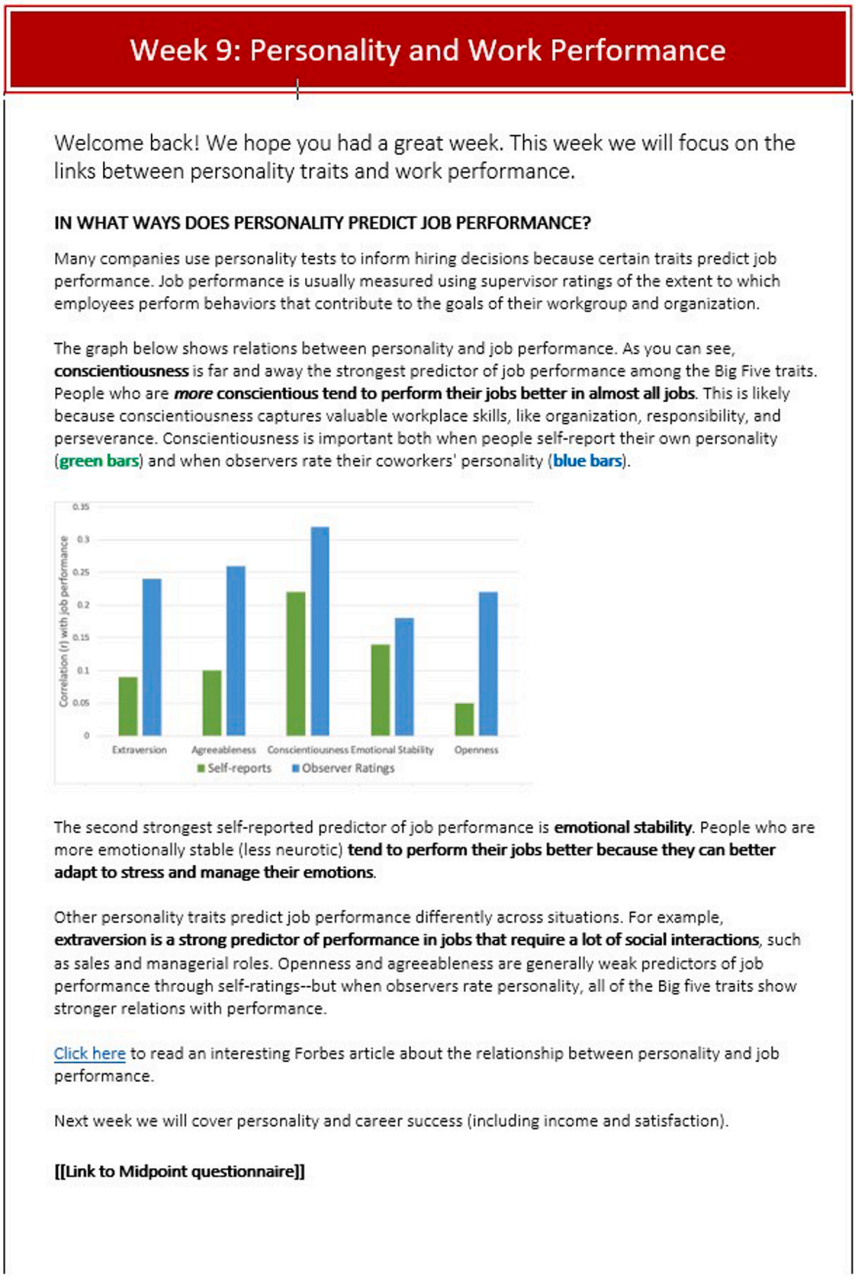
H6: Most participants will report goals to increase levels of emotional stability, extraversion, conscientiousness, and (to a lesser extent) agreeableness.

H7: There will be inverse (i.e., negative) relationships between current personality trait levels and goals to change corresponding traits.

H8: There will be a negative correlation between having a personality change goal and life satisfaction and a positive correlation with negative emotionality and the intellect facet of openness.

2. Method

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study. The preregistration, data, analysis scripts, and supplementary materials are



Week 9: Personality and Work Performance

Welcome back! We hope you had a great week. This week we will focus on the links between personality traits and work performance.

IN WHAT WAYS DOES PERSONALITY PREDICT JOB PERFORMANCE?

Many companies use personality tests to inform hiring decisions because certain traits predict job performance. Job performance is usually measured using supervisor ratings of the extent to which employees perform behaviors that contribute to the goals of their workgroup and organization.

The graph below shows relations between personality and job performance. As you can see, **conscientiousness** is far and away the strongest predictor of job performance among the Big Five traits. People who are ***more*** **conscientious tend to perform their jobs better in almost all jobs**. This is likely because conscientiousness captures valuable workplace skills, like organization, responsibility, and perseverance. Conscientiousness is important both when people self-report their own personality (**green bars**) and when observers rate their coworkers' personality (**blue bars**).

The second strongest self-reported predictor of job performance is **emotional stability**. People who are more emotionally stable (less neurotic) **tend to perform their jobs better because they can better adapt to stress and manage their emotions**.

Other personality traits predict job performance differently across situations. For example, **extraversion is a strong predictor of performance in jobs that require a lot of social interactions**, such as sales and managerial roles. Openness and agreeableness are generally weak predictors of job performance through self-ratings--but when observers rate personality, all of the Big five traits show stronger relations with performance.

Click here to read an interesting Forbes article about the relationship between personality and job performance.

Next week we will cover personality and career success (including income and satisfaction).

