# *Career Decidedness Scale:* Validazione della Versione Italiana

Fatima Abu Hamam, Hilda Du Plooy, Francesca Marinaro, Serena Rubini, Tülüce Tokat, Mattia Zene, Francesco Tommasi e Riccardo Sartori<sup>1</sup>

## Sommario

Scegliere una professione è una decisione critica per ognuno di noi. La nostra capacità di valutare e decidere tra varie opzioni di carriera è essenziale per il proprio futuro e per il proprio livello di benessere individuale. In letteratura si rintraccia lo strumento *Career Decidedness Scale*, una scala di autovalutazione del grado di decisione degli individui in merito alla propria scelta professionale. Il presente studio intende proporne una validazione italiana. Sulla base delle risposte fornite da un totale di 647 adolescenti italiani del Nord Italia, lo studio ne presenta le caratteristiche psicometriche. I risultati della Confirmatory Factor Analysis confermano la struttura monofattoriale della scala, l'affidabilità e la validità. La convergenza dei coefficienti di affidabilità e dei risultati delle componenti principali dimostra l'integrità e l'idoneità della scala sia per la ricerca che per l'applicazione pratica nel settore di riferimento. La versione italiana della *Career Decidedness Scale* può essere utile per definire e sviluppare interventi di carriera accurati da parte di consulenti ed educatori/ educatrici.

### **Parole chiave**

*Career Decidedness Scale,* Career decision, Adolescenti, Validazione Italiana, Proprietà psicometriche.

<sup>&</sup>lt;sup>1</sup> Università di Verona, Dipartimento di Scienze Umane.

# *Career Decidedness Scale:* Validation of the Italian Version

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#### Abstract

It is not surprising that the ability of evaluating and deciding upon career options has been identified as essential for each individual. The *Career Decidedness Scale* is a self-report measure aiming at evaluating the degree individuals feel decided about their career choice. The present study presents the validation of the Italian version of the *Career Decidedness Scale*. Based on responses from a total of 647 Italian adolescents in Northern Italy, the paper presents its psychometric properties. Confirmatory factor analysis results robustly endorse the one-factor structure of the scale, its reliability and validity. The confluence of fit indices, reliability coefficients, and principal component outcomes collectively affirm the scale's integrity and suitability for both research and practical application in the relevant field. The Italian version of the Career Decidedness Scale can be used in Italy for analysing the process used by young adults to make their career decisions. Understanding the factors that affect the decision process can be helpful in defining and developing more accurate career interventions by career counselors and educators.

## Keywords

*Career Decidedness Scale,* Career decision, Adolescents, Italian validation, Psychometric properties.

<sup>&</sup>lt;sup>1</sup> University of Verona, Department of Human Sciences.

# Introduction

Adolescents' career orientation is a critical factor that can have significant implications for their future career development and educational achievement. Today's teenagers face many dilemmas and challenges in their career choice. They face multiple uncertainties (i.e. uncertainties over economic situation, career, job position and prospects) (Khattab et al., 2022). For example, Italian adolescents' chances of developing coherent and satisfying future careers and life projects are affected by socio-economic difficulties. In turn, this forces them to reduce their aspirations and limit the time span of their projects (Parola & Felaco, 2020).

Unsurprisingly, career decision-making can be stressful and consequently affect psychological and physical well-being. Uthayakumar et al. (2010) found that career decision-making functions as a predictor of subjective well-being in a sample of young adults. Career decision-making is negatively correlated with intention to leave education (Bargmann et al., 2022) and active engagement in career preparation (Hirschi et al., 2011). Despite this evidence, the literature continues to grapple with the complexity of adolescents' career decisions, reiterating the need for further research to fully understand the factors that influence adolescents' career orientation.

Within the field of career counseling, a large body of research has been committed to the topic of career-decision making behaviour, and particularly career decidedness (Lounsbury et al., 1999). This refers to «the degree to which individuals feel decided about their career choice» (Lounsbury et al., 1999, p. 648). It reflects the level of confidence and certainty regarding specific career decisions i.e., what occupational field an individual wants to pursue and develop. Based on their conceptualization, career decidedness is therefore viewed on a continuum ranging from undecided to decided individuals (Lounsbury et al., 1999). Contemporary research has identified several contextual and individual factors that can affect career decidedness, making it a dynamic and multidimensional concept. Career decidedness merges with other vocational behaviour constructs (e.g. career adaptability and career decision-making self-efficacy, see Nota, 2007; Uthayakumar et al., 2010). Addressing career-related aspects and improving career decidedness is central to increasing a person's life quality throughout school and university and has been positively linked to successful future career development and subjective well-being (Uthayakumar et al., 2010). On the contrary, not being able to decide on a career has been associated with a lower ability to take advantage of specific study, training and vocational development opportunities, which can result in poorer career choices (Nota, 2007).

