Career Adaptability,Resilience,and Life Satisfaction in Italian and Belgian middle school student

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Introduction

Segmentation of the labor market and long-term unemployment have resulted in increased poverty and social exclusion (European Commission, 2015). In April 2016, an unemployment rate of 8.7% in the EU-28 area was reported. Both youth unemployment rates and youth unemployment ratios have severely increased since the beginning of the economic crisis, indicating (1) the difficulties young people face when trying to find a job and (2) that the economic crisis has severely hit the young work-seekers (Eurostat, 2016). Furthermore, in 2015, school drop-out and early school leavers, i.e. individuals between 18 and 24 years of age who completed only lower secondary education and are not involved in further education or training, was 9.8% in Belgium and 15% in Italy (European Commission, 2016).

Globalization, internationalization, job instability, rapid progression of technological developments and the economic crisis contributed to drastic changes in the world of work. Careers have become unpredictable, and the world of work has become less clearly defined, creating more significant challenges for adolescents when making career decisions and coping with career transitions (Savickas et al., 2009). As a result of the unpredictable careers, investing in movement capital, i.e., human capital, social capital, self-awareness and adaptability, becomes more critical in our current world of work. Individuals must wisely invest in and seize work opportunities that cross their paths (Guichard, 2015). Permanent updating knowledge and social capital, networking, developing and following a personal career plan and being able to adapt to the changing environment, have taken a central place in our current world of work. In order to cope with the uncertainty and unpredictability of the future in our current economic situation and environment, a growing need for positive variables such as hope, optimism and resilience is called for, particularly for adolescents, who are at a critical time for their personal and professional development (Authors at al., 2016; Authors at al., in progress). It is crucial and necessary to help young people prepare for and install positivity about their future, to consider multiple career options, to support them to

develop positive life trajectories and to cope with social-economic conditions related to uneasiness, discomfort, and confusion (Authors at al., 2014). This need for vocational guidance and career counseling to support adolescents in coping with career and work-related challenges and transitions; not only to find work but to find decent work, allowing for growth and security.

In 1999, the International Labour Organization introduced the concept of decent work. "Decent work sums up the aspirations of people in their working lives. It involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men" (ILO, 2016). Adverse effects of low-quality employment are found to be similar to the negative consequences of unemployment, i. e. lower well-being, lower life satisfaction and more physical and psychological strain (Kinicki, Prussia, & McKee-Ryan, 2000; McKee-Ryan & Harvey, 2011). Campbell and Porquet (2015) reported life satisfaction to be negatively correlated to (1) indicators of inequality and hard work conditions, and to (2) to underemployment and unemployment. As work engages most of our lives, decent work, together with career adaptability and positive variables (e.g., resilience), are therefore of essential importance for individuals' quality of life and life satisfaction (Authors at al., in progress). On the positive side, chances of finding a qualitatively good job can be increased by providing individuals with career adaptability resources (Koen, Klehe & van Vianen, 2012; Skorikov, 2007).

For all these reasons there is a need in the career field to link to a new theoretical model, able to address the 21° century challenges since an early age, in a prevention way.

Life Design and positive psychology

The Life Design approach aims at providing answers to the 21st-century world of work with its unpredictable and unclear career paths and multiple career transitions (Savickas et al., 2009). The Life Design approach views constructing the self through social relationships and work as a life-long, holistic, contextual and preventive process (Savickas et al., 2009). It emphasizes the need to

anticipate, explore and cope with multiple career transitions, to support people to become experts in co-construction and life design processes, to be hopeful and optimistic about one's future, and to develop career adaptability, which is an essential resource to manage frequent career and life transitions (Authors at al., 2014; Savickas et al., 2009). Career adaptability and positive variables (e.g., resilience) are useful to cope with uncertainty, difficulties, and change and therefore, they play a crucial role in the Life Design approach.

