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Running Head: SELF-ESTEEM AND CAREER ADAPTABILITY

Associations Between Student-Athletes' Self-Esteem and Career Adaptability Across the High School Years

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Abstract

The key challenges in sustainable elite sports concern young athletes´ holistic development. Consequently, preparation for dual careers has been recommended to enhance athletes' well-being and equip them for life after sports. The aim of this study was to examine the developmental associations between self-esteem and career adaptability among adolescent athletes across the high school years and investigate the role of gender in these developmental trajectories. A total of 391 student-athletes were followed up four times from the beginning of high school (T1) to its end (T4) using the Dual Career Form of the Career Adapt-Abilities Scale and the Self-Esteem Questionnaire. The results indicated that individual differences in student-athletes' self-esteem and career adaptability were relatively stable across the high school years and were thus modeled via the between-persons factors capturing differences between individuals across time. The results further showed that the overall levels of self-esteem and career adaptability were positively associated. Males showed higher overall levels of career adaptability and self-esteem than females. This study suggests that it is important to facilitate youth athletes' self-regulation resources by involving them in vocational developmental tasks. Further, gender differences should be considered when supporting student-athletes' development.

Keywords: *dual career, career adaptability, gender, self-esteem, well-being, adolescence*

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1 INTRODUCTION

The demands of different life domains (school, sporting, and private life) may lead to increased pressure on student-athletes and pose potential threats to their psychosocial development and well-being. According to the European Commission,[1] the main challenge related to elite sports is how to safeguard and guide young athletes' talent development simultaneously in their educational, athletic, and private lives. Special arrangements in the form of dual careers (DC)—a combination of sports and education or work—have been recommended to enhance young athletes' well-being and prepare them for life after sports.[1,2] Although student-athletes report less stress and fewer symptoms of depression and anxiety than non-athletes,[3] they still face a unique range of stressors that include, for example, role strain and transitions (e.g., starting sports high school or university).[2] Sorkkila and Ryba and colleagues[4,5] emphasized that research is needed to understand, not only the risks, but also the protective factors affecting student-athletes' well-being (e.g., self-esteem) in their DC pathways. For adolescent student-athletes to manage transitions, achieve vocational goals, and solve a range of challenges in the course of their life trajectories, support provided for them should target a broad range of skills, including career adaptability.[6,7] The present study examined the developmental associations between career adaptability and self-esteem among student-athletes, and the role of gender in the development of both.

1.1 Career Adaptability

Career adaptability refers to an individual's readiness to and resources for achieving vocational development and overcoming the complex challenges that arise during occupational transitions.[8] It is conceptualized as psychological resources that enable adolescents to regulate their strategies along the four dimensions:[8] *career concern* (i.e., the extent to which the individual is conscious of and prepares for vocational development tasks and transitions in the near and distant future), *career control* (i.e., the extent to which a person takes responsibility for constructing their own career and choosing their approach to vocational development tasks), *career curiosity* (i.e., information-seeking behaviors, openness to new experiences, exploration, and reflection on the match between the individual's abilities and the demands of a particular career), and *career confidence* (i.e., self-efficacy in pursuing a self-determined occupation and successfully coping with career stressors).

Career adaptability and thoughts concerning adaptability become evident early in secondary education.[9] As an individual considers future transitions and developmental tasks, the

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pressure to deal with goals relevant to those transitions increases.[10] Career adaptability contributes to positive transitions and personal functioning in adolescents,[11] predicting an increased sense of control and life satisfaction.[11] However, individuals differ in their competencies (adaptability) and career-related behaviors.[12] Rudolph and colleagues[12] found that personality traits contribute to the prediction of career adaptability, suggesting that personality-related factors play a role in adaptability. Further, Hirschi[13] found that boys demonstrated higher career adaptability than girls. Gender did not, however, affect the development of career adaptability among young students.[13] Investigating adolescent athletes' career adaptability and the factors that promote it is important because student-athletes tend to have difficulty envisioning their lives after sports and engaging in self-exploration during their sporting careers.[14] Park and colleagues[15] found that athletes who had not planned their post-sporting lives had an elevated risk of experiencing psychological distress, especially following involuntary athletic career termination.

