

Exploring the third level of career adaptability: Canonical correlation between career adaptabilities and defense styles

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Abstract: The aim of the present study was to assess the associations between career adaptabilities and personal defense styles. A sample of 147 Psychology undergraduate students filled in a questionnaire that included the Romanian form of Career Adapt-Abilities Scale (CAAS) and Defense Style Questionnaire 60 (DSQ-60). We adopted a canonical correlation approach in order to explore the pattern of relationships between the CAAS dimensions and the three defensive styles. Results showed that higher scores on career adaptability (especially control, curiosity, and confidence) are linearly associated with higher scores on adaptive defense style. These results are in concordance with career construction theory.

Keywords: Career adaptability; CAAS; Defense mechanisms; Coping; Canonical correlation

1. Introduction

The individual's resources for coping with current and anticipated tasks and challenges in the occupational context have an important role in constructing one's personal career. Thus, career construction is a dynamic process in which people use adaptive strategies in order to fit their personality and their expectations to their work roles (Rossier, Zecca, Stauffer, Maggiori, & Dauwalder, 2012). According to career construction theory, the need for continuous adaptation is handled through a set of career-relevant coping resources, namely career adaptabilities (Savickas, 2013). In this context, studying the associations between career adaptabilities and personal styles that allow individuals to adjust to the constraints of specific environments is of particular importance. Significant commonalities between adaptabilities and defense/coping mechanisms with adaptative function would contribute towards confirming that career adaptabilities are a set of resources that encapsulate adaptive coping behaviors.

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Career adaptabilities as coping resources

Career adaptabilities are organized in a multi-dimensional and hierarchical model with three levels (Savickas, 2013). At the highest level there are the four core dimensions of adaptability, namely concern, control, curiosity, and confidence. Becoming concerned about one's personal future as a worker, increasing control over one's vocational future, displaying curiosity in exploring one's environment, and strengthening one's confidence in his/her ability to solve specific career problems represent important resources that can help an individual to pursue his/her career aspirations (Savickas, 2013). At the intermediate level of the model, there is a multidimensional matrix of specific homogeneous variables for each of the four dimensions. This matrix consists of attitudes, beliefs and competencies that shape the specific problem-solving strategies and coping behaviors used to manage specific developmental tasks, to negotiate occupational transitions, and to manage critical work situations or even traumas. The coping behaviors represent the third and most concrete level in this structural model (Savickas, 2013). Based on the importance of these behaviors in constructing one's vocational future, career adaptabilities were even defined as a set of coping resources that a person uses in order to construct their career and to prepare for future career-related difficulties and opportunities (Savickas & Porfeli, 2012).

Coping resources at a general level

At a general level, there have been described various conscious and unconscious strategies and behaviors that people use to manage critical personal or professional life situations that produce negative emotions and psychological distress. From this variety of strategies and behaviors, defense mechanisms have received considerable attention over the past century (Thygesen, Drapeau, Trijsburg, Lecours, & Roten, 2008). They were first introduced by Sigmund Freud and were described as unconscious processes that help someone to manage external and internal threats that generate anxiety (Cramer & Porcerelli, 2016). From a psychiatric perspective, defenses are considered synonymous with coping strategies (DSM-IV, 1994). According to some authors, defenses can be differentiated from coping mechanisms due to their unconscious, unintentional, and dispositional character (Kramer, 2010; Turliuc & Măirean, 2014), but they are complementary facets of the same psychological processes (Kramer, 2010; Maricutoiu & Crasovan, 2014). Although many defense mechanisms have been identified, they can be grouped into some major categories. A parsimonious perspective about defenses is offered by Thygesen et al. (2008), that present the following three factors: (1) the image-distorting style, which includes help-rejecting complaining, splitting of self/other, projection, and projective identification; (2) the affect-regulating style, which includes intellectualization, dissociation, isolation, and fantasy; and (3) the adaptive style, which includes sublimation, self-observation,

anticipation, humor, and self-assertion. Previous studies confirmed the fact that defenses included in the first two factors are negatively associated, while defenses included in the later one are positively associated, with psychological adjustment to the workplace conditions, professional quality of life, and posttraumatic growth (e.g., Kashani, Vaziri, Zanjani, & Aghdam, 2014; Larsen et al., 2010; Miranda & Louza, 2015).

The present study

The aim of the present study was to assess the associations between the four career adaptabilities - concern, control, curiosity, and confidence – and the three personal defense styles presented above - the image-distorting style, the affect-regulating style, and the adaptive style. Because the adaptive style is considered to be a mature level of functioning, we expected to find a positive relationship between this defense style and career adaptabilities. Moreover, the theoretical definitions and empirical findings suggest that image-distortion style and affect-regulation imply a low or moderate level of functioning. Thus, we expected to find either a lack of associations or negative relationships between the latter defensive styles, on the one hand, and career adaptabilities, on the other.

