

PSYCHOMETRIC EVALUATION OF THE CAREER DECISION AGENCY SCALE (CDAS) IN CROATIAN HIGH SCHOOL STUDENTS

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Abstract

This two-study research examined the psychometric properties of the newly developed Career Decision Agency Scale (CDAS), designed to assess adolescents' active role in career decision-making. Drawing on the concept of agency, the CDAS captures both proactive engagement and avoidant tendencies across four theoretically proposed dimensions: Readiness (preparedness for decisions), Confidence (belief in decision-making ability), Disengagement (tendency to withdraw), and Autonomy (self-directedness in the process). The scale was administered in the first study to Croatian high school seniors ($N = 424$) and in the second study to first-year students from secondary vocational schools in Croatia ($N \approx 1290$). The CDAS consists of 16 items, four per subscale, rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). In Study 1, exploratory factor analysis using principal axis factoring with Oblimin rotation did not confirm the originally proposed four-factor structure. Instead, a three-factor solution emerged, explaining approximately 60% of the total variance. The first factor combined Readiness and Confidence, reflecting their conceptual and empirical overlap; the second represented Disengagement; and the third corresponded to Autonomy. Moderate intercorrelations among factors suggested related but conceptually distinct components. The three-factor structure was confirmed in Study 2 via confirmatory factor analysis, with good model fit indices ($CFI = .910$, $NFI = .902$, $RMSEA = .075$). Internal consistency was satisfactory for all subscales and the total scale in both studies. Reliability was highest for the combined Readiness–Confidence scale, followed by Disengagement and Autonomy. The total scale demonstrated good internal consistency (Cronbach's $\alpha > .800$), supporting the use of a composite score as an overall indicator of career decision-making agency. Construct validity was examined through correlations with the Autonomous Career Motivation Scale (Babarović, Šverko, & Krpanec, 2024) in Study 1 and the Career Adapt-Abilities Scale (CAAS; Savickas, 2009) in Study 2. CDAS results moderately correlated with the autonomy continuum, while correlations with CAAS were low to moderate, with the strongest associations observed between conceptually related subscales, supporting both construct validity and divergence. Overall, the findings indicate that the CDAS is a reliable and valid instrument for assessing adolescents' career decision-making agency. Its structure is best interpreted through three dimensions—Readiness–Confidence, Disengagement, and Autonomy—with the option of a total score to capture overall agency. The CDAS provides a valuable tool for evaluating adolescents' engagement in career decision-making, particularly in vocational education contexts.

Keywords: *Career decision-making, agency, adolescents, psychometric validation, vocational education.*

1. Introduction

The present research aimed to develop and validate a new instrument—the Career Decision Agency Scale (CDAS)—designed to assess adolescents' active role in career decision-making. Career decisions made during adolescence have important implications for educational attainment, occupational pathways, and psychosocial well-being (Blustein, 2011; Super, 1990). This is particularly salient for students in vocational education, who are often required to make consequential career choices before full exploration and self-understanding have matured. Although contemporary career theories emphasize personal agency as central to career development, existing measures do not adequately capture adolescents' agency within the career decision-making process itself. The CDAS was developed to address this gap by providing a developmentally sensitive, theory-driven measure of how adolescents engage with, regulate, and, at times, disengage from career decision-making.

The concept of agency refers to individuals' capacity to intentionally shape their life course through self-directed action, self-regulation, and goal pursuit (Bandura, 2006; Hitlin & Elder, 2007). In career development, agency denotes not only the capability to make choices but also the motivation and

behavior involved in initiating, sustaining, and assuming responsibility for career decisions. It extends beyond cognitive choice among alternatives to encompass motivational commitment, preparedness to act, autonomy in directing decisions, and regulation of avoidant tendencies. For adolescents navigating complex educational and vocational transitions, agency captures how decisions are approached rather than merely what choices are made. This distinction is critical because adolescents may differ substantially in their readiness to decide, confidence in their ability to make decisions, willingness to act autonomously, and tendency to avoid or postpone career decisions. Conceptualizing these differences in terms of agency allows for a more integrative understanding of both proactive engagement and disengagement, reflecting real-world decision behaviors.