1.2 Self-esteem

Self-esteem—one's overall attitude towards oneself, which involves self-evaluation of one's own worth and value[16]— plays a role in developing career adaptability.[16,17] Self-esteem has been shown to be positively associated with perceived competence in sports,[18] enhanced initiative[19], career adaptability,[7,20] and career success;[21] for example, Erol and Orth[22] showed that increased self-esteem is related to a sense of career control, which is likely to translate into better career opportunities. Moreover, Choi and colleagues[23] demonstrated that self-esteem is among the strongest predictors of career decision efficacy. Although self-esteem appears to be rather stable throughout adolescence,[24,25] it can be influenced by life events, individual experiences, and environmental factors.[24] A crucial question is, therefore, to what extent is self-esteem development associated with the development of career adaptability during the critical adolescent years? Gender may also play a role. In a previous study, Baldwin and Hoffman[26] showed that boys have higher levels of self-esteem than girls, and girls exhibited a greater mean-level fluctuation in self-esteem, suggesting gender differences in the development of self-esteem during early adolescence. However, Birkeland et al.[24] did not find gender differences in self-esteem development. Overall, the previous results suggest that boys, on average, may have higher levels of self-esteem than girls.[26] However, owing to inconsistent findings concerning the development of self-esteem,[24, 26] future studies on this topic are needed before conclusions can be made concerning gender differences in the development of self-esteem across the high school years.

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1.3 The Present Study

To support student-athletes in integrating combined sport and education into their lives, it is necessary to gain an understanding of the individual factors that affect their life paths. Therefore, in the present study, we investigated the developmental associations between the relatively new concept of career adaptability and self-esteem among student-athletes in the crucial phase of their development. More specifically, this study aimed to investigate the following research questions:

(1) To what extent do individual differences in a) career adaptability (both in terms of the five dimensions and regarding the overall common level of career adaptability) and b) self-esteem remain stable across the high school years, and to what extent there is rather time specific fluctuation in these at different phases of high school? It was expected that student-athletes would differ from each other in terms of the level of career adaptability. That is, some individuals would demonstrate higher adaptabilities than others, and these individual differences in the level of career adaptability would remain stable across high school[12] (Hypothesis 1). In line with the previous research,[7,20] we hypothesized that self-esteem would show stability across high school[7,20] (Hypothesis 2).

(2) To what extent are career adaptability and self-esteem associated across high school years? It was hypothesized that self-esteem is positively associated with career adaptability across high school[5,7,12,20] (Hypothesis 3) and that self-esteem would positively predict subsequent career adaptabilities[8,12] (Hypothesis 4).

(3) What is the role of gender in the development of career adaptability and self-esteem? Based on previous research, we expected to find that gender does not affect the development of career adaptability[13] (Hypothesis 5), but we predicted that males would show higher levels of self-esteem than females[26] (Hypothesis 6).

2 METHODS

2.1 Participants and Procedures

The present study contributed to the Finnish Longitudinal Dual Career Study,[5] which followed student-athletes across their high school years. The sample consisted of 391 athletes (51 % female; M_{age} = 16, SD = 0.17 at the beginning of the study) from six sports high schools. In Finland, sports high schools are one of the identified DC pathways[27] that provide structural support for talented athletes to combine upper secondary education with sports.

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The study was approved by the ethics board of the University of Jyvaskyla before data collection commenced. The participants signed an informed consent form before participating in the study. The data were collected using an online questionnaire or via completion of an identical paper questionnaire. The data applied in the current study were collected at the baseline, that is, at the beginning of the first grade (T1; September), and after that, once at the end of each grade (March), that is, at the end of the first grade (T2), at the end of the second grade (T3), and at the end of the third grade (T4). Career adaptability and self-esteem were assessed using self-rated scales at each measurement point (T1–T4).

