

Effectiveness of career counseling: A one-year follow-up

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ABSTRACT

The short-term effectiveness of career counseling is well supported in the literature. However, the long-term impact is often overlooked. This study quantitatively investigated the long-term stability of the positive effects gained through the career counseling process and qualitatively observed participants' levels of career project implementation. Results indicated a continual decrease of career indecision in the long-term and stabilization with regard to clients' satisfaction with life. Age was found to be an important variable in long-term effectiveness, with younger clients' career decision difficulties decreasing more significantly than that of older clients. Moreover, career decision-making readiness increased only in the long-term for emotional and motivational variables. The majority of clients implemented their career choice within a period of one year; some partially implemented it; others changed their career choice, rather successfully; and few people did not demonstrate advancement in either their choice or its implementation during this period of time.

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Several meta-analyses showed that career counseling interventions are usually effective (Brown & Ryan Krane, 2000; Whiston, Sexton, & Lasoff, 1998). Furthermore, individual career counseling is consistently cited as one of the most effective types of interventions in the field. However, the majority of intervention studies assessed short-term effectiveness. Although some authors have emphasized the importance of the long-term impacts of career interventions (e.g., Heppner & Heppner, 2003), it has been largely overlooked in research designs. In fact, none of the intervention studies included in the Whiston et al. (1998) meta-analysis reported follow-up data (Healy, 2001). This study aimed to assess the long-term effectiveness of a face-to-face career counseling intervention. Quantitative and qualitative data were used to understand clients' professional evolution during the year following career counseling termination.

The literature on the long-term effectiveness of career interventions is limited (Hughes, Bosley, Bowes, & Bysshe, 2002; Organisation for Economic & Co-operation Development [OECD], 2004). The cost of conducting longitudinal studies and the difficulty of obtaining long-term data surely account for this lack of longitudinal effectiveness studies. Heppner and Heppner (2003) stressed the importance of examining whether significant post-test changes in career outcome remain stable over the long-term. Only a few researchers have conducted quantitative longitudinal studies investigating the evolution of career outcomes. Bernaud, Gaudron, and Lemoine (2006) investigated the effectiveness of a skills self-assessment intervention designed to help unemployed French adults analyze their skills and devise a career plan. They investigated the evolution of self-esteem, self-analysis, and self-concept. They found an overall stability in self-esteem and self-analysis gains six months after the intervention and a significant decrease of self-concept over the long-term.

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Hirschi and Läge (2008) investigated the short and the long-term effectiveness of a career workshop for Swiss adolescents in a classroom setting (eighth grade of compulsory education). Career decidedness, career planning, career exploration, and vocational identity significantly increased throughout the intervention, and significant effects in all of these areas were still noted three months after the workshop. Although both studies were concerned with career issues, they were not strictly focused on the evaluation of an individual face-to-face intervention. Kirschner, Hoffman, and Hill (1994) reported a single case study assessing the effects of a career counseling intervention after 18-month and 5-year post-intervention. To our knowledge, no large-scale quantitative studies measuring the long-term impacts of an individual face-to-face career counseling intervention have been published.

Verifying the stability of quantitative indicators is important in determining the effectiveness of an intervention. Additionally, studying the long-term impacts of career counseling also gives rise to several other worthwhile research questions. For instance, Phillips (1992) stressed the importance of verifying career project implementation as well as the remaining relevance of those projects, because the “functional utility” (Heppner & Heppner, 2003, p. 444) of career counseling outcomes can only be determined through long-term research on the process. In an individual counseling context, Greenwood (2008) investigated and validated the effectiveness of her career and educational intervention based on whether the clients followed recommendations and committed to and enjoyed their chosen career paths. Results indicated that 65% of clients adhered to program recommendations and that these clients were significantly more committed to their careers than those that did not adhere to recommendations.

Adopting a subjective view on career counseling effectiveness, a longitudinal qualitative study was conducted in England (Bimrose, 2008; Bimrose & Barnes, 2006). The authors examined the career trajectories of fifty adult consumers of diverse guidance services following an initial case study interview. This five-year effectiveness study was particularly focused on investigating the perceived usefulness of career guidance from multiple sources (i.e., clients, practitioners, and witnesses). Participants consistently described the “usefulness” of guidance over the five-year study period. Clients found guidance as useful when it provided access to “specialist information, including local labor market information, details of courses, training and employee opportunities” (p. 62); provided insights, focus, and clarification; motivated them; increased their self-confidence and their self-awareness; and/or structured opportunities for reflection and discussion (Bimrose, 2008). In addition, some of the key findings of this large study showed an increase in qualification level over the period of the study: the number of clients registered as unemployed decreased from 34% to 3%, and the proportion of clients feeling that they had a career increased to 50% of the sample. Thus, particularly because of the complexity of these issues and a lack of clarity surrounding the impact study, evaluating the effectiveness of career interventions is difficult (Bimrose, Barnes, Hughes, & Orton, 2004). Therefore, using diverse methodologies and measures is one way of exploring the complexity of the processes encountered.

The issues of the implementation and the stability of career projects may be approached by using different kinds of data, and qualitative and quantitative data may be complementary. For example, Kirschner et al. (1994) conducted a long-term case study using quantitative scales as well as open-ended questions to address their goals of developing a list of career areas of interest, creating a professional network, and learning more about formal and informal educational opportunities. They described how career counseling affected the client's life up to five years after the intervention. Even though case studies do not allow for generalization, their data provides rich and useful information on the long-term evolution in various aspects of the client's life, such as experiencing a decrease of exploration stress, maintaining other discussed changes, and crystallizing career goals by the 18-month follow-up period. At five-year post-intervention, the client (named Janet) was interviewed with open-ended questions on her current situation and on what she attributed to the intervention. In the authors' words:

Janet described the career counseling as a very significant experience that directly served as the impetus to change jobs. [...] Janet also reported that she gained greater understanding of her personality style and how it affected her career and interpersonal relationship (p. 219).

Using quantitative scales and open-ended questions, Healy (2001) also sought information about clients' satisfaction with the intervention as well as what elements he found helpful. The (at least one month) follow-up consisted of an unscheduled telephone call to 181 out-of-school adults who had previously enrolled in an individual career counseling intervention. Clients reported the following elements as helpful: “being listened to” and receiving “help in clarifying assets and values,” “feedback from testing,” and “information.” Seventy-eight percent reported being satisfied or very satisfied with the intervention, with 85% reporting that they were following through on their counseling in a variety of ways. Thus, quantitative and qualitative long-term data provided complementary information on the effectiveness of a career counseling intervention as well as on the process behind its effectiveness.

According to Hanson, Creswell, Clark, Petska, and Creswell (2005), mixed method studies, “allow researchers to simultaneously generalize results from a sample to a population and to gain a deeper understanding of the phenomenon of interest” (p. 224). Savickas et al. (2009) also encouraged the use of mixed methods within the life-design paradigm. Perry, Dauwalder, and Bonnett (2009) blended client narratives with statistical analyses and Perry, DeWine, Duffy, and Vance (2007) evaluated the effects of a school-to-work psychoeducational intervention through a questionnaire and an interview focusing on academic self-efficacy. Although Perry et al. (2007) did not find any statistically significant changes from pre- to post-testing on the academic self-efficacy level, their qualitative results showed differences in developmental specificity (i.e., use of academic skills and articulation of goals) during that time. As noted by the authors, the combination of quantitative and qualitative measures provided a more complete picture of changes clients made over time than the exclusive use of one method or the other.

