The Relationship Between Career Decision Making Self-Efficacy and Emotional Intelligence, Career Optimism, Locus of Control and Proactive Personality: A Meta-Analysis Study

Hazel Duru
Bursa Uludag University,Turkey
Osman Söner
Istanbul Sabahattin Zaim University, Turkey

Abstract

Although there are studies on career decision-making self-efficacy and emotional intelligence, career optimism, locus of control, and proactive personality, no study addresses these four variables together. Therefore, this meta-analysis study examined the correlational findings between career decision-making self-efficacy and four different variables (emotional intelligence, career optimism, locus of control, and proactive personality). In this study, studies published between 1993-2022 examining the relationship between the variables determined from 10 scientific databases (Eric, JSTOR, Sage Journal, Google Academic, Scopus, Springer Ling, Taylor, and Francis ULAKBİM, Proquest, EBSCO) and career decision-making self-efficacy were used. As a result of the research, career decision-making self-efficacy and optimism (r = 0.46; 95% CI [0.33, 0.57]), locus of control (r = 0.36; 95% CI [0.02, 0.62]), proactive personality (r = 0.47; %) 95 CI [0.37, 0.57]) and emotional intelligence (r = 0.45; 95% CI [0.35, 0.54]) were found to be significantly correlated. These critical results point to promising aspects for researchers and practitioners working in career counseling.

Keywords: Career decision-making self-efficacy, emotional intelligence, optimism, proactive personality, locus of control, meta-analysis

Today, adapting to new technologies, information, competitors and business opportunities and keeping up with the new world order has gained importance for many people. While the career paths that have existed since the beginning of the 21st century have diversified, many alternative career paths have begun to emerge. Because of this diversity and rapid global changes, making career decisions for individuals becomes more problematic. It can be said that it is important to know the self-efficacy perceptions of individuals and the factors affecting these self-efficacy perceptions in making these career decisions. Emotions that can guide people's actions in career decisions; It can be said that proactive personality traits that can affect the people around them with the desire not to lose control while making decisions and the choices they will make can affect their self-efficacy perceptions. The fact that people's self-efficacy perceptions in career decision-making are affected by different characteristics and situations is important in terms of generalizing the studies conducted at this point. Individuals' economic and social situations, lifestyles and well-being, psychological and physical well-being, social acceptance and social adaptation are affected by career decisions and play an important role in making career decisions (Gati & Tal, 2008; Savickas, Briddick , & Watkins, 2002). It can be said that personal self-efficacy is effective in this process, as the individual evaluates many situations together in career choice. According to Bandura (1986), self-efficacy is the ability of individuals to organize and take action to achieve desired results. This concept, which has an important place in the career decision-making process (Taylor & Betz, 1983), expresses the confidence of the individual in the career tasks that he/she should perform (Özden, 2014). Career thoughts of people with low self-efficacy are an obstacle to their career development (Hackett & Betz, 1981). Low self-efficacy belief causes people to be limited in their job fields and offers them limited career options (Koyuncu, 2015).

Emotions influence career decision-making mainly

because they direct and regulate actions and affect the formation of emotions (Valach, Young, & Lynam, 1996). Emotions are, therefore, essential for the career decision-making process, and therefore the concept of emotional intelligence has emerged as an essential variable in the career decision-making literature (Di Fabio & Kenny, 2011; Di Fabio, 2012). Emotional intelligence is a sub-dimension of social intelligence, which includes the ability to monitor one's and others' emotions, distinguish between them, and use this information to direct the individual's thoughts and actions (Salovey & Mayer, 1990). Researchers' conceptualizations of emotional intelligence can be grouped under two basic models: ability and mixed models. The ability model refers to the cognitive-emotional ability, in which an individual's ability to process, recognize and use emotional information is emphasized (Petrides, Frederickson, & Furnham, 2004). The mixed model includes empathy, impulsiveness, assertiveness, optimism, well-being, motivation, etc. It includes mental abilities and personality traits such as (Petrides et al., 2004; Bracket, Mayer, & Warner, 2004).

Another structure that has attracted attention recently in the career development literature is career optimism. Career optimism is the ability to expect positive results from future professional developments and feel comfortable in the planning process (Rottinghaus, Day, & Borgen, 2005). The career optimism literature defines career optimism as a predictor for various career outcomes (Rottinghaus et al., 2005; Rottinghaus, Buelow, Matyja, & Schneider., 2012; Spurk & Volmer, 2013). Career optimism can be expressed as the general expectation that good things will happen to their careers while emphasizing the best possible outcomes or the most positive aspects of their future careers. These expectations can lead to career results and affect individuals' goal-setting behaviors (Kalafat, 2012).

