Erzincan Üniversitesi Eğitim Fakültesi Dergisi
Erzincan University Journal of Education Faculty
2025 Cilt 27 Sayı 2 (221-232) https://doi.org/10.17556/erziefd.1576048
Araştırma Makalesi / Research Article

Examining the Effectiveness of the Proactive Career Behaviours Development Programme

Proaktif Kariyer Davranışları Geliştirme Programının Etkililiğinin İncelenmesi

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Makale Bilgileri

Geliş Tarihi (Received Date)

30.10.2024

Kabul Tarihi (Accepted Date)

09.04.2025

Sorumlu Yazar

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Abstract: In today's world, transitioning into the workforce is becoming increasingly difficult. To address this issue, numerous recent studies have been conducted in the field of career counseling, with researchers focusing on identifying the qualities that may influence entry into professional life. These studies have revealed that one of the key qualities impacting this transition is proactive career behaviours, which contributes to employability. Therefore, it is crucial for university students, particularly those at the beginning of their careers, to demonstrate these behaviours. The purpose of this study is to test the effectiveness of the Proactive Career Behaviour Development Programme, designed to foster proactive career behaviours among university students. A quasi-experimental research design, including pre-test, post-test, and follow-up test measurements with experimental, control, and placebo groups, was employed. Pilot studies were conducted prior to the experimental procedure. The participant group consisted of 36 university students studying in Turkey, and the Proactive Career Behaviours Scale was used for measurements. The results indicated that the Proactive Career Behaviour Development Programme was effective in promoting proactive career behaviours. The programme can be integrated into career preparation training for university students, providing valuable support to students in their transition to the workforce.

Keywords: Career, career development programme, proactivity, proactive career behaviours

Öz: Günümüz dünyasında iş gücüne geçiş giderek zorlaşmaktadır. Bu sorunu ele almak üzere, kariyer danışmanlığı alanında son dönemde çok sayıda çalışma yapılmış ve araştırmacılar iş hayatına girişi etkileyebilecek nitelikleri belirlemeye odaklanmıştır. Bu çalışmalar, bu geçişi etkileyen kilit niteliklerden birinin, istihdam edilebilirliğe katkıda bulunan proaktif kariyer davranışları olduğunu ortaya koymuştur. Bu nedenle, özellikle kariyerlerinin başında olan üniversite öğrencilerinin bu davranışları sergilemeleri büyük önem taşımaktadır. Bu çalışmanın amacı, üniversite öğrencileri arasında proaktif kariyer davranışlarını teşvik etmek için tasarlanan Proaktif Kariyer Davranışı Geliştirme Programının etkililiğini test etmektir. Deney, kontrol ve plasebo gruplarıyla ön test, son test ve izleme testi ölçümlerini içeren yarı deneysel bir araştırma tasarımı kullanılmıştır. Deneysel prosedür öncesinde pilot çalışmalar yapılmıştır. Katılımcı grubu Türkiye'de öğrenim gören 36 üniversite öğrencisinden oluşmaktadır ve ölçümler için Proaktif Kariyer Davranışları Ölçeği kullanılmıştır. Sonuçlar, Proaktif Kariyer Davranışları Geliştirme Programı'nın proaktif kariyer davranışlarını teşvik etmede etkili olduğunu göstermiştir. Program, üniversite öğrencilerine yönelik kariyer hazırlık eğitimlerine entegre edilebilir ve öğrencilere iş gücüne geçişlerinde değerli bir destek sağlayabilir.

Anahtar Kelimeler: Kariyer, kariyer gelişim programı, proaktivite, proaktif kariyer davranışları

Doğanülkü, H. A. & Kırdök, O. (2025). Examining the effectiveness of the proactive career behaviours development programme. *Erzincan Üniversity Journal of Education Faculty,* 27(2), 221-232. https://doi.org/10.17556/erziefd.1576048

Introduction

Employability has become a vital focus in today's career environment. Employability refers to an individual's career potential in labor markets (van Harten et al., 2022). Researchers have recently spent a lot of effort and time on what individuals can do to demonstrate this potential (e.g., Jiang et al., 2023; Wilhelm et al., 2024). Studies in this area highlight that career self-management behaviors play a crucial role in building and sustaining employability resources (Healy, 2023; Wilhelm et al., 2024). When career self-management behaviours are mentioned, one of the primary structures that comes to mind is proactive career behaviours (Hirschi et al., 2015).

Proactive career behaviours are intentional actions that people take to achieve their career objectives (De Vos et al., 2009). In a world characterized by rapidly changing skill requirements and dynamic labor markets, individuals need to proactively direct their careers to obtain employment opportunities and achieve career success (Frey & Osborne, 2017; Wilhelm et al., 2024). In other words, for individuals to find a job, they need to carry out a proactive interaction process between themselves and their environment (Fugate et al., 2004). This is seen as much more important, especially for university students who are in the transition phase to working life (Green et al., 2020; Guan et al., 2014). Namely, students need to adopt proactive career behaviours for their employability (Healy, 2023). Additionally, according to Kinash et al. (2016) and Gardiner (2015), students who take a more proactive approach in their career development are better equipped to handle the challenges of the labor market. This situation facilitates employment.

Employability requires students to make the most of learning opportunities, whenever and wherever they arise (Healy, 2023). Of course, the employability of individuals also depends on the conditions in the social, political, economic and cultural system in which they are born, come from and enter (Healy, 2023). However, when viewed from an individual perspective, proactive career behaviours are behaviours that are under a person's control and have an impact on employability (Claes & Ruiz-Quintanilla, 1998; Hall, 2002). As a matter of fact, it is emphasized that people who show proactive career behaviours are more likely to find a job than those who do not (Valls et al., 2020). In parallel, Ma and Chen (2022) suggested conducting developmental research on proactive career behaviours, on the grounds that it could contribute to individual employability. In this regard, it would be valuable to see proactive career behaviours as an important

force for employability and to conduct studies to develop them.

Theoretical Framework

Proactive Career Behaviours (PCB)

Proactive behaviours that are future-oriented, change-oriented, based on the individual's own will have been an integral part of the career field since the late 1990s (Frese et al., 1997; Parker & Bindl, 2017; Seibert et al., 1999). Looking at the literature, it can be seen that PCB was initially discussed under four basic components: career planning, skill development, opinion consultation and networking (Claes & Ruiz-Quintanilla, 1998). Later, De Vos et al. (2009) proposed a proactive career behaviours process model, drawing on a more comprehensive proactivity literature (Crant, 2000; Grant & Ashford, 2008; Raabe et al., 2007). In this process model, PCB are discussed under two separate components called cognitive and behavioural. Cognitive components refer to planning processes that include career exploration, goal setting, and developing specific plans (Claes & Ruiz-Quintanilla, 1998). Behavioural components refer to activities aimed at networking, mentor support, and skill development (De Vos et al., 2009, Sonnentag, 2017). While cognitive components refer to the insights that individuals develop in line with their own career aspirations, behavioural components refer to behaviours initiated to manage the individual's career (De Vos et al., 2009). In other words, behavioural components are clear and observable actions that people undertake to achieve their career objectives (King, 2004).

