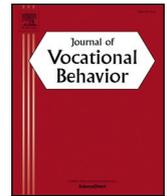




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Future orientation and attitudes mediate career adaptability and decidedness



Maria Cristina Ginevra ^{a,*}, Susanna Pallini ^b, Giovanni Maria Vecchio ^b, Laura Nota ^c, Salvatore Soresi ^c

^a Department of Psychology, University of Milan-Bicocca, Italy

^b Department of Education, University of Roma Tre, Italy

^c Department of Philosophy, Sociology, Education and Applied Psychology, University of Padova, Italy

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ABSTRACT

Based on Life Design approach, the study aimed at examining the relationship between some constructs relevant for adolescents to handle the current labor market and their role in affecting career decidedness: career adaptability, positive attitude toward the future, and future orientation. Specifically, the fully mediational role of positive attitude toward the future and future orientation on the relationship between career adaptability and career decidedness was tested. We involved 774 adolescents, of which 408 boys and 366 girls. Results showed that career adaptability predicted indirectly, through positive attitude toward the future and future orientation, career decidedness. As regards practical implication, the results carried out emphasize the importance to support career adaptability, hope, optimism, and future orientation in adolescence.

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1. Introduction

In adolescence, career choice and the resulting pursuit of a professional role is deeply related to the accomplishment of developmental tasks such as independence from family, the conquest of a professional role, and, eventually, the formation of one's own family (Santos & Coimbra, 2000). According to Erickson (1968), exploration and commitment are the core components of social identity: career decisional processes become crucial in adolescent years because they make possible future professional roles (e.g. Creed, Prideaux, & Patton, 2005). However, current studies have found that the time frames for accomplishing tasks have been expanded between adolescents and young adult period (Seiffge-Krenke & Gelhaar, 2008), and there is a slight longitudinal decrease in career concern, control, and confidence in middle-to-late adolescence (Negru-Subtirica, Pop, & Crocetti, 2015).

Meanwhile, in relation to the current socioeconomic contingencies, Italian adolescents find the process of making decisions regarding their career either especially difficult, or at worst, entirely useless. For example, Carr et al. (2014) found that Italian adolescents had higher indecisiveness scores than US adolescents; Laghi (2009) evidenced that most adolescents from 17 to 18 years had yet to decide about their professional future.

* Corresponding author at: University of Padova, 35131 Padova, Italy.

E-mail addresses: mariacristina.ginevra@unipd.it (M.C. Ginevra), susanna.pallini@uniroma3.it (S. Pallini), giovannimaria.vecchio@uniroma3.it (G.M. Vecchio), laura.nota@unipd.it (L. Nota), salvatore.soresi@unipd.it (S. Soresi).

In relation to this, Life Design approach suggests that the career counselors who work with adolescents should both confront these decision-making difficulties and inquire how to help adolescents to develop a decision-making process on their professional future, regardless of their bleak perspectives (Savickas et al., 2009). Specifically, while at the beginning of the 20th century vocational counselors emphasized the importance of finding a job suitable to one's own abilities, at present they should focus on improving the adolescent adaptation to the unpredictable environment, rather than the maturation of the inner structure. These days, the more significant ability that is worthwhile to develop in young people is the ability to adapt to the unpredictability and discontinuity of the labor market (Savickas et al., 2009), because adolescents are not as free as they once were to make self-determined choices about their career directions (Blustein, 2011).

Taking this into account, the present study aims to examine the relationship between some constructs relevant for adolescents to cope with the current labor market and their role in affecting career decidedness: career adaptability, future orientation, and positive attitude toward the future.

Career adaptability. According to the Life Design approach, career adaptability as the infrastructure that allows for the process of decision-making. This construct is conceptualized as “the self-regulation strengths or capacities that a person may draw upon to solve the unfamiliar, complex and ill-defined problems presented by developmental vocational tasks, occupational transitions, and work traumas” (Savickas & Porfeli, 2012, p. 662). Career adaptability involves a set of individual resources for coping with developmental tasks, participating in working life, and adapting to changes of both the job market and job conditions (Savickas & Porfeli, 2012). It refers to work tasks and role transitions that people face, and the resources needed to handle them. In other words, it is the process by which people actively construct their life careers, through coping with continuously changing situations, which they experience in their social contexts (Karaevli & Hall, 2006; Savickas, 2013). According to Life Design approach, four resources constitute career adaptability: concern, control, curiosity, and confidence. *Concern* involves awareness and preparation to respond to the demands of the future work environment; it is a sense of that is important to think about one's own future. *Control* is the tendency to think of the future as manageable; it implies the use of self-regulation strategies to adjust to the needs of different settings and exert influence on the context. *Curiosity* regards the exploration of possible selves and social opportunities. Finally, *Confidence* allows for standing by one's own aspirations and objectives despite difficulties (Savickas et al., 2009; Savickas & Porfeli, 2012).