[[Link to Midpoint questionnaire]]

Fig. 1. Sample newsletter excerpt.

posted on the Open Science Framework (https://osf.io/uyrnv/?view_only=881cc55bec644223bb6cc0a54c18246c). There were no changes to the pre-registered analysis plan for all hypotheses and all pre-registered hypotheses are reported.

2.1. Participants

Participants ($N_{T1} = 816$; $M_{age} = 22.77$, SD = 2.97, 70 % female) were recent college graduates recruited from three universities located in central, southwestern, and midwestern United States. Five total surveys were administered, including at baseline (June 2021), at the end of week 8 (mid-test), at the end of week 13 (post-test), at 6-month follow-up relative to baseline, and at 14-month extended follow-up relative to baseline. Participants received a $10 Amazon gift card upon completion of each of the first four waves, and a $20 Amazon gift card for completing the 14-month follow-up. A Monte Carlo simulation indicates that a sample size of 200 is sufficient to detect a small, direct effect ($\gamma_{01} = 0.10$) of a level two variable (e.g., main effect of condition) at 80 % power in a two-level multilevel model (Arend & Schäfer, 2019), indicating that our present study is sufficiently powered to detect our main effect of interest (i.e., the effect of condition of target outcomes). Participants' ethnic distribution was 35 % Asian, 34 % White, 23 % Hispanic/Latino, 5 % Black/African-American, and 4 % "Other.".

2.2. Procedure

Participants were recruited primarily via email; although we also posted opportunities to participate in the survey via student organizations and word of mouth. Email lists of recent graduates were obtained directly from the universities, and our initial pre-study survey collected information to screen out participants who were not recent graduates. After providing consent online, participants were randomized to one of two conditions in our 13-week intervention: (a) a measurement-only control condition or (b) an experimental condition that provided participants with weekly psychoeducation via email newsletters on the nature of personality, personality change, and the relationship between personality and positive life outcomes. Table 1 details each weekly newsletter topic, along with the timing of three survey measurement occasions within the 13-week intervention period. See Fig. 1 for a sample newsletter. All newsletters can be found on the Open Science Framework (https://osf.io/uyrnv/?view_only=881cc55bec644223bb6cc0a54c18246c).

Participants randomized to the intervention condition received an email with the newsletter as the body of the email at 10:00 AM on Monday for 13 weeks. Each newsletter began with a welcome message and a short summary of the week's topic. Newsletters in weeks 1 through 4 orient participants to the study with instructions, an introduction to personality, the Big Five personality traits, and the relevance of personality to school performance to contextualize these new topics. Newsletters in weeks 5 through 8 introduce content regarding whether personality can change, why personality change matters, and behavioral strategies that can be implemented to change personality traits. Finally, newsletters in weeks 9 through 13 elaborate on the importance of personality to key domains relevant to recent college graduates, particularly: work performance, career success, health, life satisfaction, and leadership. To assess weekly engagement in the intervention, we embedded a single-item question asking participants "How much of this email did you read?" on a scale from 1 ("I did not read this email") to 5 ("I read everything in this email thoroughly"). A total of 401 participants received weekly email newsletters (i.e., randomized to the experimental condition). 77.30 % of those participants responded to the engagement prompt at least once, 45.65 % responded to 7 out of 14 engagement prompts, 32.16 % responded to 10 prompts, and 15.46 % responded to all 14. Of participants who responded to the weekly survey, on average, they reported reading the entire email ($M = 4.30$; $SD = 0.21$). Sensitivity analyses revealed no significant differences in our central hypotheses between our full sample, and subsets with only those who responded to 75 % of engagement prompts and 50 % of engagement prompts. Thus, we opted to use the entire sample in all analyses to maintain sufficient power.

Participants across both conditions completed online surveys at five time points via Qualtrics at baseline, mid-test (end of week 8), post-test (end of week 13), 6-month follow-up relative to baseline, and 14-month follow-up relative to baseline (see Table 2).

2.3. Measures

The measures described below were administered according to the following schedule:

2.3.1. Independent variables

Condition. The experimental and control conditions were compared for their effects on target outcomes using a dummy code (0 = control, 1 = experimental).

2.3.2. Dependent variables

2.3.2.1. Personality traits. Personality traits were assessed using the Five Factor Model (openness, conscientiousness, extraversion, agreeableness, neuroticism) with 30 items from the Big Five Inventory-2 Short Form (BFI-2-S; Soto and John, 2017). Participants were asked to indicate their agreement with each statement starting with "I am someone who…" on a 5-point scale, ranging from 1 ("disagree strongly") to 5 ("agree strongly"). Sample items include "Is outgoing, sociable" (sociability, a facet of extraversion) and "Is compassionate, has a soft heart" (compassion, a facet of agreeableness). Composites for each Big Five domain were created by averaging six items for each relevant subscale.

2.3.2.2. Volitional personality change goals. Personality change goals were assessed using an idiographic-nomothetic (qualitative free response) method. Specifically, participants were asked, "What aspect of your personality do you currently want to change? Please be specific. If you do not want to change any aspect of your personality, please enter N/A." We coded N/A responses as participants not wanting to change their personalities. The remaining free responses were coded along categories representing increases or decreases in extraversion, conscientiousness, emotional stability, agreeableness, and openness. Three independent undergraduate research assistants coded each response. Inter-rater agreement was high for the major goal categories. Goal categories that captured less than 10 % of responses were not included in

Table 2
Measurement Schedule.

