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Stimulating resources to cope with challenging times and new realities: effectiveness of a career intervention

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Abstract A career intervention based on life design approach was devised for a group of young adults at risk for the process of career construction. It was aimed at fostering a series of resources useful to cope with career transitions, to encourage reflection on the future, to identify one's own strengths, and to plan future projects. Results of the study provided evidence for effectiveness of the career intervention across at several methods of change assessment (statistical significance, clinical significance, and social validity) and highlighted the potential of the career intervention.

Résumé. Stimuler les ressources pour affronter les temps difficiles et les nouvelles réalités: Efficacité d'une intervention de carrière. Une intervention de carrière basée sur l'approche du Life Design a été conçue pour un groupe de jeunes adultes à risque pour le processus de construction de carrière. Elle visait à stimuler une série de ressources utiles pour affronter les transitions professionnelles, encourager la réflexion sur le futur, identifier ses propres forces et planifier des projets d'avenir. Les résultats de l'étude soutiennent l'efficacité de l'intervention sur plusieurs méthodes d'évaluation du changement (significativité statistique,

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significativité clinique et validité sociale) et soulignent le potentiel de l'intervention de carrière.

Zusammenfassung. Förderung von Ressourcen zur Bewältigung von heraus-fordernden Zeiten und neuen Realitäten: Effektivität einer Karriereinterven-tion. Eine auf dem *Life Design*-Ansatz basierende Karriereintervention wurde für eine Risikogruppe junger Erwachsener entwickelt, welche Probleme mit der Karrierekonstruktion hatten. Die Intervention zielte auf die Stärkung einer Reihe von Ressourcen ab: Bewältigung von beruflichen Übergängen, Anregung von Zukunftsreflektion, Identifizierung eigener Stärken und Planung zukünftiger Projekte. Die Ergebnisse der Studie belegten die Effektivität der Karriereintervention über verschiedene Methoden der Veränderungsmessung (statistische Signifikanz, klinische Signifikanz und soziale Validität) und zeigen das Potential der untersuchten Karriereinterventionen auf.

Resumen. Estimulando recursos para afrontar tiempos desafiantes y nuevas realidades: la efectividad de la orientación profesional. Se ha diseñado un modelo de orientación profesional basado en el enfoque de Diseño de Vida y se ha aplicado a un grupo de jóvenes adultos arriesgando en el proceso de su formación profesional. Se ha dirigido a potenciar una serie de recursos capaces de ayudar a afrontar la transición profesional, fomentar la reflexión sobre el futuro, la identificación de las propias fortalezas, y la planificación de proyectos futuros. Los resultados del estudio pusieron de manifiesto la efectividad de la orientación profesional a nivel de varios métodos de evaluación de cambios (significación estadística y clínica, así como validez social) y destacó el potencial de la orientación profesional.

Introduction

The technological revolution of the twenty-first century has generated intense changes in the labor market and has made it more complex for individuals to adapt to work and make occupational choices (Savickas, 2015). Moreover, the factors of instability and insecurity are structurally characterizing the occupational landscape rendering some individuals at higher risk than others, such as young people with low education and skills, temporary workers, and immigrants (Masdonati & Fournier, 2015; Nota, Soresi, Ferrari, & Ginevra, 2014).

In Europe, young adults with lower education have higher rates of unemployment than those with at least secondary education (Istituto per la Ricerca Sociale [Institute for Social Research] and Institute for Employment Studies, 2012). In addition, they are the ones who experience more disadvantages in the labor market: fewer social certainties, greater instability—hence diminished levels of fertility— and increased risk of workplace accidents (Hill & Ybarra, 2014). They are also more likely to be recruited for low-skill jobs, to benefit from less training in the

workplace, and to be paid less than those with a regular job (Comi & Grasseni, 2012). Moreover, they will more likely experience career barriers and more recurrent occupational transitions in poorly paid temporary jobs with few skill development opportunities (Bell & Blanchflower, 2010). Young people also experience discriminations because they are thought unable to cope with occupational requests due to lack of work experience. Therefore, they are not looked upon as potential employees as much as individuals in the next higher age range who are perceived as more productive (Vaughan-Whitehead, 2011).

Immigrants must also be seen at a disadvantage in today's labor market: in 2013 the unemployment rate for non-EU citizens (21.3 %) aged 20–64 years was more than twice the level for citizens of the reporting country (10.0 %), referred to as nationals (European Statistics [EUROSTAT], 2014). Even if migration cannot be considered as a homogeneous phenomenon, immigrants frequently suffer a significant loss of their professional capital in the countries where they settle, because their juridical and social situation is often precarious and their previous work and career experience is not much considered (Schultheiss, Watts, Sterland, & O'Neill, 2011). Such challenges to access the labor market seem to characterize both those with low and those with high education and skills. The latter, in fact, can suffer a form of devaluation of their academic education, foreign work experience, and professional training (Dietz, Joshi, Esses, Hamilton, & Gabarrot, 2015).