Contemporary career development theories provide strong support for an agentic perspective. Career Construction Theory posits that individuals actively construct their vocational lives through meaning-making and intentional choices that reflect evolving identity and life themes (Savickas, 2005, 2013). Career decisions are therefore expressions of self-authorship, requiring engagement, adaptability, and responsibility. Similarly, Social Cognitive Career Theory (SCCT) emphasizes agency through self-efficacy beliefs, outcome expectations, and goal-directed behavior (Lent, Brown, & Hackett, 1994). Individuals are not passive recipients of environmental affordances; they actively regulate career behaviors through self-reflection and intentional action. Developmental models such as Super's Life-Span, Life-Space Theory further support this perspective, highlighting readiness and the implementation of self-concept in career choice as indicators of active engagement (Super, 1980, 1990). Gottfredson's Theory of Circumscription and Compromise describes how individuals actively narrow career options and adjust aspirations in response to perceived constraints, a process involving both engagement and adaptive withdrawal (Gottfredson, 2002). Taken together, these frameworks converge on the view that career decision-making is a dynamic, agentic process encompassing preparedness, confidence, autonomy, and management of avoidance tendencies.

Existing instruments address aspects of this process, but none provide a comprehensive, multidimensional assessment of agency in adolescent career decision-making. The Career Adapt-Abilities Scale (CAAS) measures psychosocial resources—Concern, Control, Curiosity, and Confidence—that support career development across transitions (Savickas & Porfeli, 2012). While these adaptability resources are essential for coping with career tasks, they do not directly assess the act of making career decisions or the behavioral engagement involved. Adaptability reflects potential readiness to cope, whereas agency reflects enacted decision behavior. Measures of career decision-making self-efficacy, such as the Career Decision-Making Self-Efficacy Scale (CDMSE; Betz, Klein, & Taylor, 1996), capture confidence in performing career decision tasks but do not encompass readiness to engage, autonomy in directing decisions, or tendencies to disengage. Similarly, the Career Decision-Making Difficulties Questionnaire (CDDQ; Gati, Krausz, & Osipow, 1996) identifies barriers that hinder decision-making, including lack of information or inconsistent preferences, but adopts a deficit-oriented perspective that does not capture proactive engagement or self-direction. In contrast, the CDAS is designed to measure adolescents' actual engagement and regulation in career decisions, integrating both proactive and avoidant dimensions to capture the full spectrum of agency.

The CDAS operationalizes career decision-making agency through four theoretically derived dimensions. Readiness reflects adolescents' preparedness and openness to engage in decisions, Confidence denotes belief in one's ability to make decisions, Autonomy captures self-directedness and ownership of the decision process, and Disengagement assesses tendencies to avoid, postpone, or withdraw from decision-making. Disengagement is conceptualized not simply as the absence of agency but as an active orientation toward withdrawal, which is especially relevant during adolescence when uncertainty and environmental pressures are high. By combining engagement and disengagement dimensions, the CDAS provides a nuanced profile of adolescents' decision behaviors, highlighting both adaptive and avoidant patterns.

The present research reports two studies with Croatian adolescents—general secondary school seniors and first-year vocational students—examining the CDAS's factor structure, internal consistency, and construct validity. The scale provides a theoretically grounded, developmentally sensitive tool for assessing adolescents' career decision-making agency, particularly in contexts where active participation in career planning is critical.

2. Method/Study 1

2.1. Participants and procedure

The first study included 424 Croatian high school seniors (approx. 17–19 years; 34% boys). Students completed self-administered questionnaires during school hours. Participation was voluntary, and ethical approval and informed consent were obtained.

2.2. Measures

The Career Decision Agency Scale (CDAS) consists of 16 items (Table 1) rated on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), measuring four dimensions: Readiness, Confidence, Autonomy, and Disengagement. Construct validity was assessed via correlations with the Autonomous Career Motivation Scale (Babarović, Šverko, & Krpanec, 2024).