Career exploration, as the initial cognitive component, is described as a lifelong process, particularly activated during life transitions. It involves gathering career-related information and testing ideas about oneself and the environment to accomplish career objectives (Zikic & Hall, 2009). The second cognitive component, goal setting, is the situation in which individuals predict and decide on the career outcomes they want to achieve (Greenhaus et al., 1995). The third cognitive component, developing specific plans, refers to individuals formulating strategies to help them achieve their career objectives (Seibert et al., 2013).

Networking, the first of the behavioural components, is expressed as one of the most basic proactive career behaviours. Networking involves efforts to establish and sustain relationships with individuals who may assist in one's career or professional life (Forret & Dougherty, 2004). The second behavioural component, mentor support, refers to a developmental relationship between a less experienced, younger individual and more experienced, senior individuals (Eby et al., 2013). The third behavioural component, skill development activities, is defined as activities aimed at initiatives and interventions that lead individuals to master and become competent in various tasks in their careers (Claes & Ruiz-Quintanilla, 1998). These six components, three cognitive and three behavioral, are the PCBs in the process model.

Self Determination Theory (SDT)

SDT is considered a comprehensive theory that guides both scientific research and the practices that reference them regarding social conditions that facilitate or hinder human development. SDT focuses on examining how all cultural, social, and biological conditions develop and strengthen or weaken the innate people's potential for psychological growth, participation and health, both generally and in specific areas (Ryan & Deci, 2017). SDT focuses on the conditions and contexts in which this developmental process proceeds optimally and how it may interfere with or compromise them (Ryan & Deci, 2017).

SDT brings an organismic perspective regarding psychological growth, wholeness and healthy living. It assumes that people are naturally curious, physically active, and inherently social beings (Ryan & Deci, 2017). One of the most important assumptions of SDT is psychological needs. SDT states that every human being has three basic psychological needs that are inherent and universal. These three basic needs are autonomy, competence and relatedness (Deci & Ryan, 2000; Ryan & Deci, 2017).

Autonomy need is expressed as individuals making their own choices and showing the will to initiate their own behaviour (Deci & Ryan, 2000; Ryan & Deci, 2017). In other words, it is the initiative of individuals in their behaviour. The need for competence is a situation related to the individual's perception of himself as capable of the activities he has done or will do. Ryan and Deci (2017) stated that individuals who consider themselves competent need a fighting ground where they can use their talents. The need for relatedness reflects individuals' need to connect with their environment and other people. Feelings of belonging and commitment to other people, and the desire for satisfying and supportive social relationships, are a product of the need for relatedness (Deci & Ryan, 2000; Ryan & Deci, 2017). These three basic psychological needs of SDT provide important guidance in attempting to explain human motivation and behaviour.

Proactive Career Behaviours (PCB) Within the Framework of Self-Determination Theory (SDT)

Vocational guidance practices have focused on the psychological needs of individuals since the early 21st century (Tang, 2003). An opinion has begun to develop that psychological needs may be effective in career processes. SDT, introduced by Deci and Ryan (1985), offers a very important perspective on psychological needs. SDT emphasizes that there are three basic psychological needs: autonomy, competence, and relatedness, which are essential nutrients for personal development (Deci & Ryan, 2008). SDT, on the other hand, emphasizes that people are proactive in nature and tend to act on and master internal and external forces rather than being passively controlled (Deci & Ryan, 2013; Ryan & Deci, 2017). Thus, individuals can mobilize their enthusiasm while working towards a goal or actively regulate the environment and proactively influence their work environment to perform well (Deci & Ryan, 2013; Ryan & Deci, 2017). SDT emphasizes that the realization of these assumptions, that is, individuals' tendency to engage in proactive behaviour, is related to the level of satisfaction of three basic psychological needs (Deci & Vansteenkiste, 2004). It is claimed that people reach an optimal motivational state if three basic psychological needs are met (Deci & Ryan, 2000, Deci & Ryan, 2008). Therefore, SDT provides a highly hypothetical focus for researchers and practitioners to clarify how proactivity occurs (Bilal et al., 2021). As a matter of fact, in many studies on proactivity in this context, SDT has already been taken as a theoretical framework (Bindl et al., 2012; Cheah et al., 2020; Huang & Hsieh, 2015; Presbitero, 2015).

Networking, one of the PCBs, can be nourished by trying to satisfy the need for relatedness, which is one of the psychological needs (Meyers, 2020). Additionally, PCB is

defined as goal-directed behaviour (Crant, 2000). This means that individuals can engage with it to achieve goals that suit them (Meyers, 2020). The goals that the individual determines are those that are compatible with their personal values, interests and needs. In other words, they are goals that reflect the autonomy of the individual (Greguras & Diefendorff, 2010; Sheldon & Elliot, 1999). Therefore, the individual's setting of autonomous goals in line with these characteristics may lead them to show PCB to achieve these goals. Individuals who shape their careers according to their own competencies take initiative, which enables them to perform their duties more effectively (Meyers, 2020). Additionally, individuals receive positive feedback from others as a result of successful experiences (Greguras & Diefendorff, 2009). This nourishes their competency needs and subsequently motivates them to take initiative and further develop their competencies to shape their careers (Deci & Ryan, 2008). As can be seen, attempts to meet psychological needs can result in PCB.

Present Study

Considering the theoretical framework and past research on PCB, it appears that PCB has a significant impact on employability. Especially for university students who are in the transition phase to working life, developing these behavioural repertoires will facilitate and accelerate their transition to business life after graduation. According to the latest data shared, the proportion of individuals with a bachelor's degree who are not employed in Turkey is 28.3% (Turkish Statistical Institute TURKSTAT, 2023). The employment of university graduates in public institutions in Turkey is decreasing every year. Job opportunities are decreasing in Turkey due to the increase in the number of graduates and the competitiveness of the job market (Gerçek, 2024). Therefore, there is a great need for research on improving PCBs in countries such as Turkey, where the unemployment rate has become a chronic problem (Çelik & Lüküslü, 2018). This is one of the biggest motivations for conducting this research. Because this chronic problem is also a source of intense career stress and anxiety (Demirtaş & Kara, 2022).

A university education requires a significant investment of money, time, energy, and emotion. It is reasonable for students to expect opportunities to obtain suitable and meaningful jobs after graduation and throughout their working lives as a result of these investments in their education. In addition, universities are institutions that should support individuals in achieving their employability goals (Healy, 2023). One of the most important structures that provide this service in universities is Career Centers (Niles, 2002; Rayman, 1999). In this context, one of the most important things to do in Career Centers is to ensure that individuals are proactive (Niles, 2002). However, there is no programme designed and used in Career Centers in Turkey to develop proactive career behaviours that contribute to individual employability, the effectiveness of which has been empirically tested. Therefore, this study is important in that it will fill the relevant gap and present a programme whose effectiveness has been tested empirically.

Employability levels are significant to policymakers as they impact a country's economic and social development. University students are expected to improve their career-related knowledge, skills and abilities in order to adapt to unpredictable labor market dynamics (Gerçek, 2024). That is, individuals are expected to be proactive. Therefore, this research would be valuable in that it has the potential to guide policy makers with its results. The aim of current research is to examine the effect of the Proactive Career Behaviours Development Programme (PCBDP), developed based on SDT, on university students' proactive career behaviours. For this aim, the following hypotheses were tested:

H_1: After PCBDP, there is a significant difference between the pretest-posttest scores of the Proactive Career Behaviours Scale (PCBS) total, career exploration, goal setting, developing special plans, networking, mentor support and skill development activities in favor of the experimental group members compared to the control and placebo group participants.