Research among adolescents in several countries both European and extra-European evidenced the impact of career adaptability on career-related outcomes, such as vocational identity, career interests, career decidedness (Rossier, 2015). Adolescents with high levels of career adaptability show lower career indecision levels, more effective problem-solving skills, decreased decisional difficulties, and a more adaptive career decision-making profile than peers with lower levels of career adaptability (Creed, Fallon, & Hood, 2009; Hirschi, Herrmann, & Keller, 2015). Regarding career indecision, Nota, Ginevra, and Soresi (2012) showed that adolescents that considered themselves undecided about their future after the completion of high school, scored lower on career adaptability, suggesting that high career adaptability enables vocational choice and vocational planning. Longitudinal studies evidence also that adolescents' career adaptability increase the chance to find a job in later age. de Guzman and Choi (2013) among New Guinea adolescents, found significant relations between career adaptability and employability skills, whereas Koen, Klehe, and Van Vianen (2012) found that Dutch young adults who received career adaptability training reported half a year later higher employment quality than did members of the control group.

Career Decidedness. Adolescents starting to think about their futures can feel undecided about how to proceed. The context of globalization, the greater number of career and academic opportunities available and the uncertainty and job insecurity characterizing the labor market, are all factors that can make young people's school and career choices very difficult (Gati & Asher, 2001; Savickas et al., 2009).

The international literature distinguishes between developmental indecision and indecisiveness. The first corresponds to a normal phase in developmental terms, and is generally operationalized as the inability to make a career choice or uncertainty about one's decision in a situation that needs decision-making; the latter is defined as a chronic problem with making choices in several situations (Ferrari, Nota, & Soresi, 2010; Santos, Ferreira, & Goncalves, 2014; Vignoli, 2015).

Research findings highlight that indecision about one's own future is related to a consistent number of other constructs, including internal traits (e.g., self-esteem, trait anxiety) and states (e.g., choice and social anxiety), and contextual factors associated with external barriers (e.g., discrimination) and interpersonal conflicts (Carr et al., 2014). Moreover, it is linked to unstable career goals, immature career attitudes, and lack of motivation to make or engage in an occupational decision (Peterson, Sampson, Lenz, & Reardon, 2002).

Future Orientation. When employment is a risk, the future is uncertain and menacing; therefore, the possibility for adolescents to think about the future is undermined. This problem increases the frequent tendency of adolescents to look for immediate gratification rather than commit to reaching a future professional goal, and to be more focused on their personal development and leisure time than on their school/career choices (Ferrari et al., 2010; Hesketh, 2000; Pallini, Bove, & Laghi, 2011; Peetsma, Hascher, Veen, & Roede, 2005). Future orientation regards the individuals' ideas, thoughts, and feelings about their future, and the ability to envisage multiple possible future scenarios (Atance & O'Neill, 2001; Stoddard, Zimmerman, & Bauermeister, 2011). It can be defined as an individual' subjective view of future (Di Maggio, Ginevra, Nota, & Soresi, 2016; Seginer, 2009).

Adolescents' process of decision implies the ability to relate their present to future career goals (McInerney, 2004): through future orientation, adolescents pursue their goals, anticipate the consequences of their actions and become aware that their present constitutes the basis for the construction of their future (Ferrari et al., 2010; Laghi, D'Alessio, Pallini, & Baiocco, 2009).

Studies have found a relationship between career adaptability and future orientation; and between future orientation and decidedness. For example, Santilli et al. (2015) found that Italian preadolescents with higher levels of career adaptability had higher levels of future orientation. Ferrari et al. (2010) found that the greater the degree of future orientation Italian adolescents had, the lower their levels of indecision were, whereas Janeiro (2010) reported that among Portuguese adolescents, future perspective was an important determinant in career planning.