Measurement Timepoint	T_1	T_2	T_3	T_4	T_5
Demographics	•				
Big Five personality traits	•	•	•	•	•
Volitional personality change goals	•	•	•		
Overall motivation to change personality	•	•	•		
Intrinsic and extrinsic motivation	•	•	•		
Life satisfaction	•	•	•	•	•

Note. Time intervals from baseline (T1) were 8 weeks (T2), 13 weeks (T3), 6 months (T4), and 14 months (T5).

Table 3
Sample Desires for Personality Change and Their Associated Conceptual Categories.

Goal Change Category	Example Response	Mean α across waves
Increased extraversion	"Increase sociability and conversation skills."	0.96
Increased agreeableness	"I want to be more caring."	0.88
Increased conscientiousness	"I'd like to become more driven when it comes to my academic and professional career."	0.96
Increased emotional stability	"How I feel about my self-image, how I am pretty much self destructive by criticizing every little bad thing I do and how I look."	0.92
Motivation Category	Example Response	
Intrinsic	"I tend to be very caring which makes it difficult to assert things for myself'	0.64
Extrinsic	"Sometimes I can be a bit much for people"	0.65

Note. Categories to decrease any trait and to increase openness were not included in this list because each captured less than 10% of responses.

the analyses due to insufficient sample size (i.e., increases in openness and decreases in all five traits). See Table 3 for descriptions of each remaining category with example responses and reliability coefficients.

Finally, it should be noted that we focused on an open-ended approach to assess personality change goals for two key reasons. First, the open-ended response method limits possible demand characteristics that may occur if participants were instead instructed to select personality change goals from a list they may not think about otherwise (i.e., a Likert-type scale approach). Indeed, 12 % of participants indicated not wanting to change anything about their personality traits using an open-ended method (see results below) whereas 4 % indicated that they did not want to change any facet of the Big Five personality traits when responding to a Likert-type scale method. Second, the open-ended approach may capture personality change goals that are more top-of-mind and may be especially susceptible to our light-touch psycho-educational intervention.

2.3.2.3. Overall motivation to change personality. To assess participants' overall motivation to change their personality, respondents were asked to indicate how motivated they were to change their personality on a scale of 5-point scale from 1 ("slightly motivated") to 5 ("very motivated").

2.3.3. Moderator variables

2.3.3.1. Intrinsic and extrinsic motivation. As part of our qualitative assessment of volitional personality change goals, participants who endorsed having a personality change goal were asked: "Please explain why you want to change in this way. In other words, what has prompted you to want to change your personality?" Free responses were coded for intrinsic and extrinsic motivation, such that motives related to the facilitation of personal growth and psychological well-being were deemed "intrinsic" ($\alpha = 0.64$) and motivations related to gaining the approval of others or avoiding guilt, shame, or criticism were deemed "extrinsic" ($\alpha = 0.65$). Intrinsic and extrinsic motivation were coded by three independent research assistants as mutually exclusive. See Table 3 for example responses.

Table 4
Sample Sizes Across Waves and Conditions.

Timepoint	Both Conditions *Total N*	Control *N*	Experimental *N*	Both Conditions *Retained N*
T_1 (baseline)	816	415	401	816
T_2 (mid-test)	508	273	235	457
T_3 (post-test)	440	233	207	397
T_4 (6-month follow-up)*	457	251	205	416
T_5 (14-month follow-up)*	482	246	236	450

Note. Follow-up months are reported relative to baseline assessment.

2.4. Attrition analyses and missing data

As is common in longitudinal psychological studies using repeated measures (Nicholson et al., 2017), our study suffered from attrition. There was a 40 % attrition rate across the full 1-year study interval. As a data quality assurance measure, we retained survey responses at each timepoint that were greater than 7 min in response time and in which three of four attention checks were passed (see responses retained in the last column of Table 4). Regarding our treatment of missing data, we used pairwise deletion for our residualized change models, and full information likelihood estimation for our multilevel models to capitalize on all available data (Graham, 2009).

2.5. Analytic approach

Per our pre-registration, to test the effectiveness of our intervention, we carried out two sets of analyses. First, we tested whether overall motivation to change personality was predicted by condition. Second, we tested whether the obtainment of a specific personality change goal was predicted by condition. Regarding the first set of analyses (testing H1), we assessed whether condition impacts overall motivation to change personality using residualized change models predicting T_2 motivation (mid-test), T_3 (post-test) motivation, and T_4 (6-month follow-up)[1] motivation from condition controlling for T_1 motivation (baseline). Regarding the second analysis focused on the obtainment of a personality change goal (testing H2), we again used residualized change models. As our outcomes, we predicted the obtainment of a personality change goal as measured by our dummy-coded free-response data. For each outcome, we predicted T_2 (mid-test), T_3 (post-test), and T_4 (6-month follow-up) goals from condition controlling for T_1 (baseline) goals.