H_2: There is no significant difference between the posttest scores and follow-up test scores of the students in the experimental group on PCBS total, career exploration, goal setting, developing special plans, networking, mentor support and skill development activities.

Method

The study employed quasi-experimental research design with experimental, control and placebo groups and pretest, posttest and follow-up test measurements. A situation that is recommended to be taken into consideration in experimental studies is the "Hawthorne Effect". According to Sedgwick (2012), the "Hawthorne Effect" is the situation in which individuals participating in the research know that they are in an experiment process, assume that there will be positive changes in themselves, and act towards the realization of this expectation. It was aimed to control this effect by creating a placebo group in addition to the experimental and control groups. The experimental process of the research is presented in Table 1.

As seen in Table 1, PCBDP consisting of eight sessions was applied to the participants in the experimental group. PGT, consisting of eight sessions, was applied to the participants in the placebo group. No study was conducted in the control group. After the sessions were completed, PCBS was applied as a posttest to individuals in the experimental, placebo and control groups. To test whether the effect of PCBS was independent of the time effect and long-lasting, PCBS was reapplied as a follow-up measurement six weeks after the application of the posttest.

Table 1. Experimental process

Groups	Pre-Test	Process	Post-Test	Follow-up Test
Experimental Group	PCBS	PCBDP (8 sessions)	PCBS	PCBS
Placebo Group	PCBS	PGT (8 sessions)	PCBS	PCBS
Control Group	PCBS	No action taken	PCBS	PCBS

Note. PCBS: Proactive Career Behaviours Scale. PCBDP: Proactive Career Behaviours Development Programme. PGT: Placebo Group Training.

Table 2. Demographic variables of participants

		Experimental Group		Control Group		Placebo Group	
Variable	**Category**	**f**	**%**	**f**	**%**	**f**	**%**
Gender	Female	7	58.3	8	66.7	7	58.3
	Male	5	41.7	4	33.3	5	41.7
	Total	12	100	12	100	12	100
Class level	1	2	16.4	3	25	0	0
	2	3	25	4	33.3	4	33.3
	3	4	33.3	5	41.7	6	50.3
	4	3	25	0	0	2	16.4
	Total	12	100	12	100	12	100

Participants

The participants of this research were determined by the criterion sampling method. In the criterion sampling method, criteria can also be shaped according to environmental factors (Marshall & Rossman, 2014). In the period just before this research was started, there were two major earthquakes in succession in Turkey. Universities moved online after the earthquake. This situation had a limiting effect on the composition of the study participants. The inclusion criteria established for this purpose are the willingness to participate in the study, to live in the city center where the research is being conducted, and to be a current university student. Exclusion criteria are the absence of a career counseling process and the absence of participation in any intervention programme for career development in the last six months.

Present research was conducted with students at a university in the Eastern Mediterranean region of Turkey. The programme announcement was made to students studying at this university with a poster prepared by the researcher. Following the announcement, 71 individuals applied to participate in the programme. 8 students who applied later stated that they had decided not to take part in the programme. Of the remaining 63 individuals, six were excluded because they did not meet the inclusion and exclusion criteria. 57 students were potential candidates to participate in the research.

PCBS was administered to 57 students as a pretest. After the pretest application, the group's PCBS total score average was found to be 70.07(Sd = 13.12). 27 students who were below average were identified. The scores of these 27 students were ranked from highest to lowest and then divided into consecutive groups of three. Then, one student from each group was randomly assigned to the experimental group, one student to the control group, and one student to the placebo group. As a result of this process, nine participants were assigned to each of the experimental, control and placebo groups. Psychoeducational group studies are aimed at gaining skills and it is expected that there will be participants with high skills in the relevant subject, that is, facilitators. There should be at least one student in each group who can be a model for the members (DeLucia-Waack, 2006). In this context, in order to be facilitator, nine students who scored one standard deviation above the average were identified. These students' scores were ranked from low to high and grouped into consecutive groups of three. Then, one person from each group was randomly assigned to the experimental group, one person to the control group, and one person to the placebo group. Thus, all groups were set to 12 people and the process of assigning members to the groups was completed. The age range of the experimental group participants is between 19 and 24 (Mean age = 22.4, SD = 1.21), the age range of the control group participants is between 18 and 23 (Mean age = 21.8, SD = 1.32), and the age range of the placebo group participants is between 19 and 24. (Mean age = 22.8, SD = 1.26). The distribution of participants in terms of gender and grade level is presented in Table 2.

Data Collection Tool

Proactive Career Behaviours Scale (PCBS): It was developed by Doğanülkü (2023) to measure the proactive career behaviours of university students. The scale, which consists of 6 dimensions (career exploration, goal setting, developing special plans, networking, mentor support, skill development activities), is in the form of a five-point Likert scale. The scale consists of 24 items. Increasing scores indicate that individuals show more proactive career behaviours. Cronbach's alpha coefficients calculated for the scale within the scope of reliability analysis vary between .83 and .91 for all dimensions.

Proactive Career Behaviours Development Programme (PCBDP)

A detailed literature review was conducted during programme preparation. As a result of the literature review, the process model by De Vos et al. (2009) has become one of the important theoretical guides. The PCBs expressed in the process model are career exploration, goal setting, developing specific plans, networking, mentor support, and skill development activities (De Vos et al., 2009; Sonnentag, 2017). On the other hand, it is considered important to examine proactivity from a positive psychological perspective (Matsuo, 2020). In this regard, when the relational studies on proactivity are examined, SDT has been taken as the theoretical framework in many studies (Bindl et al., 2012; Cheah et al., 2020; Huang & Hsieh, 2015; Presbitero, 2015). Because SDT is a motivation theory that reveals the underlying reasons for people and their behaviours (Deci & Ryan, 2013). SDT states that every human being has three basic psychological needs (autonomy, competence, and relatedness) that are innate and universal (Deci & Ryan, 2000; Ryan & Deci, 2017). SDT emphasizes that satisfaction of these needs leads individuals to be proactive. The theoretical guide of this programme developed in this direction was both the PCB process model and SDT. While developing the programme, the opinions of three field experts were taken along with the literature review. PCBDP is planned as eight sessions in total, with each session lasting 60 minutes and one session per week. Each session of the programme focused on meeting psychological needs and developing different PCBs.

Pilot Applications

Before starting PCBDP, four separate pilot applications were carried out, one by a researcher and the other three by different practitioners. In the pilot applications, each practitioner filled out a “Session Evaluation Form” at the end of the session.

Additionally, a "Session Evaluation Form" was collected from the participants to obtain feedback on the sessions. As a result of the pilot applications, 32 practitioner Session Evaluation Forms and 328 participant Session Evaluation Forms were collected. All forms were examined in detail by both the researcher and an academic who studies and practices in similar fields. After the reviews, necessary revisions were made and the PCBDP was given its final version.

Placebo Group Applications

In the study, a placebo group was designed to control the Hawthorne effect. The placebo group received an 8-session study, similar to the experimental group, designed as one session per week, each lasting approximately 60 minutes. Placebo group participants were given warm-up activities that were not related to proactivity, proactive behaviours and proactive career behaviours, and were given information on healthy living, sports and nutrition, and watched videos. Placebo group activities were carried out under equal physical conditions with the experimental group, in an environment where trust and mutual respect are essential.