Positive Attitude toward the future. In the career construction process, planning an educational or occupational goal and/or persevering in an educational or occupational path, especially coping with obstacles and problems, may be particularly difficult for adolescents with low levels of hope and optimism and high levels of pessimism toward the future (Niles, Amundson, & Neault, 2011; Savickas, 2013). Although different lines of theoretical approaches and studies have addressed hope, optimism, and lack of pessimism, the degree of overlapping between these three constructs underlines that they reflect a single global dimension, i.e. the positive attitude toward the future, reflecting a positively oriented vision about future (Bryant & Cvengros, 2004). Specifically, hope is an affective variable with cognitive components, influenced by external control beliefs (Scioli et al., 1997; Scioli, Ricci, Nyugen, & Scioli, 2011), and optimism (pessimism) is a cognitive dimension, regarding a generalized belief on positive (negative) results (Scheier, Carver, & Bridges, 1994). Optimism and pessimism should be regarded as two separate sub-traits, rather than as two poles in a *continuum* (Segerstrom, Evans, & Eisenlohr-Moul, 2011), and this might explain the low correlation between the two constructs in different studies (e.g., Ginevra et al., 2016; Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992).

Research emphasizes that having a positive attitude toward the future plays a crucial role in adolescents' adaptive development as it is correlated with their positive health and well-being (Sun & Shek, 2012). Specifically, it negatively correlated with risks for antisocial behaviors, and positively correlated with educational aspirations, persistence, school engagement, and resilience (Brown, 2015). As regards career outcomes, it is positively correlated with career goals, career planning, and career exploration (Patton, Bartrum, & Creed, 2004). In addition, Santilli, Marcionetti, Rochat, Rossier, and Nota (2016) observed that hope and optimism, as a global dimension, among Italian preadolescents partially mediated, and among Swiss preadolescents, fully mediated, the relationship between career adaptability and life satisfaction.

1.1. Research aims

Based on Life Design approach, this study aimed at analyzing the mediational role of positive attitude toward the future and future orientation on the relationship between career adaptability and career decidedness. According to Rossier (2015) and Savickas and Porfeli (2012), who stated that career adaptability facilitates vocational choice and vocational planning, and Nota et al.'s (2012) findings about the role of career adaptability on decision status, we hypothesized that career adaptability, directly and indirectly, predicted career decidedness. In addition, based on Santilli et al. (2016), who showed that career adaptability influenced positively hope and optimism (that with lack of pessimism can be regarded as indicators of a single global dimension reflecting positive attitude toward the future), Santilli et al. (2015), who found positive correlations between career adaptability and future orientation, and considering the role of these constructs on career decision (e.g., Ferrari et al., 2010), we hypothesized that positive attitude toward the future and future orientation would mediate the relationship between career adaptability and career decidedness.

2. Method

2.1. Participants

The study involved 774 adolescents: 408 (52.7%) boys and 366 (47.3%) girls, ranged between 14 and 21 years ($M = 17.45$; $SD = 0.93$). Adolescents that lived in central Italy attending the 2nd to 5th year of high school (12.02% 2nd grade, 37.98% 3rd grade, 39.66% 4th grade, and 10.34% 5th grade). In addition, 26% participants attended classic high school, 5% linguistic school, 11% scientific high school, 48% technical school, and 11% vocational school.

2.2. Measures

Career Adapt-Abilities Scale-Italian Form (Soresi, Nota, & Ferrari, 2012). The instrument consists of 24 items, the same as in the Career Adapt-Abilities Scale-International Form 2.0 (Savickas & Porfeli, 2012). Participants responded to each item on a scale from 1 (*not strong*) to 5 (*strongest*). The 24 items divided into four subscales that measure the adapt-ability resources of Concern (e.g., "Planning how to achieve my goals"), Control (e.g., "Taking responsibility for my actions"), Curiosity (e.g., "Observing different ways of doing things"), and Confidence (e.g., "Solving problems") can be combined into a total score indicating career adaptability. A previous work with Italian adolescents showed adequate internal consistency estimates of 0.80 for concern, 0.74 for control, 0.77 for curiosity, 0.85 for confidence, and 0.92 for the total score; and a coherent multidimensional, hierarchical structure of adaptability resources (Soresi et al., 2012). For this sample, Cronbach's alpha for four subscales were 0.81, 0.67, 0.72, and 0.79, and for the total score 0.89.

