

A Career Construction Course for High School Students: Development and Field Test

Cennet Gülşen, Gürcan Seçim, and Mark Savickas

We used a pretest-posttest, control group design to evaluate a psychoeducational career construction counseling course for ninth-grade students at two high schools in Northern Cyprus. The 80 participants were randomly assigned to experimental ($n = 42$) and control ($n = 38$) groups. Each group completed pre- and posttest measures of future orientation, career adaptability, life satisfaction, and belief in achieving their dreams. The experimental group received the five-session course, whereas the control group received one session about stress and test anxiety. Results indicated significant increases in scores on all measures for the experimental group only. Future studies should include long-term effects of the group program based on career construction theory.

Keywords: career construction counseling, life designing, career education, career intervention efficacy, career plan

Constantly changing living conditions, including the current COVID-19 pandemic, natural events, and communal problems prompt and often necessitate that people adapt and reconstruct their life careers. Contemporary life is also wrought with rapid developments in technology and globalization (Savickas, 2008). Such conditions increase the need for career interventions at every level to prepare people for a constantly changing world of work (Maree, 2019). Adolescents in particular question themselves about what to do in their future (Savickas, 2008), and adolescence is a period in which critical decisions about career development are made (Super, 1983). At this time, adolescents must begin thinking about and planning for their adult lives. In the process, adolescents need to have experiences to help them design their own opportunities, possibilities, perceptions, and expectations for the future (Nurmi, 2004). Because of the career transition that students experience, they may have high levels of anxiety and stress (Pietarinen et al., 2010). Since adolescents negotiate the changes and difficulties that they face, it is important to support them during this period (Maree, 2009; Savickas, 2008).

Career construction counseling (CCC) assists individuals to make career choices and changes through a narrative intervention that revises and elaborates psychosocial identity. The intervention involves an interpretative and interpersonal process through which individuals engage in self-reflection, impose direction on their vocational behavior, and make

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meaning of their careers. Although there is extensive literature about CCC for individuals, only a few studies have been published on CCC group or educational interventions. We identified only five studies that used a group guidance method (Barclay & Stoltz, 2016; Fabio & Maree, 2012; Maree, 2019; Maree et al., 2018; Santilli et al., 2019) and two studies of a college course (Cheung & Jin, 2016; Obi, 2015).

Our study used random assignment of participants to a pretest-posttest, control group design to evaluate the effectiveness of a psychoeducational course for high school students based on CCC discourse (Savickas, 2019). In the following sections, we describe the cultural context of the study, the development of the CCC course, and the findings from an initial empirical evaluation.

Context of the Study

The present study took place in Cyprus, the third largest island in the Mediterranean Sea. The Turkish part of Cyprus is located on the north of the island. Although the island is rife with political issues, Northern Cyprus has progressed in its educational system and contains both formal and informal education (Erden & Erden, 2019). Formal education covers the period of preschool through high school. There are four types of high schools: multiprogram modern, where Turkish is the primary language of instruction; college/Anatolian, where English is the primary language of instruction; vocational/technical, focusing on training and lifelong learning; and fine arts, which also offer courses for adults. The first two types provide instruction in four areas: science (e.g., physics, chemistry, biology), social studies (e.g., history, geography, philosophy), foreign language (e.g., English, German, French), and Turkish-mathematics (e.g., math, Turkish language and literature; Department of Educational Planning and Program Development, 2005). For our study, we randomly assigned students from multiprogram modern high schools to an experimental or a control group.

Career Construction Course Development

A psychoeducational course to foster the career development of high school students was designed based explicitly on CCC (Savickas, 2019). The goals of the course are to foster key career construction processes, including self-exploration, career adaptability, future orientation, narrative identity, and life satisfaction. The course content concentrates on five areas covered in individual CCC that address vocational stories about self as social actor, as motivated agent, and as autobiographical author, as well as the perspective students take on career issues and how they might deal with them. The career construction group program was created using sources based on career construction theory. The developed program was reorganized upon the suggestions of seven teachers, who were experts in this field, on the basis of their evaluations in terms of content analysis and content validity carried out on regular intervals. All the experts agreed on the final version of the developed program.

In designing the course, we followed the guidance of Brown and Ryan-Krane (2000), who defined key components that determine the impact of a career course. Course procedures included group discussions, informational presentations, homework assignments, and support for career decision-making. The written assignments and

homework were woven systematically throughout the course. Another effective ingredient in a career course, according to Brown and Ryan-Krane, is the number of sessions and hours spent in a session. Brown and Ryan-Krane suggested that five sessions may be the most effective number of group career intervention programs because the effect size decreases as the number of sessions increases. Therefore, we organized the career construction course into five sessions.