The other variable whose relationship with career decision-making self-efficacy is examined locus of control. This concept was introduced to the literature by Rotter (1966). According to Rotter (1966), locus of control is the individual's perception of all situations affecting him due to his behavior or as a result of factors outside himself. Locus of control is also defined as people's generalized expectations about the world (Carver & Scheier, 1996). In short, locus of control is concerned with who or what the causes and consequences of events are attributed to (Taylor, Peplau, & Sears, 2006; Durna & Şentürk, 2012). Locus of control belief is also related to what people attribute to the reinforcers they encounter, that is, the results obtained. These references can be attributed to factors such as luck and fate, as well as to the result of the behaviors of individuals (Solmuş, 2004). Locus of control is divided into internal and external.

A final concept examined in relation to career decision self-efficacy is proactive personality. Proactive personality traits have emerged from the interactional framework, which argues that individuals can influence those around them with their behavior and be affected by their environment (Bateman & Crant, 1993). A proactive personality, due to conditions, discovers opportunities, evaluates them by filtering them, takes responsibility, and waits patiently until there is a meaningful change (Crant, 2000). According to Bateman and Crant (1993), a proactive personality; The need to achieve success is associated with behaviors that include participating in extra-learning activities, personal achievements that mirror change, and leadership skills. Proactive individuals; show surprising performance in being open to new activities, enabling change, and going beyond expectations. As with motivation, the behaviors of proactive individuals are thought to come from within (Turner, 1997). Proactive people prefer jobs where they can bring about change. Their ever-increasing and stronger energies also increase their sphere of influence (Covey, 1998). According to Bateman and Crant (1993), the proactive person is; he/she is an entrepreneur and a person who does not stop in order to reach the goal he has set, continues in the face of difficulties, and makes the change.

Studies often examine

the relationship between career decision-making self-efficacy and emotional intelligence, career optimism, locus of control, and proactive personality. However, no meta-analysis studies examine the relationship between career decision-making self-efficacy and these concepts. Because when the studies in the literature are examined, it has been seen that the meta-analysis studies are limited and the researchers do not show enough inclination on this subject. However, it is thought that determining the generalizability of the relationships between career decision-making self-efficacy, emotional intelligence, career optimism, locus of control and proactive personality will support new research and projects. In addition, it is thought that this study is important because determining the general results about the personal characteristics that may have an impact on the career choice in the field will ensure that studies on the development of personality traits are included in the training programs of the experts working in the field. For this reason, we conducted a meta-analysis study dealing with the concepts related to career decision-making self-efficacy of individuals at different developmental stages. Theories on the subject (Bandura, 2001; Bateman & Crant, 1993; Brown, 2002; Goleman, 1996; Peterson & Seligman, 1984; Rotter, 1966) provide limited information about the development of career decision-making self-efficacy. Our meta-analysis is a research aiming at exploratory determination of the limited relationship between career decision making self-efficacy and other variables. In this exploratory meta-analysis study, we aimed to examine the relationship between four variables related to individuals' career decision-making self-efficacy. In this exploratory study: (a) Is there a significant relationship between career decision-making self-efficacy and proactive personality? (b) Is there a significant relationship between career decision making self-efficacy and emotional intelligence? (c) Is there a significant relationship between career decision making self-efficacy and locus of control? (d) Is there a significant relationship between career decision-making self-efficacy and career optimism? We sought answers to these questions.

Method

Search Strategy and Study Identification

In this meta-analysis study, study identification, screening, and selection were performed per the Systematic Reviews and Preferred Reporting Items for the Meta-Analysis (PRISMA) procedure (Moher et al., 2009). Data were collected between 25 May 2022 and 25 June 2022. Eric, JSTOR, Sage Journal, Google Academic, Scopus, Springer Link, Taylor and Francis, ULAKBİM, Proquest, and EBSCO databases were used to find studies suitable for the research. In these search engines, the conjunctions "and" and "or" were used as search terms "career decision-making self-efficacy," "emotional intelligence," "locus of control," "optimism," and "proactive personality". Studies published between 1993 and 2022 are included.