Procedure

First of all, ethical approval was obtained from the ethics committee of Çukurova University. After obtaining ethical permission, pilot studies were conducted. Informed consent was obtained from all participants before pilot studies were conducted. After the pilot studies, changes and arrangements were made in the programme and the experimental implementation process began. Informed consent was also obtained from the experimental group and placebo group participants before the start of the applications.

Data Analysis

In order to determine the effect of PCBDP, it was examined whether the difference between the pretest-posttest difference scores of the participants in the experimental, control and placebo groups was significant on the PCBS total and all sub-dimensions. By comparing the difference scores, the possibility of making a type I error was tried to be reduced (Balcı, 2018). First of all, whether the pretest-posttest difference scores of the participants had a normal distribution was examined with kurtosis and skewness values. Kurtosis and skewness values are presented in Table 3.

As seen in Table 3, all values are between +1.5 and –1.5, which is a sign of normal distribution (Tabachnick & Fidell, 2007). For this reason, ANOVA, one of the parametric tests, was conducted to determine whether the pretest-posttest difference scores of the participants in the groups differed significantly. Bonferonni Test was conducted to determine which group the difference was in favor of. In addition, effect sizes of the variables were calculated to reveal the strength of the change that occurred after the experimental procedure (Kelley & Preacher, 2012; Miller, 2007). Eta-squared (η2) value was calculated to examine the effect size. Eta-squared has values between 0.00 and 1.00. Accordingly, between .01 and .06 is considered a low effect size, between .06 and .14 is considered a medium effect size, and above .14 is considered a large effect size (Büyüköztürk, 2016).

The normality test of the posttest and follow-up test scores of the experimental group participants regarding the PCBS total and sub-dimensions was also conducted. It was concluded that the kurtosis and skewness values of the posttest and follow-up test scores of the experimental group participants were between +1.5 and –1.5, that is, they showed a normal distribution (Table 4).

As a result of normal distribution, whether the PCBS total and sub-dimensions posttest and follow-up test mean scores of the experimental group participants showed a significant difference was analyzed using the dependent sample t-test, one of the parametric tests. The study data was analyzed on SPSS version 26.0 for Windows.

Findings

Findings Regarding the Differences between Pretest-Posttest Score Means of the Groups

In this section, the findings of the statistical analysis regarding the differences between the pretest-posttest mean scores regarding the PCBS total and its dimensions are presented. First of all, pretest, posttest and pretest-posttest difference scores of the participants regarding the PCBS total and dimensions are given in Table 5.

Table 3. Kurtosis and skewness values for pretest-posttest difference scores

Variables	Skewness	Kurtosis
Career Exploration Difference Score	.43	-.59
Goal Setting Difference Score	.40	-.51
Developing Special Plans Difference Score	.16	-.20
Networking Difference Score	.15	-.72
Mentor Support Difference Score	.17	-.30
Skill Development Activities Difference Score	.50	-.04
PCBS Total Difference Score	.39	-.19

Note. PCBS: Proactive Career Behaviours Scale

Table 4. Kurtosis and skewness values for the PCBS total and sub-dimensions posttest scores and follow-up test scores of the experimental group participants

Variables	Posttest		Follow-up Test	
	Skewness	Kurtosis	Skewness	Kurtosis
Career Exploration	.37	-.47	.36	-.96
Goal Setting	.86	1.20	.16	-.94
Developing Special Plans	.76	.58	.27	-.13
Networking	.96	1.12	-.22	-.17
Mentor Support	1.00	1.45	-.02	-1.21
Skill Development Activities	.63	.34	-.24	-.02
PCBS Total	.92	1.02	-.08	-1.36

Note. PCBS: Proactive Career Behaviours Scale

Table 5. Pretest, posttest and pretest-posttest difference scores regarding PCBS total and dimensions

Scale	Group	Measurement	f	Average	Standard deviation	Difference
PCBS Total Score	Experimental group	Pre-test	12	65.33	13.31	19.25
		Post-test	12	84.58	13.67	
	Control group	Pre-test	12	66.58	14.82	-2.42
		Post-test	12	64.16	11.59	
	Placebo group	Pre-test	12	65.25	15.74	1.5
		Post-test	12	66.75	10.77	
Career Exploration	Experimental group	Pre-test	12	10.75	2.45	4.33
		Post-test	12	15.08	1.97	
	Control group	Pre-test	12	12.75	2.26	-0.67
		Post-test	12	12.08	2.53	
	Placebo group	Pre-test	12	11.08	3.15	0.5
		Post-test	12	11.58	2.53	
Goal Setting	Experimental group	Pre-test	12	11.00	2.37	2.91
		Post-test	12	13.91	2.71	
	Control group	Pre-test	12	11.75	2.83	-1.25
		Post-test	12	10.50	1.73	
	Placebo group	Pre-test	12	10.83	3.15	0.08
		Post-test	12	10.91	2.27	
Developing Special Plans	Experimental group	Pre-test	12	10.66	2.60	3.25
		Post-test	12	13.91	2.39	
	Control group	Pre-test	12	10.83	3.18	-0.67
		Post-test	12	10.16	2.28	
	Placebo group	Pre-test	12	10.41	2.27	0.34
		Post-test	12	10.75	2.26	
Networking	Experimental group	Pre-test	12	11.33	2.49	2.75
		Post-test	12	14.08	2.64	
	Control group	Pre-test	12	10.50	2.84	-0.17
		Post-test	12	10.33	2.01	
	Placebo group	Pre-test	12	10.91	3.11	0.43
		Post-test	12	11.33	1.66	
Mentor Support	Experimental group	Pre-test	12	10.66	2.42	3.25
		Post-test	12	13.91	2.42	
	Control group	Pre-test	12	10.41	2.46	-0.08
		Post-test	12	10.33	1.96	
	Placebo group	Pre-test	12	11.33	3.17	-0.58
		Post-test	12	10.75	1.76	
Skill Development Activities	Experimental group	Pre-test	12	10.91	2.42	2.75
		Post-test	12	13.66	2.49	
	Control group	Pre-test	12	10.33	2.18	0.42
		Post-test	12	10.75	2.41	
	Placebo group	Pre-test	12	10.66	2.38	0.75
		Post-test	12	11.41	1.50	

Note. PCBS: Proactive Career Behaviours Scale

Table 6. ANOVA findings regarding the pretest-posttest difference scores of the groups

	Source of Variation	Sum of Squares	df	Mean Squares	F	*p*	Difference	η2
PCBS Total Score	Between Groups	3199.389	2	1599.694	33.663	.000	1>2, 1>3	.67
	Within Groups	1568.167	33	47.530				
	Total	4767.556	35					
Career Exploration	Between Groups	164.222	2	82.111	46.451	.000	1>2, 1>3	.73
	Within Groups	58.333	33	1.768				
	Total	222.556	35					
Goal Setting	Between Groups	108.667	2	54.333	17.564	.000	1>2, 1>3	.51
	Within Groups	102.083	33	3.093				
	Total	210.750	35					
Developing Special Plans	Between Groups	99.389	2	49.694	14.438	.000	1>2, 1>3	.46
	Within Groups	113.583	33	3.442				
	Total	212.972	35					
Networking	Between Groups	57.167	2	28.583	6.996	.003	1>2, 1>3	.29
	Within Groups	134.883	33	4.086				
	Total	192.000	35					
Mentor Support	Between Groups	104.222	2	52.111	11.458	.000	1>2, 1>3	.41
	Within Groups	150.083	33	4.548				
	Total	254.306	35					
Skill Development Activities	Between Groups	38.222	2	19.111	9.355	.001	1>2, 1>3	.36
	Within Groups	67.417	33	2.043				
	Total	105.639	35					