Session 1: Role models. In the initial session, students explore how they have constructed themselves as a social actor by discussing role models. The session aims to have students consider their personal characteristics and how the characteristics can help them to create their future career. The session begins with an explanation of the course content and rules (e.g., each individual participating in every session, respecting each other, not interrupting others). Students are encouraged to take notes of the activities completed during the group sessions and to read and think about them during and after the process. Next comes a warm-up activity in which students introduce themselves by name and describe themselves with three words. Then, individuals are asked to think about five role models whom they admire. After they are given time to identify the models, students share with the group the characteristics that they admire about their models and how they themselves are similar to and different from their chosen role models. A group discussion ensues and is prompted by several questions, including the following: Which characteristics of those people do you want to have? How would these characteristics benefit you? How do your role models affect your own behavior? How would you like to do the same job or activity as the model?

Session 2: Favorite story. In the second session, students explain the script of their current favorite story, whether from a book or a movie. The goal is for students to consider the story plots as broad plans that they might envision for themselves. The students are given a form and asked to write the plots of their three favorite stories. Group interaction follows with questions that include the following: What is the crucial point of the story? What would you do if it were you? What is the reason that the story affects you? Are there similarities in the three stories to your own life story? How can you make your own story better in the current conditions? If you were to take small steps every day in order to reach your targets, what would those steps be? If you reach your targets, what will your living conditions be like? What can you do for this? The session ends by assigning some relevant homework.

Session 3: Vocational interests. In the third session, participants discuss agentic strivings and goals in the form of manifest interests displayed in such things as favorite magazines, television shows, websites, games, and school subjects. This session also includes consideration of favorite sayings or slogans because a motto usually advises the individual about the adaptability resources and adapting actions required to move to the next episode in their career story. Goals for the session also include helping students consider and discuss how their families affect their career development and how they might adapt their choices to their parents' wishes. Students complete a form that asks questions that include the following: What is the definition of success in your family? What is your own definition of success? How well do the two definitions match? What level of support does your family

provide for their decisions? After discussing their responses, students are asked if they face any career obstacles. If students identify career obstacles, they discuss how they might overcome them. Then, they are asked if there is a familial and personal slogan for success. Participants are asked to share their responses with the group. As homework, they are given a form that asks them to write out three early recollections.

Session 4: Early recollections. In the fourth session, participants express their feelings and thoughts about the results of the first three sessions. Then, they are encouraged to consider how previous experiences affect their future decisions and choices. With this awareness, they report the three memories that they wrote as homework. Their early recollections speak to the current perspective each student is taking on their future career. For most students, the early recollections are more about the future, in that students select, elaborate, and reconstruct memories that guide present or future action. Group interaction is prompted using questions that include the following: What did you feel when you thought about the memories? How similar are your current feelings to those about the past? The empty chair technique (Corey, 1991) is used in asking students what they would say to their younger selves. What might they want to say to the person who was with them in the recollection? Is there an effect of their first memories on their current career preferences? What kind of decisions do they take? How can they make more effective decisions? A form is given to be filled out as homework to prepare for the next session.

Session 5: Narrating the story. The fifth session focuses on narrating one's career story as it has progressed so far and may progress further in the future. This session is aimed at fostering construction of a narrative identity and articulation of tentative educational and vocational plans. Students acknowledge their own talents and state their tentative educational and vocational interests. The students then listen to a story about the search for meaning. It tells of a gazelle that spends its life searching and discovers at the very last moment that what it has searched for in life is within itself. Students are asked to think about this story. Then, they are asked about what they search for in life or want from life. Are there characteristics that they discover in themselves after listening to the story? If yes, what are they? What can they do with these characteristics? In which fields can they work comfortably? What kind of professions can they do? What are the projects for their life? From whom and how can they get support to realize their projects? Activities concentrate on what kind of future they desire; what they can plan for the future; what kind of responsibilities they can undertake; what obstacles they might encounter; how they might overcome the obstacles; and finally, what their most important wish is for their career and for their life. (Complete details about the course are available upon request from the first author.)

Field Test

The course was field tested using a pretest-posttest design with a control group. Two hypotheses were tested. First, we hypothesized that post-test scores on measures of future orientation, career adaptability, life satisfaction, and belief in ability to achieve personal dreams would be significantly higher for students who participated in a career construction course than for students in a control group. Second, we hypothesized

that posttest scores on all measures would be significantly higher than pretest scores for the experimental group.