The present research is part of a larger longitudinal study on career counseling effectiveness conducted at a university-run community-based career counseling center in French-speaking Switzerland between 2004 and 2009. The aims of that study

were to investigate the short-term (i.e., pre-/post-assessment) and long-term (i.e., follow-up intervals of 3 months and 1 year) impacts of a career counseling intervention. There are several challenges inherent to conducting longitudinal research. For example, using a control group in a real clinical setting requires reflecting on ethical issues, because participants in the control group must wait about two months to begin counseling but continue to complete research questionnaires. Therefore, in the first part of the larger longitudinal study, [Masdonati, Massoudi, and Rossier \(2009\)](#) reported pre-/post-quantitative results using a quasi-experimental design that employed a comparison group (not a control group). The comparison group solicited was comprised of students of a similar age to participants in the experimental group who neither sought, nor received career counseling services. Although the present study is an extension of the previous research that includes 3-month and 1-year post-intervention quantitative and qualitative data, we did not maintain a comparison group in this part of the study, because tracking individuals who did not receive our services would be difficult, at best, and costly. Thus, the primary aim of this study was to examine the stability of the effects found in the short-term (reported elsewhere in [Masdonati et al., 2009](#)) across the long-term follow-up periods subsequent to our brief career counseling intervention.

Here, we quantitatively and qualitatively addressed the long-term impacts of a face-to-face career counseling intervention, with an emphasis on the post-intervention career project implementation (i.e., career path). Quantitatively, we studied clients' decision-making difficulties and satisfaction with life throughout and after the counseling process, to compare the short- and long-term effectiveness of the intervention. The choice of outcome variables was made to observe career-specific and non-career-specific impacts of the career counseling intervention, because previous studies have shown that career interventions have holistic impacts ([Whiston et al., 1998](#)), meaning that career interventions may affect more than a person's career behaviors. Specifically, we aimed to diminish career decision-making difficulties, which represented career-specific impacts of the counseling intervention. Beyond that, satisfaction with life was measured to evaluate more broadly how clients' well being was affected, which represented non-career-specific impacts of the intervention. Additionally, qualitative analyses were carried out in order to ascertain whether projects were implemented after the career counseling process had terminated.

1. Method

1.1. Participants

The present sample consisted of 199 French-speaking career counseling clients: 101 females and 98 males, ranging from 14 to 56 years old ($M = 21.8$, $SD = 7.3$). Sixty-eight percent of the sample consisted of middle school (at the end of their mandatory education), high school, or university students, and 32% were adults working full or part time or unemployed. All participants sought services on a voluntary basis. As questions about race or ethnicity are generally not included in surveys conducted at a national level in Switzerland, and non-Swiss residents might negatively view such questions, participants were asked to report their nationality, but not their race/ethnicity or their socioeconomic status. About 89% of the participants were Swiss.

Because the career counseling service encounters a wide age-range of clients, the analyses may be biased accordingly by the comparison of relatively different vocational stages of development. However, we wanted to retain a sample that is representative of the current age range of people seeking career counseling in Switzerland. In observing a bimodal distribution of age in the sample, we were able to distinguish two groups: one group of 144 clients from 14 to 21 years old ($M = 18$, $SD = 1.7$), and another other group of 55 clients from 22 to 56 years old ($M = 31.2$, $SD = 7.7$). Thus, all results will be presented using this two-group comparison. This split may be relevant for the interpretation of implications for practice, as well. In Switzerland, people under 21 years of age who seek career counseling may be making an initial career choice while those 22 and older may be in the process of changing careers.

As with other longitudinal studies, attrition was also a consideration in our study. Each of the 199 clients included in the study completed both pre- and post-quantitative assessments. However, only 126 (63%) of these clients participated in at least one of the two long-term assessment periods. Of the 126 clients included in follow-up assessments, 84 (67%) of them participated in both of the follow-up periods. The attrition rate is, therefore, between 33% and 37%. We speculate that attrition was due to a number of factors, which may include but not be limited to: moving and not receiving the follow-up packets, taking a year off to travel (which many young Swiss people do to further study a foreign language before engaging in post-secondary studies), experiencing a lack of motivation, having either a positive or a negative level of satisfaction with the intervention, or having certain personality traits. Of these 126 participants who completed the instruments in at least one of the two follow-up periods, 78 (62%) was included in qualitative analyses, because open-ended questions were introduced in the middle of the data collection period of the larger study.

1.2. Quantitative data

1.2.1. Career decision difficulties questionnaire (CDDQ; [Gati, Krausz, & Osipow, 1996](#); [Gati, Osipow, Krausz, & Saka, 2000](#))

The CDDQ is a theory-based instrument used to identify difficulties in the decision-making process and to observe their evolution over time. The CDDQ is a 34-item self-report instrument covering three categories of difficulties: Lack of Readiness (e.g., "Work is not the most important thing in one's life and therefore the issue of choosing a career doesn't worry me much"), Lack of Information ("I find it difficult to make a career decision because I still do not know which occupations interest me"), and Inconsistent Information ("I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in"). The Lack of Readiness scale includes three subscales: Lack of Motivation, General

Indecisiveness, and Dysfunctional Beliefs. The Lack of Information scale comprises four subscales: Lack of Knowledge about the Process, Lack of Information about Self, Lack of Information about Occupations, and Lack of Ways of Obtaining Additional Information. The Inconsistent Information scale includes three subscales: Unreliable Information, Internal Conflicts, and External Conflicts. The total level of career indecision is evaluated by calculating the mean score of the 10 subscales. Clients respond by indicating their level of agreement on a 9-point Likert-type scale (1 = does not apply to me, 9 = fully applies to me).

The CDDQ-French version (Marro, 2009) was used in this study. Here, internal consistencies measured at the beginning of the intervention, at the end of the intervention, and at both follow-ups were high for the Total CDDQ scores (.87, .91, .94, and .90), for Lack of Information (.84, .90, .94, and .90), and for Inconsistent Information (.77, .83, .90, and .81). Lack of readiness was associated with low internal consistencies for all completions (.64, .67, .60, and .60). Those coefficients are similar to those observed by Gati et al. (1996), who reported homogeneity coefficients of .95, .63, .95, and .89, respectively, for Total CDDQ, Lack of Readiness, Lack of Information, and Inconsistent Information scales.

1.2.2. Satisfaction with life scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993)

The SWLS was selected to measure of clients' overall well being. The SWLS-French version was used in this study. The SWLS is composed of five items on a 7-point Likert-type scale (1 = strongly disagree, 7 = strongly agree; e.g., "In most ways my life is close to my ideal"). This instrument has good sensitivity and was used to detect changes in life satisfaction during and after interventions (Pavot & Diener, 2008). Diener et al. reported an internal consistency of .87, and we found .85, .87, .86, and .88 over the four administration times in the current study.

1.3. Qualitative data

The qualitative analyses were guided by the following two overarching research questions: "What career paths did clients follow from the beginning of the intervention to one year after?" and, "What were clients' own impressions of how they achieved their career goals?" These research questions were chosen in light of the free-response questions (listed below) that were included after the larger study began to better understand clients' career paths from their own perspectives. To determine the overall degree to which each client implemented the career plan discussed during career counseling, clients were asked to answer open-ended questions regarding their current personal and professional situation three months and one year after the end of the intervention. Additionally, counselors reported pre-intervention data from their first-session notes regarding clients' stated needs for counseling and clients' current personal and professional situation. Counselors also reported post-intervention data, based on their last-session notes regarding clients' choice and career plans. This counselor-reported pre-/post-data set was used to understand the participants' personal situation as it was reported to them and the career plans the client made over the course of the intervention. That information served as a baseline regarding the clients' career planning, and was then triangulated with client-reported follow-up data at 3-month and 1-year post intervention to determine to what extent the clients implemented the career plans made in session with their counselors. During the follow-up assessment periods, clients also were asked to rate their own impressions of having achieved their career goals on a 4-point Likert-type scale (1 = completely, 2 = partially, 3 = not particularly, 4 = not at all). Career path categories emerged based on the initial counselor reports and the follow-up client reports.