Notes. PCBS: Proactive Career Behaviours Scale. Df: Degrees of Freedom. η2 (Eta-Square): Effect Size. 1: Experimental Group. 2: Control Group. 3: Placebo Group

Table 7. Dependent samples *t-test* findings on the differences between the posttest and follow-up test score averages regarding the PCBS total and dimensions of the experimental group participants

	Measurement	f	Average	Standard deviation	df	*t*	*p*
PCBS Total Score	Post-test	12	84.58	13.67	11	1.407	.187
	Follow-up test	12	78.75	13.36			
Career Exploration	Post-test	12	15.08	1.97	11	1.459	.172
	Follow-up test	12	14.08	1.24			
Goal Setting	Post-test	12	13.91	2.71	11	1.483	.166
	Follow-up test	12	12.58	1.44			
Developing Special Plans	Post-test	12	13.91	2.39	11	1.834	.094
	Follow-up test	12	12.17	1.52			
Networking	Post-test	12	14.08	2.64	11	1.529	.155
	Follow-up test	12	12.83	1.19			
Mentor Support	Post-test	12	13.91	2.42	11	-.921	.377
	Follow-up test	12	14.50	1.24			
Skill Development Activities	Post-test	12	13.66	2.49	11	1.400	.189
	Follow-up test	12	12.50	1.16			

Note. PCBS: Proactive Career Behaviours Scale. Df: Degrees of Freedom

As seen in Table 7, it is seen that the pretest-posttest difference scores of the experimental group participants regarding the total and all dimensions of PCBS are higher than the difference scores of the control and placebo group participants. ANOVA was conducted to test whether the difference was statistically significant, and the findings are presented in Table 6.

As seen in Table 6, it was concluded that there was a significant difference between the pretest-posttest difference scores of the participants in the experimental, control and placebo groups regarding the PCBS total and all dimensions ($F = 33.663$, $p < .05$; $F = 46.451$, $p < .05$; $F = 17.564$, $p < .05$; $F = 14.438$, $p < .05$; $F = 6.996$, $p < .05$; $F = 11.458$, $p < .05$; $F = 9.355$, $p < .05$). Bonferroni Test was performed to determine which group the difference was in favor of. As a finding of the test, it was observed that the difference scores of the participants in the experimental group regarding the total and all dimensions of PCBS were significantly higher than the participants in the control and placebo groups. This finding shows that the experimental procedure is effective in terms of PCBS total and all dimension scores. The eta-square ($\eta 2$) value calculated to evaluate the magnitude of this effect is .67 for the total score, .73 for career exploration, .51 for goal setting, .46 for developing special plans, .29 for networking, .41 for mentor support and .36 for skill development activities. All of these values indicate a large impact level.

Findings Regarding the Differences between the Posttest and Follow-up Test Mean Scores of the Experimental Group Participants

The differences between the posttest and follow-up test mean scores of the experimental group participants regarding the PCBS total and dimensions were analyzed with the dependent samples t-test. Analysis findings are presented in table 7.

As seen in Table 7, it was concluded that there was no statistically significant difference between the posttest score averages of the experimental group participants regarding the PCBS total and dimensions and the follow-up test score averages ($t = 1.407$, $p > .05$; $t = 1.459$, $p > .05$; $t = 1.483$, $p > .05$; $t = 1.834$, $p > .05$; $t = 1.529$, $p > .05$; $t = -.921$, $p > .05$; $t = 1.400$, $p > .05$). In other words, in the follow-up measurements made 6 weeks later, it was observed that the effects of the experimental procedure continued in terms of the total PCBS.

Discussion and Conclusion

In this research, the effect of PCBDP on university students' proactive career behaviours was examined. The research was designed with an experimental design, and the effectiveness of PCBDP was tested with 3 measurements (pretest, posttest, follow-up test) on three groups (experiment, control, placebo). While there was a significant increase in the PCBS scores of the experimental group participants in the measurements made after the completion of the experimental procedure, this effect was not observed in the placebo and control group participants. This result shows that PCBDP has positive effects on university students' proactive career behaviours. In addition, it was observed that this effect continued in the follow-up measurements made after six weeks.

While preparing the PCBDP, whose effectiveness was wanted to be tested, SDT provided theoretical guidance. One of the most important assumptions of SDT is that people are proactive in nature and tend to be active rather than passively controlled (Deci & Vansteenkiste, 2004). SDT also emphasizes that people have an innate tendency towards growth and development (Deci & Ryan, 2000). However, it emphasizes that the realization of these assumptions, that is, the positive development potential of individuals and their tendency to engage in proactive behaviour, is related to the level of satisfaction of three basic psychological needs (Deci & Ryan, 2000; Deci & Ryan, 2008). These foundations made SDT the guiding theoretical framework in designing PCBDP. As a matter of fact, SDT has been guiding the theoretical framework of many studies on proactivity (Bindl et al., 2012; Cheah et al., 2020; Huang & Hsieh, 2015; Presbitero, 2015). In this research, each session of PCBDP was prepared by focusing on the psychological needs of individuals, considering the assumption of SDT. Activities and practices in the sessions were designed considering the satisfaction of individuals' psychological needs, and in this way, proactive career behaviours were tried to be gained in individuals. To ensure that the impact of the programme continues into the future, studies have been carried out and participants have been informed about the importance of satisfying psychological needs and what can be done to meet them. In this context, the preparation of PCBDP under the leadership of SDT has been an important element in ensuring that PCBDP is effective on individuals' proactive career behaviours and that

this positive effect continues to exist in the following period (6 weeks).

In the study, it was observed that the 8-session PCBDP, developed based on SDT, had a positive effect on career exploration and that this effect continued after 6 weeks. Career exploration activities are important proactive career behaviours (De Vos et al., 2009). All attempts by individuals to know themselves and discover their characteristics are career research activities. In addition, attempts to investigate alternatives and possible options in the environment are also considered career exploration activities (Zikic & Hall, 2009). However, it is emphasized that the need for autonomy must be nurtured so that individuals can engage in exploratory activities for both themselves and the environment (Meyers, 2020; Paixão et al., 2022). Because autonomy is seen as a resource for people to determine appropriate objectives for themselves and engage in exploratory activities that are compatible with their personal values, interests and needs (Greguras & Diefendorff, 2010; Sheldon & Elliot, 1999). The need for autonomy is the ability of individuals to make their own choices and initiate their own behaviour (Deci and Ryan, 2008), and individuals engage in exploratory activities to nurture this. Already, in the research conducted by Paixão et al. (2022), it was revealed that career exploration and autonomy are related. In this research, the session designed to improve career exploration focused on nurturing individuals' need for autonomy. Nurturing the need for autonomy has become an important source for development in career exploration activities.