Method

Participants

Participants consisted of 80 students who were in the spring term of the ninth grade in Famagusta, Northern Cyprus. Mean age of the students was 14.25 years ($SD = 0.61$). The experimental group consisted of 26 female and 16 male students, and the control group consisted of 22 female and 16 male students. Participants attended two different high schools. In literature courses at one school, there were 25 students in the experimental group and 21 students in the control group. In mathematics courses at the other school, there were 17 students in the experimental group and 17 students in the control group. Required permissions were obtained from relevant ministries and institutions. The students in the study volunteered to participate. Students who did not volunteer were excluded from the study. There were no significant differences in sociodemographic attributes between the experimental and control group students.

Measures

From a review of research on career construction theory (Rudolph et al., 2017), we identified three variables pertinent to evaluating effects of the course: future orientation, career adaptability, and life satisfaction. The inventories were administered at pretest and posttest to measure these variables along with an item that addressed participants' belief in their ability to achieve their dreams.

Future orientation. Di Maggio et al. (2016) developed the Design My Future (DMF) scale to assess future orientation and resilience among individuals ages 14 to 19 years. *Future orientation* refers to the hopes, thoughts, plans, motivations, and emotions an individual has for their future (Arnett, 2000; Nurmi, 1989). *Resilience* refers to the ability to cope with challenging life experiences, including uncertainty (Sapientza & Masten, 2011). Future orientation provides a basis from which to set up targets and plan for the future. The original scale consists of 19 items with a 5-point Likert-type response format (1 = *it does not describe me at all*, 5 = *it describes me very well*). It contains two subscales that measure future orientation and resilience, with 11 items and eight items, respectively. Di Maggio et al. found that factor loadings ranged between .40 and .77. Cronbach's alpha internal consistency reliability was .88 for Future Orientation and .80 for Resilience. Similar to the original scale, the Turkish-language version of the DMF adapted by Gülşen and Yalçinkaya (2020) has 18 items and shows a two-factor structure with Future Orientation and Resilience. The eigenvalue of the first factor of the scale is 6.17, accounting for 34.29% of the total variance. The eigenvalue of the second factor of the scale is 1.84, accounting for 10.24% of the total variance (Gülşen & Yalçinkaya, 2020). Cronbach's alpha coefficients are .87 for the Future Orientation subscale, .77 for the Resilience subscale, and .88 for the total scale.

Career adaptability. Increasing clients' career adaptability resources, or career adaptabilities, is a central goal of career education and counseling.

Career adaptability resources are viewed as self-regulatory psychosocial competencies that shape adapting strategies and, when activated, condition adapting behaviors. Adaptable high school students are conceptualized as (a) becoming concerned about their vocational future, (b) taking control of shaping their vocational future, (c) displaying curiosity by exploring possible selves and future scenarios, and (d) showing the confidence to pursue their aspirations. We measured career adaptability and its four dimensions of concern, control, curiosity, and confidence with the Career Adapt-Abilities Scale–Short Form (CAAS-SF; Maggiori et al., 2017). Specifically, we used a Turkish translation that was validated with three different age groups (Işık et al., 2018). For the Turkish version, Işık et al. (2018) determined the reliability coefficient for a high school sample was .75 for the Concern subscale, .71 for Control, .70 for Curiosity, .70 for Confidence, and .85 for total career adaptability. For an undergraduate student sample, alphas were .79 for Concern, .77 for Control, .76 for Curiosity, .79 for Confidence, and .90 for total career adaptability. For an adult sample, alphas were .81 for Concern, .80 for Control, .84 for Curiosity, .87 for Confidence, and .91 for total career adaptability.

Satisfaction with life. Satisfaction with life refers to the cognitive component of subjective well-being. The Satisfaction With Life Scale (SWLS; Diener et al., 1985) has been used in at least 10 studies dealing with career construction theory. We used the version translated into Turkish by Dağlı and Baysal (2016) with a 5-point Likert-type response format (1 = *not at all suitable*, 5 = *very suitable*). The Cronbach's internal consistency coefficient for the scale was .88, and test-retest reliability was .97 (Dağlı & Baysal, 2016). Factor analysis indicates that the scale shows a single-factor structure and comprises five items from the original version of the SWLS.

Dream achievement. We used a single item (belief-in-your-dreams item) to assess how strongly students believed they could achieve their career-related dreams. Students rated their belief in their ability to achieve their dreams from 1 (*I strongly don't believe*) to 10 (*I strongly believe*).