Next, to address the effect of our intervention on personality change attainment (testing H3 and H4), we employed multilevel modeling to account for the nested structure of our data: observations (level 1) nested within people (level 2) using maximum likelihood estimation. We ran separate models for each trait outcome and engaged in a model-building process described here. First, to test growth in our outcome variables (traits as measured by the BFI-2), we tested time as a level 1 predictor, centered at baseline. Time was tested in both linear and quadratic growth models to account for potential graduated decreases over the longitudinal study, and was also tested as both a fixed and random effect to test for significant differences in growth trajectories between participants. We next added the condition variable (dummy coded) to assess the impact of our intervention on a given trait (testing differences in intercepts) and also tested a condition*time interaction term to assess whether condition interacted with time to predict

[1] The decision to collect a 14-month follow-up was made after the pre-registration was complete and analyses were underway. Thus, as per the pre-registration, our main hypotheses used data from Waves 1–4. Multilevel models assessing trait change included data from all 5 waves.

different rates of change in a given trait (testing differences in slopes; H3). Finally, we tested whether having a personality trait goal predicted change in a corresponding trait, and whether the condition interacted with having a trait-specific change goal in predicting each trait outcome by testing a condition*change goal interaction term in each model (testing H4).

Further, we used the same multilevel models specified above to explore the relationship between intrinsic and extrinsic motivation to trait change (testing H5). More specifically, we tested the effect of intrinsic motivation (dummy coded) on a given trait (testing for differences in intercepts), as well as an intrinsic motivation*time interaction term to test whether intrinsic motivation interacted with time to predict different rates of change in a given trait (testing for differences in slopes). We then tested an intrinsic motivation*condition interaction term to test whether intrinsic motivation interacted with the condition to predict personality trait change. Finally, we performed descriptive analyses and calculated bivariate Pearson correlations to replicate existing findings on volitional personal change (H6-H8).

Finally, to help further validate our focus on the open-ended approach to VPC assessment, we conducted comparison analyses with an alternative scale approach to assessing VPC (e.g., the cBFI; Hudson et al., 2015). Both our open-ended response and alternative scale approaches yielded similar correlational analyses in which current personality trait levels are inversely related to corresponding trait goals. See Table S4 in the Supplementary Materials (https://osf.io/uyrnv/?view_only=881cc55bec644223bb6cc0a54c18246c).

3. Results

To establish the foundation for our main intervention findings, we first report findings from our pre-registered replication of consistent findings in the field of volitional personality change (H6-H8). We then tested the effectiveness of our volitional personality change intervention in its ability to increase the motivation to change one's personality (H1), develop personality change goals (H2), and achieve personality change, both relative to those without an initial goal (H3) and to those randomized into the control condition (H4). Finally, we explore whether reported intrinsically motivated goals predict greater downstream change relative to extrinsically motivated goals (H5).

As reported earlier, to rule out alternative explanations, we first ran sensitivity analyses testing whether results differed across varying levels of reported attention while reading each week's newsletter. Results did not significantly change across attention levels; thus, we report findings with the full dataset to maximize power and to remain consistent with analyses that did not use condition as a covariate.

3.1. Pre-registered replication of Extant volitional personality change findings

At baseline, the vast majority (88 %) of participants indicated a desire to change an aspect of their personalities. As predicted by H6 and replicating previous research, the most common personality change goals were to increase extraversion ($n = 243$; 35 %), emotional stability ($n = 216$; 31 %), and conscientiousness ($n = 95$; 13 %).

Next, replicating previous work and in alignment with H7, desires to increase a given trait were inversely related to baseline levels of corresponding traits (Table 5; note that baseline neuroticism was positively related with the desire to increase emotional stability, which was coded as a positive outcome).

Finally, again replicating previous work and in line with H8, having a personality change goal was negatively related to life satisfaction ($r = -0.19$) and positively related to baseline neuroticism ($r = 0.18$). Contrary to our hypothesis and previous research (Baranski et al., 2020), having a personality trait change goal was not significantly related to the openness facet of intellectual curiosity ($r < 0.001$).

3.2. Testing the effectiveness of the personality change intervention

We next tested the effects of our intervention. First, we hypothesized that intervention condition would predict increases in overall motivation to change one's personality (H1). Contrary to our hypothesis, those randomized to participate in the intervention did not report greater overall motivation to change their personalities at any point during the study period relative to those who were randomized into the control condition.

We also hypothesized that participating in our intervention would increase the likelihood of reporting personality change goals (H2). We found that, relative to those in the control group, those in our intervention condition were more likely to cite an increased desire to become more emotionally stable from T_1 to T_3 ($b = 0.093$, $p = 0.035$). No effects were observed for desires to increase conscientiousness, agreeableness, openness, or extraversion. Thus, our hypothesis was not supported except in the case of goals to increase emotional stability (See Supplementary Materials for complete model parameters).

To assess the effects of our intervention on desired personality change both relative to those without change goals regardless of condition (H3) and relative to those in the control condition regardless of initial trait change goal (H4), we first assessed the general personality change trends across the study period of all participants. Participants reported significant changes over time in all five traits, primarily in ways that opposed the maturity principle (Roberts et al., 2006). On average, participants showed significant linear decreases in extraversion ($b = -0.040$, $p < 0.001$), conscientiousness ($b = -0.038$, $p < 0.001$), agreeableness ($b = -0.026$, $p < 0.001$), and openness ($b = -0.017$, $p < 0.001$), as well as increases in neuroticism ($b = 0.022$, $p < 0.001$). Model fit was improved in predicting change for each trait when allowing time to randomly vary, except for neuroticism, indicating significantly different growth trajectories between participants in predicting extraversion, conscientiousness, agreeableness, and openness over time.

Next, we tested whether the intervention promoted personality trait change for those who had a personality change goal (H4). Contrary to our prediction, we found that condition did not interact with having a personality change goal and time in predicting changes in trait extraversion (b = -0.025, $p = 0.282$), conscientiousness (b = -0.014, $p = 0.691$), neuroticism ($b = 0.021$, $p = 0.388$), agreeableness (b = -0.052, $p = 0.245$), and openness (b = -0.004, $p = 0.958$).