2.2 Measurements

2.2.1 Dual career adaptability. Career adaptability was measured at time points T1–T4 using the Career Adapt-Abilities Scale–Dual Career Form (CAAS-DC).[7] The Dual Career Form was developed by adding a subscale (Dual Career Concern) to the original CAAS.[8] The CAAS-DC contains a total of 27 items that measure five dimensions of career adaptability: concern (four items; e.g., *thinking about what my future will be like*), control (six items; e.g., *making decisions by myself*), curiosity (six items; e.g., *observing different ways of doing things*), confidence (six items; e.g., *learning new skills*), and dual career concern (five items; e.g., *concerned about my athletic career*). All items were rated on a 5-point Likert scale (1 = *not my strongest ability* to 5 = *one of my strongest abilities*). For each subscale, a mean score was obtained, indicating competence in that domain. The CAAS-DC score was shown to demonstrate factorial and concurrent validity in a Finnish high school sample.[7] Cronbach's alpha values were used in the present study for the scores of different subscales and time points (T1, T2, T3, and T4); values varied between 0.82 and 0.91.

2.2.2 Self-esteem. Self-esteem was measured at time points T1–T4 using five items (e.g., *I feel like a person who has a number of good qualities*) taken from the Rosenberg Self-Esteem Scale (RSES).[16] All items were rated on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*). The measure has been used in previous studies involving adolescents in Finland, and the test scores have demonstrated good validity.[7] Cronbach's alphas in the current sample at different time points ranged between 0.77 and 0.82.

2.3 Analysis Strategy

To investigate the developmental stability and within-person fluctuation of career adaptability and self-esteem during the high school years, as well as these constructs'

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developmental associations, we employed random intercept cross-lagged path analysis[28] in the structural equation modeling framework. The selected strategy was found to be the most appropriate strategy to test the stated hypotheses because it considered both the between- (i.e., individual variation in the overall levels of the studied constructs across time) and within-person (i.e., time-specific variation in the studied constructs) effects and thus produces more valid (unbiased) results reflecting the developmental phenomena than autoregressive cross-lagged panel models.[28]

First, to explore between individual variation in the overall levels of the five career adaptability dimensions and self-esteem across four measurement points, six first-order factors describing these overall levels were specified. Additionally, a second-order factor for the five first-order level factors of career adaptability was specified to model the overall level of career adaptability across time. Correlation between the overall levels of career adaptability across time and overall level of self-esteem across time was allowed. Second, time-specific factors capturing common variation between career adaptability dimensions at a particular time point were specified separately for each time point T1–T4. Similarly, time-specific factors were estimated for self-esteem at each time point T1–T4. These specific factors were not allowed to correlate with the first-order factors of career adaptability and self-esteem or the second-order factor of career adaptability. Third, regression paths between time-specific factors capturing the lagged effects of career adaptability and self-esteem were allowed for successive measurement points. These regression coefficients captured the cross-lagged effects between adaptability and self-esteem after controlling for the possible stability of each construct. In addition to the regression coefficients, the residual correlations between the time-specific factors of adaptability and self-esteem at each measurement point were allowed. Finally, a gender variable was added to the model to predict the overall levels of career adaptability and self-esteem across time, and the mean differences between genders in other specified factors were examined and estimated with the help of modification indices (i.e., the associations between gender and the first-order factors in the model were fixed to zero; therefore, poor model fit and the model modification indices indicated whether any of these associations needed to be estimated). The Mplus syntax for the constructed model is provided in Supplemental Material S1.

The model was estimated using the Mplus statistical program (version 7.3.; Muthén & Muthén, 1998–2019). Initial analyses revealed the invariance of the study constructs across time

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and gender groups.[1] The results of the invariance tests are given in Supplemental Material S2. The covariance coverage of the data varied from 0.69 to 1.00. The missing values were supposed to be missing at random (MAR), and estimation was performed using the full information maximum likelihood estimator (MLR), which produces robust standard error and scale corrected chi-square test values. In addition to the chi-square test, the model fit was evaluated using the comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA), and the standardized root mean square error (SRMR). Good model fit was indicated if the chi-square test result was non-significant, CFI and TLI were at least .95, RMSEA was lower than .06, and SRMR was lower than .08.