Follow-up data consisted of open-ended questions included in the survey that clients received through the mail at 3-month and 1-year intervals after the end of the intervention. The open-ended questions were designed to observe clients' perceptions of their career plan implementation and to explore how their personal lives had changed across the assessment periods. Questions were presented as follows: "Please describe precisely the changes that occurred in your professional and private life during the last three [or nine] months," and "To date, do you have the impression that you have achieved or are about to achieve the career goals you set when you attended sessions at our career counseling service?" To this last question, clients first chose one of the four options described above, then, they were invited to write a free response on that topic.

1.4. Qualitative analysis

The data analysis team consisted of the first two authors with occasional consultation regarding content analysis provided by the fifth author. The first and second authors initially openly and independently coded all qualitative data according to procedures outlined by Boyatzis (1998) for themes found within clients' responses, as well as for the career paths that clients followed. Two approaches, inductive category development and deductive category application (Mayring, 2000) were used. Researchers used constant comparison methods during peer debriefing meetings at each phase of coding and analysis: (1) to discuss themes and career paths that emerged from the data (4 meetings), (2) to reach consensus regarding themes and definitions of career paths (3 meetings), (3) to collapse themes into categories (3 meetings), and (4) to proceed with final coding and confirmation of all themes and categories, as well as (5) to choose representative case examples to illustrate each career path (2 meetings). The fifth author was also apprised of coding and analysis progress and provided feedback regarding themes, categories, and career paths that emerged from the data to both analysts (4 meetings), which was incorporated into subsequent phases of analysis.

After the primary analysts reached final agreement about coding procedures and definitions, a side-by-side analysis of the first 10 cases was conducted, and then the rest of the sample was independently coded. To ensure that an acceptable level of interrater reliability in coding had been achieved, we calculated Cohen's (1960) kappa coefficient on the remaining 68 (of 78 total) participants after all data had been coded. This coefficient, .78, was calculated to compare the coding that raters used within participant

responses after terms and definitions had been mutually consented to. This means that the proportion of agreement between both raters, when corrected for chance, was 78%.

1.5. Procedure

All of the participants were voluntarily engaged in a face-to-face intervention at a university-run community-based career counseling service in French-speaking Switzerland. The intervention consisted of four to five 1-hour weekly sessions. For that, all participants were charged a fixed price according to their professional status (working versus student/unemployed) regardless of the duration of the intervention (four or five sessions). Career counseling was provided by advanced students engaged in a Master of Science in Career Counseling program under the supervision of qualified counselors. Although the intervention was adapted to the specific needs and characteristics of each client, videotaping and, at times, *in vivo* supervision of student counselors ensured a high degree of standardization of the intervention procedures. During *in vivo* supervision, in which the supervisor was present in the session, the quality of the intervention was supported through direct intervention in the counseling session, if necessary. All sessions were videotaped, and the standardization of the intervention was monitored through regular meetings between supervisors, through feedback given to counselors during supervision sessions, and by counselor reporting of the content and the steps of each intervention via a computerized database.

Clients who presented for career counseling sessions at the counseling service during the research period (from October 2004 to December 2008) were asked to participate in the study by their respective career counselors-in-training at the end of their first counseling session. At that time, they were informed through discussion that the purpose of the study was to assess the effectiveness of the intervention provided by the center; that their participation in the study would involve follow-up assessment for one year; they were given the packet containing the instruments, and were told that they could ask questions about the research at any time. Their consent to participate in the study was informed and voluntary and complied with the ethical standards of the American Psychological Association (APA) and of the International Association for Educational and Vocational Guidance (IAEVG).

Participants completed the CDDQ and SWLS at the end of their first session (pre-intervention) and at the end of their last session (post-intervention). Counselors were asked to provide qualitative information regarding their clients' personal situation and career plans at pre- and post-intervention times. In addition, the participants were sent two follow-up questionnaires at 3-month and 1-year intervals after the termination of their last counseling session. These questionnaires included the CDDQ, SWLS, and the open-ended questions described above and took about 15 min to complete. Because fatigue was not estimated to be a factor in completing the surveys, the order of the instruments was not counterbalanced within the questionnaire. When necessary, two reminders were sent for each follow-up and a free movie ticket (sent after the completed questionnaire was returned by mail) was offered as incentive to further encourage participation in the study or to thank former clients for their research participation. Finally, participants who did not answer during the first follow-up period were still solicited for the last follow-up, unless they explicitly asked to withdraw from the study.

1.6. Intervention

As presented in [Masdonati et al. \(2009\)](#); according to the classification of the major theories of career development and vocational behavior suggested by [Betz \(2008\)](#) and by [Fouad \(2007\)](#), the intervention studied may be described as an eclectic theoretical approach ([Savickas, 1996](#)), wherein we used elements of the theory of work adjustment and of the social cognitive career theory flexibly in order to help clients better "understand their career behavior" ([Gysbers, Heppner, & Johnston, 2003, p. 47](#)). The theory of work adjustment was used to help clients explore their own interests, personality, and skills, as well as their work and educational environments and to implement career solutions matching these two aspects. Social-cognitive career techniques were used to strengthen career decision self-efficacy, outcome expectations, and perception of social resources and to overcome perceived obstacles. The intervention was carried out in a face-to-face setting, over four to five 1-hour sessions, which is compatible with recommendations by [Brown and Ryan Krane \(2000\)](#) regarding the number of sessions needed for intervention effectiveness.

The intervention comprised three stages, similar to those described in [Gati and Asher's \(2001\)](#) pre-screening, in-depth exploration, choice (PIC) model. The first stage was dedicated to the clarification of the client's needs and formulation of their goals. The second stage concerned assessment and information-seeking tasks. The third stage consisted of evaluating existing options, decision-making, planning, and implementing the chosen solution. Moreover, the CDDQ used in this study is based on Gati's theory. Additionally, our intervention included at least four of the five ingredients identified by [Brown, Ryan Krane, Brecheisen, Castelino, Budisin, Miller, & Edens \(2003\)](#): workbooks and written exercises, individualized interpretation and feedback, world of work information, and attention to building support. Modeling was the only ingredient that was not systematically present depending on the demand and the situation of the client.

2. Results

2.1. Quantitative results

We used mixed design ANOVAs, which combine repeated-measures and independent designs ([Field, 2009](#)), to take the bimodal distribution of the age variable into account to avoid the risk of interpreting global results for different stages of career

development. In the present study, we observed the progression of repeated-measures outcome variables (i.e., vocational indecision, satisfaction with life) and introduced between-groups comparison in order to differentiate between clients younger than 21 years of age and those older than 21 years of age. As suggested by Cohen (1988), partial eta-squared was considered as the effect size index, with .01, .06, and .14, respectively, qualifying as small, medium and large effect sizes.

Preliminary analyses were then conducted to test age impact on the two outcome variables throughout the study using the new bimodal variable for age. This variable had no significant main effect on the Total CDDQ or on any of the categories, $F(1, 97) \leq 1.78$, ns, indicating that age has no or few impact independent from any other variable on vocational indecision throughout the study. However, age had a significant main influence on the level of satisfaction with life of the participants: clients younger than 22 years of age reported a systematically and significantly higher level of well being, $F(1, 88) = 9.08$, $p < .01$, partial $\eta^2 = .09$. No main gender effect was found either for vocational indecision or for life satisfaction.