Table 5
Correlations Between Baseline Traits and Personality Change Goals.

	Goal to increase Extraversion	Goal to increase Agreeableness	Goal to increase Conscientiousness	Goal to increase Emotional Stability
Baseline Extraversion	**−0.26****			
Baseline Agreeableness	0.01	**−0.14****		
Baseline Conscientiousness	0.14	0.03	**−0.26****	
Baseline Neuroticism	−0.14	−0.04	−0.04	**0.24****

Note. ** $p < 0.01$. Openness is not included due to the low (<3%) reported base rate of goals to increase openness.

When assessing the effects of our intervention on personality trait change irrespective of having a personality change goal, we found, contrary to our expectations (H4), condition exhibited no effect on changes in trait extraversion ($b = 0.004$, $p = 0.940$), conscientiousness ($b = 0.021$, $p = 0.694$), neuroticism ($b = -0.026$, $p = 0.674$), and agreeableness ($b = 0.049$, $p = 0.255$). Condition did significantly predict openness such that those in the intervention condition reported higher openness compared to those in the control condition at baseline and across the study period ($b = 0.112$, $p = 0.020$). However, condition did not significantly interact with time to predict different rates of change in openness ($b = -0.020$, $p = 0.058$), and thus, condition did not impact different trajectories in openness between our experimental and control conditions.

Finally, we tested whether having a personality change goal in a specific domain predicted corresponding changes in the target trait (independently from the intervention). We found that those who had a goal to increase emotional stability decreased in neuroticism over time ($b = -0.041$, $p = 0.001$), although this effect size is quite small and should be interpreted with caution. Interestingly, having a change goal to increase conscientiousness and agreeableness predicted significant *declines* in corresponding traits. Specifically, those who wanted to increase conscientiousness *decreased* in conscientiousness ($b = -0.569$, $p < 0.001$) and those who wanted to increase agreeableness *decreased* in agreeableness ($b = -0.252$, $p = 0.008$). Having a goal to increase openness had no effect on self-reported trait openness ($b = -0.115$, $p = 0.407$), nor did having a goal to increase extraversion in increasing extraversion ($b = 0.021$, $p = 0.067$).

3.3. Intrinsic vs. extrinsic motivation in predicting trait change

We next tested our prediction that those who expressed intrinsic motivation (vs. extrinsic) motivation to change their personalities would experience greater personality change goal achievement (H5). To contextualize these results, we outlined which trait goals participants reported as intrinsically vs. extrinsically motivated. Desires to be more conscientious, emotionally stable, and open were largely intrinsically motivated, while desires to be more extraverted and agreeable were largely extrinsically motivated (Table 6).

Contrary to our expectations, we found that having intrinsic motivation to change one's personality was negatively associated with trait conscientiousness ($b = -0.239$, $p < 0.001$) and positively associated with trait neuroticism ($b = 0.246$, $p < 0.001$), and that intrinsic motivation did not significantly interact with time to predict different growth trajectories in conscientiousness. Overall, these results did not confirm our hypothesis that having intrinsic motivation to change one's personality results in greater personality change relative to having extrinsic motivation.

Table 6
Frequency of Personality Change Goals and Intrinsic/Extrinsic Motivation.

Timepoint	Frequency *n* (%)	Intrinsic Motivation *n* (%)	Extrinsic Motivation *n* (%)
Extraversion	$n = 243$ (35 %)^	$n = 95$ (40 %)	$n = 145$ (60 %)
Emotional Stability	$n = 216$ (31 %)	$n = 180$ (83 %)	$n = 36$ (17 %)
Conscientiousness	$n = 95$ (13 %)	$n = 89$ (94 %)	$n = 6$ (6 %)
Agreeableness	$n = 66$ (10 %)	$n = 26$ (39 %)	$n = 40$ (60 %)
Openness	$n = 15$ (2 %)	$n = 9$ (60 %)	$n = 6$ (40 %)

Note. We used majority-rule across three independent coders. Thus, disagreement among coders is reflected in instances where intrinsic and extrinsic categories do not add to the total trait frequency.

4. Discussion

To date, successful personality change interventions have used structured, behaviorally-guided protocols in helping participants achieve desired personality change (e.g., Hudson et al., 2019; Stieger et al., 2020), yet the boundary conditions separating effective from ineffective interventions have yet to be fully established. Testing the efficacy of less intensive interventions in facilitating desired personality change may enable the delivery of personality change interventions at scale, and could help facilitate popular interest in improving one's personality. Accordingly, based on major tenets of Expectancy Value Theory (Wigfield & Eccles, 2000), we tested the effectiveness of a 13-week psychoeducational personality change intervention in encouraging personality change goal motivation and subsequent personality change. We carried out this intervention among recent college graduates transitioning to the workforce, given this important period of adult personality development.

Overall, our intervention was not successful in increasing overall motivation to change one's personality and promoting desirable personality changes. Moreover, our intervention had limited success in promoting the adoption of specific personality change goals over time. Participants in the intervention condition were more likely to cite an increased desire to become more emotionally stable from baseline to the 3-month follow-up, but there were no other significant differences across conditions. Below we discuss implications to the development of new personality change interventions.

4.1. The effectiveness of a psychoeducational motivation-focused intervention

Of primary interest, our study tested whether a psychoeducation-focused and less behaviorally intensive intervention facilitates volitional personality change. We found no main effects of condition on overall motivation to change personality and on personality trait change. Our intervention also did not encourage broader adoption of personality change goals as we expected.