The *Career Decidedness Scale* (CDS) was developed by Lounsbury et al. (1999) with the purpose of evaluating an individual's level of career decidedness. Originally, CDS consisted of 14 items but has since been reduced to six

and received construct validation in further studies among early, middle, and late adolescents (Lounsbury et al., 2005). Moreover, Lounsbury and researchers (2005) found strong correlations between positive personality traits (e.g., Conscientiousness, Emotional Stability, Openness and Agreeableness) and career decidedness among both adolescent and adult populations. Presently, the scale is only available in a limited number of languages (e.g., Turkish; Akçakanat & Uzunbacak, 2012) with no Italian version adapted and validated. This study aims to contribute to the assessment of an individual's level of career decisionmaking in the Italian population by proposing an Italian version of the CDS. Studying career decision is particularly important in the Italian context, which in recent years continues to rank first in Europe for the presence of NEETs (young adults who are neither in education, employment, or training) (Eurostat, 2022). The value of validating the scale for use on Italian youth stands in adding the career decidedness literature through having the ability to identify young people at risk of career indecision. This can help to plan career development and intervention programmes to address career decision difficulties and promote career decision-making abilities.

# Methods

# Participants & Procedure

The study included a total of 647 participants (63% males, 87.7% Italian citizens) who were invited to complete the self-reported measure of career decidedness. Students were from different educational streams (high schools, primary vocational education, and training) in Northern Italy. The study was conducted following the ethical principles of Helsinki over a period of 9 months. All participants and their parents were informed about the purposes of the project and given a statement ensuring the confidentiality of their individual results.

# Measures

The Career Decidedness Scale by Lounsbury and colleagues (1999) is a subcomponent of the Transition to College Inventory (TTC) (Lounsbury, 2003). The CDS is composed of six statements where respondents indicate their level of agreement based upon a 5-point Likert scale (ranging from 1 = strongly disagree to 5 = strongly agree). Statements were translated into Italian and back translated for accuracy and quality control. Example items in the English version include: «I have made a definite decision about a career for myself», and «I am having a difficult time choosing among different careers.»

# Data analysis

We ran confirmatory factor analyses (CFA), guided by chi-square ( $\chi^2$ ) statistics and fit indices SRMR, CFI, TLI, and RMSEA, following Hu and Bentler's criteria (1998). For the analyses, we applied maximum likelihood estimation to assess a one-factor model fit using Jamovi software (Version 2.3.19). The planned analysis includes examining the impact of missing data treatment and testing the consistency of the factor structure across data subsets to validate construct reliability. Post-hoc residual analyses identify unexplained variance, leading to model refinements as necessary, ensuring a methodologically sound approach to scale validation.

# Results

# Descriptives

As an initial analytical step, descriptive statistics for the Career Decidedness item were computed. The skewness exhibited a range from -0.04 to 0.09, indicating a slight leftward data distribution bias. The kurtosis showed a range from -1.05 to -0.72, suggesting a distribution that is somewhat flatter than normal. Both metrics are comfortably within the  $\pm 2$  threshold, affirming the normality assumption in line with the guidelines provided by Trochim & Donnelly (2010). Our reliability analysis reported a Cronbach's alpha of .84 for the overall scale, indicating good internal consistency.

# Confirmatory factor analysis

In our CFA, the factor loadings demonstrate robust estimates with significant statistical strength across all indicators. These loadings surpassed the recommended .50 threshold, thus confirming each item's substantial contribution to the underlying factor. Specifically, the standardized estimates for the factor loadings ranged from .50 for Reversed-CareerDecid (2) to .79 for Reversed-CareerDecid (6). The 95% Confidence Interval for these factor loadings further solidifies our model, with no interval straddling zero and the lower bounds ranging from .61 to .89, which reinforces the stability of our factor structure. The statistical significance of these loadings is highlighted by p-values markedly below the .001 threshold, suggesting that the observed factorial structure is not an artifact of random variation.