According to our first quantitative hypothesis, clients' career decision-making difficulties were expected to decrease, whereas their life satisfaction was expected to increase between the beginning and the end of the career counseling intervention. To assess the short-term evolution of career decision-making difficulties according to age, a repeated measures pre-/post-ANOVA on the CDDQ Total and a repeated measures MANOVA on the other three CDDQ categories were carried out, both introducing groups of age as an additional independent variable. As expected, a large and significant main effect of the intervention was observed through the decrease of the Total CDDQ scores, $F(1, 196) = 158.53$, $p < .001$, partial $\eta^2 = .44$. However, no interaction effect between intervention and age was observed, $F(1, 196) = .60$, ns. Two career decision-making difficulties categories contributed to the significant decrease concerning the Total CDDQ: Lack of Information, $F(1, 196) = 241.11$, $p < .001$, partial $\eta^2 = .55$, and Inconsistent Information, $F(1, 196) = 35.13$, $p < .001$, partial $\eta^2 = .15$. However, there was no significant change over time in lack of readiness, $F(1, 196) = .46$, ns. Again, the interaction between the intervention and age was not significant for the three categories, $F(1, 196) \leq 1.04$, ns.

As above, assessment of the effects of the intervention on changes in clients' life satisfaction over time was determined through a mixed-design pre-/post-ANOVA. Life satisfaction significantly increased during the career counseling intervention as evidenced by the moderate main effect of the intervention, $F(1, 197) = 25.35$, $p < .001$, partial $\eta^2 = .12$. Moreover, no interaction effect with age was observed, $F(1, 197) = .24$, ns. More detailed analyses concerning the short-term effectiveness of career-counseling were carried out on a sub-sample ($n = 89$), compared with a control group of students who neither sought nor received a career-counseling intervention ($n = 89$), and are reported elsewhere (Masdonati et al., 2009).

The second hypothesis and main aim of the current study addressed the long-term stability of the beneficial impacts of career counseling. Fig. 1 shows the evolution of Total CDDQ scores and those from the three categories throughout the study according to age. A repeated-measures immediate post-intervention/1-year follow-up ANOVA introducing age as an additional independent variable was conducted to assess whether the important decrease of the career decision difficulties and satisfaction with life between pre- and post-intervention remained stable in the long-term. The impact of age on this long-term evolution was tested using two age groups. Results showed that career decision difficulties moderately decreased after the intervention, as indicated by a significant main effect of the intervention, $F(1, 100) = 6.23$, $p < .05$, partial $\eta^2 = .06$. More importantly, an interaction with age was observed, with clients younger than 21 years of age showing an important decrease of indecision while clients older than 22 years of age remained stable, $F(1, 100) = 7.83$, $p < .01$, partial $\eta^2 = .07$.

Repeated-measures MANOVAs introducing age as an independent variable were conducted to investigate the long-term impacts of the intervention on CDDQ scores. They indicated a main effect of the intervention in the long-term by a significant and moderate decrease of only one of the three CDDQ categories: Lack of Readiness. Interestingly, while scores on the Lack of Readiness scale remained stable in short-term analyses (pre-/post-), they significantly decreased in the long term, $F(1, 100) = 7.73$, $p < .01$, partial $\eta^2 = .07$. However, there is no interaction effect with age, $F(1, 100) = .56$, ns. More importantly, even if the categories Lack of Information and Inconsistent Information were not globally affected in the long-term by the intervention, results showed that the interaction effects with age were significant across time. A significant and moderate interaction effect appeared on the Lack of Information scale, $F(1, 100) = 3.90$, $p < .05$, partial $\eta^2 = .06$ and on the Inconsistent Information scale, $F(1, 100) = 8.03$, $p < .01$, partial $\eta^2 = .07$. Again, clients younger than 21 years of age saw decreasing scores while scores for clients older than 22 years of age remained stable, or even increased slightly.

Fig. 2 shows the evolution of life satisfaction at each assessment time according to age. Although we found a main effect of the intervention on short-term assessment and a main effect of age throughout the study, no significant main effect of the intervention nor interaction with age was observed between the post-intervention and 1-year follow-up assessments of life satisfaction, $F(1, 90) \leq 2.93$, ns.

Ten subsequent mixed-design MANOVAs were conducted to investigate the long-term impacts of the intervention and age on the CDDQ subscales (Table 1). Of the Lack of Readiness subscales, Indecisiveness scores, $F(1, 100) = 11.48$, $p < .01$, partial $\eta^2 = .10$ showed the greatest decrease and were associated with moderate effect size. Scores on the Lack of Motivation and Dysfunctional Beliefs subscales did not significantly decrease over time. As with results indicated for the entire category, there is no interaction between intervention and age on the Lack of Readiness subscales. Concerning the Lack of Information subscales, a significant and moderate main effect of the intervention, $F(1, 100) = 7.36$, $p < .01$, partial $\eta^2 = .07$, as well as a moderate interaction effect, $F(1, 100) = 9.19$, $p < .01$, partial $\eta^2 = .08$ was observed regarding the lack of information about the career decision making process. Moreover, a small but significant interaction effect was observed for the subscale Lack of Information on the ways of obtaining information. However, The Lack of Information about Self subscale and the Lack of Information about Occupations subscale scores indicated no significant main or interaction effects. Finally, no main effect but a moderate interaction effect between age and the intervention was observed on Inconsistent Information subscales scores for Unreliable Information, $F(1, 100) = 6.53$, $p < .05$, partial $\eta^2 = .06$, and Internal Conflict, $F(1, 100) = 10.41$, $p < .01$, partial $\eta^2 = .09$. No significant effects were observed for External Conflict.