According to the life design approach, in career counseling activities great attention should be given to those clients who are more likely to become at-risk individuals when coping with today's labor market, career construction, work employment and re-employment processes (Nota, Ginevra, & Santilli, 2015; Savickas et al., 2009). In relation to this, the aim of this study was to examine the effectiveness of a career intervention in supporting a group of young adults with low education and with experience of migration (i.e., foreign individuals who had been living in Italy between 6 and 9 years).

Life design approach

It is a framework based on the integration of career construction theory and self-construction theory, social and social-constructivist theories, as well as intra-individual learning and dynamic processes, such as career adaptability and career competencies. The former is the readiness to make and negotiate occupational choices, while the latter involves the ability to make decisions carefully and rapidly, self-efficacy, ability to identify and seize opportunities, self-determination, and availability to assimilate career moves in a meaningful life story (Guichard, 2012; Savickas, 2013).

Considering the changes of the today's labor market, the life design emphasizes the need to develop knowledge and abilities for the analysis of complex dynamics, non-linear causalities, multiple subjective contexts, and ecological settings. Moreover, it supports clients to give flexible and adaptive answers to developmental tasks, to project themselves positively toward their own future, and to manage and anticipate occupational transitions (Savickas, 2015; Savickas et al., 2009). Accordingly, flexibility, self-directedness, positive attitude toward the future, and

particularly career adaptability, are considered crucial resources to successfully handle the occupational landscape, and therefore, should be privileged in career interventions (Hirschi & Dauwalder, 2015; Nota, Ginevra, et al., 2015). The four career adaptability resources (concern, control, curiosity, and confidence) regard the attitudes and abilities useful to cope with occupational transitions, developmental tasks, and work traumas (Savickas, 2015). Specifically, concern involves the ability to be positively projected towards the future, control regards the tendency to consider the future as partly controllable, curiosity refers to the predisposition to explore the environment, and, lastly, confidence regards self-efficacy beliefs to cope with the challenges in pursuing one's own goals (Savickas, 2013). These career adaptability resources correlate with different vocational and work-related dimensions and denote a set of regulation processes useful to project one's own life and to manage one's own career path (Rossier, 2015).

According to life design, career interventions should focus also on reflectivity, understood as a reflective project on the self and taking into consideration the consequences of one's own career decisions, and on intentionality and action, that is, translating intentions into actions to ensure that what is relevant to the individual will actually happen (Nota, Ginevra, et al., 2015). Attention should also be paid to narratability, asking clients to produce micronarratives about how they have developed and constructed their self, identity, and career (Savickas, 2015; Savickas et al., 2009). Through narration, people can reconsider themselves as individuals, identify significant aspects of their life, and attribute new meanings to their difficulties, thus triggering change and emancipation processes. Lastly, considering people's strengths is also important as it focuses attention on emotional components and behavioral aspects that can favor the identification of different ways in which to pursue one's goals (Ferrari, Sgaramella, & Soresi, 2015).

Aim of the research

In this study, we developed a career intervention, which takes inspiration from the life design approach, aimed at fostering a series of resources useful to cope with career transitions, and to encourage reflection on the future, identification of one's own strengths, and planning of future projects. The target of the intervention was a group of young adults at-risk for the career construction process, with experience of migration and low education, who was attending an evening course provided by a vocational high school.

To evaluate the effectiveness of the career intervention, we tested the statistical significance and the clinical significance of the change on career adaptability resources, as they are crucial to manage and design the occupational landscape (Savickas & Porfeli, 2012), and on identifying actions and emotional components considered as potential means to be at one's disposal for the pursuit of future projects (Ferrari et al., 2015; Guichard & Pouyaud, 2015; Savickas et al., 2009; Walls & Little, 2005). Moreover, we provided a first evaluation of two indicators of the social validity of the career intervention, i.e. satisfaction with and perceived

utility of the intervention as they are key elements of the acceptability of the intervention (Barrett, Shortt, Fox, & Wescombe, 2001).

Statistical significance of change

As result of the career intervention it was expected that, compared to the control group, the experimental group will report higher levels of career adaptability. Moreover, at the end of the career intervention, the experimental group was expected to identify a greater number of actions and emotional components to pursue future projects.