3 RESULTS

The descriptive statistics (Table 1) demonstrated that participants showed relatively high self-esteem and career adaptabilities across high school. Among the five dimensions of adaptability, confidence, control, and DC concern had the highest mean scores across high school, while concern and curiosity had the lowest. Based on the correlations, self-esteem and the career adaptability dimensions were positively correlated at each measurement point. The correlations were particularly strong in the case of the control adaptability dimension.

3.1 Development of Career Adaptability

The results of the tested model are shown in Figure 1 (only statistically significant paths are shown). The final model (model modifications are presented in detail in S1) demonstrated a good fit to the data: $X^2(240) = 331.014$, $p < .05$, RMSEA = 0.031, SRMR = 0.037, CFI = 0.983, TLI = 0.978. The results showed that adaptability was relatively stable across high school and that most of the variation in the adaptability dimensions was caused by the individual differences in the overall level of career adaptability ($R^2_{_concern} = .65$, $p < .001$; $R^2_{_DCconern} = .85$, $p < .001$; $R^2_{_control} = .67$, $p < .001$; $R^2_{_curiosity} = .77$, $p < .001$; $R^2_{_confidence} = .86$, $p < .001$). In addition, the levels of the different adaptability dimensions were relatively stable across high school; approximately half of

[1] When testing invariance, we applied change in RMSEA (as RMSEA is a generally stricter indicator of invariance than CFI and is suitable in the case of large sample sizes and complex models; see, Chen, 2007).[29] The results of these analyses showed that in the cases of all constructs, factor loadings, intercepts, and residual variances of the observed variables were invariant across time and gender groups (as indicated by a change of RMSEA lower than .015; change of RMSEA values varied between -.007 and .011 depending on the construct and the model) between the tested nested models.

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the variation in different dimensions at different measurement points (T1–T4) was caused by the overall individual level of particular adaptability dimensions ($R^{2_concern}$ = .45-.47, $p < .001$; $R^{2_Dcconern}$ = .35-.47, $p < .001$; $R^{2_control}$ = .48-.56, $p < .001$; $R^{2_curiosity}$ = .36-.38, $p < .001$; $R^{2_confidence}$ = .43-.51, $p < .001$).

In addition to the overall level of adaptability, time-specific variation was found. The time-specific variation of career adaptability at T3 predicted subsequent career adaptability at T4 (R^2 = .17): The higher the adaptability at the end of the second grade, the higher the adaptability at the end of high school.

3.2. Development of Self-Esteem

Similar results were found for self-esteem, which was relatively stable across the high school years. Most of the variation in self-esteem at different measurement points was caused by the individual differences in the overall level of self-esteem across time (R^{2_T1} = .61, $p < .001$; R^{2_T2} = .59, $p < .001$; R^{2_T3} = .53, $p < .001$; R^{2_T4} = .41, $p < .001$). However, this effect decreased at the end of the high school, and measurement point-related variation increased (R^{2_T4} = .59, $p < .001$). The time-specific variation of self-esteem at the T3 predicted subsequent self-esteem at the T4 (R^2 = .15, $p < .01$): The higher the self-esteem at the end of the second grade, the higher subsequent self-esteem at the end of high school.

3.3 Developmental Association Between Career Adaptability and Self-esteem

The model revealed that the individual differences in the overall level of career adaptability across the high school years were positively and statistically significantly associated with individual differences in the overall level of self-esteem (r = .50, $p < .001$). Further, one specific association was found indicating that the individual overall level of control was positively associated with the individual overall level of self-esteem (r = .47, $p<.001$). In addition to these associations between the overall levels of adaptability and self-esteem, time-specific positive associations between the constructs were found at each measurement point, and the correlations became stronger towards the end of the high school (r^{T1} = .29, $p < .01$; r^{T2} = .29 $p < .001$; r^{T3} = .56 $p < .001$; r^{T4} = .46, $p < .001$). The cross-lagged associations between career adaptability and self-esteem were not significant. Finally, the results concerning the role of gender showed that gender predicted individual levels of career adaptability (R^2 = .03) and self-esteem (R^2 = .07), with females demonstrating lower levels of both compared to males.

