



# Developing authenticity: A quasi-experimental investigation

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## ABSTRACT

Authenticity facilitates positive human functioning. Yet, previous research has not adequately addressed whether different dimensions of authenticity develop naturally as one ages or whether their development can be facilitated through systematic interventions. These issues must be addressed to better understand the dimensionality of authenticity and its change over time. We conducted a quasi-experimental intervention study with 170 first-year business students (58 treatment and 112 control group participants) at a university in Switzerland over an eight-month period—a critical time when authenticity should naturally develop given young adults' move from their family of origin. A career and personal development program exhibited differential effects on three dimensions of authenticity: (1) *authentic living* increased only for those in the treatment group, (2) *acceptance of external influence* decreased in both groups, but with a stronger effect in the treatment group, and (3) no significant changes occurred in either group's *self-alienation*. These findings suggest that some authenticity dimensions may be more receptive to natural growth, whereas others require systematic interventions or may be notoriously hard to change. The results contribute to the theoretical understanding of authenticity and provide practical insights into its development.

## 1. Introduction

Authenticity—that is, being true to and acting in accordance with one's true self—is key to positive human functioning (Sutton, 2020; Wood et al., 2008). Authenticity contributes to self-esteem development (Impett et al., 2008), positive interpersonal relationships and well-being (Baker et al., 2017; Rivera et al., 2019; Seto & Davis, 2021), positivity and meaning (Russo-Netzer & Shoshani, 2020) as well as creativity (Xu et al., 2021).

Authenticity is conceptually and empirically distinct from other individual difference constructs (Maltby et al., 2012; Wood et al., 2008). It shows small to moderate correlations with the Big Five personality traits: positive correlations with conscientiousness, agreeableness, extraversion, and openness to experience and a negative correlation with neuroticism (Bond et al., 2018). Authenticity loads on the sixth factor of personality, 'Honesty–Humility' (Maltby et al., 2012), which comprises attributes such as truthfulness, sincerity, and honesty, and is therefore similar to authenticity (Ashton & Lee, 2007). Evidence also shows that

authenticity is related to but distinct from approach/inhibition self-regulatory systems and from psychobiological models of personality (Pinto et al., 2011).

However, what does it mean to be 'true to oneself'? Contemporary theories of personality offer two perspectives (Sheldon et al., 1997; Sutton, 2018, 2020). Authenticity as *consistency* (i.e., acting in ways that are strictly consistent with one's stable personality traits across social roles, contexts/situations, and over time) implies a somewhat rigid and inflexible self-concept. Instead, conceptualizing authenticity as a process of *coherence* or *congruence* means that the individual strives for an alignment between the inner self (i.e., cognitions, emotions, values, and beliefs; Kernis & Goldman, 2006) and its outward expression (Lehman et al., 2019). We follow this latter view, which implies that individuals may struggle to achieve authentic self-expression (Sheldon et al., 1997) whilst also offering opportunities for the development of authenticity over the lifespan (e.g., Seto & Schlegel, 2018) or through interventions (e.g., Leroy et al., 2013).

Authenticity development is a process of "perceived movement

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towards [one's] true self" (Seto & Schlegel, 2018, p. 313). It requires the individual to uncover and find ways of expressing what they consider their true self. In line with Erikson's (1963) theory of psychosocial development, people tend to address deeper self-related questions during late adolescence and young adulthood (McAdams & McLean, 2013). This is supported by empirical evidence (Impett et al., 2008; Thomaes et al., 2017). Changes in the self-system include the proliferation of multiple selves, for example, what is perceived as true and false selves (Harter et al., 1996). During emerging adulthood (18–25 years), individuals continue to explore their sense of the true self in different areas of life to form a more stable understanding of 'who they really are' and 'who they want to be' (Arnett, 2000, 2007).