Clinical significance of change

Based on O'Connell, McNeely, and Hall (2008), who found that individuals with low levels of education or vulnerability could characterize for low career adaptability, it was hypothesized that, at pre-test, the experimental group will show lower levels of career adaptability compared to the normative sample of the adult version of the career adapt-abilities scale-Italian form (CAAS-Italy for adults; Nota, Ferrari, Sgaramella, & Soresi, 2015), due to its demographic characteristics (low education, experience of migration, unemployment, and temporary jobs). It was further hypothesized that, at post-test, the changes in career adaptability will be clinically significant, that is the improvement will be such as to have practical import and that the experimental group will show normative levels of career adaptability.

Evaluation of the career intervention by participants

Lastly, it was expected that the experimental group would assess the career intervention as satisfactory and useful. Also, a relationship was expected between participants' satisfaction with and perceived utility of the career intervention and intervention outcomes, hypothesizing a correlation between, on the one side, categories of satisfaction and utility, and on the other, considerable improvement in career adaptability and in identifying actions and emotional components to pursue future projects.

Method

Design and procedure

This quasi-experimental study was conducted in two vocational high schools in commercial sector of a northern Italian province, an evening and a regular high school, respectively. The Italian vocational high school lasts 5 years and is specifically focused on job-specific training through practical activities, laboratories, and internships with the aim to facilitate the direct entry of the student to the labor market. The evening course and the regular course have the same educational

program, the only difference being that the former offers evening classes that can be attended by Italian young adults who have dropped out of school (some of them with unsuccessful educational experiences) and by immigrants without a high school diploma, in order to increase their employment opportunities (de Vela & Zippel, 2012).

The experimental group comprised young adults attending the last year of the evening course, who had asked for a career intervention to help them plan their professional future. In order to select school to participate as the control group, we drew up the following criteria: (a) Located in the same province as the experimental school; (b) Same educational program as the evening course. After the school has been selected, high school students were invited to participate to the project. The control group was composed by students that attended the last year of the regular course.

Prior to the study, all voluntary participants gave their consent to participate to the career intervention. While the experimental group was taking part in the career intervention, the control group joined typical school-based vocational guidance activities (e.g. presentation of post-diploma courses, participation to career guidance fairs, and meetings with companies). Moreover, a personalized report on individual results was delivered for each participant.

Participants

A total of 60 participants took part in the study (18 men and 42 women). Specifically, the experimental group was made up of 30 young adults (seven men and 23 women; $M_{age} = 28.13$; $SD = 6.70$). The 46.7 % of participants of this group was represented by immigrants from Eastern Europe, North Africa, and South America. They stated they had been living in Italy for between 6 and 9 years ($M = 7$; $SD = 1.3$). At pre-test, they showed fair understanding and mastering of the Italian language and were deemed suitable to take part in the further steps of the intervention. In addition, 28 (93.3 %) participants described previous work experiences, with a mean of three temporary jobs ($SD = 1.48$) in low-wage sectors (e.g., pizza-maker, baby-sitter, home builder, assistant to the elderly).

The control group was made up of 30 adolescents (11 boys and 19 girls; $M_{age} = 19.84$; $SD = 0.77$), of which the 26.7 % was represented by immigrants from Eastern Europe, North Africa, and South America. They had been students in Italy at least since their middle school years.

At the time of the intervention, all participants of both experimental and control groups had qualifications suitable to allow them to access to vocational high schools (middle school diploma). No significant differences were recorded between the experimental and control group about the variables gender, $\chi^2(1) = 1.27$, $p = .199$, or experience of migration $\chi^2(1) = 2.584$, $p = .09$. However, the experimental group's chronological age was significantly higher than the control group $t(58) = 6.73$, $p < .001$.

Measures

Career adapt-abilities scale-Italian form (CAAS-Italy for adults; Nota, Ferrari, et al., 2015)

The scale was administered to the experimental and control group at pre- and post-test. It consists of 24 items, the same as in the CAAS-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 combine into a total score indicating career adaptability and are also divided into four subscales that measure the adaptability resources of Concern (e.g., "Preparing for the future"), Control (e.g. "Taking responsibility for my actions"), Curiosity (e.g., "Becoming curious about new opportunities"), and Confidence (e.g. "Overcoming obstacles"). The normative information used for clinical significance testing was taken from Nota, Ferrari, et al.'s (2015) study, that provided a preliminary standardization of the scale with Italian adults. Specifically, using confirmatory factor analysis (CFA), the authors showed that the total scale and four subscales have good internal consistency estimates (range .80 to .86) and a coherent multidimensional hierarchical structure in Italian adults $[\chi^2$ (248, $n = 1445) = 2335.835;$ $p < .001;$ CFI $= .96;$ NNFI $= .95;$ RMSEA $= .08$ (CI$_{90}$ $= .07$–$.08)]$, and the structure was similar to CAAS-International Form 2.0 (Savickas & Porfeli, 2012). For this study, Cronbach's alpha for the four subscales were .68, .61, .67, and .80, respectively.