Contextualizing our findings in the transition period from college graduation to employment, we find that this highly transformative time was largely marked by socially *un*desirable personality changes, however, our intervention did not largely help buffer against these undesirable trends (see below for a possible exception).

Importantly, these mean-level change results conceptually replicate recent work by Reitz and colleagues (2022) that found similar decreases in personality change over their 2-year study period among individuals during the same university-to-work transition period. These authors, however, found that individuals who reported a higher sense of work-related mastery observed more positive changes in conscientiousness (Reitz et al., 2022). Thus, there may be similarly relevant, unassessed moderators that may be at play in our study. Indeed, it may be the case that the transition from college to the workforce is *such* an important period in one's life that positive or negative feelings of mastery put individuals on an upward or downward spiral of personality development, respectively.

From the limited effects of our psychoeducational intervention, we infer two primary points. First, our findings demonstrate the limitations of motivation-focused and psychoeducational interventions in producing desired personality change compared to interventions focused on behavioral strategies. Future research can explore other approaches to enhancing individuals' motivation, such as adding more interactive components or building interventions that can benefit a broader population. Second, we find that the transition from college to the workforce

presents a period of both change and upheaval, resulting in decreases in personality trait levels in the short term (albeit modest changes, on average). This may bring extra challenges to personality interventions. However, considering that this transition represents a critical period, more research is needed to identify major barriers to desired personality change during the transition and explore ways of helping recent graduates cope with these challenges.

Interestingly, we found that regardless of condition, those with a goal to increase conscientiousness and agreeableness tended to report *decreases* in those traits over time. The 'back-firing' effect partially replicates findings from Baranski et al. (2020) and Robinson et al. (2015), who both demonstrate that when participants do not engage in a volitional personality change intervention, those with goals to increase conscientiousness tend to decrease in conscientiousness over 6 months. In accordance with the interpretation of those researchers, participants with goals to increase conscientiousness tend to have low initial levels of this trait, which may put them at a disadvantage at achieving goals to increase organization, productivity, and responsibility in particular, and goal pursuit in general. From this perspective, null results of our primary analyses perhaps indicate that our intervention may have served as a buffer to this 'back-firing' effect; however, more research is needed to test this possibility.

4.2. Exploring why emerging adults want to change their personalities

Given the central theme of our intervention was the impact that motivation has on successful personality change, we conducted two sets of analyses examining the content of participants' motivation – namely, the degree to which goals were intrinsically vs. extrinsically motivated, and the context of their motivation (e.g., professional, social, physical health, psychological health, etc.). We found that desires to become more extraverted and agreeable—traits that are primarily interpersonal in nature—are largely extrinsically motivated. In total, 60 % of individuals endorsing each of these trait goals expressed extrinsic motives (influence from others or external forces) as the impetus for wanting to increase these traits. Additional content coding analyses revealed that for people with goals to increase extraversion (but not agreeableness), the majority (51 %) wanted to do so to facilitate social advancement. Together, these findings suggest that a common reason why people want to be more extraverted is to increase their overt social status. This finding may also be relevant to the study period, given that individuals transitioning to the workforce may be particularly motivated to network and build social status to facilitate professional success.

4.3. Building a confirmatory science on volitional personality change

Finally, we performed a pre-registered replication of key findings in the field of personality psychology addressing the prevalence and content of personality change goals. With one exception, we replicated all previous findings regarding the (a) prevalence of general and specific personality change goals, (b) strong inverse relationship between corresponding current and desired traits, and (c) the strong relationships between having a personality change goal and current life satisfaction (negatively related) and neuroticism (negatively related).

Regarding the prevalence of personality change goals, our study also contributes to knowledge about the implications of using open-ended (qualitative) vs. scale-based assessment of personality change goals. As previously detailed in our Method section, we focused on coded open-ended responses regarding personality change goals, as we believe this approach more directly reflects conscious endorsement of personality change goals that are top-of-mind as compared to scale-based measurements that may prime participants to reflect on desirable personality changes. Indeed, and as previously mentioned, 12 % of participants indicated they had no personality change goals according to free-response data, compared to the 4 % of participants implicated as having no personality change goals according to our scale-based measurement. Thus, our findings reveal that slightly more people are likely to endorse personality change goals when prompted with a list of traits to change, as compared to an open-ended approach. Importantly, however, our supplementary analyses indicate *no* substantive differences in using qualitative vs. scale measurement in predicting actual personality change from intervention condition.

Although free-response data more conservatively measures the frequency of personality change goals relative to scale-based measurement, we still observed a higher proportion of our sample that wanted to change some aspect of their personality compared to other idiographic-nomothetic approaches (e.g., 51 %–68 %; Baranski et al., 2016). This discrepancy may stem from how we inquired about personality change goals in the current study ("What aspect of your personality do you currently want to change? Please be specific. If you do not want to change any aspect of your personality, please enter N/A") compared to wording in other approaches (e.g., "Do you want to change an aspect of your personality?" [If selected yes], "Describe an aspect of your personality you are trying to change;" Baranski et al., 2016). Specifically, participants essentially had to 'opt out' of describing personality change goals, whereas, in other studies, they simply clicked a 'no' option.