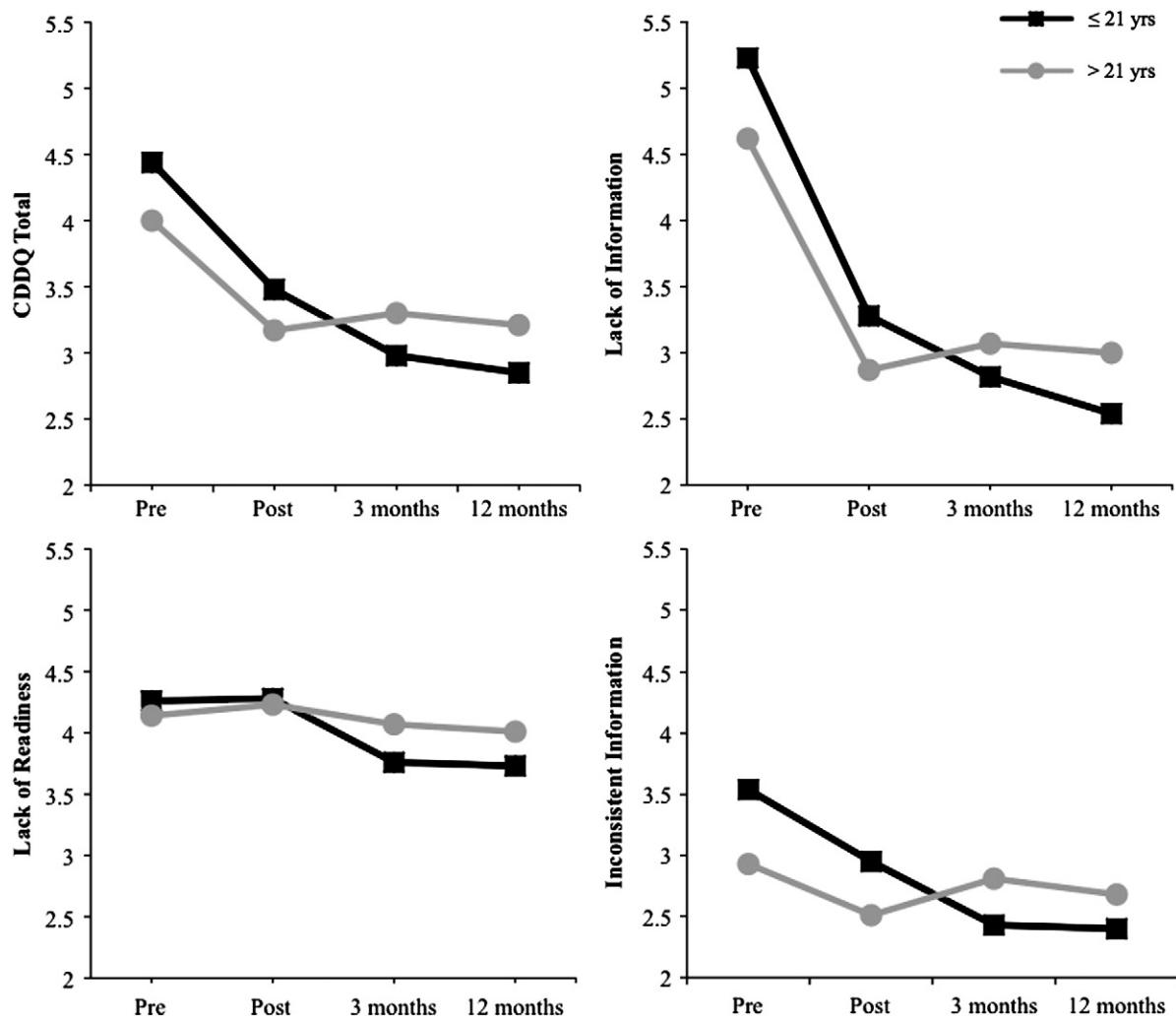


Fig. 1. Long-term effectiveness of career counseling intervention on career decision-making difficulties according to age.

As the analyses above were all calculated between the post-intervention time and the 1-year follow-up time in order to conserve as much data as possible, the results do not address the specific evolution between post-intervention and 3-month or between 3-month and 1-year measures. Therefore, we conducted repeated measures post-intervention/3-month and 3-month/1-year

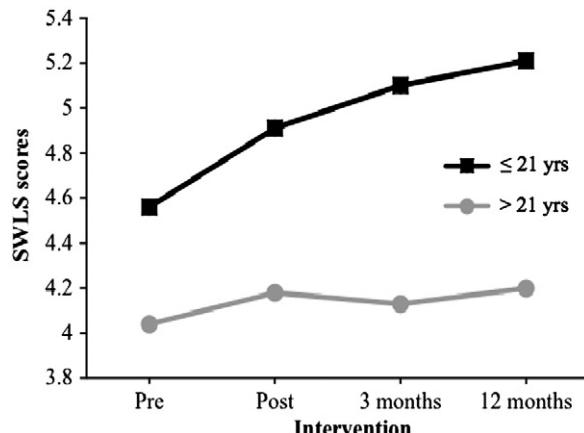


Fig. 2. Short- and long-term evolution of the clients' life satisfaction.

Table 1Long-term *M* and *SD* for the subscales of the CDDQ by age.

Variable	Post		3 months		12 months	
	Mean	SD	Mean	SD	Mean	SD
<i>Clients</i> ≤ 21 years	<i>n</i> = 145		<i>n</i> = 80		<i>n</i> = 76	
LR: lack of motivation	3.15	1.65	3.06	1.75	2.52	1.58
LR: indecisiveness***	5.83	1.98	5.16	1.89	5.03	1.81
LR: dysfunctional beliefs	4.27	1.46	3.77	1.19	3.73	1.58
LI about the process**/+	3.78	1.75	3.07	1.74	2.57	1.40
LI about self	3.17	1.61	3.00	1.72	2.53	1.37
LI about occupations	3.56	1.79	3.21	1.82	2.89	1.77
LI about ways of obtaining info. ⁺	2.79	1.59	2.54	1.45	2.32	1.58
II: Unreliable information ⁺	3.19	1.67	2.78	1.59	2.70	1.67
II: Internal conflict ⁺	3.68	1.62	3.10	1.53	2.89	1.46
II: external conflict	2.48	1.70	1.93	1.51	1.86	1.62
<i>Clients</i> > 21 years	<i>n</i> = 57		<i>n</i> = 31		<i>n</i> = 28	
LR: lack of motivation	3.26	1.84	3.23	1.82	3.27	1.97
LR: indecisiveness***	5.81	2.07	5.33	2.15	5.15	2.14
LR: dysfunctional beliefs	3.67	1.55	3.47	1.58	3.33	1.53
LI about the process**/+	3.16	1.83	3.08	1.68	3.23	2.00
LI about self	3.05	1.93	3.15	2.09	3.31	2.02
LI about occupations	2.91	1.81	2.67	1.90	2.65	1.56
LI about ways of obtaining info. ⁺	2.37	1.44	2.40	2.10	2.45	1.62
II: unreliable information ⁺	2.85	1.60	2.86	1.76	2.96	1.60
II: internal conflict ⁺	3.11	1.42	3.36	2.09	3.25	1.21
II: external conflict	2.04	1.52	2.14	1.89	1.63	1.24

Note. LR = Lack of Readiness; LI = Lack of Information; II = Inconsistent Information.

Significant Intervention main effect: **p* < .05. ***p* < .01. ****p* < .001.Significant Age × Intervention interaction: ⁺*p* < .05. ⁺⁺*p* < .01. ⁺⁺⁺*p* < .001.

mixed-design ANOVAs (for Total CDDQ) and MANOVAs (for the CDDQ categories) to assess whether the amount of significant post-test changes differed according to its proximity to the intervention. CDDQ Total indecision scores indicated no significant effects neither between immediate post-intervention and 3-month post-intervention assessments, nor between the two follow-up assessment times. Although several results were close to significance, Lack of Readiness, $F(1, 105) = 7.19, p < .01$, partial $\eta^2 = .06$ was the only category where a moderate main intervention effect was found between immediate-post intervention and 3-month follow-up. Moreover, no significant changes were noted for any of the categories between both follow-up times. Concerning satisfaction with life, non-significant changes were again noted at 3-month and at 1-year post-intervention.

Finally, as presented above, we observed a 33% to 37% attrition rate between the immediate post-intervention assessment and the follow-ups. Therefore, we conducted a series of mixed-design ANOVAs in order to verify whether participants who completed the follow-ups differed from those who did not participate in the entire investigation. These consisted of repeated measures pre-/post-ANOVAs on CDDQ Total and categories introducing a categorical variable concerning participants having continued or not as an independent variable. Specifically, we were interested in knowing if having participated in the entire study was associated with the effectiveness of the process. Results indicated that lack of readiness was the only variable on which participants who had completed the entire investigation had significantly lower difficulties throughout the process, $F(1, 198) = 8.27, p < .01$, partial $\eta^2 = .04$. Effectiveness was, otherwise, not significantly associated with having completed all follow-up research packets. In addition, after verification using chi-squared tests, neither gender nor age was associated with the attrition rate.