Interactions with others help the individual to make sense of who they are, but they also require interpersonal skills (McAdams & McLean, 2013). Young adults become increasingly independent from their family of origin and are exposed to new social contexts. They "begin to form a place as an adult in the adult world" (Levinson, 1986, p. 5), while navigating the sense of instability that is typical of emerging adulthood (Russo-Netzer & Shoshani, 2020). Developing authenticity can be a challenge for young adults and requires systematic support (Russo-Netzer & Shoshani, 2020; Seto & Schlegel, 2018).

The purpose of our study is to report on a quasi-experimental intervention that tests whether an eight-month career and personal development program (CPDP) can help young adults develop authenticity during their first year at university. We compare pre- and post-intervention measurements of three authenticity dimensions – self-alienation, authentic living, and acceptance of external influence – in treatment and control groups. In doing so, we provide evidence to the following three questions: (1) whether authenticity development occurs naturally or if at all, (2) whether authenticity development can be assisted through intervention, and (3) whether different dimensions of authenticity have the same developmental properties (i.e., malleability and receptiveness to intervention). Finally, this work offers practical insights for organizations to design authenticity development programs.

### 1.1. Authenticity dimensions and development

In the present study, we apply the authenticity-as-congruence approach (Sutton, 2020) and use the tripartite conceptualization of authenticity by Wood et al. (2008): *Self-alienation* captures the incongruence between one's deep-level states and experiences (i.e., physiological, emotional, cognitive) and the conscious awareness of such states. *Authentic living* results from behaving in ways which are true to one's core self in most situations. *Acceptance of external influence* is the extent to which one's experiences and behaviors are driven by others' expectations instead of one's own values and beliefs. Research supported the conceptual distinctiveness across multiple samples and subgroups (e.g., by ethnicity, gender), reporting small to moderate correlations between these three dimensions (Wood et al., 2008) and confirming the factor structure over time (Zhang et al., 2018). Previous results also demonstrated differential relationships of the three authenticity dimensions with outcomes such as happiness, stress, or anxiety (Wood et al., 2008), emphasizing the need to treat the dimensions of authenticity as distinct.

Wood et al. (2008) were interested in how authenticity changes and how its development can be facilitated. Current evidence is limited to interventions that address specific forms of authenticity development in professional contexts. For example, leadership development programs can facilitate self-awareness and balanced processing (Evans et al., 2016) as well as authentic leadership (Baron & Parent, 2015; Nübold et al., 2020; Petriglieri et al., 2011), and mindfulness training increases employees' authentic functioning (Leroy et al., 2013). The findings are based on older adult samples, some apply qualitative methods, often lack control group designs, and do not differentiate the authenticity dimensions (details in Online Supplement Section I). This research does not fully address authenticity as part of the broader self-development

tasks for young adults (McAdams & McLean, 2013; McLean et al., 2007). We seek to address these limitations with the current research.

### 1.2. The present study

Our study aims to investigate the effects of a CPDP on the development of the three dimensions of authenticity. Consistent with theories of personality development (e.g., Dweck, 2017), we argue that the CPDP addresses authenticity as a self-development task for young adults as it is situated in everyday interactions, relationships, and the process of self-reflection in different settings (e.g., interactions with peers, feedback, value reflection). We predict that compared to first-year undergraduate students who do not participate (i.e., control group), first-year undergraduate students who participate in the CPDP (i.e., treatment group) will report a reduction in self-alienation (Hypothesis 1), an increase in authentic living (Hypothesis 2), and a reduction in the acceptance of external influence (Hypothesis 3).

## 2. Methods

### 2.1. Participants and procedure

We used a quasi-experimental design to test the impact of the CPDP on the three dimensions of authenticity with a sample of first-year business students enrolled at a university in Switzerland. At the start of their first year, all 1200 students were invited to join informational events about the CPDP and to apply for a total of 65 places offered. Participation in the CPDP was voluntary, free of charge, and not monetarily rewarded. Participation in the study was also voluntary and not a requirement for enrolment in the program. The study was part of a larger data collection effort, but no other publications have been based on the data reported here. We obtained usable data from 58 treatment group participants and 112 control group participants pre- and post-intervention on measures of self-rated authenticity and control variables. The final sample (i.e., treatment and control group) included 58 women (34.10 %) and 112 men between the ages of 18 and 24 years ( $M = 20.00$  years,  $SD = 1.15$  years).