It has been observed that PCBDP, developed based on SDT, has a positive effect on goal setting and this positive effect continues after six weeks. The existence of the goal becomes a motivating force for the individual to pursue that goal (Hirschi, 2014). Therefore, it is stated that goals are very important for proactivity (De Vos et al., 2009; Seibert et al., 1999). On the other hand, it is emphasized that goals are also important in relation to psychological needs (Kasser & Ryan, 1996; Ryan & Deci, 2000). In particular, competence and autonomy are psychological needs that stand out in goal setting. The competence need is the individual's perception of himself as capable (Ryan & Deci, 2000). Accordingly, individuals whose need for competence is nurtured can feel stronger and set goals for the future. In short, it is emphasized that the need for competence is an important basis for goal setting (Ryan & Deci, 2000). On the other hand, the need for autonomy reflects the ability of individuals to make their own choices and initiate their own behaviour (Deci & Ryan, 2008). Therefore, supporting individuals' autonomy will lead them to become aware of their own wishes and set goals accordingly (Deci & Ryan, 2008; Ryan & Deci, 2000). As a matter of fact, the session designed to improve goal setting in this research was designed to nourish the need for competence and autonomy. Nurturing these needs made a significant contribution to the participants' positive development in the context of goal setting.

The study observed that SDT-based PCBDP had a positive effect on developing specific plans and that this positive effect continued after 6 weeks. Developing special plans means preparing oneself in accordance with the situation and conditions to achieve one's career objectives (Seibert et al., 2013). In this research, while designing a session to develop specific plans, the focus was on nurturing the need for autonomy and the need for competence. Because if individuals make their plans autonomously, their motivation to comply with their plans increases (Ryan & Deci, 2000). This will increase the motivation of autonomous individuals to plan. On the other hand, individuals will be more successful if they design their plans taking their competencies into consideration. As a matter of fact, competence is the need to feel competent and strong in the task in question, as well as the opportunity to use one's skills and knowledge successfully (Gucciardi & Jackson, 2015). Therefore, as the individual feels competent and powerful, the tendency to make specific plans and comply with these plans will increase. In summary, nurturing the individual's need for both autonomy and competence will contribute significantly to making appropriate plans. Within the scope of PCBDP, the fact that the sessions were able to meet these needs had a significant impact on the positive development of the participants in developing special plans.

In the study, it was observed that PKDGP had a positive effect on networking and that this effect continued 6 weeks after the completion of the programme. Networking, one of the most basic proactive career behaviours, is nourished by attempts to reorganize and strengthen existing relationships and meet the relatedness need, which is one of the psychological needs of individuals (Meyers, 2020). Relatedness need is a product of the need for a sense of belonging, commitment, and satisfying and supportive social relationships towards other people (Deci & Ryan, 2000; Ryan & Deci, 2017). Initiatives to feed this need provide a resource for the individual to meet new people and strengthen existing relationships. In this context, supporting individuals' relatedness need is a pioneer in creating a network. In this research, the session designed to improve networking was designed to allow for the satisfaction of the relatedness need. This situation was effective in the development of the participants in networking. In addition, in the research conducted by Jacobs et al. (2019), the result that there is a positive relationship between the relatedness need and networking coincides with our research result.

Another finding of the study is that PCBDP has a positive effect on mentor support and this positive effect continues after six weeks. Mentor support is a form of collaborative relationship that defines the transfer of knowledge between individuals (Rowland, 2012). Mentor support is closely related to the relatedness need. In the study conducted by Larose et al. (2005), it was concluded that there was a positive relationship between receiving mentor support and the relatedness need. As a manifestation of the need for relatedness, individuals attempt to communicate with other people (Deci & Ryan, 2000; Ryan & Deci, 2017). Accordingly, individuals can obtain information, get support on issues they are having difficulty with, and overcome their problems more easily with the opinions they receive from experienced people. In this research, the session designed to improve receiving mentor support was designed to allow the relatedness need to be nurtured. This was a key factor in boosting the mentor support scores of participants in the experimental group.

It was observed that PCBDP was positive on skill development activities and this effect continued after six weeks. Individuals who proactively manage their careers take the initiative in improving their skills (Parker & Liao, 2016). Skill development activities are evaluated in relation to the satisfaction of the need of competence, one of the psychological needs. Because the need for competence means that individuals see themselves as sufficient and their existence as useful and meaningful, and this nourishes them

psychologically (Deci & Ryan, 2000). Individuals who shape their careers according to their own competencies take initiative, and this enables them to perform their duties with a higher quality (Meyers, 2020). As a result of these successful experiences, individuals receive positive feedback from others (Greguras & Diefendorff, 2009). This feeds their need for competence (Deci & Ryan, 2008). Afterwards, individuals become more motivated to take the initiative and improve their career-related skills. In this research, the session designed for skill development activities was designed to meet the need for competence. Therefore, nurturing the competence needs of the experimental group participants in their development in skill development activities provided significant support.

This research has some limitations. Although the research was designed with an experimental design, all the criteria of real experimental design research could not be met due to the nature of the field of social sciences. Assignments to groups were made randomly, but not all disruptive variables that could have an impact on proactive career behaviours could be identified and controlled. This is the biggest limitation of the research. Another important limitation of the study is related to the long-term impacts of the intervention programme. The long-term impact of PCBDP is limited to data collected from follow-up measurements performed six weeks after programme completion. In future studies, repeat follow-up measurements can be made after periods such as three months, six months and one year to test the longer-term effects of the programme. In this way, arrangements can be made to improve the programme over time and additional training can be given to the participants in line with the results achieved.

Based on the research findings, several recommendations are offered for both researchers and practitioners. The research was conducted with university students living in the Eastern Mediterranean region of Turkey. The generalizability of the results should be tested by conducting research with individuals living in other regions of Turkey and with different cultural characteristics. PCBDP was conducted with a group of 12 students. Another suggestion for researchers is to organize the programme so that it can be applied to larger groups, in order to increase the usefulness of the programme and to provide training to more people at the same time. The effect of any socio-demographic variables of the participants on the process and outcome of the programme was not tested. Socio-demographic factors may negatively impact the program's effectiveness. Thus, the research could be repeated with socio-demographic variables controlled. This study was conducted with university students. It is recommended to conduct similar studies with newly graduated individuals and test the effectiveness of the programme. Proactive career behaviours are behavioural patterns that have important effects on the transition process of university students to working life. PCBDP can be used in studies aimed at improving individuals' proactive career behaviours in University Career Centers. By revising the content of the programme so that it can be applied to graduates, this programme can be applied to all job seekers by vocational counselors who provide employment services. While providing individual career counseling services to students who feel the need for development regarding proactive career behaviours, PCBDP session contents can be benefited from.

Author Contributions

The literature review, research method, findings, discussion and conclusion were made by the first author. The second author contributed to the literature review, data analysis, and discussion section. All authors have read and approved the final version of the manuscript.

Ethics Declaration

This study was conducted with the approval decision taken at the 2022/06 meeting of Çukurova University Human Research Ethics Committee in Social Sciences (Protocol No. 03/06/2022-E.409383) dated June 28, 2022.

Conflict of Interest

There is no conflict of interest for this study.

Acknowledgements

This article was partially adopted from the first author's PhD dissertation.

References

Balcı, A. (2018). *Sosyal bilimlerde araştırma yöntem, teknik ve ilkeler (13. basım). [Research methods, techniques and principles in social sciences (*13th ed.)*]* Pegem Academy.