4 DISCUSSION

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This study aimed to add to our understanding of the development of and developmental associations between self-esteem and career adaptability among adolescent student-athletes across high school, as well as the role gender plays in student-athletes' career adaptability and self-esteem. First, the results showed that career adaptability and self-esteem were relatively stable across individual differences in high schoolers' overall levels of each construct over time, which explained most of the variation. Second, during the high school years, career adaptability and self-esteem were positively associated with each other, showing mutual variation. Third, gender was associated with the overall levels of career adaptability and self-esteem, with males showing higher levels of both compared to females.

The present study's first objective was to examine the extent to which individual differences in career adaptability and self-esteem are stable across the high school years and to what extent time-specific fluctuation occurs at different phases of high school. In this study, career adaptability was found to be relatively stable, with an individual-level explanation available for over half of the variation across high school. It was expected (Hypothesis 1) that there would be stable individual differences between student-athletes across high school.[8,12] One explanation for adaptability's high degree of stability could be, as previous studies[14] have shown, that athletes tend to postpone their career-related activities;[14] consequently, stable personality-related factors[12] play a larger role in their adaptability at this stage than more time-specific contextual and environmental factors. Overall, it seems that individual involvement in vocational developmental tasks determines the extent of student-athletes' career aspiration development. Similarly, as expected (Hypothesis 2), self-esteem was found to be relatively stable across high school, with an individual-level explanation available for around half of the variation. However, an interesting finding was that individuality's influence decreased at the end of high school. This may indicate that the life events concerning the upcoming transition can affect self-esteem at the individual level.[24,26]

In addition to overall high stabile individual-level career adaptability and self-esteem, our stability hypothesis was further supported by the findings concerning time-specific variation predictions: Career adaptability in the middle of high school predicted career adaptability at the end of high school. Timonen et al.[9] suggested that starting high school and subsequent transitions may trigger thoughts about adaptability. Those youths who self-assess as having the resources to construct a career and being prepared for transitions will show high career adaptability later in life.

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Individuals who focus on goals related to career transitions and developmental tasks may also reflect more on their future endeavours.[10]

The present study's second aim was to examine the developmental association between self-esteem and career adaptability across time among student-athletes. As we expected (Hypothesis 3), and in line with previous research,[5,7,12,20] career adaptability was positively associated with self-esteem at each measurement point and at the individual level across high school. However, self-esteem at the previous time point did not predict subsequent career adaptabilities at the following time point, as expected (Hypothesis 4). This may be because both career adaptabilities and self-esteem showed high stability. It may also be related to trait-like factors.[12] No change was observed. The findings further suggested that towards the end of high school, mutual variation between adaptability and self-esteem increases, which may indicate that there are some common factors behind these constructs that explain the association. Regarding the adaptability dimensions, a positive association was found between level of control and self-esteem. Erol and Orth[22] suggested that increased self-esteem is related to a sense of control and better career opportunities. Additionally, in line with Rudolph and colleagues'[12] finding that a proactive personality predicts career adaptability, student-athletes who self-assess as having a plan, assume an active role in their career development, and feel that they are in control of their future may develop not only career adaptability, but also high self-esteem.

The present study's third objective was to examine the role of gender in the development of career adaptability and self-esteem. The results showed that gender was positively associated with both the student-athletes' overall level of career adaptability (contradictory to Hypothesis 5) as well as with their overall level of self-esteem (Hypothesis 6), with males reporting higher overall career adaptability and self-esteem levels than females. Concerning self-esteem, our findings are in line with previous studies.[24, 26] It can be speculated that as males have been shown to perceive their self-esteem more positively than females during adolescence[26] and as career adaptability is related to trait-like optimism,[12] male student-athletes may, at least in part, derive their higher perception of adaptability from their optimism about the future.[14,30] Overall, our findings highlight that gender differences in career adaptability and self-esteem levels should be considered when providing support for youth athletes.

To conclude, given that the individual-level explained most of the variation in career adaptability, it is important to recognize individuals with low levels of career adaptability (and identify the reasons for that) and support the development of adaptabilities starting at the

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beginning of high school (or even earlier). Such interventions can be achieved by facilitating individual planning and the exploration of possible future paths, engaging in meaningful conversations, and increasing these individuals' sense of control. The association between career adaptability and self-esteem across high school suggests that both are complementary resources for positive development. Student-athletes with high self-esteem and career adaptability might have more resources to explore other plans and pursue endeavours outside of sports in the future.