Fig. 1 displays detailed information regarding the quasi-experimental procedure.

### 2.2. Career and personal development program (CPDP)

The CPDP was designed to facilitate the development of authenticity in young adults entering university by providing them with opportunities to explore and express who they are, who they aspire to be, and learn the associated skills (McAdams & McLean, 2013; McLean et al., 2007). It took place over the course of two academic semesters. The CPDP included group workshops (informative and transformative) and individual coaching sessions (details in Online Supplement Section II). Several of the group workshops provided participants with opportunities for self-reflection and interpersonal skills development (e.g., self and value reflection, personality assessment, negotiation), whilst other workshops were more practical in nature (e.g., time management) and facilitated skills that helped participants to navigate interpersonal relationships and demands in professional contexts (e.g., allocating time in line with personal values and preferences, understanding norms in business contexts).

The individual coaching sessions followed a strength-based approach (MacKie, 2014). They provided the space to reflect on and express one's true self in a safe relational context (McLean et al., 2007). Professional coaches of the CPDP received training prior to their assignment to ensure consistency. In the treatment group, participants attended between 1 and 13 workshops ( $M = 7.43$ ,  $SD = 2.46$ ) as well as between 1 and 8 individual coaching sessions ( $M = 3.50$ ,  $SD = 1.67$ ).

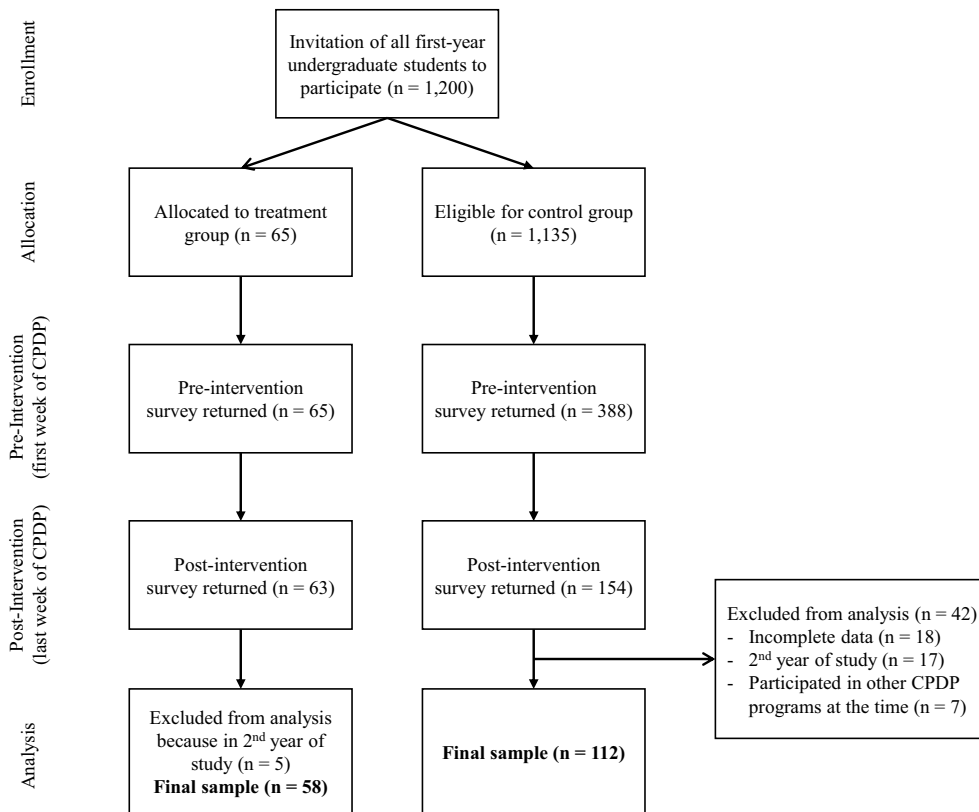


Fig. 1. Procedural flow chart of quasi-experimental procedure.