Future projects

Taking into account the attention given to future projects and goals in the Life Design approach (Savickas et al., 2009), at pre- and post-test the experimental group was asked to answer the following question: "In the immediate future what will you do to ensure that your future projects can be achieved?"

Evaluation of the career intervention by participants

Although social validity is usually evaluated by administering self-report question-naires, some authors suggest to use qualitative interviews in order to allow a holistic examination of the intervention with participants' voices (Hersh, 2008; Leko, 2014). For these reasons, to evaluate the satisfaction with and perceived utility of the career intervention, as two indicators of the social validity, some questions based on Barrett et al.'s (2001) study were developed. Specifically, at post-test the experimental group was asked to complete a question as a measure of overall satisfaction with the career intervention: "How do you feel about what we have done?", a question as a measure of satisfaction with the specific components of the career intervention: "Among the things we have done what did you find particularly interesting for you?", and a question as measure of perceived utility of the specific components of the career intervention: "What did you find particularly useful for your present and your future?"

Intervention

The career intervention "Feeling good at school today... for a future of quality!" aimed at fostering a series of resources to cope with career transitions, to encourage reflection on the future, to identify one's own strengths, and to plan future projects. It is based on some key concepts of the Life Design approach, i.e. reflection, narratability, attention to one's own strengths in one's personal resources, such as career adaptability, hope, optimism, resilience, future orientation. It differs from other career interventions, as it is not a structured training on one construct (e.g., career adaptability; Koen, Klehe, & Van Vianen, 2012). Participants are stimulated to engage in reflection and reasoning about their lives retrospectively and prospectively, to identify their personal strengths, and to think about their personal and professional future by articulating purposes and making a commitment to self (Savickas, 2015).

The intervention was articulated into three stages of activities for a total of 10 h with the whole group (divided into small groups of 15 individuals) and individual activities. It was implemented by a career counselor with a specific post-graduate training in vocational guidance and career counseling, who was unaware of the research aims and of the hypotheses that had been formulated about career intervention effectiveness.

Following the presentation of the project, in the first phase, each participant was handed a workbook containing a series of stimuli aiming to encourage participants to tell, revise, and build their professional and life stories. In more detail, through guided self-reflection (workbook), participants were stimulated to think over their personal and professional self, their concept of work and study, how balance study activities and their other commitments, conditions, and requirements of their current work situation, their personal and professional experiences and what good came of them, and, lastly, their expectations and wishes for the future. The workbook was filled out individually outside the school context to allow the person to reflect and revise their answers. A week after handing out the workbook the second phase of the career intervention began.

In the second phase, as supported by Savickas (2013) and Savickas et al. (2009), the trainer, working with small groups, underscored the importance of a series of resources to cope with the complexity of the current labor market, projecting positively toward the future, and taking the responsibility for their future. Participants were then administered on-line questionnaires tapping their levels of hope, optimism, resilience, future orientation, career preparedness, propensity to act in a courageous way with any difficult and risky situations that may be encountered, values that are aspired to, abilities to study, and investment in education and training. Participants were invited to rate themselves on those same variables and urged to identify their strengths. Each questionnaire was preceded by a brief description of the construct considered and of its importance for future professional planning and in connection with the current labor market. Specifically, the following measures with adequate psychometric properties for the Italian context were proposed to participants to support them to identify their strengths: Vision About Future (Ginevra et al., 2016) to assess hope and optimism (α = .78 and .86); Design

my Future (Di Maggio, Ginevra, Nota, & Soresi, 2016) to assess future orientation and resilience (α = .77 and .83); Career Preparedness (Nota, Ferrari, et al., 2015) to assess career preparedness (α ranged between .73 and .81); Courage Measure (Norton & Weiss, 2009) to assess persistence despite having fear (α = .78); Schwartz Value Survey (Schwartz et al., 2001) to assess values (α values ranged between .62 and .76); I, School, and Studying Scale (Soresi & Nota, 2007) to assess the ability to study and the investment in education and training (α values ranged between .77 and .83). After the online administration of the instruments, each participant received a personalized report, which showed all the variables analyzed in the form of personalized graphs. To favor careful analysis and re-elaborations, the participants were asked to read the report, draft a written synthesis of the strengths emerged for each variable, and write an overall brief description of themselves in the light of all this.