Career Adaptability. Career adaptability is a psycho-social construct that consists of four problem-solving and coping strategies or resources that help to cope with age-appropriate developmental tasks and transitions. The four career adapt-abilities are concern, control, curiosity, and confidence. Concern entails being preoccupied with the future and being aware of and making plans for the imminent transition, accompanied by an optimistic and hopeful attitude towards the future. Control is the tendency to feel in control of the future and feel capable of making mature and adequate career-related decisions. Curiosity entails exploring the environment, the self, and one's past, present, and desired future; exploring is the competence that comes with curiosity. The competence related to confidence is problem-solving. Confidence is the tendency of trusting one's problem-solving skills and trusting oneself to be able to cope with obstacles, challenges, and barriers effectively. Research has been investigating what predicts career adaptability, what outcomes career adaptability has, and which variables it correlates with (Hartung & Taber, 2008; Hirschi, 2009; Duffy, 2010; Savickas & Porfeli, 2012; Authors at al., 2014). Career adaptability is related to different aspects of life, e.g. (1) to personality, e.g. emotional intelligence (Coetzee & Harry, 2014), (2) to the career context e.g. work engagement (Rossier, Zecca, Stauffer, Maggiori, & Dauwalder, 2012), (3) and to life satisfaction (e.g. Malinauskas & Vaicekouskas, 2013; Authors at al., 2014), and (4) to optimism (Rottinghaus, Day, & Borgen, 2005). Young people start preparing for and working on their careers long before they engage in actual work behavior (Hartung, Porfeli, & Vondracek, 2008). Hirschi (2009) found that career adaptability development and positive youth

development go hand in hand and that an increase of career adaptability predicted an increase in experienced life satisfaction over time.

Furthermore, a three-wave longitudinal study in early-to-middle and middle-to-late adolescents reported positive reciprocal associations between career concern and academic achievement, indicating that students who are more involved with career planning tend to perform better at school, and vice-versa, high academic achievement strengthens students' future orientation and optimism regarding their vocational future further (Negru-Subtirica & Pop, 2016). Career adaptability and its resources play an essential role in preparing young people for important career decisions, contribute to the development of positive well-being and satisfaction, and empower youth to set and pursue realistic and adaptive career goals (e.g., Hirschi, 2009). Therefore, it is essential to research career adaptability resources and positive variables in young people, allowing to understand the development of both constructs better and allowing researchers to provide tools to contribute to the positive (career and life) development of youth.

Resilience. One of the positive variables that play a crucial role in promoting adaptive career development and construction is the general concept resilience, that is related to positive adaptation when facing challenging circumstances (Masten & Tellegen, 2012). Masten, Obradović, and Burt (2006) described resilience as the ability to quickly regain the energy and strength that are needed to take action when facing challenges that are threatening one's development, stability, and vitality. Resilience is, therefore, a psycho-social resource or a protective factor when facing challenges and having to cope with risks and future uncertainties; it is the positive side of adaptation under extenuating circumstances (Masten, 1989). Contrary to the common belief that resilience is rare, evidence strongly suggests that resilience is an ability that many possess (Masten, 2014). Half a century of resiliency research showed the importance and power of human and social capital in the development of resilience, and that resilience can contribute to positive development throughout life (Masten, 2014). Resilience is not innate but is an ability that can be developed. For the development of resilience and it is corresponding cognitive, social and self-regulation skills, it is crucial that

children are provided with opportunities to learn, with qualitative care-taking and nutrition, and with support from and for their families (Masten & Gewritz, 2006).

Furthermore, research showed that it might be easier to prevent problems in development by promoting competence and success rather than by focusing on reducing problems (Masten, 2011). From childhood onwards, resilience is positively related to positive developmental outcomes and negatively related to maladaptive developmental outcomes (Masten & Tellegen, 2012). Preadolescents' and adolescents' resilience is positively correlated to scholastic achievement, vocational identity and career commitment (Diemer & Blustain, 2007). Furthermore, several studies showed that resilience is related to positive development in adolescence. Donald and Clacherty (2005) reported that adolescents with higher levels of resilience asked for others' support when needed, were more able to cope with the demands of reality, had better developed problem-solving skills, and had better social relationships. Also, adolescent's resilience is related to coping strategies to deal with stress (Connor & Davidson, 2003), and higher levels of civic engagement and work adaptive behavior (Masten & Osofsky, 2010). Research showed that preadolescents' and adolescents' resilience is positively related to career adaptability, life satisfaction and future orientation (e.g., Barto, Lambert, & Brott, 2015; Authors at al., 2016). Ong, Bergemans, Bisconti, and Wallace (2006) reported that (1) higher levels of resilience predicted a weaker association between positive and negative emotions, especially on stressful days, and (2) over time, positive emotions function to assist resilient individuals to recover from and cope with daily stressful events. Developing resilience can, therefore, be a protective factor to cope with present and future daily stressors in life. Given the high levels of nowadays social and occupations uncertainties, researchers have started emphasizing the importance of resilience in the field of career development to cope with (future) unpredictability, turbulences, uncertainties, and challenges (e.g., Bimrose & Hearne, 2012; Lyons, Schweitzer, & Ng, 2015).