2.2. Qualitative results

One objective of this study was to explore clients' individual subjective experiences of career project implementation after termination of their career counseling process. Several themes emerged from the qualitative data, which are highlighted in italics below, as well as four distinct career paths: implementation of the career project discussed in career counseling, partial implementation of the project, change of project/career path, and no professional evolution during the year that followed career counseling. Table 2 shows chosen examples of the evolution of each of these career paths. Although space limitations precluded a full illustration of each case, we selected the most relevant information from each case to demonstrate the complexity and heterogeneity of each career path across assessment times.

As indicated in Table 2, the majority of the clients followed an *implementation* path (64%), meaning that one year after the career counseling intervention, they implemented the career project they discussed with their career counselors and they had the impression to have achieved the goals that they set in session. Others achieved *partial implementation* (12%) of their career projects and goals, *changed* (12%) the career path they had originally discussed in career counseling, or reported *no professional evolution* (12%) in their career path or goals. Each of these career paths, along with the major themes that define them, is further explained below.

Table 2

Clients' career paths over the course of career counseling with follow-ups after 3 months and 1 year.

Category	n	Pre		Post	3 months	12 months
		Situation/demand	Career projects		Situation/changes	Situation/changes
Implementation	50	He is in the Faculty of Business. He has doubts about his choice and would like to find something that suits him.	School of Tourism, School of Education, or Practical Business School	He started the School of Education. "I am quite sure to have found my path, now I have to follow it!"	He is still in the School of Education. "I am now convinced to have found my way."	
Change	10	He is at the end of high school. He would like to confirm two career choices: Faculty of Business and Economics and architecture at the university	Faculty of Business or Architecture at university	He is studying architecture at the university. "The studies I have started match totally what I would like to do."	He is doing an apprenticeship in technical drawing (drafting). "University was too theoretical. I am doing an accelerated apprenticeship in order to reach an architecture [practical] school."	
Partial implementation	9	He is in high school and wonders if he should continue studying or not. He needs to remotivate himself and explore his possibilities.	Pass his classes, study computer science at the university and do training courses in this field	He is still in high school. "I succeeded in changing my study habits and in being more organized in what I am doing."	He is still in high school. "A better confidence in myself [following the career counseling]. I am finding answers to my questions. I can better organize my work."	
No professional evolution	9	She is in high school. She would like to find what she'd like to do after. Her parents are divorced and she is in conflict with her mother.	Biology/Chemistry at the university or in a practical school	She is still in high school. "I still don't have a good idea of what I will do after high school"	Unemployed. "No evolution"	

2.2.1. Implementation

By the end of the 1-year follow-up time, clients included in this career path had implemented their main choice or one of the career projects that they discussed with their counselor. For one group of participants, the criterion for being included in this category was to have started a university or vocational training program, or another formal educational program in the case of adults in career transition. Most of them expressed more and more *certainty* concerning their career choice at follow-up times as exemplified in the illustrative case in Table 2. For a second group of participants, implementation may have entailed taking significant steps in the direction of their career counseling goals, as participant 11331, who planned to start a school for professional translation after finishing high school, did. She had earned her high school diploma within the 3-month follow-up time and was studying Spanish in Seville, Spain at the one-year follow-up, stating, "I will do what is necessary to be able to enter the school I want next year (ETI-Geneva) and I have already decided on possible alternatives if I cannot get into the ETI."

Moreover, two main profiles comprised this form of implementation: clients who already implemented their project by the first follow-up time and then confirmed it at the second follow-up time and clients who had not yet implemented their career project after three months but achieved implementation after one year. As an example of the first profile, participant 11121 was a high school student at the time of the intervention. Three months after, she was already engaged in law school at a university, which still suited her after one year. She even reported having passed her first series of semester exams at that time. Other clients had a more gradually progressive path, such as participant 11174, who said at the 3-month follow-up that he had not yet decided what to do after finishing high school. However, at the 1-year follow-up he stated, "The guidance counseling helped me choose the major I started." He had obtained his high school diploma and had started university. However, several participants' paths are not quite so linear and, for some, interplay between personal and professional spheres became a career implementation barrier. For instance, participant 11227 was satisfied to have chosen and to have started an educational program in architecture at the 3-month follow-up. However, at the 1-year follow-up, she presented doubts about passing her exams that might be related more to her personal difficulties:

I am about to finish my first series of exams in June. [...] If I don't pass this year, I will seek an internship in architecture. If I like this internship, I will consider doing an apprenticeship in technical drawing. [...] On a personal level: I've become withdrawn, [I'm] a lot less sociable. I made myself see a psychologist. I am sometimes depressed....

In addition, these results confirmed not only that the implementation process and transitions are long-term processes but also that they are accounted for by multiple factors. One may assume that implementing a career choice is aligned with decisional state and motivational aspects, which is also what we observed (e.g., choice confirmed, path found, motivation to implement). But beyond that, contextual factors (e.g., length of time to finish high school, failure to enter into a post-secondary school) or personal difficulties (e.g., moving or parents separating) may make transitions particularly long and complex, even if career implementation is ultimately achieved.

As one might expect, a great number of clients in this category (44%) expressed *congruence with* and *satisfaction in* their career choices and career paths. For instance, participant 11304 stated, "I made a choice based on our counseling sessions, and I do not regret it. I believe that I am right where I need to be." Most of the clients' satisfaction with the outcome is expressed as congruence between the clients' individual characteristics and the nature of their career choice (e.g., "I found my path/my way," "I am in the right place," "It suits me perfectly"). In addition, one participant expressed her satisfaction with a change, which occurred after

reducing her weekly work schedule. One participant was satisfied, as he felt competent in his chosen field. Finally, one participant was pleased to see alternatives presenting themselves for his future. In addition, 18% of the clients in this category expressed satisfaction with the service provided by the career counseling center. For instance, participant 11296 said that, "The counseling sessions from your career counseling center helped me a lot to propel myself forward and ultimately to choose the educational path I'm currently undertaking." Very few expressed dissatisfaction with the intervention.

However, not all individuals in this category were always completely satisfied with their career options. Even if implementation of their career project may attest to a successful intervention, some clients expressed *negative or mixed feelings* concerning their career choice. Some clients still faced a number of problems linked to the implementation of their projects or had *doubts* about the long-term prospects of their choice. For instance, participant 11067 expressed paradoxical feelings concerning his professional reorientation. "I found the field that I want to pursue for the next 25 years (sustainable development) but not the exact job, the company, nor how [to break into it]." For client 11216, her dissatisfaction lied in the gap between theory and practice: "I am currently achieving my career objectives... but the practical side is not presented at the university and it weighs on me." Similarly, in finishing her master's degree, client 11028 had doubts about her insertion into the job market:

I am currently succeeding in the educational program I started after career counseling, and I was very happy with the [master's-level] classes. But now that there are only three months left and I am faced with [writing] my master's thesis, I am having difficulties moving forward and I am beginning to doubt whether I will have professional opportunities in the future.

Thus, successful implementation of the career project discussed in session may indicate that the career counseling intervention was successful in one vein. Nevertheless, there are certain nuances in the way that clients experienced their career path implementation that may attenuate their own perceptions of a successful career path.

2.2.2. Change

Clients in this category changed their mind after counseling and implemented a different career project from the one discussed in session. Although such a change could be interpreted as a failure of the career counseling intervention, many clients successfully made another choice without additional assistance. In fact, being able to change one's decision probably underscores the effectiveness of the intervention, indicating, instead, an increase in career-related self-efficacy. Moreover, most are *satisfied with their new choice*. It can thus be hypothesized that the intervention improved clients' decision-making skills and self-confidence in following a new plan, which were both important components of the intervention.