## 2.3. Measures

### 2.3.1. Authenticity

We used Wood et al.'s (2008) 12-item scale measuring the three dimensions with 4 items each: self-alienation ( $\alpha_{T1} = 0.83$ ,  $\alpha_{T2} = 0.84$ ), authentic living ( $\alpha_{T1} = 0.84$ ,  $\alpha_{T2} = 0.85$ ), and acceptance of external influence ( $\alpha_{T1} = 0.88$ ,  $\alpha_{T2} = 0.82$ ). Participants rated all items on a 7-point Likert scale (1 = *does not describe me at all*, 7 = *describes me very well*). At Time 1 (T1), the three-factor model fit the data well,  $\chi^2(51) = 94.66$ ,  $p < .001$ , CFI = 0.956, TLI = 0.943, RMSEA = 0.072, SRMR = 0.050. At Time 2 (T2), the three-factor model again fit the data well,  $\chi^2(51) = 94.62$ ,  $p < .000$ , CFI = 0.953, TLI = 0.939, RMSEA = 0.071, SRMR = 0.059. At both time points the three-factor model fit the data significantly better than a one-factor model (T1:  $\Delta\chi^2(3) = 366.81$ , T2:  $\Delta\chi^2(3) = 390.07$ , both  $ps < 0.001$ ), supporting the three-dimensional factor structure.

### 2.3.2. Covariates

We carefully selected potential covariates based on theoretical considerations to eliminate the possibility that they were the reason for any post-intervention differences observed between the treatment and control groups. However, we made inclusion in the subsequent analysis dependent on the statistical association with authenticity (Becker et al., 2016). Four covariates were included: reflective learning style, implicit person theory, distance to previous place of residence, gender (details in Online Supplement Sections III & IV).

## 3. Results

### 3.1. Descriptive statistics

Table 1 summarizes means, standard deviations, and correlations for each of the dependent variables at T1 and T2 for the treatment and

control groups.

We first investigated whether the treatment and control groups were comparable given that we could not utilize random assignment as well as the homogeneity of variances assumption due to unequal group sizes. Results of this set of preliminary analyses are provided in the Online Supplement Sections IV and V. Based on these analyses we concluded that (1) the measurement of authenticity was not perceived differently across treatment and control groups, (2) the treatment and control groups were equivalent in authenticity at the start, and (3) the identified differences on the covariates led to their inclusion in subsequent analyses.

### 3.2. Hypothesis testing

Results from the repeated measures MANCOVA demonstrated a significant overall interaction effect between group and time,  $F(3,160) = 2.868$ ,  $p = .038$ ,  $\eta_p^2 = 0.051$ , a non-significant effect of group,  $F(3,160) = 0.150$ ,  $p = .929$ , and a non-significant effect of time,  $F(3,160) = 2.287$ ,  $p = .081$ . Table 2 summarizes means and test values for each of the dependent variables. Fig. 2 displays bar charts for control and treatment groups from pre- to post-intervention. For hypothesis testing, we report results from univariate analyses for each of the three authenticity measures separately as well as estimates of means and significance from pairwise comparisons.<sup>2</sup>

Hypothesis 1 suggested that participation in the CPDP leads to a significant decrease in self-alienation. The main effect of time,  $F(1,162) = 0.010$ ,  $p = .921$ ,  $\eta_p^2 = 0.000$ , and the interaction effect between group and time,  $F(1,162) = 1.918$ ,  $p = .168$ ,  $\eta_p^2 = 0.012$ , were not significant. Participants of the treatment group did not show significantly lower

<sup>2</sup> The analysis without covariates led to the same pattern of results for each of the three authenticity dimensions, although the overall test statistic was not significant,  $F(3,166) = 2.619$ ,  $p = .053$ ,  $\eta_{p2}^2 = 0.045$ .