The results from the CFA revealed a comparative fit index (CFI) of .93, which indicates a strong level of fit, surpassing the widely accepted threshold of .90,

suggesting a robust correspondence between the hypothesized model and the observed data. A Tucker-Lewis index (TLI) of .88 is slightly below the commonly recommended threshold of .90 but still demonstrates a moderate level of fit. A root mean square error of approximation (RMSEA) of .13, while exceeding the preferred cut-off of .08, still signifies a reasonable fit for the model. Moreover, the SRMR value of .04, falling well below the suggested threshold of .08, further supports the adequacy of the model fit. The post-hoc model performance showed minimal residual correlations, suggesting the model's capacity to adequately capture the shared variance among items. This minimal residual correlation ranges from -.03 between CareerDecid (1) and Reversed-CareerDecid (2) to .10 between CareerDecid (3) and Reversed-CareerDecid (6), thereby supporting the appropriateness of the one-factor solution.

An Obliman rotation was used for the principal component analysis which was conducted as an adjunct analysis to validate the scale's one-dimensionality, with the first component accounting for 56.23% of the total variance. This finding is supported by a satisfactory KMO measure of sampling adequacy, which stood at .85 overall, and Bartlett's test of sphericity, which was significant ( $\chi^2$  = 1481, df = 15, p < .001).

### Discussion

In the present study, we presented the validation of the Italian version of the CDS, the Career Decidedness Scale (CDS), to assess career decidedness, which was initially developed by Lounsbury and colleagues in 1999 and later revised and validated among various groups by Lounsbury and colleagues in 2005. The previous validation of the scale showed that positive personality traits correlated strongly with career decidedness in both adolescents and adults (Lounsbury et al., 2005). Despite being available in limited languages, an Italian version of the CDS has not been adapted or validated. This study aims to fill this gap by proposing an Italian version, addressing the need for assessing career decision-making in Italy, especially given the high prevalence of NEETs (Eurostat, 2022).

The present validation was based on a sample of 647 adolescents and CFA was conducted to evaluate the scale's one-dimensionality and to assess its psychometric properties. The CFA results substantiated the one-factor model of the CDS, evidenced by satisfactory fit indices and a high level of internal consistency, as indicated by Cronbach's alpha. These findings indicate that the CDS is a reliable instrument for measuring career decidedness in Italy. The validation process underscores the scale's applicability in the assessment of career decision-making processes among Italian adolescents, offering a methodologically sound tool for career counseling and educational interventions. The study encounters some limitations warranting consideration. Relying on self-reported measures might introduce response bias or inaccuracies stemming from subjective interpretations or social desirability effects. Participants' responses could be influenced by their desire to conform to perceived societal expectations or personal biases, which may not accurately represent their true career decidedness. Additionally, the absence of convergent or discriminant validity assessments in our study further limits our ability to fully understand the scale's relationship with other related constructs. However, these limitations collectively suggest avenues for future research to enhance the scale's validity and applicability.

In conclusion, the present study offers a robust instrument to evaluate career decision-making processes among Italian adolescents. From a practical standpoint, the validated Italian CDS emerges as a useful tool for career counselors and educators. It facilitates the identification of adolescents who might benefit from enhanced support in their career decision-making journey. Additionally, the scale's application in educational contexts can inform the design of bespoke interventions and developmental programmes, aimed at fostering effective career planning among students.

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## APPENDIX

## Table 1

Italian Version of the Career Decidedness Scale

- 1. Ho preso una decisione certa circa la mia carriera.
- 2. Dover scegliere fra diverse carriere mi sta causando momenti difficili (r).
- 3. Sono certo di quello che alla fine farò per vivere.
- 4. Non sono sicuro del genere di lavoro che vorrò fare una volta terminati gli studi (r).
- 5. So qual è il genere di lavoro che un giorno vorrò avere.
- 6. Per quanto riguarda la carriera che voglio intraprendere, continuo a essere incerto (r).

# **Disclosure and Conflicts of Interest**

The author(s) declare that there are no conflicts of interest concerning the present study.

### Data availability statement

The data that support the findings of this study are available on request from the corresponding author.