Procedure

We obtained required permissions from relevant ministries and administrators to apply the program at schools. School administrators designated the most enthusiastic classes to participate in the program. Classes were randomly assigned to either the experimental or the control group. The course met once per week for 5 weeks. The first session lasted 75 minutes, and the remaining four sessions were each 60 minutes. Session 1 took longer because it contained more activities than the subsequent sessions. The control group experienced only one 50-minute session, in which the topics of stressful experiences and test anxiety were addressed.

Before the program started, each class of students was asked if they were willing to participate. The purpose of the study was explained to the participants, who were informed about their roles and rights. An informed consent form was received from each participant. Participants were informed that their identities would not be disclosed in the published findings of the study. To verify findings and prevent misinterpretation of the data, we decided to apply the education program to the control group and to submit results to participants and to school administrators, including the school counselor. If necessary, counseling services were provided to participants.

The first author managed all sessions, given her expertise in CCC and that she had designed the structure of the course. Pretest measures were conducted at Session 1, and posttest measures were done at Session 5, the final session. A single session was completed with the control group. Our aim was to decrease the influence of the group atmosphere on the results of the study.

An introductory activity was carried out with the experimental group to warm students up to working together as the career construction group session was applied. The same introductory warm-up activity was done with the control group, which was asked to identify problems they experienced most. Because test anxiety and stress were the predominant topics for the control group, a 50-minute activity was organized as a group chat to decrease the effect of group interaction on the study outcome.

Data Analysis

A Wilcoxon signed-ranks test was used to compare pretest and posttest results of the experimental and control groups. We used the Mann-Whitney *U* test to compare posttest results of the experimental and control groups. We calculated effect sizes to determine statistically significant differences in posttest scale scores of the experimental and control groups. The Mann-Whitney *U* test was also applied to determine whether any gender differences exist in the scores between and among groups. We tested the causal relationship between the independent and dependent (study outputs) variables using binary logistic regression analysis.

Results

As shown in Table 1, the Wilcoxon test results indicated no statistically significant differences between the pre- and posttest scores for the students in the experimental or control groups on the DMF total scale or the Future Orientation and Resilience subscales; the SWLS; the CAAS-SF total scale or the Concern, Control, Curiosity, and Confidence subscales; or the belief-in-your-dreams item. Results of the Wilcoxon test comparing the pre- and posttest scores of the experimental group students, shown in Table 1, indicated a significant statistical difference, with the students scoring higher at posttest on the DMF total scale and the Future Orientation and Resilience subscales; the SWLS; the CAAS-SF total scale and the Concern, Control, Curiosity, and Confidence subscales; and the belief-in-your-dreams item. The same analysis comparing pre- and posttest results for the control group indicated no statistically significant differences between pre- and posttest scores on the SWLS or the belief-in-your-dreams item. There were significant differences on the other scales, showing a decrease in scores for the DMF scale and both of its subscales as well as the CAAS-SF total scale and the Concern and Confidence subscales.

Mann-Whitney *U* test results indicated a statistically significant difference between pre- and posttest scores for all variables in favor of the experimental group as seen in Table 2. Table 2 also provides effect sizes for the intervention on the posttest results of the two groups. We used Cohen's (1988) method to compute Cohen's *d*. In general, Cohen recommended a *d* value less than 0.2 represent a weak effect size, 0.5

TABLE 1

Results of the Wilcoxon Signed-Ranks Test Comparing Pretest and Posttest Scores for the Experimental and Control Groups

Group and Measure	Pretest	Posttest	<i>t</i> / <i>Z</i>	<i>p</i>
	<i>M</i> ± <i>SD</i>	<i>M</i> ± <i>SD</i>		
Experimental (<i>n</i> = 42)				
DMF total	61.00 ± 11.02	69.07 ± 9.17	-9.98	<.05
Future Orientation	33.86 ± 8.04	38.29 ± 5.69	-7.59	<.05
Resilience	27.14 ± 4.54	30.79 ± 4.45	-8.51	<.05
SWLS	15.48 ± 3.70	17.67 ± 2.59	-6.59	<.05
CAAS-SF total	41.24 ± 7.61	46.45 ± 6.06	-9.43	<.05
Concern ^a	10.33 ± 2.44	11.60 ± 1.91	-4.87	<.05
Control ^a	10.62 ± 3.12	11.74 ± 2.08	-3.84	<.05
Curiosity ^a	9.88 ± 2.38	11.38 ± 2.07	-4.88	<.05
Confidence	10.40 ± 2.57	11.74 ± 2.15	-5.15	<.05
BYD ^a	7.02 ± 1.12	7.71 ± 0.83	-4.47	<.05
Control (<i>n</i> = 38)				
DMF total	60.53 ± 11.11	58.47 ± 10.46	4.60	<.05
Future Orientation	33.87 ± 7.93	32.68 ± 7.60	4.40	<.05
Resilience	26.66 ± 4.60	25.79 ± 4.17	2.87	.007
SWLS	16.00 ± 3.92	15.66 ± 3.21	1.57	.124
CAAS-SF total	41.84 ± 7.51	40.11 ± 6.84	5.56	<.05
Concern ^a	10.13 ± 2.85	9.71 ± 2.57	-2.83	.005
Control ^a	10.26 ± 2.61	9.84 ± 2.26	-1.91	.057
Curiosity ^a	10.13 ± 2.12	9.97 ± 1.84	-0.85	.397
Confidence	11.31 ± 2.46	10.58 ± 2.27	3.59	.001
BYD ^a	7.05 ± 1.45	6.76 ± 1.22	-9.43	<.05