The third phase of the career intervention included a further group meeting aiming to encourage an analysis of resources to cope with career transitions. This activity was followed by the individual completion of the second part of the workbook to reflect on one's own strengths and, based on them, to identify their personal and professional projects. In this connection, participants were stimulated to use the strengths recognized in the previous phase, relate present and future experiences, in order to identify further strengths, and to imagine their possible futures in terms of goals and strategies useful to cope with challenges and difficulties, with particular attention to the educational methods to complete the high school. At the end of this phase, each participant received a second personalized report, which summarized the strengths they had attributed to themselves and their commitments for the future and underlined the changes they experienced in the career intervention.

Data analysis

In order to evaluate the effectiveness of the career intervention, data were analyzed in several ways, including statistical significance tests, clinical significance tests, and the evaluation of the satisfaction with and perceived utility of the career intervention, as indicators of social validity. The methods are described below.

Statistical significance of change on career adaptability

Following Koen et al.'s (2012) study, the effect of the career intervention on participants' career adaptability via the following sets of analyses was tested. First, a series of *t* tests were conducted to determine if there were significant between-group differences at pre-test on four dimensions of career adaptability. Moreover, considering the significant difference between the experimental and control group on age, a series of regression was performed on any of the dependent variables at pre-test. Then, conditional on the results of the regression analyses, mixed-effects ANOVA with one between-groups factor (Treatment condition) and one within-groups factor (Time), or mixed effects ANCOVA with the additional variable of age as covariate, were carried out to verify whether the development of the four career

adaptability resources was significant and could be due to the career intervention. Finally, the effect size was assessed using the partial eta squared (η_p^2), which evaluates the percentage of variance explained by each dimension. Conventionally, the threshold values for the index η_p^2 are .01, .06, and .14, which indicate, respectively, a small, moderate, and large effect size (Greene & Salkind, 2003).

Statistical significance of change on future projects

Based on Ferrari et al.'s (2015), Guichard and Pouyaud's (2015), Savickas et al.'s (2009), and Walls and Little's (2005) studies that emphasize actions, emotions, and feelings to pursue personal and professional goals and plans, responses were content analyzed by two independent judges (the first and the third author, respectively) by considering the number of actions and emotional components to pursue future projects. After the answers were analyzed, paired samples *t*-tests were used in order to determine whether actions and emotional components at pre- and post-test were significantly different from each other. The effect sizes for the mean differences were examined using Cohen's (1992) *d* statistic. The magnitude of the *d* statistic was interpreted as small (0–.29), medium (.30–.79), or large ($\geq$.80).

Clinical significance of change

Based on van Wieringen and Cribbie's (2014) suggestions, to assess the clinical significance of statistically significant improvements on the experimental group's career adaptability compared to the normative sample the extended Kendall, Marrs-Garcia, Nath, and Sheldrick's (1999) approach of equivalency testing proposed by Cribbie and Arpin-Cribbie (2009) was used. More specifically, normative comparisons were carried out to evaluate whether the career intervention produced a clinically meaningful effect, by verifying if the experimental group was equivalent to the normative sample at post-test. The equivalence of the experimental group and normative sample was examined through equivalence testing, in which they are considered equivalents if the difference between the means is trivial or if the difference between the means falls within an equivalence interval. Specifically, the following steps were carried out: (1) the heteroscedastic *t* test due to Welch was conducted to verify if at pre-test the experimental group was significantly different from the normative sample on subscales means of the CAAS-Italy for adults (Nota, Ferrari, et al., 2015); (2) dependent from the results of the first step, the Schuirmann–Yuen equivalence test (Wieringen & Cribbie, 2014) was carried out to determine if the experimental group showed normative levels of career adaptability at post-test. This second step regarded only the subscales of CAAS-Italy for adults (Nota, Ferrari, et al., 2015) for which the *t*-test at pre-test was statistically significant. Equivalence between the experimental group and the normative sample were examined at the 0.5, 1.0, and 1.5 standard deviations levels (of the normative sample), which can be defined "definitive equivalence", "probable equivalence", and "potential equivalence", respectively (Cribbie & Arpin-Cribbie, 2009).