Visions About Future (Ginevra et al., 2016). It consists of 19 items and assesses attitudes toward hope, optimism, and pessimism. Participants responded to each item on a scale from 1 (*It describes me not at all*) to 5 (*It describes me very well*). The 19 items are divided into three subscales that measure Optimism (6 items; e.g., "Usually, I am full of enthusiasm and optimism"), Hope (7 items; e.g., "In the future I will do what I'm not able to do today") and Pessimism (6 items; e.g., "I will hardly find a

job really suitable for me”). Previous analyses (see Ginevra et al., 2016) suggested that VAF is a psychometrically valid and reliable measure. Specifically, as regards construct validity, the factor structure was confirmed through exploratory and confirmatory factor analyses, and was also found to be invariant across gender in Italian adolescents. In addition, concurrent validity was confirmed, showing that the factors hope and optimism correlated positively and the factor pessimism correlated negatively with career adaptability and life satisfaction. The VAF had also acceptable internal consistency with Italian adolescents, with reliability coefficients of 0.86 for optimism, 0.78 for pessimism, and 0.84 for hope. Also for this sample, the confirmatory factor analyses showed adequate fit indices ($SB-\chi^2 [149, n = 774] = 774.787; p < 0.001; CFI = 0.95; NNFI = 0.94; RMSEA = 0.07 (CI_{90} = 0.07–0.08); SRMR = 0.06$), suggesting that three factors were well represented by the items and that could be considered as indicators of a single global dimension reflecting a positively oriented attitude toward the future. For this sample, Cronbach's alpha for three subscales were 0.85, 0.77, and 0.84 respectively, and 0.85 for the total score.

Design My Future (DMF; Di Maggio et al., 2016). It consists of 19 items on a scale from 1 (*It describes me not at all*) to 5 (*It describes me very well*). It assesses Future orientation (11 items; e.g. “Thinking about the future excites me”); and Resilience (8 items; e.g. “Even under pressure, I'm able to concentrate, to think with finish and carefully”). Previous analyses (see Di Maggio et al., 2016) demonstrated construct validity, through exploratory and confirmatory factor analyses, and measurement invariance across gender in a sample of Italian adolescents. In addition, discriminant validity was confirmed with measures of career adaptability, optimism, pessimism, hope, and life satisfaction. The two scales demonstrated in a sample of Italian adolescents good internal consistency estimates of 0.88 for Future orientation and 0.80 for Resilience. For this study, only the subtest future orientation was used, showing a Cronbach's alpha of 0.88.

Ideas and Attitude on School/Career Future (Sorensen & Nota, 2003). The 16-item assesses adolescents' ideas, attitudes, and behaviors regarding their future as it relates to school and career decision-making. Students rate the items from 1 (*does not describe me at all*) to 5 (*describes me perfectly*). It is composed by three factors: Level of Decision and Assurance Related to One's School/Career Future (10 items, e.g. “I don't know what to think when I have to decide which is the best school for me”), Level of Locus of Control Associated with Professional Problem Solving (4 items, e.g. “It is useless to think too much about the job I will do when I grow up. One way or another, I will certainly find something to do”), and Ability to Gather Information Useful to Making a Choice (AGI, 3 items; e.g. “I can't imagine what I will do when I grow up”). Previous analyses with a sample of Italian adolescents demonstrated construct validity, through exploratory and confirmatory factor analyses, discriminant validity with measures of career beliefs, and adequate internal consistency reliability estimates: alpha values for the three factors, were 0.84, 0.61 and 0.62, respectively. In this study, Cronbach's alpha values for the three factors were 0.89, 0.75, and 0.87 respectively, and for the total score was 0.89.

2.3. Procedure

The adolescents enrolled in this study were involved in vocational guidance activities in their high schools. Specifically, all students enrolled in these grades participated in the study unless they happened to be absent from school when the measures were administered. Trained researchers collected the questionnaires with measures of interest for this study as well as other measures, such as career interests, career values, that were administered to draw up personalized reports.

Before participating in the vocational guidance activities, the adolescents were informed of the purpose of the project, procedures and what they could expect upon conclusion. A stringent consent procedure for the research was followed including parents' consent and approval from school councils and freedom of adolescent to decline participation if they choose to do so. Before starting, the researchers explained that participants' responses would be absolutely confidential.

2.4. Data analysis

2.4.1. Preliminary analysis

All questionnaires administered were screened for missing data. Moreover, the normality of distributions of career adaptability resources (concern, control, curiosity, and confidence), positive attitude toward the future (hope, pessimism, and optimism), future orientation, and career decidedness (level of decision and assurance related to one's school/career future, level of locus of control associated with professional problem solving, and ability to gather information useful to making a choice) was tested using Kolmogorov-Smirnov statistic. *T tests* were also computed to check if there were any significant across-group differences in dimensions considered according to gender. Inter-correlations among dimensions considered were also computed.