Life satisfaction. Quality of life is based on personal values and criteria. Schalock et al. (2002) considered "life" to refer to important aspects of human existence, e.g. family, and work, and

"quality" to refer to human values, e.g. health, satisfaction, and happiness. Wehmeyer et al. (2011) described "quality of life" as a multidimensional construct and in objective and subjective (i.e., life satisfaction) components, which refer to the possibilities to meet the needs of people and to the opportunities to pursue improvements in life. Multiple studies reported positive relations between hope, optimism, future orientation and resilience, and variables related to the job and life satisfaction (Authors at al., 2016; Patton, Bartrum, & Creed, 2004; Schmid & Lopez, 2011; Youssef & Luthans, 2007). The relationship between job strain and life satisfaction was partially mediated by career adaptability (Maggiori, Johnston, Krings, Massoudi, & Rossier, 2013). Furthermore, life satisfaction is not only related to, but can also be predicted by career adaptability and positive variables, such as resilience (Hirschi, 2009; McIlveen, Beccaria, & Burton, 2013; Masten, & Tellegen, 2012; Authors at al., 2016).

Research Aim

The present unpredictable world of work, together with school drop-out and (youth) unemployment indicates the great need for vocational guidance and career counseling and support in coping with career and work-related challenges and transitions. Previous research has investigated the direct and indirect relationships between career adaptability and life satisfaction (e.g., Hirschi, 2009; McIlveen, Beccaria, & Burton, 2013; Authors at al., 2015). However, up to the authors' knowledge, no previous research has been conducted regarding this topic on middle school students. Middle school students are in an in-between phase, in which they have finished primary school, but are not in high school yet, where students are expected to make study and career decisions and where career transitions are starting to occur. The research on the relationships between career adaptability, resilience and life satisfaction can lead to a better understanding of how these concepts develop from a young age onwards.

Furthermore, a better understanding of the relations between these concepts can be used to contribute positively to their development (e.g., through the development of tools and preventive

intervention programs) and assist in preparing our youth to cope with and construct their future in our current continually changing society. Trends as globalization and internationalization indicate the need for international research and collaboration. Generalizability is increased by conducting this research across different countries.

The present study, in relation to the former studies and the Life Design approach, which emphasizes the role of career adaptability and positive variables such as resilience to deal with the challenges of today's society, aimed to analyze the relationship between career adaptability, resilience and life satisfaction on Belgian and Italian middle school students' life satisfaction. Taken into consideration Hirschi's (2009) study, who observed a direct relationship between career adaptability and life satisfaction, and Authors et al. (2015) study, who observed positive relationships between career adaptability and positive future orientation, we hypothesized that career adaptability, directly and indirectly (i.e., through resilience) would predict life satisfaction in Italian and Belgian middle school students. Furthermore, we predicted that the conceptual model would be comparable across countries.

Method

Participants

The sample consisted of 316 middle school students, 166 boys and 150 girls (M_{age} = 14.12, *SD* = 2.06). This total sample included 158 Italian participants (M_{age} = 13.73, *SD* = .599), 83 boys and 75 girls, and 158 Belgian (Flemish) participants (M_{age} = 13.82, *SD* = .592), 83 boys and 75 girls. No age [$F(1, 314) = 1.600$, $p = .207$] differences were observed between Italian and Belgian participants.

Measures

Career Adapt-Abilities Scale (CAAS; Savickas & Porfeli, 2012). The CAAS consists of 24 items. Participants responded to each item on a scale from 1 (*not strong*) to 5 (*strongest*). The 24

items combine into a total career adaptability score, and are also divided into four subscales that measure the adapt-ability resources of concern (e.g., "Realizing that today's choices shape my future"), control (e.g. "Counting on myself"), curiosity (e.g., "Investigating options before making a choice") and confidence (e.g. "Working up to my ability). For the present study, the Italian validated versions for middle school students (Di Maggio, Ginevra, Laura, Ferrari, & Soresi, 2015) was used for gathering the Italian data and the CAAS-Belgium Form (Dries, Van Esbroeck, van Vianen, Cooman, & Pepermans, 2012) was used for gathering the Belgian data. A multi-group analysis confirmed that the Italian and Belgian versions reached, configural (χ^2 (246) = 384.423, CFI = .83, TLI= .81, RMSEA = .060, SRMR= .069), weak (χ^2 (512) = 885.766, CFI = .81, TLI=.799, RMSEA = .068, SRMR= .082), and strong invariance (χ^2 (532) = 1005.268, CFI = .764, TLI = .755, RMSEA = .075, SRMR= .080). In this study, Cronbach's alpha for four subscales were .70, .71, .72, and .79.