The present study has some limitations that should be considered before generalizing the results. First, the sample comprised high school students; the results might be different for vocational school students. Second, the present study examined the effect of gender on career adaptability and self-esteem. However, other factors may play a role in the development of the studied constructs. In further studies, the role of different individual, school- and sport-related factors as well as sources of social support or pressure, such as coaches and teachers, in student-athletes' career adaptability and self-esteem development should be investigated alongside the associations between these factors to gain a deeper understanding of the possible confounding affecting the phenomena.

5 PERSPECTIVES

The present study contributes to the existing literature in three ways. First, we showed that self-esteem and career adaptability are relatively stable across high school among student-athletes, indicating that support for career-related activities should be individually targeted early on during a dual career. Second, as the individual overall level of control was positively associated with the individual overall level of self-esteem, student-athletes who feel that they are in control of their future may develop not only career adaptability, but also high self-esteem. Third, gender differences should be considered when providing support for student-athletes' dual career construction development and well-being.

Declaration of Conflicts of Interest

The author(s) declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1 SelfesT1	.77	.65[c]	.55[c]	.48[c]	.27[c]	.21[c]	.16[b]	.24[c]	.34[c]	.23[c]	.22[c]	.24[c]	.32[c]	.24[c]	.12[b]	.20[b]	.50[c]	.39[c]	.35[c]	.34[c]	.31[c]	.28[c]	.23[c]	.23[c]
2 SelfesT2		.77	.59[c]	.59[c]	.18[b]	.26[c]	.18[b]	.24[c]	.23[c]	.36[c]	.31[c]	.28[c]	.18[c]	.25[c]	.17[b]	.24[b]	.35[c]	.48[c]	.42[c]	.38[c]	.22[c]	.38[c]	.29[c]	.28[c]
3 SelfesT3			.77	.68[c]	.17[b]	.23[c]	.28[c]	.27[c]	.24[c]	.27[c]	.45[c]	.35[c]	.22[c]	.23[c]	.33[c]	.32[c]	.39[c]	.38[c]	.57[c]	.43	.24[c]	.31[c]	.34[c]	.29[c]
4 SelfesT4				.82	.13[a]	.22[c]	.20[b]	.31[c]	.18[c]	.26[c]	.35[c]	.39[c]	.14[b]	.18[b]	.24[c]	.32[c]	.31[c]	.28[c]	.40[c]	.51[c]	.20[c]	.28[c]	.23[c]	.34[c]
5 ConcT1					.85	.55[c]	.45[c]	.39[c]	.54[c]	.38[c]	.24[c]	.29[c]	.60[c]	.39[c]	.25[c]	.29[c]	.53[c]	.34[c]	.30[c]	.31[c]	.65[c]	.43[c]	.33[c]	.26[c]
6 ConcT2						.86	.52[c]	.39[c]	.36[c]	.62[c]	.36[c]	.36[c]	.37[c]	.59[c]	.34[c]	.36[c]	.33[c]	.53[c]	.32[c]	.28[c]	.43[c]	.72[c]	.36[c]	.29[c]
7 ConcT3							.84	.59[c]	.36[c]	.33[c]	.50[c]	.39[c]	.34[c]	.32[c]	.52[c]	.42[c]	.36[c]	.28[c]	.47[c]	.32[c]	.37[c]	.36[c]	.54[c]	.39[c]
8 ConcT4								.84	.38[c]	.33[c]	.44[c]	.58[c]	.24[c]	.28[c]	.35[c]	.32[c]	.33[c]	.28[c]	.38[c]	.44[c]	.35[c]	.31[c]	.45[c]	.61[c]
9 ConfiT1									.89	.52[c]	.45[c]	.36[c]	.62[c]	.40[c]	.33[c]	.39[c]	.67[c]	.44[c]	.40[c]	.37[c]	.64[c]	.44[c]	.46[c]	.31[c]
10 ConfiT2										.91	.49[c]	.44[c]	.38[c]	.71[c]	.39[c]	.42[c]	.41[c]	.75[c]	.44[c]	.40[c]	.44[c]	.76[c]	.45[c]	.29[c]
11 ConfiT3											.85	.60[c]	.25[c]	.34[c]	.68[c]	.45[c]	.37[c]	.39[c]	.64[c]	.46[c]	.64[c]	.41[c]	.58[c]	.40[c]
12 ConfiT4												.87	.31[c]	.31[c]	.45[c]	.47[c]	.38[c]	.36[c]	.46[c]	.61[c]	.36[c]	.38[c]	.47[c]	.60[c]
13 CurioT1													.90	.48[c]	.33[c]	.35[c]	.64[c]	.39[c]	.34[c]	.31[c]	.57[c]	.40[c]	.32[c]	.29[c]
14 CurioT2														.87	.39[c]	.37[c]	.40[c]	.70[c]	.40[c]	.39[c]	.39[c]	.67[c]	.33[c]	.25[c]
15CurioT3															.85	.54[c]	.33[c]	.35[c]	.63[c]	.42[c]	.27[c]	.33[c]	.50[c]	.34[c]
16 CurioT4																.85	.33[c]	.34[c]	.41[c]	.45[c]	.35[c]	.33[c]	.41[c]	.38[c]
17 ContT1																	.85	.56[c]	.54[c]	.53[c]	.61[c]	.39[c]	.37[c]	.31[c]
18 ContT2																		.88	.58[c]	.48[c]	.43[c]	.68[c]	.39[c]	.26[c]
19 ContT3																			.85	.63[c]	.30[c]	.38[c]	.50[c]	.34[c]
20 ContT4																				.83	.35[c]	.34[c]	.40[c]	.53[c]
21 DCT1																					.85	.52[c]	.47[c]	.38[c]
22 DCT2																						.84	.45[c]	.35[c]
23 DCT3																							.82	.56[c]
24 DCT4																								.84
M	3.76	3.72	3.72	3.61	2.86	2.98	2.87	2.98	3.44	3.47	3.36	3.29	3.05	3.17	3.14	2.99	3.45	3.47	3.36	3.29	3.37	3.33	3.15	3.10
Males	3.91	3.85	3.88	3.77	2.99	3.09	2.92	3.10	3,43	3.52	3.42	3.46	3.10	3.28	3.18	3.09	3.52	3.53	3.48	3.44	3.46	3.41	3.26	3.21