2.4.2. Mediation analysis

A two-step procedure was executed, by using the software Lisrel 8.7 (Jöreskog & Sörbom, 2005). Based on results of the preliminary analyses, in the first step, we examined the measurement model using a multigroup approach with a covariance matrix and asymptotic covariance matrix with 13 observed variables.

The item parceling method was used to create the latent variables of career adaptability, positive attitude toward the future, future orientation, and career decidedness, as it results in a better model fit than using all items as indicators (Little, Cunningham, Shahar, & Widaman, 2002). Precisely, for the multidimensional constructs, such as career adaptability, positive attitude toward the future, and career decidedness, the internal-consistency approach was used (Kishton & Widaman, 1994). This technique consists in creating parcels that use the facets/factors as the grouping criteria, and parcels would reflect the sum or average of items of

each facet. Specifically, we proceed to calculate the average of items of each facet, creating four parcels for career adaptability, three parcels for positive attitude toward the future, and three parcels for career decidedness. Instead, for future orientation that is exemplified by only a single measure, we used the item-to-construct balancing technique, with factorial algorithm (Little et al., 2002). First of all, we tested the dimensionality of future orientation using a Principal Axis Factoring (PAF). Specifically, a one-factor solution was found with 12 items accounting for 46.27% of total variance, and loadings ranging from 0.48 to 0.80. Secondly, three parcels were created based on the magnitude of the factor loadings in factor analysis. Specifically, the three items with the highest item-to-construct loadings were assigned to the three parcels, and then the other three items with the next highest loadings were added to the parcels in an inverted order. This procedure continued until all items were anchored to the three parcels. Cronbach's alpha for the parcels were 0.72, 0.69, and 0.74, respectively.

We proceed to test configural invariance and metric invariance across groups. Configural invariance tests whether the basic model structure is equivalent among boys and girls. Instead, metric invariance verifies whether the factor loading parameters are invariant across groups. If a latent factor has equal loadings across groups, this guarantees that each group responds to the items in the same way (Cheung & Rensvold, 2002).

In the second step, multigroup structural analyses were conducted to test the group differences in the conceptual model. This analysis is appropriate for this study because it evaluates between-group differences with respect to the role of positive attitude toward the future and future orientation in mediating the relation between career adaptability and career decidedness. First, two competing conceptual models implementing a partial mediated relationship (Model A) and a fully mediated relationship (Model B) between career adaptability and career decidedness through positive attitude toward the future and future orientation were tested to choose the baseline structural model across the two groups (Kelloway, 1998). Specifically, using the latent variables defined in the measurement model, we estimated a partially mediated model (direct and indirect relations from career adaptability to career decidedness, through positive attitude toward the future and future orientation) and a fully mediation model (an indirect relation from career adaptability to career decidedness through positive attitude toward the future and future orientation).

After choosing the baseline model, we established the measurement invariance across groups to verify gender differences on path coefficients. Therefore, the factor loading parameters were constrained to be equal across two groups. Lastly, the equality constraints were imposed on structural paths of the model in order to test gender differences in the structural relations (Bentler, 2006).

Because preliminary analyses showed that data were nonnormally distributed ($p < 0.05$), the Satorra-Bentler Scaled Chi-square test statistic was used for assessing the model fit (Satorra & Bentler, 2001). Less attention was given to chi-square due to its sensitivity to sample size. Instead, we considered the comparative fit index (CFI) and the nonnormed fit index (NNFI), with values of 0.95 or high indicating a better fit; the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMS), with values of 0.08 or less indicating a good model fit (Hu & Bentler, 1999). To report the evidence of invariance, we used the following criteria: (a) the multigroup model shows an adequate fit to the data, and (b) the Δ CFI test (Byrne & van de Vijver, 2010; Cheung & Rensvold, 2002), when the differences in comparative fit index values between models are < 0.01 . As suggested by Byrne and van de Vijver (2010), we considered these criteria, and particularly the Δ CFI test, because the chi-square statistic is sensitive to sample-size sensitivity and the CFI value is increasingly supported as a more rational measure of model improvement.

To test the magnitude and significance of mediation effects, we used the bootstrapping procedure, as it can be applied to studies involving multiple mediators and does not require the assumption of normality of the sampling distribution (Preacher & Hayes, 2008). Specifically, as suggested by Lau and Chang (2012) we formed 1000 bootstrap samples from the original data set

Table 1
Descriptive statistics and correlations among variables.