Bilal, M., Chaudhry, S., Amber, H., Shahid, M., Aslam, S., & Shahzad, K. (2021). Entrepreneurial leadership and employees' proactive behaviour: Fortifying self-determination theory. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(3), 176–191. https://doi.org/10.3390/joitmc7030176

Bindl, U. K., Parker, S. K., Totterdell, P., & Hagger-Johnson, G. (2012). Fuel of the self-starter: How mood relates to proactive goal regulation. *Journal of Applied Psychology, 97*(1), 134–150. https://doi.org/10.1037/a0024368

Büyüköztürk, Ş. (2016). *Sosyal bilimler için veri analizi el kitabı (28. basım). [Manual of data analysis for social sciences (22nd ed.)]* Pegem Academy.

Cheah, C. S., Cheong, S. Y., Tan, C. L., & Yeow, J. A. (2020). Determinants of proactive career behaviour among female workers: Proactive personality as a moderator. *International Journal of Accounting, Finance and Business, 5*(30), 64–79. http://www.ijafb.com/PDF/IJAFB-2020-30-12-05.pdf

Claes, R., & Ruiz-Quintanilla, S. A. (1998). Influences of early career experiences, occupational group, and national culture on proactive career behavior. *Journal of Vocational Behavior, 52*, 357–378. https://doi.org/10.1006/jvbe.1997.1626

Crant, J. M. (2000). Proactive behavior in organizations. *Journal of Management, 26*(3), 435–462. https://doi.org/10.1177/014920630002600304

Çelik, K., & Lüküslü, G. D. (2018). Unemployment as a chronic problem facing young people in Turkey. *Research and Policy on Turkey, 3*(2), 155–172. https://doi.org/10.1080/23760818.2018.1517449

De Vos, A., De Clippeleer, I., & Dewilde, T. (2009). Proactive career behaviours and career success during the early career. *Journal of Occupational and Organizational Psychology, 82*, 761–777. https://doi.org/10.1348/096317909X471013

Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality, 19*(2), 109–134. https://doi.org/10.1016/0092-6566(85)90023-6

Deci, E. L., & Ryan, R. M. (2000). The" what" and" why" of goal pursuits: Human needs and the self-determination of

behavior. *Psychological Inquiry, 11*(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology/Psychologie Canadienne, 49*(3), 182–185. https://psycnet.apa.org/doi/10.1037/a0012801

Deci, E. L., & Ryan, R. M. (2013). *Intrinsic motivation and self-determination in human behavior*. Springer Science & Business Media.

Deci, E. L., & Vansteenkiste, M. (2004). Self-determination theory and basic need satisfaction: Understanding human development in positive psychology. *Ricerche di Psicologia, 27*, 23–40. https://doi.org/10.1016/S0065-2601(08)60130-6

DeLucia-Waack, J. L. (2006). *Leading psychoeducational groups for children and adolescents*. Sage Publications.

Demirtaş, A. S., & Kara, A. (2022). Career adaptability and unemployment anxiety in Turkish senior undergraduate students: The mediating role of career stress. *Turkish Psychological Counseling and Guidance Journal, 12*(64), 19–33. https://doi.org/10.17066/tpdrd.1095894

Doğanülkü, H. A. (2023). *Proaktif kariyer davranışları geliştirme programının etkililiğinin incelenmesi*. [Yayımlanmamış Doktora Tezi]. Çukurova Üniversitesi.

Eby, L. T., Allen, T. D., Hoffman, B. J., Baranik, L. E., Sauer, J. B., Baldwin, S., Morrison, M. A., Kinkade, K. M., Maher, C. P., & Evans, S. C. (2013). An interdisciplinary meta- analysis of the potential antecedents, correlates, and consequences of protégé perceptions of mentoring. *Psychological Bulletin, 139*, 441–476. https://doi.org/10.1037/a0029279

Forret, M. L., & Dougherty, T. W. (2004). Networking behaviors and career outcomes: Differences for men and women?. *Journal of Organizational Behavior, 25*(3), 419–437. https://doi.org/10.1002/job.253

Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of Occupational and Organizational Psychology, 70*(2), 139–162. https://doi.org/10.1111/j.2044-8325.1997.tb00639.x

Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change, 114*, 254–280. https://doi.org/10.1016/j.techfore.2016.08.019

Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*(1), 14–38. https://doi.org/10.1016/j.jvb.2003.10.005

Gardiner, C. M. (2015). From certificate chasing to genuine engagement: The contribution of curriculum design to students' career intent in a subfield. *Australian Journal of Career Development, 24*(1), 53–63. https://doi.org/10.1177/1038416214564886

Gerçek, M. (2024). Serial multiple mediation of career adaptability and self-perceived employability in the relationship between career competencies and job search self-efficacy. *Higher Education, Skills and Work-Based Learning,14*(2),461–478. https://doi.org/10.1108/HESWBL-02-2023-0036

Grant, A. M., & Ashford, S. J. (2008). The dynamics of proactivity at work. *Research in Organizational Behavior, 28*, 3–34. https://doi.org/10.1016/j.riob.2008.04.002

Green, Z. A., Noor, U., & Hashemi, M. N. (2020). Furthering proactivity and career adaptability among university students: Test of intervention. *Journal of Career Assessment, 28*(3), 402–424. https://doi.org/10.1177/1069072719870739

Greenhaus, J. H., Callanan, G. A., & Kaplan, E. (1995). The role of goal setting in career management. *International Journal of Career Management, 7*(5), 3–12. https://doi.org/10.1108/ 09556219510093285

Greguras, G. J., & Diefendorff, J. M. (2009). Different fits satisfy different needs: linking person-environment fit to employee commitment and performance using self-determination theory. *Journal of Applied Psychology, 94*(2), 465–477. https://psycnet.apa.org/doi/10.1037/a0014068

Greguras, G. J., & Diefendorff, J. M. (2010). Why does proactive personality predict employee life satisfaction and work behaviors? A field investigation of the mediating role of the self-concordance model. *Personnel Psychology, 63*(3), 539–560. https://doi.org/10.1111/j.1744-6570.2010.01180.x

Guan, Y., Guo, Y., Bond, M. H., Cai, Z., Zhou, X., Xu, J., & Wang, Y. (2014). New job market entrants' future work self, career adaptability and job search outcomes: Examining mediating and moderating models. *Journal of Vocational Behavior, 85*(1), 136–145. http://dx.doi.org/10.1016/ j.jvb.2014.05.003

Gucciardi, D. F., & Jackson, B. (2015). Understanding sport continuation: An integration of the theories of planned behaviour and basic psychological needs. *Journal of Science and Medicine in Sport, 18*(1), 31–36. https://doi.org/10.1016/j.jsams.2013.11.011

Hall, D. T. (2002). *Careers in and out of organizations*. Sage.