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Females	3.62	3.60	3.57	3.45	2.73	2.87	2.82	2.87	3.45	3.42	3.30	3.12	2.99	3.06	3.09	2.93	3.31	3.37	3.24	3.14	3.28	3.26	3.05	3.00
SD	.62	.65	.68	.76	.80	.83	.81	.84	.69	.75	.71	.77	.73	.72	.72	.70	.73	.78	.79	.80	.76	.73	.75	.84
Males	.57	.63	.63	.73	.81	.84	.84	.81	.67	.77	.72	.73	.74	.75	.75	.75	.71	.77	.80	.79	.72	.74	70	.77
Females	.63	.65	.68	.78	.78	.83	.84	.85	.70	.73	.70	.78	.72	.70	.68	.67	.74	.80	.76	.74	.78	.74	.77	.87

Table 1. *Means (M), Standard Deviations (SD), and Bivariate Correlations between the Study Variables*. Cronbach´s alphas are presented in the diagonal.

Note 1. c= $p < .001$, b= $p < .01$, a= $p < .05$ Selfes = Self-esteem, Conc = Concern, Confi = Confidence, Curio = Curiosity, Cont= Control, DC = Dual career concern, , T1 = measurement point 1, T2 = measurement point 2, T3 = measurement point 3, T4 = measurement point 4.