Inclusion Criteria

As a result of the searches (including theses and articles), a total of 60 studies were found. Inclusion criteria were (i) the language of the studies was Turkish or English, (ii) the correlation coefficient and sample size (N) values were reported for the relevant variables, (iv) valid and reliable measurement tools were used to measure the relevant variables, and (v) the studies were fully accurate. In the searches made in the above-mentioned indexes, the concepts were written separately, and the studies in which the relationship between the indexes and career decision-making self-efficacy were examined by the researchers in accordance with the purpose of the research. The studies found were reviewed and coded in accordance with the inclusion criteria. As a result of the coding, 6 articles/thesis were not included in the meta-analysis study because there was a lack of correlation coefficient in 6 articles/thesis, 2 career decision self-efficacy sub-dimensions did not have a total score correlation, 3 were not in English and Turkish languages, and 4 were experimental studies.

The process of the studies included in the meta-analysis is shown in Figure 1.

Data Extraction and Reliability

The two researchers who conducted the research searched the databases to find the studies per the purpose of the research. The author coded all available outcome variables examined in the studies, including the year of publication, sample size, mean age, country, sample group, variables, and scales used. Both researchers independently coded all the studies found, and the coding consistency between the researchers was found to be over 95%. When disagreement arose over whether a study met the inclusion criteria, the two researchers debated their differences until they reached a consensus. The meta-analysis included the correlation coefficients (r) for each sample. When a study included more than one independent sample (eg, Sovet & Metz, 2014), we classified each sample as a single unit and separately coded the correlation coefficients within the sample.

Data Analysis

For the meta-analysis, we followed the procedures of Lipsey and Wilson (2001) for all calculations. We used correlation coefficients (Pearson's r) to calculate effect sizes in this meta-analysis. We applied Fisher's r-to-z transform to calculate unweighted effect sizes, following the computational method proposed by Lipsey and Wilson (2001) to synthesize r-effect sizes. Because the sample sizes of studies differed significantly, we also calculated the standard error and inverse variance weights to assess the effect of sample sizes on effect size:

Effect Size Statistic: ESr =r, ESZr =.5loge[1+ESr/1-ESr]
Standart Error: SEZr=1/√¯n-3
Inverse Variance Weight: WZr=n-3

Then, after weighting studies using sampling variances, we performed both Q and I2 tests to assess the heterogeneity of effect sizes (Huedo-Medina et al., 2006). The Q statistic reports the statistical significance of true heterogeneity, and I2 measures its extent. For example, I2 = 50% indicates that fifty percent of the total variability between effect sizes is due to true heterogeneity between studies. In general, a fixed effects model is adopted in a meta-analysis when both $p > 0.1$ (Q statistic) and $I2 \leq 50\%$ are provided; otherwise, the random effects model is adopted. Any I value exceeding 75% indicated significant heterogeneity, hence the appropriateness of using a random effects model for meta-analysis. Finally, a known risk to the validity of a meta-analysis is publication bias; this is because studies with statistically significant results are more likely to be published than those with non-significant results. Therefore, we visually inspected the data using a funnel plot to assess the risk of publication bias. In addition, the Egger test was applied to detect the asymmetry in the Funnel plot. (Peters et al, 2006).

Results

Sample Characteristics

The 45 studies included in the meta-analysis had a total of 45 independent samples and 22,194 participants in samples ranging in size from 80 to 1,540 (Table 1). Most studies were conducted in China (n=8) and Indonesia (n=9). Other studies Turkey (n= 5), South Korea (n=4), America (n=4), Malaysia (n=1), India (n=1), Taiwan (n=1), Pakistan (n=2)), Germany (n=1), Greece (n=1), United Kingdom (n=1), Philippines (n=1), Nigeria (n=1), Belgium (n=1) and Oman (n=1) made in their countries. The mean age in the samples ranged from 14 to 34.72. Studies were conducted with secondary school students (n=3), high school students (n=15), university students (22), graduate students (n=1), companies (n=1), employees (n=1), professional professionals (n= 1) was done with athletes (n=1).

Measurement and Outcome Characteristics

Studies in the sample were used to measure CDMSE: Career Decision Making Self-Efficacy Short-Form (n=26), Career Decision Making Self-Efficacy Scale(n=11), Career Decision Self-

Efficacy (n=4), Major Decision-Making Self-Efficacy Scale (n=1), Career Decision-Making Self-Efficacy Questionnaire (n=1), Middle School Self-Efficacy Scale (n=1), Career and Talent Development Self-Efficacy Scale (n=1) they used. Career Futures Inventory (n=7), Life Orientation Test (n=2), and Optimism Scale (n=1) scales were used to measure optimism. Trait Emotional Intelligence Questionnaire Short Form Scale (n=4), Emotional Intelligence Scale (n=4), Emotional Intelligence Inventory (n=1), and Schutte Self Report Emotional Intelligence Test (n=1) scales were used to measure emotional intelligence. The Proactive Personality Scale (n=13) and the Chinese version of the Proactive Personality Scale (n=2) scales were used to measure proactive personality traits. Finally, Rotter Internal-External Locus of Control Scale (n=5), Locus of Control Scale (n=2), Internal Locus of Control Scale (n=1), and Career Locus of Control Scale (n=1) scales were used to measure the locus of control (see table 1).