Design My Future (Authors at al., 2015.). The instrument consists of 21 items assessing two subscales: middle school student's resilience (e.g. "I think I'm able to challenge the difficult situations that may arise in the future for me") and future orientation (e.g., "Look ahead and think about what will happen in the future makes I feel full of energy"). Participants responded to each item on a scale from 1 (*not strong*) to 5 (*strongest*). For this research, the Italian validated version was used. The Design My Future was translated into Dutch (Flemish) by a team of three people, who were familiar with the background literature and theories. The committee approach, in which each "translator" first translates the items individually and a meeting is organized afterward to decide upon the best translation for each item together, was used. A multi-group analysis confirmed that the Italian and Belgian versions reached, considering MacCallum et al.suggestion (1996), configural (χ^2 (376) = 665.030, CFI = .851, TLI = .833, RMSEA = .070, SRMR=.077, 90% C.I.= .061-.078), weak (χ^2 (395) = 685.168, CFI = .850, TLI = .841, RMSEA = .068, SRMR=.084, 90% C.I.= .060-.077), and strong invariance (χ^2 (414) = 824.681, CFI = .788, TLI = .785, RMSEA =

.079, SRMR=.094, 90% C.I.= .071-.087). In this study, Cronbach's alpha was .83 for resilience and .87 for future orientation.

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). For this study we used Italian and Belgian versions of the SWLS, that is a five-item scale used to assess global life satisfaction (Blais, Vallerand, Pelletier, & Brière, 1989; Authors at al., 2013). An example of items is "I am satisfied with my life." Participants are asked to rate how much each statement describes them on a 7-point Likert Scale, ranging from 1 (*not strong*) to 7 (*strongest*). The SWLS Cronbach's alpha of this study was .75.

Procedure

Italian youngers, participating in middle school-based counseling activities, filled out the questionnaire during group testing sessions conducted in a small group format by specialized psychologists, in classrooms, and training contexts. Informed consent was received, along with assent from the younger, before school personnel administered the assessment. Youngers were asked to read the instructions for each instrument before completing the self-evaluation questionnaires.

Regarding the Belgian data, before administering the questionnaires, informed consent and assent from the principals, participants and participants' parents were obtained. The Belgian middle school students completed the questionnaires in their class groups during free school periods, monitored by teachers who had received administering instructions before the time. The students were asked to read the instructions carefully before completing the questionnaires.

The research followed the ethical rules of the Belgian Society of Psychology and the American Psychological Association. Approval from the Social and Societal Ethics Committee (KU Leuven, Belgium) was acquired before collecting the data.

Results

Preliminary Analysis

The highest amount of missing data for any item was 1.2%. As recommended by Parent (2013), series mean substitution was used to replace this small percentage of missing data (e.g., less than 10% for any given item).

Means, standard deviations, and inter-correlations for each country are reported in Table 1. Positive correlations were observed among career adaptability, resilience and life satisfaction. Correlations were lower for the Belgian sub-sample.

Regarding the correlation values between career adaptability and resilience that were higher than .60, a multicollinearity test was run (Field, 2000). The tolerance value and VIF value appeared normal with values of 0.46 and 0.63 for collinearity tolerance in the Italian and Belgium groups respectively, and 1.156 and 2.14 for collinearity VIF in the Italian and Belgium groups respectively. Menard (1955) suggested that a tolerance value of less than 0.1 almost certainly indicates a serious collinearity problem. It was noted that tolerance values in this study are higher than 0.1, indicating no severe collinearity problem. Furthermore, Myers (1990) suggested that a VIF value greater than 10 calls for concern; however, in the current study, the VIF values are less than 10.

Preliminary analysis of variance (ANOVA) was also run to verify whether any nationality differences would emerge in career adaptability, resilience, and life satisfaction. ANOVA revealed no effect of nationality on both career adaptability, resilience, and life satisfaction.