3. Results/study 1

An exploratory factor analysis (EFA) using principal axis factoring with Direct Oblimin rotation was conducted to examine the dimensionality of the CDAS. The originally proposed four-factor structure was not supported by Scree plot (Figure 1) and Kaiser-Guttman criterion. Instead, a three-factor solution emerged, explaining approximately 61% of the total variance. The first factor combined Readiness and Confidence, reflecting conceptual and empirical overlap. The second factor corresponded to Disengagement, and the third factor represented Autonomy. Intercorrelations among factors were moderate, indicating related but distinct components. Internal consistency was satisfactory for all subscales, with the highest reliability observed for the combined Readiness–Confidence factor ($\alpha = .899$). The total scale also demonstrated good internal consistency ($\alpha = .848$), supporting its use as an overall indicator of career decision-making agency. Construct validity was examined via correlations with the autonomy continuum measured by ACMS (Babarović, Šverko, & Krpanec, 2024), which yielded expected and moderate associations with the agency dimensions, supporting convergent validity.

Figure 1. Scree plot – EFA principal components eigenvalues of CDAS.

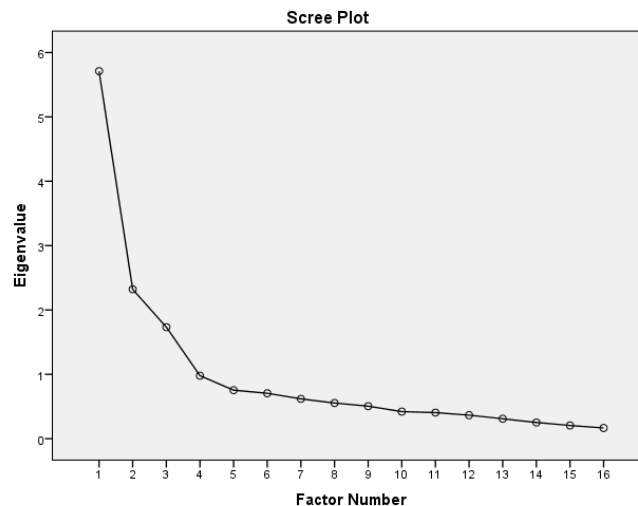


Table 1. EFA of CDAS – Structure matrix after Principal Axes Factoring and Direct Oblimin rotation.

Item	Principal Axes		
	1	2	3
1. I know my interests, desires, traits, and abilities well; I know what I want to do and what I am good at.	.792	-.232	-.355
2. I have sufficient information about occupations; I know what work tasks look like, how to get educated, and where one can find employment.	.656	-.078	-.417
3. At this moment, it is easy for me to decide about my career.	.869	-.158	-.312
4. I feel ready to make a decision about my career.	.856	-.148	-.367
5. I am confident about which occupation and job would suit me best.	.839	-.146	-.347
6. I have firmly decided what kind of job I would like to do in the future.	.173	-.111	-.062
7. My decision about my future career is firm and clearly defined.	.869	-.243	-.282
8. I clearly feel which occupation is best for me.	.862	-.197	-.336
9. I am currently not thinking about my future career.	-.194	.606	.011
10. I am not in a hurry to decide about my future career because there is still time for that.	-.193	.821	-.004
11. When one of my friends thinks a lot about their career, I think they are overdoing it.	-.023	.524	-.051
12. Choosing a career is not important to me at the moment because things change.	-.262	.660	.028
13. I will make my decision about my future career independently.	.294	.070	-.728

14. I will listen to others' advice about my career; I cannot make that decision on my own.	-.214	-.003	.592	
15. Everyone should choose their own occupation and take responsibility for their future.	.295	-.072	-.756	
16. No one knows better than I do which occupation would suit me best.	.282	.040	-.576	
	Rotation Sums of Squared Loadings	5.221	2.001	2.636

4. Method/Study 2

4.1. Participants and procedure

The second study included 1,290 first-year students from Croatian vocational schools (approx. 17–19 years, 49% boys). The procedure mirrored Study 1, with voluntary participation, supervision, and ethical approval.