In sum, our replication efforts were largely successful. The only pre-registered hypothesis we did not replicate was the positive relationship between the intellect facet of openness and having a personality change goal. Importantly, in contrast to other effects with convergent findings across researchers, methodologies, and samples, this effect was only found in one study with a large, international sample (Baranski et al., 2020). Accordingly, we consider our replication of most pre-registered effects as a significant step towards a confirmatory science around basic volitional personality change questions. Our hope is for future researchers to build upon this foundation and explore new questions regarding the mechanisms, stability, relative priority, and generalizability of volitional personality change goals, among other important avenues for new research.

5. Limitations

While this study elaborates on the boundary conditions by which volitional personality change is possible, it is not without its limitations. First, while we chose to focus on recent college graduates in particular, the volitional personality change process, especially as it applies to motivation to change, may differ substantially across different age groups.

Next, we acknowledge that the open-ended approach may be liable to misidentifying participants' intended goals through the coding process or miss important secondary goals not listed in participants' one shot open-ended response. Furthermore, while this approach enabled us to assess goals that are "front of mind" and expressed in participants' own words, it did limit our ability to assess the prevalence of each goal and priority of attainment relative to other personality or non-personality goals. Finally, this approach requires the dichotomous presence/absence coding of a given personality change goal without capturing the degree of desired change. The limited variability may restrict the ability to detect correlations with outcomes (e.g., Blake & Gangestad, 2020; Donnellan & Rakhshani, 2023; Goodwin & Leech, 2006, but as previously indicated, our supplementary analyses indicate that using the open-ended response vs. scale approach did not

significantly impact our findings (https://osf.io/uyrnv/?view_only=881cc55bec644223bb6cc0a54c18246c) in terms of our primary analyses on the effects of intervention condition on target outcomes.

Finally, this study was conducted during the Summer and Fall of 2021, which occurred prior to widespread COVID-19 vaccine availability. Recent college graduates may have faced particularly strong hardships, especially as they navigated the job market when most companies had enduring hiring freezes. If not assessed during this period, participants' personality traits may not have changed in socially undesirable directions, and they may have been more open and able to utilize our psychoeducational intervention toward their self-improvement.

6. Conclusion

The current study adds to findings from previous research (Asadi et al., 2020; Baranski et al., 2020; Robinson et al., 2015) to converge on one important point: acting counter-dispositionally and attaining personality change is no easy task. Though personality change interventions offer promising evidence that people can, indeed, change with the help of a guided behavioral intervention (Hudson & Fraley, 2015; Roberts et al., 2017; Stieger et al., 2018), our work helps close the gap and define the boundary conditions by which volitional personality change is possible. Our findings suggest that psychoeducational, motivation-focused interventions may not be sufficient to encourage personality change in the absence of specific and regular behavioral activation, and further illuminate the contours by which personality change interventions are (in)effective.

Credit authorship contribution statement

Erica Baranski: Writing – review & editing, Writing – original draft, Project administration, Methodology, Funding acquisition, Data curation, Conceptualization. **Ramona L. Martinez:** Writing – review & editing, Writing – original draft, Formal analysis, Conceptualization. **Zihan Liu:** Writing – review & editing, Formal analysis, Data curation. **Kevin Hoff:** Writing – review & editing, Project administration, Methodology, Funding acquisition, Data curation, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The authors would like to acknowledge the amazing research assistants who contributed to content coding open-ended responses: Lupe Hernandez, Ashley Duarte, Mya Mejia, Monica Tran, Amelia Zusman, Ricky Huang, Steph Moran, and Jillian Guelos. Also, this research was funded by start-up grants provided by the University of Houston and California State University, East Bay.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.jrp.2024.104549.

References

Abraham, J., & Barker, K. (2015). An expectancy-value model for sustained enrolment intentions of senior secondary physics students. *Research in Science Education, 45*, 509–526. https://doi.org/10.1007/s11165-014-9434-x

Allemand, M., Olaru, G., Stieger, M., & Flückiger, C. (2024). Does realizing strengths, insight, and behavioral practice through a psychological intervention promote personality change? An intensive longitudinal study. *European Journal of Personality*. https://doi.org/10.1177/08902070231225803

Arend, M. G., & Schäfer, T. (2019). Statistical power in two-level models: A tutorial based on Monte Carlo simulation. *Psychological Methods, 24*(1), 1–19. https://doi.org/10.1037/met0000195

Atkinson, J. W. (1957). Motivational determinants of risk-taking behavior. *Psychology Review, 64*, 359–372. https://doi.org/10.1037/h0043445

Asadi, S., Dehaj, H. M., & Robinson, O. (2020). Personality change goals and plans as predictors of longitudinal trait change in young adults: A replication with an Iranian sample. *Journal of Research in Personality, 85*, Article 103912. https://doi.org/10.1016/j.jrp.2020.103912

Baranski, E., Gray, J., Morse, P., & Dunlop, W. (2020). From desire to development? A multi-sample, idiographic examination of volitional personality change. *Journal of Research in Personality, 85*, Article 103910. https://doi.org/10.1016/j.jrp.2019.103910

Baranski, E. N., Morse, P. J., & Dunlop, W. L. (2017). Lay conceptions of volitional personality change: From strategies pursued to stories told. *Journal of Personality, 85*(3), 285–299. https://doi.org/10.1111/jopy.12240

Bleidorn, W., Hopwood, C. J., & Lucas, R. E. (2018). Life events and personality trait change. *Journal of Personality, 86*(1), 83–96. https://doi.org/10.1111/jopy.12286

Bleidorn, W., Schwaba, T., Zheng, A., Hopwood, C. J., Sosa, S. S., Roberts, B. W., & Briley, D. A. (2022). Personality stability and change: A meta-analysis of longitudinal studies. *Psychological Bulletin, 148*(7–8), 588–619. https://doi.org/10.1037/bul0000365

Bühler, J. L., Orth, U., Bleidorn, W., Weber, E., Kretzschmar, A., Scheling, L., & Hopwood, C. J. (2023). Life events and personality change: A systematic review and meta-analysis. *European Journal of Personality*. https://doi.org/10.1177/08902070231190

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Eccles-Parsons, J., Adler, T. F., Futterman, R., Goff, S. B., Kaczala, C. M., Meece, J. L., & Midgley, C. (1983). Expectancies, values, and academic behaviors. *Achievement and Achievement Motivation, 1983*, 75–146.