The measurement and structural model

We used a two-step approach to SEM. In the first step, we tested the measurement model and proceeded to test the structural model in the second step (Anderson & Gerbing, 1988).

First, a measurement model was evaluated using a multi-group approach for the Italian and Belgium sub-samples. Specifically, we tested the invariance of the measurement model, using a covariance matrix with 8 variables as input data. Specifically, we created item parcels to form

multiple observed indicators representing each latent construct (4 for career adaptability, 2 for resilience, and 2 life satisfaction). As suggested by Kishton and Widaman (1994), we used the internal-consistency approach, which creates parcels that use the factors as the grouping criteria for career adaptability (concern, control, curiosity, and confidence). Regarding the resilience and life satisfaction measurements, we assigned items for each of the latent constructs, using the item-to-construct balancing technique (Little, Cunningham, Shahar, & Widaman, 2002), which resulted in creating two parcels.

Overall, the baseline measurement model had good fit indices χ^2 (44) = 94.106, CFI = .95, TLI = .93, RMSEA = .08. Next, we constrained all factor loadings to be equal between the two groups. The measurement model specifying full metric invariance (i.e., where the factor loadings were constrained to equality) across both samples showed a good model fit χ^2 (47) = 100.889, CFI = .94, TLI = .93, RMSEA = .08 and did not show a significantly poorer fit than the baseline model specifying freely estimated parameters to the Satorra-Bentler chi-square difference test ($\Delta\chi^2$ = 7, Δdf = 3, p = .07).

In the second step, we conducted structural modeling tests to evaluate the conceptual model. First, we tested the hypothesized model across Italian and Belgium groups simultaneously without imposing any equality constraints. The baseline model produced a good fit to the data χ^2 (46) = 102.383, CFI = .93, TLI = .92, RMSEA = .08. The paths were constrained and the model was re-estimated, χ^2 (50) = 106.495, CFI = .94, TLI = .93, RMSEA = .08.

Finally, we tested the nested structural model using the scaled difference chi-square test (ΔSBχ2; Satorra and Bentler, 2001). According to the Satorra-Bentler chi-square difference test and CFIΔ test ($\Delta\chi^2$ = 4, Δdf =4, p =.39), the model which constrained the paths was not significantly weaker than the baseline model. Thus, no significant group differences in the conceptual model across Italian and Belgian middle school students were found. The results confirm the hypothesis of a full mediation between career adaptability, resilience, and quality of life in the two sub-samples that we considered.

To test the magnitude and significance of mediation effects, we followed Shout and Bolger' (2002) suggestion to use the bootstrapping procedure. Specifically, we formed 1000 bootstrap samples from the original data set through random sampling with replacement. If the 95% confidence interval (CI) for the mean indirect effect does not include zero, the indirect effect is considered statistically significant at the .05 level.

The bootstrapping analysis highlighted that career adaptability (ß = .298, 95% CI [.127, .469]) had an essential indirect link (i.e., did not include zero) with life satisfaction through the mediating role of resilience.

Discussion

Based on the Life Design approach, the present study examined the relationship between career adaptability, resilience and life satisfaction in a group of Italian and Belgium middle school students. More specifically, we hypothesized that resilience, directly and indirectly, mediated the relationship between career adaptability and life satisfaction and that this conceptual model was comparable across countries. Our results supported this mediation, showing that career adaptability is directly and indirectly, through resilience, related to life satisfaction in both the Italian and Belgium middle school students.

Results obtained are consistent with other studies showing that career adaptability, i.e., being characterized by a set of individual resources to cope with developmental tasks, (1) contributes positively to the ability to face future challenges associated with difficulties regarding social and work uncertainties, and (2) that career adaptability also leads to higher levels of satisfaction for the experienced quality of life (Fergus & Zimmerman 2005; Luthar, 2007; Authors at al., 2014; Olsson, 2008; Prince-Embury, 2006; Rossier, 2015). Developing the ability to think about and prepare for the future, and to consider themselves ready to face future challenges and threats in preadolescence, may result in more adaptive career development later in life (Masten & Tellegen, 2012).