Note. DMF = Design My Future scale; SWLS = Satisfaction With Life Scale; CAAS-SF = Career Adapt-Abilities Scale–Short Form; BYD = belief-in-your-dreams item.

^aWilcoxon signed-ranks test.

represent a moderate effect size, and a value greater than 0.8 represent a strong effect size. Our results indicated a medium to large effect size. The effect size for the DMF total score was strong ($d = 1.08$), as were the effect sizes for the Future Orientation ($d = 0.84$) and Resilience ($d = 1.16$) subscales. The effect size for the SWLS was moderate ($d = 0.69$). The effect size for the CAAS-SF total score was strong ($d = 0.98$), as were the effect sizes for the Concern ($d = 0.83$) and Control ($d = 0.87$) subscales. The effect sizes were moderate for the Curiosity ($d = 0.72$) and Confidence ($d = 0.52$) subscales. The effect size for the belief-in-your-dreams item was strong ($d = 0.91$).

The experimental group's pre- and posttest results were examined by gender as shown in Table 3. Posttest results indicated higher scores for female versus male students in Future Orientation ($M = 39.81$ vs. $M = 35.81$), Resilience ($M = 31.58$ vs. $M = 29.50$), total DMF ($M = 71.38$ vs. $M = 65.31$), and total CAAS-SF ($M = 47.81$ vs. $M = 44.25$). Thus, female students were in a better situation than male students in terms of these levels. When reviewing pretest results, we found a similar pattern (see Table 3), with Future Orientation, Resilience, and total CAAS-SF results higher for female students than for male students.

We conducted binary logistic regression analysis to examine the pre- and posttest model consistency of our program (experimental and control group; see Table 4). The explanatory value of the model after the test ($R^2 = .30$) increased in comparison with the explanatory value

TABLE 2

**Results of the Mann-Whitney *U* Test Comparing Posttest Scores
for the Experimental and Control Groups**

Measure and Group	<i>M</i> ± <i>SD</i>	<i>Mdn</i>	Range	<i>U</i>	<i>p</i>	Cohen's <i>d</i>
DMF total				-4.83	<.05	1.08
Experimental	69.07 ± 9.17	70.50	45.00–85.00			
Control	58.47 ± 10.46	60.00	38.00–82.00			
Future Orientation				-3.75	<.05	0.84
Experimental	38.29 ± 5.69	39.00	25.00–49.00			
Control	32.68 ± 7.60	33.00	14.00–47.00			
Resilience				-0.17	<.05	1.16
Experimental	30.79 ± 4.45	31.00	18.00–38.00			
Control	25.79 ± 4.17	25.00	18.00–35.00			
SWLS				-3.09	.003	0.69
Experimental	17.67 ± 2.59	18.00	11.00–22.00			
Control	15.66 ± 3.21	16.00	10.00–23.00			
CAAS-SF total				-4.40	<.05	0.98
Experimental	46.45 ± 6.06	46.00	31.00–57.00			
Control	40.11 ± 6.84	39.00	24.00–56.00			
Concern ^a				-3.38	.001	0.83
Experimental	11.60 ± 1.91	12.00	8.00–15.00			
Control	9.71 ± 2.57	10.00	4.00–14.00			
Control ^a				-3.51	<.05	0.87
Experimental	11.74 ± 2.08	12.00	8.00–15.00			
Control	9.84 ± 2.26	10.00	5.00–14.00			
Curiosity ^a				-3.33	.001	0.72
Experimental	11.38 ± 2.07	11.50	6.00–14.00			
Control	9.97 ± 1.84	10.00	7.00–15.00			
Confidence				-2.34	.022	0.52
Experimental	11.74 ± 2.15	11.00	7.00–16.00			
Control	10.58 ± 2.27	10.50	5.00–15.00			
BYD ^a				-3.89	<.05	0.91
Experimental	7.71 ± 0.83	8.00	6.00–9.00			
Control	6.76 ± 1.22	7.00	3.00–9.00			

Note. DMF = Design My Future scale; SWLS = Satisfaction With Life Scale; CAAS-SF = Career Adapt-Abilities Scale–Short Form; BYD = belief-in-your-dreams item.