2. Method

2.1 Participants and procedure

The sample included 147 Psychology undergraduate students (84.4% female) who volunteered to participate in the study. The mean age of the participants was 21.5 years ($SD = 3.7$ years), ranging from 19 to 45 years. The data was collected through a computerized questionnaire in the Faculty's informatics laboratory.

2.2 Measures

Career Adapt-Abilities Scale (CAAS; Savickas & Porfeli, 2012; Romanian version by Rusu, Măirean, Hojbotă, Gherasim, & Gavriloaiei, 2015) is a 24 item instrument designed to measure four career adaptability dimensions: concern, control, curiosity and confidence. Participants indicated using a 5-point Likert scale how strongly they have developed each ability (ranging from 1-Not strong to 5-Strongest). The CAAS showed good reliabilities (Table1).

Defense Style Questionnaire 60 (DSQ-60; Thygesen, Drapeau, Trijsburg, Lecours, & de Roten, 2008; Romanian version by Crașovan & Maricuțoiu, 2012) is a 60-item questionnaire designed to measure 30 defense mechanisms. Several alternatives for grouping the 30 defenses into factors have been proposed. For the present study, we used the three-factor version of the DSQ, which demonstrated improved psychometric properties in a Romanian sample (Crașovan & Maricuțoiu, 2012). This version includes only 14 defenses (28 items), representative for three defensive styles: image distorting style

(comprising help rejecting complaining, splitting –self/other, projection, and projective identification), affect regulation style (comprising intellectualization, dissociation, isolation, and fantasy), and adaptive style (comprising sublimation, self-observation, humor, self-assertion, and anticipation). Respondents answered on a 9-point Likert scale, ranging from 1 – Not at all applicable to me, to 9 – Completely applicable to me. The scales showed satisfactory reliabilities (Table 1).

3. Results

Inspecting Table 1 we can see that all four adaptability dimensions are significantly correlated only with the adaptive style. The other two defensive styles hold trivial associations with career adaptabilities. Even so, a multivariate approach is recommended in order to more accurately capture the relationships between the two sets of variables. Hence, we adopted a canonical correlation approach in order to explore the pattern of relationships between the CAAS dimensions and the three defensive styles. This is considered to be the most appropriate multivariate statistical procedure when exploring the associations between two pairs of multiple numerical variables (Weiss, 1972). In the present study, we introduced concern, control, curiosity and confidence as the first set of variables and the defense mechanisms as the second one.

Table 1. Means, standard deviations, reliability estimates and correlation coefficients among study variables.

Measure	1	2	3	4	5	6	7
Career adaptabilities							
1. Concern	.80						
2. Control	.36**	.71					
3. Curiosity	.48**	.53**	.76				
4. Confidence	.54**	.56**	.64**	.83			
Defense styles							
5. Style of image distortion	.04	-.09	-.04	-.03	.69		
6. Style of affective regulation	-.08	-.07	-.06	-.12	.47**	.64	
7. Adaptive style	.23**	.31**	.29**	.30**	-.01	.19*	.58
Mean	3.52	3.70	3.49	3.73	4.06	4.42	5.98
Standard deviation	0.62	0.63	0.62	0.64	1.21	1.27	0.96

Note: $N = 147$. Cronbach's α estimates are displayed on the main diagonal.

* $p < .05$, ** $p < .01$.

Applying the three criteria highlighted by Hair, Anderson, Tatham, and Black (1998), we extracted only the canonical function that (a) reached the level of statistical significance, (b) had at least medium canonical correlations, (c) and noticeable redundancy coefficients.

Only one of the three extracted canonical functions reached statistical significance (see Table 2), revealing 16% of common variance between variates ($r = .41$, Wilks $\lambda = .82$, $p = .004$). Consistently, the redundancy index values for both variable sets indicate rather modest amounts of shared variance. Inspecting the canonical loadings (see Figure 1) we can see that the four career adaptabilities contribute to a similar extent to their corresponding canonical function (with the highest correlations for confidence and control), while in the other case the only substantial contribution is exerted by adaptive style. Concerning the cross-loadings, only control, curiosity and confidence exhibit at least medium-sized correlations with the variate for defensive styles (all $r > -.30$). Consistently, adaptive style is the only variable from the second set that has a noticeable correlation with the career adaptabilities variate ($r = -.36$). In other words, higher scores on career adaptability (especially control, curiosity, and confidence) are linearly associated with higher scores on adaptive defense style.