In turn, this may foster middle school students' tendency to achieve difficulties and to succeed in what it is essential for them, thus stimulating even greater feelings of life satisfaction. Global changes such as globalization and internationalization call for international collaborations and research. Even though the socio-economic conditions in European countries may be different, middle school students are confronted with the same problems everywhere, i.e. they have in common that all middle school students have to start thinking about and start making important decisions about their future career; they experience a transition moment in which improved career adaptability resources can lead to enhanced career related behaviors and beliefs and better adapting responses in the continually changing environment, as well as adaptation results, such as life satisfaction (Hirschi, Herrmann, & Keller, 2015).

Implications for practice. Results of this study showed that it could be of great advantage to increase career adaptability resources, especially in middle school students. Increasing career adaptability resources in European middle school students could be achieved by individual and/or small group face-to-face activities and interventions, that include the development of each of the adaptability resources e.g. concern for a hopeful vision about one's personal future; control to increase internal locus of control and decision-making skills; curiosity to stimulate career exploration; confidence and self-efficacy beliefs to encourage agency and coping skills (Authors at al., 2015). Furthermore, this will contribute to enhanced resilience strategies and life satisfaction.

Limitations and Future Directions. Although two countries were involved in this research, more international research will be needed to validate our findings and to test the generalizability of this conceptual model for other countries.

The second limitation is that only self-evaluation questionnaires were used. Future research could explore and extend these findings, e.g., by making use of both quantitative and qualitative data.

Future research could also consider other positive psychological variables, such as optimism and hope, and other less subjective dimensions of quality of life.

One last suggestion for future research is to make use of a longitudinal design, to examine if these characteristics, in relation with career adaptability, help middle school students over time to develop a vocational identity and investigate the long term effects related to high school training.

Table 1.

Descriptive statistics, and Correlations across groups

Measure				**Italian group**		**Belgium group**	
	1	**2**	**4**	**M**	**DS**	**M**	**DS**
1. Career Adaptability	-	.600**	.437**	84.35	10.30	85.21	12.66
2. Resilience	**.730****	-	.285**	25.70	5.00	26.13	5.82
4. Life satisfaction	**.265****	**.269****	-	23.44	5.49	22.23	5.96

Note. Correlations in bold regard the Italian group.

* p< 0.05; ** p<0.01.

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Running Head: Career Adaptability, Resilience, Satisfaction with Life

Figure 1.

Significant Standardized Regression path coefficients.

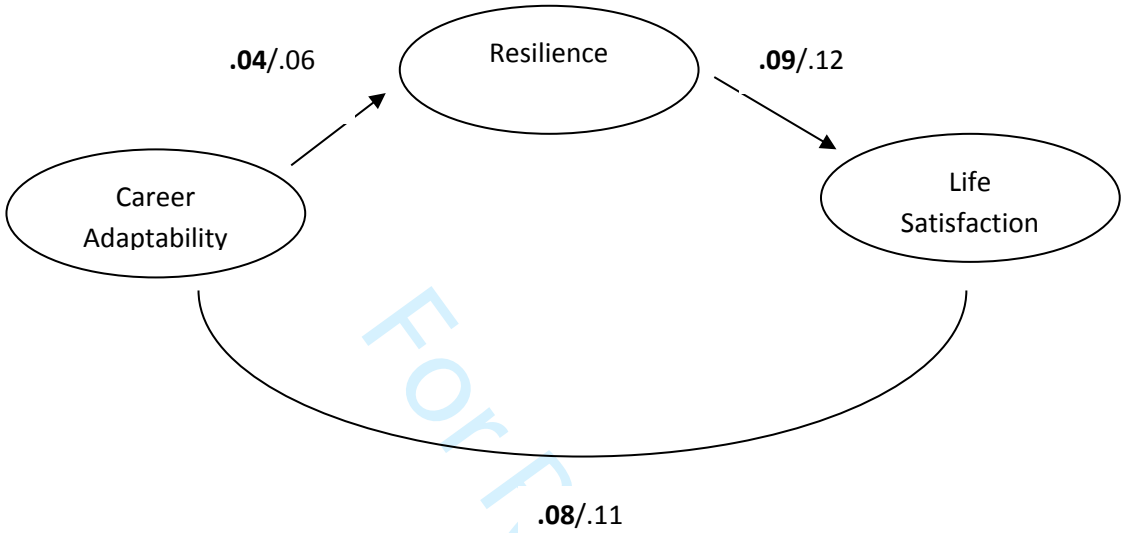

Figure 1.

Standardized regression path coefficients for the Italian and Belgian sub-samples. Regression path coefficients for the Italian group are in bold. All coefficient were significant the Italian and Belgian sub-sample.