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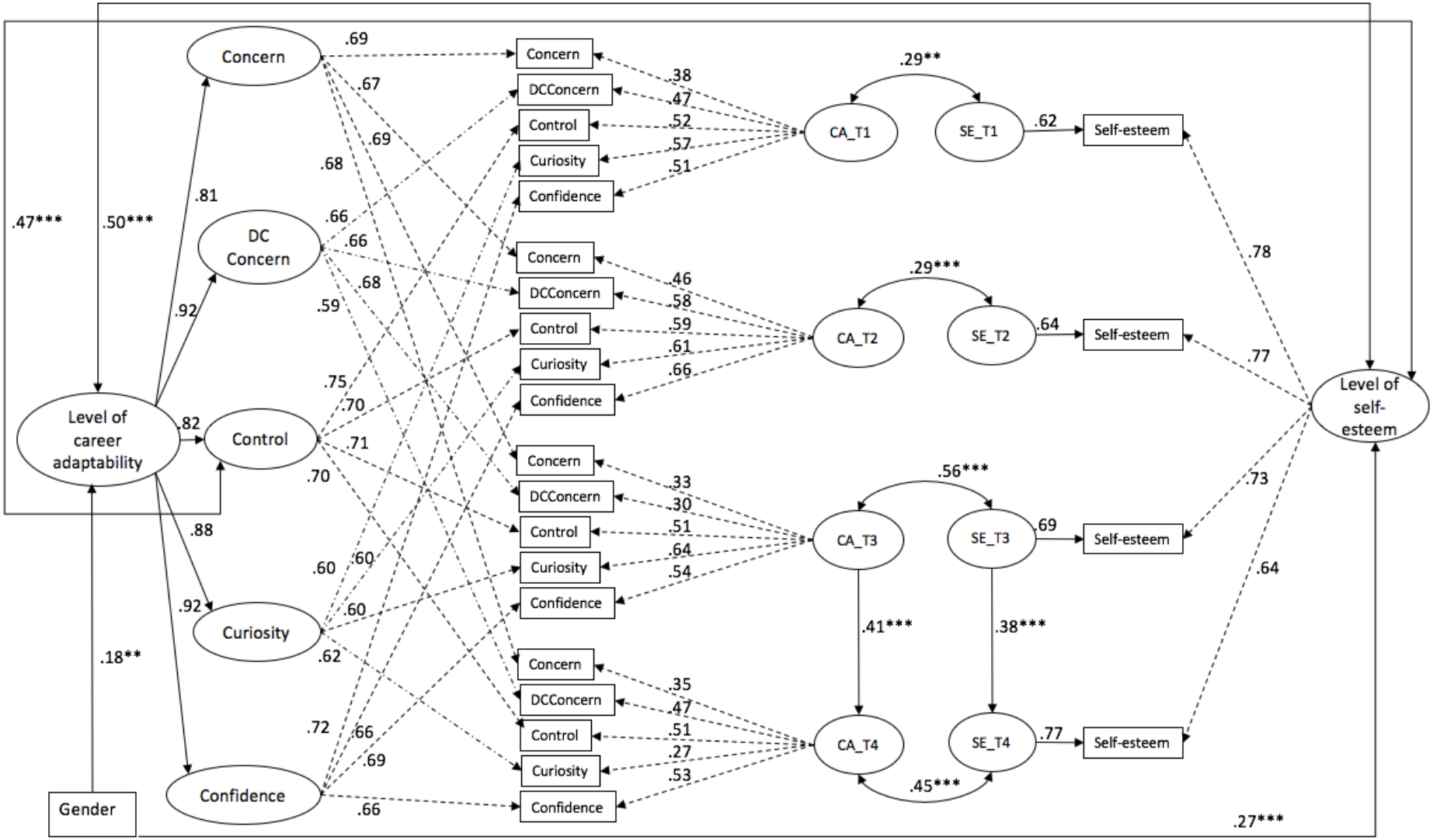

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Figure 1. Factor model of career adaptability, self-esteem, and gender (Standardized coefficients; Only statistically significant paths reported). SE_T1 = specific factor of self-esteem at time point 1, SE_T2 = specific factor of self-esteem at time point 2, SE_T3 = specific factor at time point 3, SE_T4 = specific factor of self-esteem at time point 4, CA_T1 = specific factor for adaptability at time point 1, CA_T2 = specific factor for adaptability at time point 2, CA_T3 = specific factor for adaptability at time point 3, CA_T4 = specific factor for adaptability at time point 4.

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