Table 2. *Canonical correlation between career adaptabilities and defensive styles.*

	Canonical function
R	0.41*
R ²	0.16
	Cross loadings
Career adaptabilities (CAAS)	
Concern	-.27
Control	-.33
Curiosity	-.32
Confidence	-.36
Defensive styles (DSQ)	
Style of image distortion	.05
Style of affective regulation	.11
Adaptive style	-.36
Redundancy coefficient for CAAS	.10
Redundancy coefficient for DSQ	.05

Note: $N = 147$.

* $p < .01$.

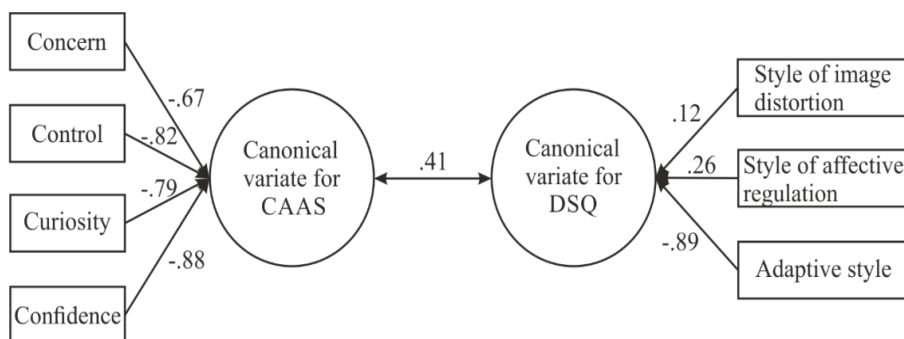


Figure 1. Canonical function for career adaptabilities and defensive styles

4. Discussion

The present study highlighted the positive association between all four career adaptabilities and the adaptive defense style. In concordance with the career construction theory, these results support the adaptive coping role of career adaptabilities. The data is also in line with previous studies that report positive associations between adaptive defenses and favorable outcomes in different domains, including the work environment (e.g., Larsen et al., 2010; Miranda & Louza, 2015). Also consistent with our expectations, we did not find significant relationships between the other defense styles – image distortion and affective regulation – and career adaptabilities.

Adaptive / non-avoidant and non-adaptive / avoidant defenses / coping mechanisms seem to be in a orthogonal relationship (Maricuțoiu & Crașovan, 2014) and simultaneously relate with different criteria (e.g., Larsen et al., 2010). In other words, the evidence suggests that the two categories are complementary facets of the same process rather than two poles of a continuum (Maricuțoiu & Crașovan, 2014). Taking into account this perspective on defenses / coping mechanisms, and the fact that career adaptabilities were related only to adaptive defenses, we believe that there might also be a set of non-adaptive coping behaviors uncovered by the career construction theory. Hence, future studies should consider exploring the incremental validity of non-adaptive coping behaviors beside career adaptabilities in relation to career relevant criteria. Such research could clarify if there is a real theoretical need to distinctly address and maybe incorporate negative coping behaviors in understanding vocational behavior.

Moreover, future studies should simultaneously assess the relationships between defense mechanisms and coping mechanisms with career adaptabilities, because on the one hand, the two constructs were shown not only to hold significant shared variance, but also to be complementary (Maricuțoiu

& Craşovan, 2014). On the other hand, defenses are considered unconscious strategies, while coping implies conscious strategies used to deal with external threats. From this perspective it would be interesting to find if career adaptabilities are associated more with consciously or unconsciously driven resources. This could be particularly interesting for adolescents and young employees since they are at the starting point of constructing their careers and are expected to possess less experience-shaped levels of career adaptability.

There is a cautionary note that one should take account of when interpreting the present results: the study was conducted on a homogeneous sample of young participants (psychology students) with the majority of them being females. Thus, their experience with occupational transitions and work traumas is mostly nonexistent, their second layer of the self (self as agent) being mainly at the beginning (Savickas, 2013). Similar research, conducted on more diverse working populations could offer a more accurate picture on the pattern of relationships between career adaptabilities and coping mechanisms.

Our study revealed that career adaptabilities are exclusively associated with adaptive coping (i.e., adaptive defense style), providing support to the career construction theory and for the adaptive coping role of career adaptability dimensions. Yet, since adaptive and non-adaptive coping types are distinct and complementary mechanisms, future studies should also address the role of the latter category in relation to career relevant variables. Also, beside career adaptabilities, non-adaptive coping behaviors should be considered within the process of career education and counseling, in order to help individuals to better optimize the fit between their needs and vocational constraints.

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