	2	3	4	5	6	7	8	9	10	11	Boys		Girls	
											M	SD	M	SD
1. Concern	0.41**	0.49**	0.53**	0.54**	0.39**	-0.14**	0.42**	0.37**	0.25**	0.11**	20.85	4.12	21.84	4.06
2. Control		0.48**	0.54**	0.36**	0.25**	-0.18**	0.41**	0.19**	0.15**	0.09**	23.54	3.14	23.66	3.45
3. Curiosity			0.55**	0.40**	0.32**	-0.10**	0.36**	0.12**	0.13**	0.15**	21.25	3.67	22.28	3.61
4. Confidence				0.39**	0.25**	-0.17**	0.48**	0.24**	0.18**	0.14**	23.02	3.71	22.67	3.59
5. Future orientation					0.42**	-0.35**	0.65**	0.43**	0.37**	0.14**	38.28	7.62	40.04	7.93
6. Optimism						-0.22**	0.56**	0.22**	0.22**	0.19**	20.41	4.33	19.24	4.77
7. Pessimism							-0.37**	-0.33**	-0.37**	-0.19**	13.12	4.62	11.60	3.86
8. Hope								0.41**	0.36**	0.22**	24.44	4.56	23.81	4.75
9. Level of decision and assurance related to one's school/career future									0.44**	0.32**	34.21	6.54	33.00	7.53
10. Level of locus of control associated with professional problem solving										0.37**	11.38	2.89	12.25	2.95
11. Ability to gather information useful to making a choice											5.73	2.06	5.87	2.01

** $p < 0.001$.

through random sampling. If the 95% Bias-Corrected (BC) confidence interval for the mediation effect does not include zero, the indirect effect is considered statistically significant at the 0.05 level.

3. Results

3.1. Preliminary analysis

All items displayed satisfactory symmetry and kurtosis values (all values were ≤ 1). The final sample included missing data (low than 1%) in the questionnaires administered. Therefore, missing data replacement was performed using person mean replacement, as this method has been suggested to preserve the sample size (Pigott, 2001). The Kolmogorov-Smirnov test revealed that the distributions of raw scores for all dimensions deviated significantly from a normal distribution (all $p_s < 0.05$). Means, standard deviations, and inter-correlations are summarized in Table 1. Low to moderate correlations were observed among dimensions (see Table 1). In addition, a strong and positive correlation was observed between hope and future orientation. However, discriminant validity for these dimensions was evaluated by calculating the average variance extracted (AVE). The analysis carried out showed that the AVE for future orientation (AVE = 0.54) and Hope (AVE = 0.62) exceed the recommended AVE value of 0.5 and the squared correlation between the constructs ($\text{corr}^2 = 0.53$), suggesting that multicollinearity is not a concern (Farrell, 2010; Fornell & Larcker, 1981).

T tests revealed significant gender differences on Concern $t(772) = -3.380, p = 0.001$; Curiosity $t(772) = -3.954, p < 0.001$; Future orientation $t(772) = -3.142, p = 0.002$; Optimism $t(772) = 3.585, p < 0.001$; Pessimism $t(772) = 4.951, p < 0.001$; Level of Decision and Assurance Related to One's School/Career Future $t(772) = 2.390, p = 0.017$; Level of Locus of Control Associated with Professional Problem Solving $t(772) = -4.135, p = 0.017$. Specifically, boys showed higher levels of optimism, pessimism, and decision and assurance related to school/career future, and lower levels of concern, curiosity, future orientation, and locus of control associated with professional problem-solving than girls (see Table 1). These findings suggest the importance of distinguishing boys and girls when testing the mediational model hypothesized.

3.2. Measurement model

The configural measurement model had a very good fit $\text{SB-}\chi^2(118) = 350.426, \text{RMSEA} = 0.071 (\text{CI}_{90} = 0.063\text{--}0.080), \text{CFI} = 0.973, \text{NNFI} = 0.964, \text{SRMR} = 0.053$. The metric model (factor loadings to be equal between the two groups) had also a very good fit $\text{SB-}\chi^2(127) = 368.444, \text{RMSEA} = 0.070 (\text{CI}_{90} = 0.062\text{--}0.079), \text{CFI} = 0.972, \text{NNFI} = 0.965, \text{SRMR} = 0.056$. Moreover, no significant fit changes were observed according to ΔCFI test.