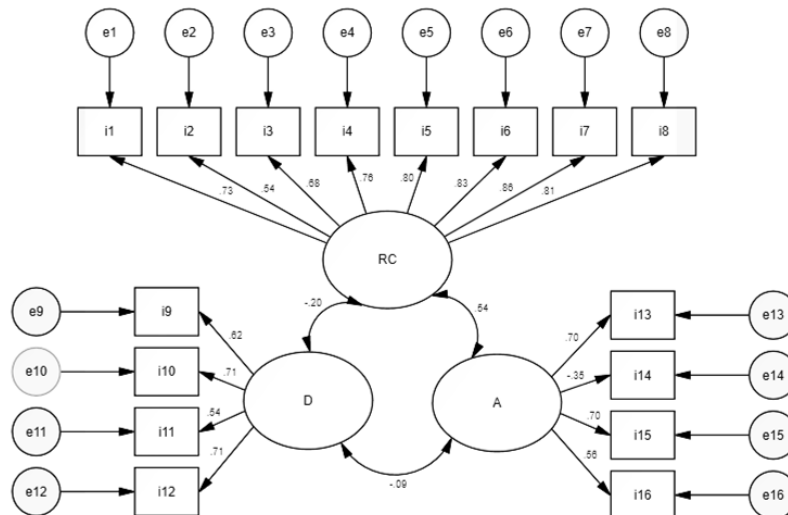
4.2. Measures

The CDAS was administered alongside the Career Adapt-Abilities Scale (CAAS; Savickas, 2009; Croatian version - Šverko & Babarović, 2019) to examine construct validity.

5. Results/study 2

A confirmatory factor analysis (CFA) was conducted to test the three-factor structure identified in Study 1 (Figure 2). The model demonstrated good fit to the data (CFI = .910, NFI = .902, RMSEA = .075). Subscale reliabilities were satisfactory, with Cronbach's alpha highest for the combined Readiness–Confidence scale, followed by Disengagement and Autonomy. The total scale showed good internal consistency ($\alpha = .846$). Construct validity was further supported through correlations with the Career Adapt-Abilities Scale (CAAS; Savickas, 2009). Correlations were low to moderate overall, with the strongest associations observed between conceptually related subscales, supporting both convergent and discriminant validity. These results indicate that the CDAS reliably measures adolescents' career decision-making agency, with three distinct but related dimensions and an interpretable total score for overall agency.

Figure 2. CFA structure of CDAS with standardized regression and correlation coefficients.



Note: RC - Readiness–Confidence; D - Disengagement; A - Autonomy; i1 to i16 - CDAS scale items - corresponds to table 1.

6. Discussion

The present research developed and validated the Career Decision Agency Scale (CDAS), a multidimensional measure of adolescents' engagement and regulation in career decision-making. Across two studies, the CDAS demonstrated satisfactory reliability, construct validity, and a stable three-factor structure comprising Readiness–Confidence, Disengagement, and Autonomy. Study 1's exploratory factor analysis revealed the conceptual overlap of readiness and confidence, suggesting that preparedness to engage and belief in one's decision-making ability are closely linked in late adolescence, while Study 2 confirmed this structure with good model fit across different adolescent populations, including vocational students.

The CDAS provides a theoretically grounded and developmentally sensitive tool that captures both proactive engagement and avoidant tendencies in career decision-making, extending beyond existing instruments such as the Career Adapt-Abilities Scale (Savickas & Porfeli, 2012), the Career Decision-Making Self-Efficacy Scale (Betz et al., 1996), and the Career Decision-Making Difficulties Questionnaire (Gati et al., 1996). By integrating motivational, behavioral, and self-regulatory aspects of agency, the CDAS allows for a nuanced assessment of how adolescents navigate career choices, assume responsibility, and regulate withdrawal or avoidance. Correlations with the Autonomous Career Motivation Scale and CAAS subscales supported the scale's construct validity, demonstrating meaningful yet distinct associations with related constructs.

These findings indicate that career decision-making in adolescence can be meaningfully conceptualized as an agentic process encompassing readiness, confidence, autonomy, and disengagement. Practically, the CDAS offers career counselors, educators, and researchers a useful tool for identifying engagement patterns and avoidance tendencies, particularly in vocational education contexts where students are required to make early and consequential career choices. Overall, the CDAS fills a conceptual and practical gap in career assessment, bridging adaptability, decision-making difficulties, and self-efficacy, while its brevity and multidimensionality make it well suited for both research and applied settings.

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