**Table 1**  
Descriptive statistics and correlations for authenticity.

	M	SD	1	2	3	4	5	6	M	SD
1. Self-alienation (t1)	2.73	1.28		0.74***	−0.45***	−0.41***	0.34***	0.30**	2.50	1.26
2. Self-alienation (t2)	2.45	1.02	0.29*		−0.41***	−0.38***	0.28**	0.44***	2.51	1.32
3. Authentic living (t1)	5.30	0.90	−0.46***	−0.27*		0.69***	−0.42***	−0.31**	5.44	1.04
4. Authentic living (t2)	5.59	0.75	−0.28*	−0.31*	0.60***		−0.39***	−0.28**	5.43	0.96
5. Acceptance of external influence (t1)	3.75	1.10	0.40**	−0.02	−0.46***	−0.29*		0.68***	3.58	1.37
6. Acceptance of external influence (t2)	3.24	1.02	0.20	0.37**	−0.29*	−0.35**	0.44**		3.30	1.18

Note. Variables measured on 7-point Likert scales. Treatment group ( $N = 58$ ) results reported at the lower left diagonal. Control group ( $N = 112$ ) results reported at the upper right diagonal. Time 1 (t1) and Time 2 (t2) measures.

\*  $p < .05$ .

\*\*  $p < .01$ .

\*\*\*  $p < .001$ .

**Table 2**  
Estimates of means, mean differences, significance and 95 % confidence intervals for pairwise comparisons.

Dependent variable	M (SE) (Time 1)	M (SE) (Time 2)	Mean difference (Time 1 – Time 2)	p	95 % CI
Self-alienation					
Control group	2.49 (0.12)	2.49 (0.12)	−0.003	0.979	−0.218, 0.212
Treatment group	2.74 (0.18)	2.47 (0.17)	0.273	0.085	−0.038, 0.584
Authentic living					
Control group	5.48 (0.10)	5.46 (0.09)	0.019	0.808	−0.132, 0.170
Treatment group	5.24 (0.14)	5.53 (0.13)	−0.287	0.010	−0.505, −0.068
Acceptance of external influence					
Control group	3.54 (0.12)	3.31 (0.11)	0.229	0.027	0.027, 0.431
Treatment group	3.81 (0.18)	3.19 (0.16)	0.620	0.000	0.328, 0.913

Note. Treatment group:  $N = 57$  (due to missing value on one covariate), control group:  $N = 112$ . Included covariates: reflective learning style, implicit person theory, distance to previous place of residence, gender.

levels of self-alienation at T2 ( $M = 2.47$ ) than at T1 ( $M = 2.74$ ;  $p = .085$ , 95 % CI  $[-0.038, 0.584]$ ), although there was a trend in the expected direction. In the control group, levels of self-alienation did not change from T1 ( $M = 2.49$ ) to T2 ( $M = 2.49$ ;  $p = .938$ , 95 % CI  $[-0.218, 0.212]$ ).

Hypothesis 2 suggested that participation in the CPDP significantly increases authentic living, and we found support for this prediction. The main effect of time was not significant,  $F(1,162) = 0.116$ ,  $p = .734$ ,  $\eta_p^2 =$