The number of studies for each variable used in the meta-analysis, the sum of sample sizes, correlation values and Fisher's z-transform values of correlation values, confidence intervals, heterogeneity test values of variables (Q, p; I2) and Tau2, z and p values Table 2' has also been given. (See table 2)

Effect Sizes Relating to Career Decision-Making Self-Efficacy

Optimism

The test for heterogeneity ($Q = 149.35$, $p < 0.001$; $I2 = 93.974$) revealed that the data in 10 independent samples were heterogeneous, thus confirming the appropriateness of using a random effects model in the meta-analysis (Lipsey & Wilson, 2001). The fact that the obtained Q value exceeds the 9 degrees of freedom and .05 confidence level (sd=9, $\chi2(.05)=16.91$) specified in the chi-square table indicates that the data are heterogeneous (Borenstein et al., 2014). Patsopoulos et al. (2008) state that an I2 value above 50% indicates heterogeneity. Finding the I2 value as 93.97% indicates that the study is heterogeneous. Based on Pearson's guidelines for correlation sizes (small: $0< r \leq 0.30$, medium: $0.30< r \leq 0.70$, large: $.70< r \leq 1.00$), the random effects model optimism and career decision self-efficacy are moderate showed a correlation ($r= 0.46$), 95% CI [0.33, 0.57], $z = 6.37$, $p< 0.001$ (Table 2). The information from 10 studies on optimism and the forest graph is given in Figure 2.

Publication Bias.

Publication bias occurs by focusing only on a specific result or by including only studies obtained with one particular narrow search in the meta-analysis (Dinçer, 2014). We found no evidence of publication bias, as indicated by the symmetrical distribution of studies in the funnel plot (Figure 3). The Egger test also showed that the estimates of these included studies might not be affected by publication bias with a p-value greater than 0.05, $t =0.92$, $P = 0.38$, 95% CI [-5.86-13.67]. As no publication bias was detected, it was unnecessary to run Duval and Tweedie's crop-fill analysis to assess such bias in the meta-analysis further.

Proactive Personality

The heterogeneity test ($Q = 605.51$, $p < 0.001$; $I2 = 97.68$) revealed that the data in 15 independent samples were heterogeneous, thus confirming the appropriateness of using a random effects model in the meta-analysis (Lipsey & Wilson, 2001). The fact that the Q value obtained exceeds the 14 degrees of freedom specified in the chi-square table and the .05 confidence level (sd=14, $\chi2(.05)=23.68$) indicates that the data are heterogeneous (Borenstein et al., 2014). Patsopoulos et al. (2008) state that an I2 value above 50% indicates heterogeneity. Finding the I2 value as 97.68% indicates that the study is heterogeneous. Based on Pearson's guidelines for correlation sizes (small: $0< r \leq 0.30$, medium: $0.30< r \leq 0.70$, large: $.70< r \leq 1.00$), the random effects model proactive personality and career decision self-efficacy moderate showed a high level of correlation ($r= 0.47$),

95% CI [0.37, 0.57], z = 7.85, p< 0.001 (Table 2). The information and forest plot of 15 studies on proactive personality is given in Figure 4.

Publication Bias. We found no evidence of publication bias, as indicated by the symmetrical distribution of studies in the funnel plot (Figure 5). The Egger test also showed that the estimates of these included studies might not be affected by publication bias with a p-value greater than 0.05, t = 3.35, p = 0.005, 95% CI [-26.49--5.70]. As no publication bias was detected, it was unnecessary to run Duval and Tweedie's crop-fill analysis to assess such bias in the meta-analysis further.