^aMann-Whitney *U* test.

before the test ($R^2 = .10$). We observed that the amount increased after the test; however, the increase was not significant.

Discussion

We designed a psychoeducational course based on CCC to provide high school students with meaningful activities to foster self-discovery and exploration of tentative occupational preferences. We field-tested the course using pre- and posttests with students randomly assigned to experimental or control groups in two high schools. Our first hypothesis was that students' scores would increase on measures of future orientation, career adaptability, satisfaction with life, and beliefs in achieving their dreams for the experimental group but not for the control group. Posttest scores of the experimental group students for the DMF total scale and the Future Orientation and Resilience subscales were higher than the posttest scores of the control group students. These findings

TABLE 3

Results of the Mann-Whitney *U* Test Comparing Pretest and Posttest Scores for the Experimental Group by Gender

Measure and Gender	<i>M</i> ± <i>SD</i>	<i>Mdn</i>	Range	<i>t/U</i>	<i>p</i>
Pretest					
DMF total				−2.74	.006
Female	64.73 ± 9.57	65.50	40.00–82.00		
Male	54.94 ± 10.89	56.50	33.00–72.00		
Future Orientation				−2.70	.007
Female	36.50 ± 7.68	37.00	17.00–48.00		
Male	29.56 ± 6.83	29.50	17.00–40.00		
Resilience				−1.84	.065
Female	28.23 ± 4.13	28.00	19.00–35.00		
Male	25.38 ± 4.75	24.00	16.00–32.00		
SWLS				−0.33	.745
Female	15.35 ± 3.54	15.50	9.00–22.00		
Male	15.69 ± 4.05	16.00	9.00–23.00		
CAAS-SF total				−2.18	.029
Female	43.15 ± 6.93	44.00	23.00–54.00		
Male	38.13 ± 7.84	37.00	24.00–53.00		
Concern ^a				−1.28	.201
Female	10.81 ± 1.98	11.00	6.00–14.00		
Male	9.56 ± 2.94	9.50	5.00–14.00		
Control ^a				−1.56	.120
Female	11.12 ± 3.09	11.00	3.00–15.00		
Male	9.81 ± 3.08	10.00	4.00–15.00		
Curiosity ^a				−1.47	.142
Female	10.27 ± 2.44	11.00	5.00–14.00		
Male	9.25 ± 2.21	9.50	5.00–12.00		
Confidence				−1.79	.073
Female	10.96 ± 2.41	10.50	6.00–15.00		
Male	9.50 ± 2.63	9.50	3.00–14.00		
BYD ^a				−0.18	.861
Female	7.08 ± 1.20	7.00	5.00–9.00		
Male	6.94 ± 1.00	7.00	5.00–8.00		
Posttest					
DMF total				−1.88	.060
Female	71.38 ± 8.04	72.50	55.00–85.00		
Male	65.31 ± 9.88	64.50	43.00–79.00		
Future Orientation				−2.15	.032
Female	39.81 ± 5.37	41.00	29.00–49.00		
Male	35.81 ± 5.47	35.50	25.00–45.00		
Resilience				−1.31	.189
Female	31.58 ± 4.07	31.50	23.00–38.00		
Male	29.50 ± 4.86	30.00	18.00–36.00		
SWLS				−0.37	.715
Female	17.65 ± 2.35	17.00	14.00–22.00		
Male	17.69 ± 3.03	18.00	11.00–22.00		
CAAS-SF total				−2.08	.038
Female	47.81 ± 5.92	47.50	31.00–57.00		
Male	44.25 ± 5.79	44.00	32.00–56.00		
Concern ^a				−1.12	.265
Female	11.88 ± 1.75	12.00	8.00–15.00		
Male	11.13 ± 2.13	11.00	8.00–14.00		
Control ^a				−1.80	.072
Female	12.19 ± 1.96	12.00	8.00–15.00		
Male	11.00 ± 2.13	11.00	8.00–15.00		

(Continued)

TABLE 3 (Continued)