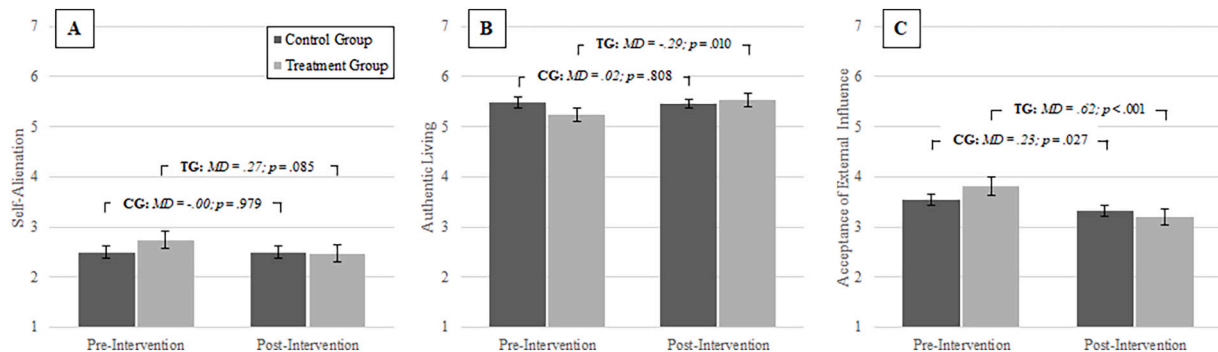
0.001. The interaction effect between group and time was significant,  $F(1,162) = 4.754$ ,  $p = .031$ ,  $\eta_p^2 = 0.029$ . Participants in the treatment group showed significantly higher levels of authentic living at T2 ( $M = 5.53$ ) than at T1 ( $M = 5.24$ ;  $p = .010$ , 95 % CI  $[-0.505, -0.068]$ ), Hedges's  $g_{average} = 0.283$ . In the control group, levels of authentic living did not increase significantly from T1 ( $M = 5.48$ ) to T2 ( $M = 5.46$ ;  $p = .808$ , 95 % CI  $[-0.132, 0.170]$ ).

Hypothesis 3 suggested that participation in the CPDP significantly decreases the acceptance of external influence. The main effect of time,  $F(1,162) = 6.108$ ,  $p = .014$ ,  $\eta_p^2 = 0.036$ , and interaction effect between group and time,  $F(1,162) = 4.364$ ,  $p = .038$ ,  $\eta_p^2 = 0.026$ , were significant. Participants in the treatment group showed significantly lower levels of acceptance of external influence at T2 ( $M = 3.19$ ) than at T1 ( $M = 3.81$ ;  $p < .001$ , 95 % CI  $[0.328, 0.913]$ ), Hedges's  $g_{average} = 0.484$ . Participants in the control group also showed significantly lower levels of acceptance of external influence at T2 ( $M = 3.31$ ) than at T1 ( $M = 3.54$ ;  $p = .027$ , 95 % CI  $[0.027, 0.431]$ ), Hedges's  $g_{average} = 0.186$ . In sum, acceptance of external influence decreased in both groups, although the effect was stronger for participants in the treatment group.

### 3.3. Exploratory analyses

To explore which aspects of the CPDP influenced authenticity at T2, we calculated partial correlational analyses (i.e., controlling for authenticity at T1). Even though these analyses are based on a small sample ( $N = 54$ ; due to missing data), we uncovered that some elements of the CPDP seemed more relevant to specific authenticity dimensions than others.

Participants' level of *self-alienation* at T2 was negatively related to the number of coaching sessions ( $r = -0.28$ ,  $p = .036$ ) and the attendance of transformative group workshops ( $r = -0.30$ ,  $p = .023$ ), but unrelated to informative group workshop attendance ( $r = -0.20$ ,  $p = .135$ ). *Authentic living* at T2 was not related to any specific element of the CPDP (coaching



**Fig. 2.** Bar charts for the change in self-alienation (A), authentic living (B) and acceptance of external influence (C) in control and treatment group from pre- to post-intervention.

Note. CG = Control Group; TG = Treatment Group; MD = Mean Difference (Pre-Intervention – Post-Intervention). Adjusted means for included covariates are reported.

sessions:  $r = 0.09$ ,  $p = .526$ ; transformative group workshops:  $r = 0.02$ ,  $p = .901$ ; informative group workshops:  $r = 0.14$ ,  $p = .310$ ). *Accepting external influence* at T2 showed a significant negative relationship with attended coaching sessions ( $r = -0.28$ ,  $p = .037$ ), but not with group workshop attendance (transformative:  $r = 0.01$ ,  $p = .928$ ; informative:  $r = -0.16$ ,  $p = .252$ ).