Healy, M. (2023). Careers and employability learning: pedagogical principles for higher education. *Studies in Higher Education*, 1–12. https://doi.org/10.1080/03075079.2023.2196997

Hirschi, A. (2014). Hope as a resource for self-directed career management: Investigating mediating effects on proactive career behaviors and life and job satisfaction. *Journal of Happiness Studies, 15*(6), 1495–1512. https://doi.org/10.1007/s10902-013-9488-x

Hirschi, A., Freund, P. A., & Herrmann, A. (2014). The Career Engagement Scale: Development and validation of a measure of proactive career behaviors. *Journal of Career Assessment, 22*(4), 575–594. https://doi.org/10.1177/1069072713514813

Hirschi, A., Herrmann, A., & Keller, A. C. (2015). Career adaptivity, adaptability, and adapting: A conceptual and empirical investigation. *Journal of Vocational Behavior, 87*, 1–10. https://doi.org/10.1016/j.jvb.2014.11.008

Huang, J. T., & Hsieh, H. H. (2015). Supervisors as good coaches: Influences of coaching on employees' in-role behaviors and proactive career behaviors. *The International Journal of Human Resource Management, 26*(1), 42–58. https://doi.org/10.1080/09585192.2014.940993

Jacobs, S., De Vos, A., Stuer, D., & Van der Heijden, B. I. (2019). "Knowing me, knowing you" the importance of networking for freelancers' careers: Examining the mediating role of need for relatedness fulfillment and employability-enhancing competencies. *Frontiers in Psychology, 10*, 2055. https://doi.org/10.3389/fpsyg.2019.02055

Jiang, Z., Wang, Y., Li, W., Peng, K. Z., & Wu, C.-H. (2023). Career proactivity: A bibliometric literature review and a future research agenda. *Applied Psychology, 72*(1), 144–184. https://doi.org/10.1111/apps.12442

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22*(3), 280–287. https://doi.org/10.1177/0146167296223006

Kelley, K., & Preacher, K. J. (2012). On effect size. *Psychological Methods, 17*(2), 137–152. https://doi.org/10.1037/a0028086

Kinash, S., Crane, L., Judd, M. M., & Knight, C. (2016). Discrepant stakeholder perspectives on graduate employability strategies. *Higher Education Research & Development, 35*(5), 951-967. https://doi.org/10.1080/07294360.2016.1139555

King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior, 65*(1), 112–133. https://doi.org/10.1016/S0001-8791(03)00052-6

Larose, S., Tarabulsy, G., & Cyrenne, D. (2005). Perceived autonomy and relatedness as moderating the impact of teacher-student mentoring relationships on student academic adjustment. *Journal of Primary Prevention, 26*(2), 111–128. https://doi.org/10.1007/s10935-005-1833-3

Ma, Y., & Chen, S. C. (2022). Understanding the determinants and consequences of perceived employability in graduate labor market in China. *International Journal for Educational and Vocational Guidance*, 1–20. https://doi.org/10.1007/s10775-022-09567-7

Marshall, C., & Rossman, G. B. (2014). *Designing qualitative research*. Sage Publications, Inc.

Matsuo, M. (2020). The role of work authenticity in linking strengths use to career satisfaction and proactive behavior: a two-wave study. *Career Development International, 25*(6), 617–630. https://doi.org/10.1108/CDI-01-2020-0015

Meyers, M. C. (2020). The neglected role of talent proactivity: Integrating proactive behavior into talent-management theorizing. *Human Resource Management Review, 30*(2), 100703. https://doi.org/10.1016/j.hrmr.2019.100703

Miller, S. A. (2007). *Developmental research methods* (3rd Edition). SAGE Publications Inc.

Niles, S. G. (2002). *Adult career development: Concepts, issues and practices*. National Career Development Association.

Paixão, O., & Gamboa, V. (2022). Autonomous versus controlled motivation on career indecision: The mediating effect of career exploration. *Journal of Career Development, 49*(4), 802–815. https://doi.org/10.1177/0894845321992544

Parker, S. K., & Bindl, U. K. (2017). *Proactivity at work: Making things happen in organizations*. Routledge.

Parker, S. K., & Liao, J. (2016). Wise proactivity: How to be proactive and wise in building your career. *Organizational Dynamics, 45*(3), 217–227. http://dx.doi.org/10.1016/j.orgdyn.2016.07.007

Peng, P., Song, Y., & Yu, G. (2021). Cultivating proactive career behavior: The role of career adaptability and job embeddedness. *Hypothesis and Theory, 12*, 1–16. https://doi.org/10.3389/fpsyg.2021.603890

Presbitero, A. (2015). Proactivity in career development of employees: The roles of proactive personality and cognitive complexity. *Career Development International, 20*(5), 525–538. https://doi.org/10.1108/CDI-03-2015-0043

Raabe, B., Frese, M., & Beehr, T. A. (2007). Action regulation theory and career self- management. *Journal of Vocational Behavior, 70*(2), 297–311. https://doi.org/10.1016/j.jvb.2006.10.005

Rayman, J. R. (1999). Career services imperatives for the next millennium. *The Career Development Quarterly, 48*(2), 175–184. https://doi.org/10.1002/j.2161-0045.1999.tb00283.x

Rowland, K. N. (2012). E-mentoring: An innovative twist to traditional mentoring. *Journal of Technology Management & Innovation, 7*(1), 228–237. http://dx.doi.org/10.4067/S0718-27242012000100015

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology, 25*(1), 54–67. https://doi.org/10.1006/ceps.1999.1020

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Sedgwick, P. (2012). The Hawthorne effect. *British Medical Journal, 344*(2), 1–2. http://dx.doi.org/10.1136/bmj.d8262

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84*(3), 416–427. https://doi.org/10.1037/0021-9010.84.3.416

Seibert, S. E., Kraimer, M. L., Holtom, B. C., & Pierotti, A. J. (2013). Even the best laid plans sometimes go askew: Career self-management processes, career shocks, and the decision to pursue graduate education. *Journal of Applied Psychology, 98*, 169–182. https://doi.org/10.1037/a0030882

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: the self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482–497. https://psycnet.apa.org/doi/10.1037/0022-3514.76.3.482

Sonnentag, S. (2017). Career proactivity. In K. Parker and U. K. Bindl (Eds.), *Proactivity at work* (pp. 49–76). Routledge.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Pearson.

Tang, M. (2003). Career counseling in the future: Constructing, collaborating, advocating. *The Career Development Quarterly, 52*(1), 61-69. https://doi.org/10.1002/j.2161-0045.2003.tb00628.x

TURKSTAT, Turkish Statistical Institute (2023). Yüseköğretim İstihdam Göstergeleri/ Higher Education Employment Indicators (June 2023). from https://data.tuik.gov.tr/Bulten/Index?p=Yuksekogretim-Istihdam-Gostergeleri-2022-49600. Accessed 15 November 2023.

Valls, V., González-Romá, V., Hernandez, A., & Rocabert, E. (2020). Proactive personality and early employment outcomes: The mediating role of career planning and the moderator role of core self-evaluations. *Journal of Vocational Behavior, 119*, 103424. https://doi.org/10.1016/j.jvb.2020.103424

van Harten, J., de Cuyper, N., Knies, E., & Forrier, A. (2022). Taking the temperature of employability research: A systematic review of interrelationships across and within conceptual strands. *European Journal of Work and*

Organizational Psychology, 31(1), 145–159. https://doi.org/10.1080/1359432X.2021.1942847

Wilhelm, F., Hirschi, A., & Schläpfer, D. (2024). The multidimensional nature of career self-management behaviours and their relation to facets of employability. *Journal of Occupational and Organizational Psychology, 97*(1),342–375. https://doi.org/10.1111/joop.12474

Zikic, J., & Hall, D. T. (2009). Toward a more complex view of career exploration. *The Career Development Quarterly, 58*(2), 181–191. https://doi:10.1002/j.2161-0045.2009.tb00055.x