Results of the Mann-Whitney *U* Test Comparing Pretest and Posttest Scores for the Experimental Group by Gender

Measure and Gender	<i>M</i> ± <i>SD</i>	<i>Mdn</i>	Range	<i>t/U</i>	<i>p</i>
Posttest (Continued)					
CAAS-SF total (continued)					
Curiosity				-1.12	.265
Female	11.62 ± 2.19	12.00	6.00–14.00		
Male	11.00 ± 1.86	11.00	6.00–14.00		
Confidence				-1.59	.113
Female	12.12 ± 2.27	12.50	7.00–16.00		
Male	11.13 ± 1.86	11.00	9.00–15.00		
BYD				-0.36	.719
Female	7.69 ± 0.93	8.00	6.00–9.00		
Male	7.75 ± 0.68	8.00	6.00–9.00		

Note. DMF = Design My Future scale; SWLS = Satisfaction With Life Scale; CAAS-SF = Career Adapt-Abilities Scale–Short Form; BYD = belief-in-your-dreams item.

^aMann-Whitney *U* test.

are consistent with other research showing that youth who received a CCC-based workbook intervention obtained positive feelings about their career planning and futures (Santilli et al., 2019). Posttest scores of our experimental group students for the CAAS-SF total scale and the Concern, Control, Curiosity, and Confidence subscales were higher in comparison with the posttest scores of the control group. Our findings support previous findings that CCC can be used effectively in group contexts (Barclay & Stoltz, 2016; Fabio & Maree, 2012; Maree, 2019; Maree et al., 2018). On the basis of our results, it seems that experimental group students are ready to integrate their subjective identity profiles within their future time perspective and create a life design for their future (Guichard, 2009). Results of our study show consistency with previous results (Obi, 2015; Santilli et al., 2019).

TABLE 4
Logistic Regression Analysis

Measure	<i>B</i>	<i>SE</i>	<i>p</i>	OR	95% CI
Pretest ^a					
DMF	0.02	0.03	.514	1.02	[0.96, 1.08]
SWLS	-0.04	0.07	.593	0.96	[0.84, 1.11]
CAAS-SF	-0.02	0.05	.667	0.98	[0.89, 1.08]
BYD	-0.04	0.19	.855	0.97	[0.66, 1.41]
Constant	0.61	1.74	.727	1.83	
Posttest ^b					
DMF	0.08	0.05	.105	1.08	[0.98, 1.18]
SWLS	0.06	0.11	.596	1.06	[0.85, 1.33]
CAAS-SF	0.02	0.07	.767	1.02	[0.89, 1.18]
BYD	0.71	0.32	.026	2.02	[1.09, 3.76]
Constant	-11.76	2.92	<.05	0.00	

Note. OR = odds ratio; CI = confidence interval; DMF = Design My Future scale; SWLS = Satisfaction With Life Scale; CAAS-SF = Career Adapt-Abilities Scale–Short Form; BYD = belief-in-your-dreams item.

^a $R^2 = .10$. ^b $R^2 = .30$.

Posttest scores of our experimental group students for the SWLS were higher than those of the control group students. These results show consistency with a prior study stressing that career adaptability and future orientation are important factors for the skills of an individual to cope with difficulties and increase life satisfaction (Cabras & Mondo, 2018). However, we designed our program to increase students' future orientation, career adaptability, and satisfaction with life. Our findings indicated that satisfaction with life had less of an effect. One reason may be that anxiety levels were increasing for our students because exam week was approaching at the time the posttest was carried out. Studies have shown that subjective well-being can be affected for different reasons, such as financial situation, daily frustrations, personality characteristics, and life events (Rask et al., 2002). The experimental group students had higher levels of belief in achieving their dreams than did the control group students. This may have occurred as a result of thinking about their future, considering their role models, and completing written assignments about possible career obstacles and what could be done to eliminate the obstacles and express themselves comfortably in the classroom.

Our second hypothesis was that posttest scores of the experimental group on all variables would be higher than their pretest results. Posttest scores of the experimental group students for the DMF total scale and the Future Orientation and Resilience subscales were significantly higher than their pretest scores. Posttest scores of the experimental group students for the CAAS-SF total scale in general and the Concern, Control, Curiosity, and Confidence subscales were also higher than their pretest scores. These results can be connected with what students obtained from the program, such as (a) awareness of their career interests, (b) improved knowledge about their career choices, (c) increased active and clear thinking from written homework (Fabio & Maree, 2012), (d) clearer thinking about and planning for their life projects, (e) improved coping with career obstacles, and (f) increased feedback and support from small-group interaction (Kim et al., 2015).