#### 4. Discussion

Our results contribute to the understanding of how authenticity develops during specific life stages (Seto & Schlegel, 2018), providing evidence that not all of its dimensions are equally malleable, and some develop naturally during emerging adulthood (Arnett, 2000, 2007). Authentic living was most clearly influenced by the CPDP. In line with previous results (Leroy et al., 2013), targeted development supports young adults on the journey toward their true self in the form of authentic actions and self-expression. Authentic living does not necessarily increase over time (Zhang et al., 2018). The exploratory analyses suggest that a combination of learning activities as opposed to any single one affected the changes in authentic living. Authentic living relates positively to self-authored career-decisions (White & Tracey, 2011). We concur that the CPDP helped participants' self-authored plans for their time at the university, instilling a sense of personal agency (McAdams & McLean, 2013).

Acceptance of external influence decreased in the treatment group as predicted, but also in the control group, albeit relatively less so than in the treatment group. The finding opens new perspectives for a naturally occurring, experiential form of authenticity development (Russo-Netzer & Shoshani, 2020). Developmental experiences, such as leaving the family home and entering new social circles, build an increased sense of independence and self-expansion (Xu et al., 2015). These experiences may have facilitated change in the control group. However, especially the coaching sessions appear to have supported participants in the process of managing the external influences above and beyond this naturally occurring development. It appears that the acceptance of external influence was impacted mainly through coaching.

Self-alienation appeared the least susceptible to change. This is problematic because feelings of self-alienation can put young adults' academic achievements at risk (Kim et al., 2018). While it is possible that the CPDP did not fully reach these deep levels of the self, the supplemental analyses provide insights that close interactions with a coach and transformative sessions may have the potential to impact self-alienation. In sum, according to our findings, there may be a decision to make which dimensions of authenticity an intervention intends to tackle. Authentic living and managing external influences were successfully improved, whereas self-alienation may be more suitable for individualized coaching or therapeutic interventions (Petriglieri et al., 2011).

##### 4.1. Limitations and future research

Practical constraints did not allow us to utilize random assignment of participants to treatment and control groups. The analysis of mean levels of authenticity at T1 supports the assumption that treatment and control groups were comparable. However, descriptive differences emerged suggesting that participants in the treatment group scored lower on authenticity than in the control group and caught up to them.<sup>3</sup> This points to the possibility of alternative explanations (e.g., treatment by regression interaction) that cannot be ruled out by the current study design. For example, one may assume that the pre-test sensitized participants to the intervention. An 8-month period passed between T1 and T2 and authenticity was one measure among several, which likely

reduced this effect. However, to fully rule out this possibility a post-test-only (or even Solomon four-group) design would be needed. It is also possible that the CPDP affected other, unmeasured variables which then caused a change in authenticity as a side effect.

Our exploratory analysis illustrated that only certain aspects of the CPDP were associated with changes in authenticity. A limitation of our research as well as opportunity for future work is that we have only begun to address which means of personal development –or in which combination– facilitate the development of authenticity. The notion that discrete experiences may couple together in meaningful ways for enhanced developmental benefit has been described as a “developmental punch” (Tesluk & Jacobs, 1998, p. 323; see also: Dragoni et al., 2011). Future research could investigate “dosage effects” or differential combinations (e.g., including vs. excluding coaching) to differentiate the effectiveness of specific elements.

##### 4.2. Conclusion

Our quasi-experimental investigation revealed that some authenticity dimensions are receptive to natural growth and others require systematic development. We hope to inspire interventions for young adults that support them on their self-development journeys.

#### CRediT authorship contribution statement

**Petra Kipfelsberger:** Conceptualization, Methodology, Investigation, Project administration, Writing – original draft, Writing – review & editing. **Susanne Braun:** Formal analysis, Project administration, Visualization, Writing – original draft, Writing – review & editing. **Martin Fladerer:** Validation, Writing – review & editing, Visualization. **Lisa Dragoni:** Supervision, Writing – review & editing.

#### Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.paid.2022.111825>.

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