Evaluation of the career intervention by participants

To assess the satisfaction with and perceived utility of the career intervention, firstly, the first and second author independently examined all answers to the three questions. Specifically, as suggested by Barrett et al. (2001) for the open-ended questions, responses regarding the first question (overall satisfaction with the intervention) were analyzed in order to identify the positive and critical aspects of the intervention. The answers to the second question (satisfaction with the specific components of the intervention) were analyzed in relation to procedures used and activities carried out in the career intervention. Lastly, the third question was analyzed according to the specific components of the career intervention perceived as useful. Across all categories identified, inter-rater reliabilities (κ) ranged from .90 to .93. Secondly, Spearman's rank-correlation analyses between the identified categories (frequency coding within categories) and career adaptability scores and number of actions and emotional components to pursue future projects at post-test were carried out.

Results

Preliminary analysis

Intercorrelations among study variables at pre- and post-test were summarized in Table 1.

Statistical significance of change on career adaptability

As showed in Table 2 the *t*-tests carried out to verify whether the experimental and control group would be comparable at pre-test did not show differences on concern, control, curiosity, and confidence.

The regression analyses carried out showed a significant effect only on concern (see Table 3). Therefore, the mixed effects ANCOVA with age as covariate showed a significant interaction condition × time on concern. In addition, the mixed effects ANOVA showed significant interactions condition × time on control, curiosity, and confidence (see Table 2). The values for the index η_p^2 showed a large effect size. The statistical power observed (SPSS 23.0) ranged from .90 to .95 for all variables analyzed. In addition, the post hoc power analysis with the program G*Power3 (Faul, Erdfelder, Lang, & Buchner, 2007) confirmed that the study had enough power to detect interaction effects. Next, tests of within-subjects indicated that for concern and confidence, the effect of time was significant both within the experimental and control group. Specifically, the experimental group showed a significant increase in concern even when controlling for age, and in confidence between pre- and post-test. However, the control group had a significant mild decrease between the two measurements. For control and curiosity, a significant

Table 1 Summary of intercorrelations

Measures	1	2	3	4	5	6	7	8	9	10	11	12
1. Pre-test actions	–	-.18	.17	.01	.36	.25	.15	.27	.27	.06	.10	.25
2. Pre-test emotional components		–	.39*	.06	.21	.07	-.01	-.13	.14	-.09	-.10	-.11
3. Post-test actions			–	-.20	.19	-.03	-.01	-.21	.24	-.01	.03	.11
4. Post-test emotional components				–	.08	.12	.18	.18	.10	-.04	.13	.19
5. Pre-test concern					–	.49**	.47**	.47**	.73***	.27	.26	.51**
6. Pre-test control						–	.61***	.58***	.40*	.56**	.32	.57**
7. Pre-test curiosity							–	.48**	.33	.33	.57**	.49**
8. Pre-test confidence								–	.38*	.41*	.56**	.70***
9. Post-test concern									–	.43*	.42*	.59**
10. Post-test control										–	.64***	.68***
11. Post-test curiosity											–	.74***
12. Post-test confidence												–

Intercorrelations for the experimental group ($n = 30$) are presented above the diagonal, and intercorrelations for the control group ($n = 30$) are presented below the diagonal

$*p < .05$, $**p < .01$, $***p < .001$

Table 2 Means and standard deviations of the experimental and control group at pre- and post-test on career adaptability

Measure	Pre-test				t value (df = 58)	p	Post-test				2-way interaction F (df = 1, 58)	p	η^2_p
	Control group (n = 30)		Experimental group (n = 30)				Control group (n = 30)		Experimental group (n = 30)				
	M	SD	M	SD			M	SD	M	SD			
Concern	20.50	2.27	21.13	3.88	.77	.44	19.27	3.32	22.90	3.54	13.50	<.001	.19
Control	21.33	2.75	22.33	2.73	1.41	.16	20.53	2.57	23.77	3.02	13.06	<.001	.18
Curiosity	20.70	2.37	20.83	3.51	.172	.86	20.17	2.51	22.70	3.64	10.73	.002	.16
Confidence	21.67	2.01	22.37	4.21	.82	.42	20.17	3.27	23.60	4.05	13.40	<.001	.19

Table 3 Regression analyses for age on career adaptability	Pre-test measure	R^2	B	β	t	p
	Concern	.07	.53	.27	2.10	.040
	Control	.03	.42	.18	1.41	.163
	Curiosity	.01	.20	.09	0.71	.482
	Confidence	.05	.44	.23	1.80	.077

increase between pre- and post- test was observed for the experimental group, but not for the control group.