Clients made different kinds of changes in their career plan and path. Some of them pursued a career path in a similar field. For example, during the year following the career counseling intervention, one university student decided to switch to her second-choice major, which was discussed at the end of the intervention. The example illustrated in Table 2 concerns a client who became dissatisfied with his university-level studies between the two follow-up times, and decided to pursue his education in a technical school offering an alternative way of reaching his professional goals.

Those lateral changes contrasted with more drastic changes made by other clients. Some clients manifested a feeling of *ambivalence* when they did not implement what they had planned during counseling sessions. For instance, one client reported:

On one hand, I have the impression to have totally achieved my career objectives because I found my path; on the other hand, not at all because my career choice is totally different [from what we discussed in counseling]. We concluded the sessions talking about medicine and I am currently studying music.

One teacher presented for professional reorientation, but she was also in the midst of both professional and personal crises. She considered obtaining information to go to the university, but during the 3-month follow up time, she reported being in Australia to take a year off from her studies. When she returned from her travels, she pursued self-employment activities. Again, the importance of multiple life spheres, which interweave with career projects, was accentuated in this last example. In this client's particular case, the year off from her studies may have influenced the change that occurred more than the intervention, itself. Change is otherwise well exemplified in participant 11322's words, whose serious family difficulties were extensively discussed within the counseling process as they were closely related to her indecision:

I decided not to register for the EESP. I enrolled at the university in Psychology. [...] I resumed my studies after a year and I really want to become a psychologist. Studying interests me quite a bit. I still have family concerns, but I can distance myself from it. I try to stay positive.

Finally, several clients in this category changed their minds concerning their plans but had not yet implemented a new plan. For the most part, those clients were still in high school one year after the intervention and, thus, they had not yet had the opportunity to implement a new career plan. However, some high school participants' comments clearly demonstrated that career path changes were under consideration well before implementation was underway: "I changed my mind. Gradually, I decided to enter the hotel management school."

2.2.3. Partial implementation

Clients in this category reported progress or an evolution in their situation but did not fully achieve the goals they set for themselves during career counseling. For those people, important professional questions remained unresolved one year later.

The example illustrated in [Table 2](#) concerns a participant who reported personal progress in increasing his motivation and organizational skills, but who was still unable to choose a career project. For some high school students, one year may not be enough to implement a choice: Some of them decided to take a year off from their studies, while others simply might not have been ready to do so.

Furthermore, as affirmed by one participant in this category: "A work transition takes time, just to determine a new path to follow." For adults reorienting their careers, the situation is often more complicated and takes time to become clear. Participant 11182 was a housewife and wished to re-enter the job market as a teacher. By the first follow-up, she had increased her working time from 10% to 50%, as planned during the sessions. However, she still expressed doubts about what she "should" do to reconcile her family and professional lives:

[1-year follow-up] I have no more debt. I am motivated by my work. Luck has shined upon us: We are going to move into a big and beautiful house in an ideal location. I would like to know if I "have to" evolve in my professional life or not or just stay on the current path so as not to risk losing it. I would like to [stay on the career path that I'm on] but I'm afraid that it will keep me from meeting my responsibilities as a mother.

Some of the clients in this category had *personal issues* and counseling needs that went beyond the reasons they originally presented for career counseling. These personal needs were often too complicated to resolve during the brief career counseling intervention provided. Although some reported that the intervention helped them in part, for these clients, additional time and other forms of help were needed to resolve their more personal issues. Despite the brief and career-focused nature of the counseling provided, participant 11177 expressed the benefits of this intervention on personal issues very precisely:

I knocked on your door because I needed help back then, someone to listen to me, to attend to my well being. I needed someone to recognize that I was psychologically abused by my father and by a team of nurses in [name of city]. I just wanted to leave it all behind and start over, and I couldn't seem to take a step back and distance myself from it.

2.2.4. No professional evolution

Clients in this category did not report any real progress concerning their career project between the end of the intervention and one year later. As shown in [Table 2](#), some of these participants were high school students who neither had continued their education nor had chosen a profession. For most clients, this lack of professional evolution was related to the deterioration of their personal situations. Almost all clients in this group either reported severe personal difficulties at the beginning of the intervention (e.g., recurring bouts of depression) or had to face serious personal difficulties during the follow-up periods (e.g., parents' divorce, relationship break-up, etc.). As illustrated by comments in other categories, dealing with the interplay between personal and professional life spheres is a recurrent theme in career counseling. Personal difficulties prevented some clients from investing time and energy into pursuing their professional goals. For instance, client 11020 was finishing high school during the counseling intervention, and also was being seen by a psychiatrist who had prescribed anxiolytic medicine to him. Although his plan included pursuing higher education, he only reported health concerns at the 1-year follow-up: "I suffer daily from a permanent and strong state of general anxiety and also have further bouts of anxiety at the beginning of the evening. This keeps me from pursuing my education and from working. It's handicapping!"

Client 11106 was a teacher who had recently experienced burnout. She was considering a job change due to relational difficulties she had with her colleagues. She was also in the midst of a personal crisis due to marital conflict. The counselor recommended that she first work on her personal difficulties with her husband and colleagues before making a radical career change. After three months, she managed to "distance herself" from some of her professional difficulties while her marital relationship was in question. After one year, she and her husband had separated: "My husband left me, which makes it impossible for me to foresee a job change at the moment. [...] My family situation is difficult and my current state [of mind] disastrous!"

3. Discussion

Using both quantitative and qualitative data provided rich information on the long-term impacts of our brief, individual, face-to-face career counseling intervention. Quantitative results supported the two hypotheses regarding the effectiveness of both short- and long-term career-specific and non-career-specific outcomes of career counseling. Career decision difficulties significantly decreased between pre- and post-assessment times and continued to moderately decrease at follow-up times. Interestingly, an interaction effect with age indicated that younger clients showed decreasing career decision difficulties in the long-term. Moreover, although satisfaction with life moderately increased during intervention, no significant change was observed over the following year. However, a main effect of age on this variable highlighted that, again, younger clients presented systematically higher scores on life satisfaction than older clients.

The extent to which clients implemented the plans they discussed with their counselors and their impressions of having achieved their career goals were also studied. Qualitative results showed that the great majority of the clients implemented their career plans within one year. Some of them only partially implemented their plans, a small number of clients changed their plans relatively successfully, and some did not implement their planned professional goals. Based on the ensemble of the quantitative and qualitative results reported here, we estimate that the career counseling intervention presented in this study appeared to be effective overall and adapted to the wide range of clients visiting the career counseling service. In addition, the effectiveness of the intervention does not appear to be associated with clients' continued participation in the study.

Using quantitative and qualitative data allowed us to explore and to better understand the specific meaning of a significant career indecision decrease for clients and how they developed their career paths. Results indicated different evolutions of the career decision difficulties categories identified by Gati et al. (1996, 2000), especially for the Lack of Readiness category, which did not decrease from pre- to post-intervention, but did decrease significantly at the 3-month post-intervention mark. Notably, clients' Indecisiveness scores showed improvement, decreasing in the long-term.

In Gati and Asher's (2001) PIC model, the readiness to make a career choice must be in place before entering into the career choice process. Clients, then, are ready to concentrate on the more cognitive elements of their career choice: prescreening, exploration, and choice. Surprisingly, the present study showed an opposite trend, where differences in lack of readiness were observable only in the long-term. Moreover, the three readiness subscales (Motivation, Indecisiveness, and Beliefs) were related to motivational and emotional aspects of career choice. Apparently, the assessed intervention had an impact on those more embedded and stable characteristics only over a longer period of time. This can be explained by the fact that clients might need time after the termination of career counseling to more fully consider their career plan and what was done within the sessions. Additionally, implementing some aspects of their project might positively influence their readiness.