Emotional Intelligence

The heterogeneity test (Q = 134.14, p < 0.001; I2 =92.54) revealed that the data in 10 independent samples were heterogeneous, thus confirming the appropriateness of using a random effects model in the meta-analysis (Lipsey & Wilson, 2001). The fact that the obtained Q value exceeds the 9 degrees of freedom and .05 confidence level (sd=9, $\chi 2(.05)=16.91$) specified in the chi-square table indicates that the data are heterogeneous (Borenstein et al., 2014). Patsopoulos et al. (2008) state that an I2 value above 50% indicates heterogeneity. The I2 value was 92.54%, indicating that the study was heterogeneous. The model showed a moderate correlation between emotional intelligence and career decision-making self-efficacy (r= 0.45), 95% CI [0.35, 0.54], z = 7.80, p< 0.001 (Table 2). The information and forest plot of 11 studies on emotional intelligence is given in Figure 6.

Publication Bias. We found no evidence of publication bias, as indicated by the symmetrical distribution of studies in the funnel plot (Figure 7). The Egger test also showed that the estimates of these included studies might not be affected by publication bias with a p-value greater than 0.05, t =1.08, P = 0.31, 95% CI [-3.88-11.02]. As no publication bias was detected, it was unnecessary to run Duval and Tweedie's crop-fill analysis to assess such bias in the meta-analysis further.

Locus of Control

The heterogeneity test (Q = 1133.15, p < 0.001; I2 =99.29) revealed that the data in nine independent samples were heterogeneous, thus confirming the appropriateness of using a random effects model in the meta-analysis (Lipsey & Wilson, 2001). The fact that the Q value obtained exceeds the 8 degrees of freedom specified in the chi-square table and the .05 confidence level (sd=9, $\chi 2(.05)=15.50$) indicates that the data are heterogeneous (Borenstein et al., 2014). Patsopoulos et al. (2008) state that an I2 value above 50% indicates heterogeneity. The I2 value being 99.29% indicates that the study is heterogeneous. Based on Pearson's guidelines for correlation sizes (small: $0< r \leq 0.30$, medium: $0.30< r \leq 0.70$, large: $.70< r \leq 1.00$), the random effects model optimism and career decision self-efficacy are moderate showed a correlation (r = 0.36), 95% CI [0.02, 0.62], z = 2.09, p < 0.001 (Table 2). The information from nine studies on the locus of control and the forest plot is given in Figure 8.

Publication Bias. We found no evidence of publication bias, as indicated by the symmetrical distribution of studies in the funnel plot (Figure 9). The Egger test also showed that the estimates of these included studies might not be affected by publication bias with a p-value greater than 0.05, t =1.02, P =0.34, 95% CI [-28.08-11.10]. As no publication bias was detected, it was unnecessary to run Duval and Tweedie's crop-fill analysis to assess such bias in the meta-analysis further.

Discussion and Conclusion

In this meta-analysis study, we examined the findings of previous studies on the relationships between the variables of optimism, proactive personality, emotional intelligence, and locus of control and the CDMSE of individuals in different sample groups. Our results revealed significant relationships between each of the variables and CDMSE. All four variables had a moderate

Table 1.