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology, 60*, 549–576. https://doi.org/10.1146/annurev.psych.58.110405.085530

Hudson, N. W., & Fraley, R. C. (2015). Volitional personality trait change: Can people choose to change their personality traits? *Journal of Personality and Social Psychology, 109*(3), 490–507. https://doi.org/10.1037/pspp0000021

Hudson, N. W., & Fraley, R. C. (2016). Do people's desires to change their personality traits vary with age? An examination of trait change goals across adulthood. *Social Psychological and Personality Science, 7*(8), 847–856. https://doi.org/10.1177/1948550616657598

Hudson, N. W., Briley, D. A., Chopik, W. J., & Derringer, J. (2019a). You have to follow through: Attaining behavioral change goals predicts volitional personality change. *Journal of Personality and Social Psychology, 117*(4), 839–857. https://doi.org/10.1037/pspp0000221

Lodi-Smith, J., & Roberts, B. W. (2007). Social investment and personality: A meta-analysis of the relationship of personality traits to investment in work, family, religion, and volunteerism. *Personality and Social Psychology Review, 11*(1), 1–19. https://doi.org/10.1177/1088868306294590

Miller, T. J., Baranski, E. N., Dunlop, W. L., & Ozer, D. J. (2019). Striving for change: The prevalence and correlates of personality change goals. *Journal of Research in Personality, 80*, 10–16. https://doi.org/10.1016/j.jrp.2019.03.010

Moore, A. M., Holding, A. C., Buchardt, L., & Koestner, R. (2021). On the efficacy of volitional personality change in young adulthood: Convergent evidence using a longitudinal personal goal paradigm. *Motivation and Emotion, 45*, 171–185. https://doi.org/10.1007/s11031-021-09865-7

Nicholson, J. S., Deboeck, P. R., & Howard, W. (2017). Attrition in developmental psychology: A review of modern missing data reporting and practices. *International Journal of Behavioral Development, 41*(1), 143–153. https://doi.org/10.1177/0165025415618275

Quintus, M., Egloff, B., & Wrzus, C. (2017). Predictors of volitional personality change in younger and older adults: Response surface analyses signify the complementary perspectives of the self and knowledgeable others. *Journal of Research in Personality, 70*, 214–228. https://doi.org/10.1016/j.jrp.2017.08.001

Reitz, A. K., den Boer, L., van Scheppingen, M. A., & Diwan, K. (2022). Personality maturation through Sense of Mastery? Longitudinal evidence from two education-to-work transition studies. *Journal of Personality., 1–17*. https://doi.org/10.1111/jopy.12789

Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin, 132*(1), 1–25. https://doi.org/10.1037/0033-2909.132.1.1

Roberts, B. W., Wood, D., & Smith, J. L. (2005). Evaluating Five Factor Theory and social investment perspectives on personality trait development. *Journal of Research in Personality, 39*(1), 166–184. https://doi.org/10.1016/j.jrp.2004.08.002

Robinson, O. C., Noftle, E. E., Guo, J., Asadi, S., & Zhang, X. (2015). Goals and plans for Big Five personality trait change in young adults. *Journal of Research in Personality, 59*, 31–43. https://doi.org/10.1016/j.jrp.2015.08.002

Shang, C., Moss, A. C., & Chen, A. (2023). The expectancy-value theory: A meta-analysis of its application in physical education. *Journal of Sport and Health Science, 12*(1), 52–64. https://doi.org/10.1016/j.jshs.2022.01.003

Soto, C. J., & John, O. P. (2017). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality, 68*, 69–81. https://doi.org/10.1016/j.jrp.2017.02.004

Stieger, M., Nißen, M., Rüegger, D., Kowatsch, T., Flückiger, C., & Allemand, M. (2018). PEACH, a smartphone- and conversational agent-based coaching intervention for intentional personality change: Study protocol of a randomized, wait-list controlled trial. *BMC Psychology, 6*, Article 43. https://doi.org/10.1186/s40359-018-0257-9

Stieger, M., Flückiger, C., & Allemand, M. (2023). One year later: Longer-term maintenance effects of a digital intervention to change personality traits. *Journal of Personality*. https://doi.org/10.1111/jopy.12898

Stieger, M., Wepfer, S., Rüegger, D., Kowatsch, T., Roberts, B. W., & Allemand, M. (2020). Becoming more conscientious or more open to experience? Effects of a two-week smartphone-based intervention for personality change. *European Journal of Personality, 34*(3), 345–366. https://doi.org/10.1002/per.2267

Wigfield, A., & Eccles, J. S. (2000). Expectancy–value theory of achievement motivation. *Contemporary Educational Psychology, 25*(1), 68–81. https://doi.org/10.1006/ceps.1999.1015