Statistical significance of change on future projects

Examples of answers codified as Actions were: "Applying for a course to improve my English level", "Applying for college", and as Emotional components were: "Having courage and self-control in difficult situations"; "Having more self-efficacy". Paired samples t-tests showed a significant effect on actions $t (26) = -2.164, p = .04$; and Emotional components $t (26) = -4.412, p < .001$. Specifically, at post-test the experimental group showed a greater number of actions (pre-test $M = 2.52$, $SD = 1.25$; post-test $M = 3.29$, $SD = 1.61$) and emotional components (pre-test $M = .59$, $SD = .69$; post-test $M = 2.48$, $SD = 2.16$) to pursue future projects than pre-test. Cohen's d obtained (.42 for Actions and .85 for Emotional components) suggested medium to large effect sizes.

Clinical significance change

The Welch's t-tests conducted showed that the experimental group was statistically different from the normative sample on the following subscales: Control $t (31.24) = 9.43, p = .004$; Curiosity $t (30.50) = 12.03, p = .002$; and Confidence $t (29.94) = 5.58, p = .025$. Specifically, the experimental group scored significantly worse than the normative sample on these dimensions. Instead, at pre-test the experimental group had similar mean scores compared with the normative mean on Concern. Means (with SD in parentheses) for the normative sample in four career adaptability resources were 21.45 (4.43), 23.89 (3.70), 23.09 (3.90), and 24.20 (3.72), respectively. At post-test the experimental group means were found to be equivalent to the normative sample means on all three subscales (control, curiosity, and confidence), at discharge at even the most conservative equivalence interval ($SD = 0.5$; $p < .05$), which can be described as "definitive equivalence".

Evaluation of the career intervention by participants

As shown in Table 4, an overall satisfaction with and perceived utility of the career intervention was observed. In addition, the Spearman's rho correlations showed positive and moderate correlations at post-test between the category "Reading the personalized report and its compilation" of the question "Among the things we have done what did you find particularly interesting for you?", and Curiosity (Spearman

Table 4 Frequencies and percentage of categories about the evaluation of the career intervention

Categories	Example of answers	N	%
Question[a]: "How do you feel about what we have done?"			
Positive aspects	The work was useful to know myself better and to understand my strengths, but above all my weaknesses and what I can do to improve myself	25	89.3
Critical aspects	The report was, in my opinion, too long	3	10.7
Question[b]: "Among the things we have done what did you find particularly interesting for you?"			
Compilation of the workbook	I feel almost already fulfilled just by reading the workbook, because this book puts together my past, present, and future	7	29.7
Acquisition of greater self-knowledge and identification of one's own strengths	Understanding that I can cope by myself, but that I can also ask for help	5	20.8
Compilation of the questionnaires	Filling out the questionnaires, how the questionnaires were devised, and the attention paid to different ways of dealing with very difficult situations	5	20.8
Reading the personalized report and its compilation	The personalized report. I think the representation of our strengths was effective	4	16.7
Instructions received on coping with study activities	The indications on the method of study and how to deal with some school situations	4	16.7
Group discussion	Hearing about other people's experiences, and so getting more motivated	3	12.5
Other aspects	Sharing and discussing with the career counselor	2	7.1
Question[c]: "What did you find particularly useful for your present and your future?"			
The opportunity to acquire more self-knowledge and more awareness of their strengths	Finding one's strengths, wanting to underline the importance of this research	14	56
The opportunity to reflect on their future goals and projects	Reflecting on what the future may be like, setting goals to be achieved, and knowing that I can rely on myself	11	44
The group discussion and confrontation	When we all got together in a circle and talked	3	12
All activities	All activities were very useful	1	4

Percentage of category totals for each question

[a] $n = 28$

[b] $n = 24$

[c] $n = 25$

$\rho = .42$, $p < .05$), and between the category "Acquisition of greater self-knowledge and identification of one's own strengths" of the question "What did you find particularly useful for your present and your future?" and Emotional components (Spearman $\rho = .54$, $p < .01$). No statistically significant correlations were found between the remaining categories and outcomes intervention.

Discussion

The aim of this study was to examine the effectiveness of a career intervention on a group of young adults with low education and with experience of migration, who were struggling with the process of career construction.

Compared to the normative sample for career adaptability (CAAS-Italy for adults; Nota, Ferrari, et al., 2015), a relevant resource to face developmental tasks and to adapt to unexpected needs related to the changes of the current labor market (Savickas & Porfeli, 2012), our results highlighted that, at pre-test, the experimental group showed lower levels of control, curiosity, and confidence. That suggested that the individuals involved in the career intervention were unlikely to cope with the process of career construction (Masdonati & Fournier, 2015; Nota et al., 2014; Savickas, 2015). The results also confirmed that vulnerable individuals (e.g., those with low education) are at risk in their career adaptability resources (O'Connell et al., 2008) and emphasized the need to develop career interventions to help them improve their resources to manage and design the occupational landscape (Rossier, 2015). In addition, it was observed that at pre-test the experimental group showed levels of career concern similar to those of the normative sample. This may be due to the fact that the experimental group asked for the career intervention to help them plan their professional future. As suggested by Niles, Amundson, and Neault (2011) and Savickas (2013), a request for counseling arises from clients' positive attitude toward the future and from perception of being able to successfully face their professional issues.