This last remark leads to another trend observed throughout the long-term results (see Fig. 1): the CDDQ Total score and its three categories immediately following post-intervention assessment evolved differentially according to the age of the participants (though not significantly for the lack of readiness). The intervention was, in fact, equally effective between pre- and post-intervention assessment periods for clients in terms of gender and age. Clients younger than 21 years of age were still more concerned by the long-term decrease in indecision whereas clients older than 22 years of age stayed more stable or reported slightly increasing difficulties on most of the career decision-making categories. Although the intervention is equally effective for the entire sample in the short-term, younger participants seemed to benefit more from it in the long-term. It is possible that this is a manifestation of the decrease of developmental indecision in younger participants rather than generalized indecisiveness (Heppner & Hendricks, 1995; Tyler, 1961). This decrease may be greater for younger clients because they are confronted with making a first career choice more urgently within the year following the intervention than for adults in transition or for adults who already have a job.

Additionally, the implementation of a career path acted as a catalyst for reducing developmental and temporary indecision. Younger clients may have been more inclined to utilize the tools for career choice developed during the intervention because of the proximity of their deadlines (e.g., choosing between high school or an apprenticeship, entering university, etc.). Of course, in our uncertain world, developmental indecision and transition processes can appear at any age. Similarly, indecisiveness may concern the youngest clients, as well. It can nevertheless be hypothesized that clients who are reorienting their career paths are perhaps concerned with longer career decision-making processes, which may imply reorganizing their entire life, not just their professional orientation. As Heppner and Hendricks (1995) posited, career counseling with undecided versus indecisive clients implies different processes. The service provided to people in reorientation may need to be redesigned as a longer-term process: Adults' career changes are often intermingled with insertion issues or dissatisfaction in other areas of their lives, and may require more time in counseling to successfully resolve.

Qualitative results supported and deepened the information obtained from quantitative analyses. They were coherent with the quantitative results, showing significant decreases in vocational indecision, as 65% of clients implemented their career choices within one year. Additionally, 12% of clients changed their minds and decided to follow a new career plan. About half of them had already implemented the new plan one year after the intervention. Thus, with more than 75% of clients successfully implementing their career choices after one year, the concrete effectiveness of the intervention appears confirmed.

Indeed, having implemented their project might surely have helped them to have more certainty about their choice. For clients who changed their career plans, an interesting issue is the potential causal relationship between the influence of the intervention and the decisions to change. It could be hypothesized that the career counseling process helped them make this decision with more confidence and in a more autonomous way. This interpretation is strengthened by the fact that the counseling service also aimed at helping clients explore several options in order to broaden their choice options and to prevent stress linked to career plan changes.

According to Phillips (1992), the implementation of a career decision is a critical phase of the career counseling process that has been overlooked by many researchers. Moreover, Heppner and Heppner (2003) wondered if the short-term outcomes presented in the literature are still relevant in the long-term. For instance, a career indecision score may decrease, but does not guarantee the "goodness" of the decision made. Not only did this study investigate longitudinal data by examining the implementation of career decisions, but it also explored how people perceived this process. Indeed, results confirmed that some of the implemented projects were not as satisfying as clients thought they would be.

As illustrated above, two groups of clients took career paths that resulted in not reaching their career objectives, partly because of persistent or emerging personal difficulties. This observation could be linked to the quantitative results concerning clients' lack of readiness. Clients who partially implemented their career plans or who showed no evolution might be less prepared to make a career choice and, therefore, may have contributed to the relatively high level of lack of readiness found throughout the study. Further questions emerged from those different observations. For instance, the results concerning lack of readiness might illustrate the limits of a brief career-focused counseling intervention, especially for clients whose personal issues are too critical to be effectively treated in a short amount of time. Alternately, they could indicate that specific, person-centered interventions should be conceived for people with high levels of lack of readiness. The solution to these dilemmas depends on the time invested in career counseling, the counselor's level of training and expertise in providing personal counseling, and on clients' specific and individual needs.

Concerning the level of expertise of the counselors who provided the intervention in this study (master's-level students), it is worth reiterating that each session was prepared not only by the advanced-level student but also by a support team comprised of

an experienced supervisor and several observing students. Although we recognize that the student counselors' inexperience may have impacts on the overall effectiveness of the intervention, we tried to minimize those effects through videotaping the sessions and, at times, providing *in vivo* supervision in order to ensure the quality and standardization of the intervention received by clients. However, further empirical studies should be designed to investigate what impact using counselors-in-training and these supervision methods might have on the resulting effectiveness of the intervention.

Finally, concerning the limits of a counseling service exclusively centered on career concerns, it is worth reiterating that career counselors in Switzerland are not trained to treat more profound counseling needs, such as depression or marital conflicts. Although some clients obviously benefit from career counseling to improve their personal situations (e.g., self-awareness, self-esteem, motivation), as indicated by clients who partially implemented their career goals, some clients' personal difficulties are so urgent that dealing with their professional issues must be delayed. Although career counselors can provide support by actively listening to *all* of clients' concerns (professional and personal), in Switzerland, clients with deeper personal concerns would be referred to another clinician (e.g., psychologist or psychiatrist) and encouraged to seek those services in addition to or before returning to career counseling sessions. Nevertheless, career counseling may play an important role in stimulating client's personal awareness and insight.

3.1. Limitations

This study includes several limitations. The first is the absence of a control or reference group for comparison. Although a comparison group was included in the larger study in which data for this study was also collected, the comparison group was not retained for long-term analysis due to cost concerns and difficulties related to continuing to track this group in the year that followed our initial contacts. Secondly, the amount of qualitative data was limited by the manner in which it was collected: Brief free-write responses used a limited amount of space on the follow-up forms and were introduced in the middle of the data collection period for the larger study. Thirdly, the information used to determine clients' career paths was reported by two different sources: to establish a baseline by the counselor (at pre- and post-intervention times) and for follow-up purposes by the clients themselves (at 3-month and 1-year post-intervention). Consequently, the subjectivity of the counselors' interpretation of the clients' career plans may, in some cases, misrepresent the clients' perspectives, which may have resulted in unwitting data analysis issues. Lastly, the second author, who was extensively involved in coding and interpreting the qualitative data, is a native English speaker with a C1 (advanced) level in French (see [Europass, 2011](#); [Wikipedia, 2011](#)). The qualitative data were all written in French. Although .78 seems quite reasonable in terms of interrater reliability, and the first and second authors met multiple times as described to confer and to agree upon terms and definitions with consultation from the fifth author, the fact that the data were written in French and coded by a native English speaker could explain why the interrater reliability found was not higher.

3.2. Future research

Further research should consider closer examinations of the counseling process through interviews, based, for instance, on the career paths developed in this study. Such a study may attempt to highlight patterns of successful interventions and more details regarding why some clients did not implement their career plans one year after terminating career counseling. Interviews could also investigate what aspects of their career paths clients attribute to the intervention, and their own perceptions of how they evolved professionally and personally during the counseling process. The latter could be compared to the counselors' impressions. Moreover, specific interventions should be developed and assessed in order to focus on more motivational and emotional difficulties, and instruments capable of more precisely identifying these kinds of difficulties should be developed and validated for use. These specific interventions could be compared to standard interventions using an experimental design, allowing for such a comparison in the long-term.

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