SWLS posttest scores of the experimental group were significantly higher than their pretest scores. These findings are consistent with results from a study of a short-term career program to improve career maturity and life satisfaction of Korean adolescents (Ham & Lim, 2017). Our experimental group students' posttest scores for belief in achieving their dreams was also higher than their pretest scores. Increased beliefs of the students in achieving their dreams show consistency within findings of our study.

Effect sizes for the DMF total scale ($d = 1.08$) and its Future Orientation ($d = 0.84$) and Resilience ($d = 1.16$) subscales were each strong. Effect sizes for the Turkish CAAS-SF total scale ($d = 0.98$) and for the Concern ($d = 0.83$) and Control ($d = 0.87$) subscales were also strong. Effect sizes for the Curiosity ($d = 0.72$) and Confidence ($d = 0.52$) subscales were medium. Effect size for the SWLS was medium ($d = 0.69$). Effect size for the belief-in-your-dreams item was strong ($d = 0.91$). In a meta-analytic review of career choice interventions, Whiston et al. (2017) reported an average effect size of 0.352 for the programs examined in their analysis. Based on the results of our work, we can say that the program we created has an above-average effect size. Results of our study support the study results of Brown and Ryan-Krane (2000) that express the main components determining the effect of career progress.

We conducted binary logistic regression analysis to examine pretest and posttest model consistency of the program (experimental and control

group) we created in our study. Explanatory value of the model after the test increased in comparison with the value before the test. We observed that scores increased after the test; however, the increase was not significant. We observed the most significant increase in students' levels of belief in achieving their dreams. Thus, the question of students' level of belief in achieving their dreams is seen as an effective tool to explain the difference between experimental and control groups. In general, it cannot be said that we created a consistent model. One reason could be our use of measures, in the form of the DMF and CAAS-SF, that assessed similar constructs. Future research that uses different measures might improve our model consistency.

Finally, we reviewed whether there were differences by gender in the pre- and posttest results of the experimental group. At both pre- and posttest, significant differences were observed in terms of gender. Female students' results were higher than those of male students for future orientation, resilience, and career adaptability. Such differences show consistency with previous studies indicating that girls generally score higher on measures of career maturity than do boys (Hartung et al., 2005; Santilli et al., 2019). Our observed increases in career control and career confidence levels of girls in comparison with boys were not significant.

Remarkably, our study results indicated a decrease in career adaptability and future designing scores of the control group students. The reason might be student anxiety due to their approaching exams, as we observed that students had very intense test anxiety. Some authors have suggested that test anxiety negatively affects student performance (Pekrun, 2001). Perhaps students could not evaluate the test questions carefully because of their anxiety. If so, it can be suggested that students regularly do anxiety-reduction practices to improve their coping with test anxiety and stress. Also, the source of test anxiety can be identified, and appropriate coping practices implemented. We also observed that a few students did not participate actively in some sessions of our study. For example, they avoided sharing their feelings when early memories were shared during Session 4. It may be that shyer individuals felt more inhibited than those who were less shy in interpersonal relations. Because shy people try to avoid interactions, they may have felt scared and preferred not to talk (Bell, 1995). Some training can be given to people with such characteristics to become more extroverted. Although this situation brings questions to our mind about the trust environment of the group atmosphere, active participation of other students into the process confuted our thought. In general, students indicated that they found the program useful and their awareness levels raised.

Limitations and Future Research Directions

Our findings indicate that students in the course increased their future orientation, career adaptabilities, subjective well-being, and belief in their capacity to achieve their career dreams. The strong effect sizes for future orientation and career adaptability resources were particularly noteworthy outcomes of the course. The adaptive readiness signaled by future orientation and supported by career adaptability self-regulation resources prepares ninth-grade students to anticipate and deal with the vocational developmental tasks of crystallizing career preferences and, in due course, specifying occupational choices. The results of our study are limited by the lack of follow-up tests after 1 month, 6 months, and 12

months. Follow-up tests are needed to assess whether students can internalize and stabilize the gains they make. Furthermore, the effectiveness of the course has been tested only in two public schools. Evaluating the effects of the course in private schools, colleges, vocational high schools, and other types of high schools is important in terms of generalizing the results of the present study. Encouraged by results of our field test, future researchers might evaluate the course with students in different grades and types of high schools. It would also be useful to compare the course with other types of interventions. It is important to compare the results from this constructionist course with those from a traditional vocational guidance course built on a positivist framework. In short, we can state that the career construction psychoeducational program we developed for first-year high school students shows promise for further use and study.

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