Various methods were used to examine the effectiveness of the career intervention. Specifically, the results of the statistical significance test showed that, compared to the control group, the experimental group experienced an overall increase in concern, control, curiosity and confidence, whereas there was no increase or a mild decrease in the control group. In addition, the results of the clinical significance test showed that at post-test the experimental group's mean scores were similar to those of the normative sample on control, curiosity, and confidence, providing strong additional evidence in support of the effectiveness of the career intervention.

The increased concern may be due to emphasis given to the importance of narrating about oneself and to imagining scenarios and future projects taking into account one's own past and present (Savickas & Porfeli, 2012). Higher levels of curiosity may also be due to participants being urged—through self-reflection—to focus their attention on personal and professional self-exploration (which they had not done before the career intervention) and to look for their strengths in relation to the different constructs (Savickas & Porfeli, 2012). The results on confidence and

control may be due to emphasis given to the importance of considering one's own strengths to achieve future goals despite challenges and difficulties. Moreover, reflections on future projects may have stimulated participants' feelings of greater responsibility for their future and increased perception of self-efficacy in their abilities to pursue them.

Results on participants' future projects showed an increased number of both actions and emotional components to pursue their own projects in the future. Individual reflection, group discussion and overall activities conducted during the career intervention may well have helped participants to reflect on their future projects by stimulating them to identify and select more actions, ideas and solutions that they had not thought of individually. In addition, the intervention may have encouraged them to recognize their own personal resources and strengths that can play a part in pursuing their future projects.

Finally, the results showed that almost all participants perceived the career intervention as satisfactory and useful, thus satisfying the two indicators of social validity. These findings confirm that this career intervention can respond to the requests of young adults who need professional support in their career construction. Moreover, when examining the possible relationship between participants' satisfaction with the career intervention and intervention outcomes (career adaptability, actions and emotional components to pursue future projects), a statistically significant positive correlation was observed at post-test between satisfaction with reading the personalized report and its compilation and levels of curiosity. A relationship was also found between perception of utility with the acquisition of greater self-knowledge and identification of one's own strengths and the number of emotional components at post-test. This suggests that most participants enjoyed the opportunity to read about and reflect on their strengths, also because they had been asked to write down about their strengths at the end of the report, and the more useful they considered the possibility to identify their strengths, the higher they scored on curiosity and number of emotional components to achieve what was dear to them.

Implications for practice

The study has shown that it is possible to increase at-risk individuals' levels of career adaptability, and the number of actions and emotional components to pursue future projects, which in turn could predict employment and re-employment quality, and the way people search for a new job (Koen, Klehe, Van Vianen, Zikic, & Nauta, 2010).

Using a workbook, describing dimensions useful to reflect on one's future, and subsequent discussion in small groups are all important points to consider when involving a number of at-risk individuals with the aim to help them in their process of career construction and employment, at the same time guaranteeing reduced costs—if compared with individual counseling sessions—and high personalization, and to give each participant the opportunity for specific feedback and for improving their acquired strengths.

Limitations and recommendation for future research

Although our findings are encouraging, there are some limitations that must be considered. Firstly, the sample size is quite small; therefore, the generalizability of the results could be limited. In addition, although the gender composition is biased, with more women involved in the study, this effect seems to depend on the vocational high school involved, which is attended mainly by women (75 %) (National Institute of Statistics [ISTAT], 2015). Secondly, the control group joined typical school-based vocational guidance activities. It may simply be that the added attention that the experimental group received contributed to their higher scores. Future research should propose other types of interventions for the control group. Thirdly, it must also be specified that the effectiveness of the career intervention should not be limited to examining changes that occur only at the end of the career intervention. This implies that future research should also include 6- and 12-month follow-ups to verify whether young adults involved in the study have maintained and generalized the resources focused on in the career intervention, and if this has affected the achievement of their future projects. Specifically, it could be interesting in future studies verifying the number of actions completed, employment status, satisfaction with employment. Fourthly, we examined only participants' satisfaction with and perceived utility of the career intervention, as two indicators of social validity. Further studies should test the other indicators of social validity (e.g. the extent to which participants use the abilities focused on in the career intervention over time, or the extent to which they choose the career intervention; Carroll & Peter, 2014).

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