3.3. Structural model

The fit indexes of partial mediated model and the fully mediated model were good across groups (see Table 2). Using the ΔCFI test, CFI changes were < 0.01 between two models for two groups. However, the fully mediation model showed a better fit in terms of RMSEA compared to the partial mediation model and the direct path from career adaptability to career decidedness was not significant in both groups. Therefore, the fully mediation model as the final structural model was chosen.

To verify whether each structural path coefficient is statistically different among boys and girls, we proceed to conduct multigroup SEM. The metric invariance was imposed on the fully mediated model (Model B), showing a good fit $\text{SB-}\chi^2(129) = 368.570, \text{RMSEA} = 0.069 (\text{CI}_{90} = 0.061\text{--}0.078), \text{CFI} = 0.972, \text{NNFI} = 0.966, \text{SRMR} = 0.056$. Thus, as a next step, the structural paths of the model were constrained to be invariant across gender. The results showed that the fully mediated model imposing equality constraints across groups provided a good fit $\text{SB-}\chi^2(133) = 371.386, \text{RMSEA} = 0.068 (\text{CI}_{90} = 0.060\text{--}0.076), \text{CFI} = 0.972, \text{NNFI} = 0.967, \text{SRMR} = 0.056$, and no significant fit changes were observed ($\Delta\text{CFI} = 0.00$). Thus, no significant group differences exist in the fully mediated model across boys and girls. Standardized factor loadings ranged from -0.30 (pessimism saturated negatively on positive attitude toward the future) to 0.70 . As Fig. 1 illustrates, the gamma coefficients for the relationships between career adaptability and positive attitude toward the future (estimate $0.682, \text{SE} = 0.057, t = 12.012, p < 0.001$) and future orientation (estimate $0.852, \text{SE} = 0.056, t = 15.257, p < 0.001$) were positive and highly significant. Additionally, the relationships between positive attitude toward the future and future orientation on career decidedness were also positive and significant (positive attitude toward the future - career decidedness: estimate $0.395, \text{SE} = 0.093, t = 4.227, p < 0.001$; future orientation -

Table 2
Summary of model fit statistics.

Group	SB- χ^2	df	RMSEA	RMSEA (CI)	CFI	NNFI	SRMR
<i>Partial mediated model</i>							
Boys	192.254	59	0.075	0.063–0.086	0.968	0.958	0.056
Girls	160.108	59	0.069	0.056–0.082	0.977	0.969	0.053
<i>Fully mediated model</i>							
Boys	191.821	60	0.073	0.062–0.085	0.969	0.959	0.056
Girls	160.737	60	0.068	0.055–0.081	0.977	0.969	0.053

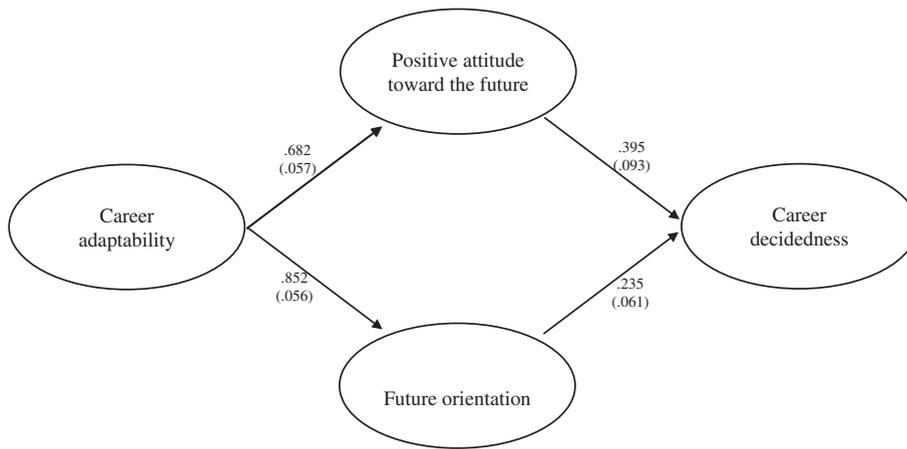


Fig. 1. Fully mediation model with estimate coefficients.

career decidedness: estimate 0.235, $SE = 0.061$, $t = 3.824$, $p < 0.001$). The analysis showed, with 95% confidence, that the total indirect effect of career adaptability on career decidedness through the two mediators was significant, with a point estimate of 0.047 ($SE = 0.047$). The specific indirect effects of each proposed mediator showed that positive attitude toward the future, with a point estimate of 0.269 ($SE = 0.065$); and future orientation, with a point estimate of 0.020 ($SE = 0.053$) were both significant.

The bootstrapping analysis highlighted that the BC bootstrap confidence interval for indirect effect between career adaptability and career decidedness through positive attitude toward the future was between 0.129 and 0.519, which indicates that the mediation effect is significantly different from zero. Likewise, the BC bootstrap confidence interval for indirect effect between career adaptability and career decidedness through future orientation did not contain zero (lower limit = 0.009; upper limit = 0.033), indicating that the mediation effect is significantly different from zero.

4. Discussion

Based on Life Design approach, the present study examined the relationship between career adaptability, positive attitude toward the future, future orientation, and career decidedness in a group of Italian adolescents. Using a multigroup approach for boys and girls subsamples, our results supported a fully mediation, showing that career adaptability is indirectly, through positive attitude toward the future and future orientation, related to career decidedness across gender. Despite the preliminary analyses showing mean differences between the boys and girls, their slopes were shown to be equal through the results of the multigroup SEM analyses.

These results are consistent with literature previously reviewed which evidenced the impact of career adaptability on career decidedness (Creed et al., 2009; Hirschi et al., 2015; Nota et al., 2012; Peterson et al., 2002; Rossier, 2015). Given that the process of decision deeply related to the vision of future career goals (Ferrari et al., 2010; Janeiro, 2010; Laghi et al., 2009; McInerney, 2004), we explored the mechanism that translates career adaptability in decision making, taking into account the role played by both positive attitude toward the future and future orientation on the process of decision making, that has been observed also on other studies (Ferrari et al., 2010; Patton et al., 2004). In this way, we formulated a model consistent with previous research comprehensive of different variables involved in the process of career choice.

The results carried out showed also that, in relation to the today's socioeconomic contingencies, if adolescents consider themselves able to handle with developmental tasks and particularly with changes in the job market and job conditions, they may develop generalized beliefs on positive future outcomes and positive feelings to pursue their goals and wishes. As a consequence, they will be more able to imagine multiple possible future scenarios. This open and confident attitude could stimulate a greater commitment and responsibility for career choices and career decision making (Ferrari et al., 2010; Janeiro, 2010; Laghi et al., 2009; Marko & Savickas, 1998; Santilli et al., 2015).

Following the Life Design approach, our study, through the analysis of these personal aspects to be leveraged for decide, could contribute to the improvement of an evidence-based intervention on the decision-making process (Savickas et al., 2009), for increasing adolescents' degree of freedom in the active building of their career pathways. Specific interventions stimulating career adaptabilities resources and career decidedness could encourage the adolescents' narrative ability, on indicating the focal points, such as hope, optimism, and future orientation, on which adolescents could address their attention and reflexive activity. Structured interventions or small groups or individual career counselling activities can be planned, with ad-hoc materials, such as stories, or videos to promote these dimensions. In this regards, we remember the trainings on career adaptability developed by Koen et al. (2012) and Nota, Ginevra, Santilli, and Soresi (2014); also regarding hope, optimism, and future orientation, we mention for example the programs proposed by Marques, Lopez, and Pais-Ribeiro (2011); Gillham, Reivich, Jaycox, and Seligman (1995); Marko and Savickas (1998), and Ferrari, Nota, and Soresi (2012).

There are potential limitations of this study because of the measures that were used (self-reports) and the cross sectional nature. Regarding the first, nevertheless, career adaptability, positive attitude toward the future, and career decidedness are private cognitive-emotive states that are necessarily accessible through report by the individuals who hold those beliefs and experience these emotional tonalities. Certainly, in future works it would be desirable to rely upon multiple methods and informants across situations to minimize bias due to self-report and reputation. In addition, one cannot exclude the possibility that other personal or situational factors moderate or mediate the relations between career adaptability and career decidedness. Surely, the decision making process is even more complex than this: future studies could formulate models, which include also personal and social adjustment aspects.

Regarding the cross-sectional nature of this study, obviously, the decision-making process on career future is only a part of the career development. Longitudinal studies could analyze the different steps of the career development, such as the chance to find a job in later age and the related job satisfaction. For example, de Guzman and Choi (2013) and Koen et al. (2012) found a link between adolescents' career adaptability and a following higher quality of their job. Further longitudinal studies could be useful for identifying and tracking how the abroad decision-making process, including career adaptability and positive orientation on career future, would influence the possibility to find effectively a "good-enough job" and to have career success.

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