Selected Characteristics of the Included Studies/Samples

Authors	Year	N	Mean Age	Country	Samples	Variables	Scale
Zhou et al.	2021	743	22.5	China	University Graduates	• Proactive personality • Career decision-making self-efficacy • Employment stress	• Proactive Personality Scale • Career Decision-Making Self-Efficacy Scale • Career Success Criteria Scale
Xin et al.	2020	220	21.82	China	Undergraduates	• Proactive personality • Career Success Criteria Clarity Career Decision-Making Self-Efficacy	• Proactive Personality Scale • Career Decision-Making Self-Efficacy Scale • Career Success Criteria Scale
Tanau & Salim	2020	140	14	Indonesia	Junior High School	• Career Decision Self-Efficacy • Planned Happenstance • Career Decision Self-Efficacy	• Career Decision Self-Efficacy Short Form • Planned Happenstance Career Inventory • The Proactive Personality Scale
Srikanth	2012	186	34.72	India	Manufacuring Companies	• Self Efficacy • Career Self Management • Proactive Personality	• Career Self Efficacy Scale • Proactive Personality Scale • Career Self Management Scale
Ramadhani & Suharso	2021	758	Between 16-19 ages	Indonesia	High School	• Proactive Personality • Parental Involvement • Career Decision Self-Efficacy	• Career Decision Self-Efficacy Scale Short Form • Parent Career Behavior Checklist • Proactive Personality Scale
Ramadhani & Susharso	2020	758	/	Indonesia	High School	• Proactive Personality • Parental Involvement • Career Decision Self-Efficacy	• Career Decision Self-Efficacy Scale Short Form • Parent Career Behavior Checklist • Proactive Personality Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Preston & Salim	2019	949	16	Indonesia	Senior High School	• Parenting style • Proactive personality • Career decision self-efficacy	• Career Decision Self-Efficacy Scale-Short Form • Parental Authority Questionnaire • Proactive Personality Scale
Mujiati & Salim	2021	858	17.7	Indonesia	12th-grade vocational school students	• Career Decision Self-Efficacy • Proactive Personality • Attributions	• Career Decision Self-Efficacy Scale – Short Form • Proactive Personality Scale • Assessment of Attributions for Career Decision Making
Li	2021	514	/	China	High schools	• Family Function • Proactive Personality • Career Decision-Making Self-Efficacy	• Major Decision-Making Self-Efficacy Scale • Proactive Personality Scale • Family Assessment Device
Kim & Park	2017	296	21.74	South Korea	University students	• Proactive Personality • Career Decision-Making Self-Efficacy • Career Search Self-Efficacy	• Proactive Personality Scale • Career Decision-Making Self-Efficacy Scale Career Search Self-Efficacy Scale
Hsieh & Huang	2014	336	21.03	Taiwan	College students	• Career decision self-efficacy • Proactive Personality • Socioeconomic Status	• Socioeconomic Status • Proactive Personality Scale • Career Decision Self-Efficacy Scale–Short Form
Hou et al.	2014	810	22.90	China	Graduate students	• Proactive personality • Decision-making self-efficacy • Career adaptability	• Chinese version of the Proactive Personality Scale • Career Adapt-Abilities Scale-International Form • Career Decision-Making Self-Efficacy Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
He et al.	2021	1540	19.58	China	College students	• Proactive personality • Perceived social support • Interaction item	• Chinese version of the Proactive Personality Scale • Perceived Social Support Scale • Career Decision Making Self Efficacy Questionnaire • Career Decision Making Difculties Questionnaire
Fatin & Salim	2020	833	16-20	Indonesia	12th grade vocational school students	• Emotional intelligence, • Career Decision Self-Efficacy, Proactive Personality:	• Proactive Personality Scale • Career Decision Self-Efficacy Scale-Short Form • Trait Emotional Intelligence Questionnaire-Short Form
Darmayanti & Salim	2020	840	16.39	Indonesia	Senior high schools	• Career Decision-Making Self-Efficacy • Emotional Intelligence • Proactive Personality	• Career Decision-Making Self-Efficacy Scale–Short Form. • Trait Emotional Intelligence Questionnaire–Short Form • Proactive Personality Scale
Ahmad & Nasir	2022	211	-	Pakistan	* Electronic media employees	• Boundaryless Career Orientation • Career Optimism • Career Decision-making Self-efficacy • Consideration of Future Consequences	• Career Decision Self Efficacy Scale • Consideration of Future Consequences Form • Career Orientation Scale • The Career Futures Inventory

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Ahmad &Nasir	2021	192	/	Pakistan	Professionals of electronic media industry	• Positive career shocks • Carere decision making self efficacy • Career optimism • Consideration of future consequence immediate	• Career Decision Self Efficacy • Consideration of Future Immediate Form • Career Shock Scale • The Career Futures Inventory
Aymans et al.	2019	307	28	Germany	University students	• Perceived lecturer support • Perceived career optimism • Perceived career barriers • Self-efficacy	• Career Optimism subscale of the Career Futures Inventory • Career Self-Efficacy Scale • Perceived Lecturer Support • Perceived Career Barriers Scale
Charokopaki & Argyropoulou,	2019	153	16-17	Greece	High school	• Optimism, • Career Decision Self-Efficacy • Career Indecision	• Middle School Self-Efficacy Scale • Career Decision Scale • Life Orientation Test-Revised
Chui et al.	2022	170	/	China	Undergraduate students	• Protean Career Orientation • Career Optimism • Career Adaptability • Career Decision Self-Efficacy	• Career Adapt-Abilities Scale– Short Form • Career Decision Self-Efficacy Scale • The Career Futures Inventory • Protean Career Orientation
Coon	2009	325	19.93	America	College students		• Career Decision-making Difficulties Questionnaire • Career Decision-Making Self-Efficacy Scale-Short Form • Career Futures Inventory-Revised • The Brief COPE scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Garcia et al.	2015	235	17.34	Philippines	Undergraduate students	• Parental support • Teacher support • Career decision-making self efficacy • Career optimism	• Career-Related Parent Support Scale • Teacher Support Scale • Career Decision-Making Self-Efficacy Scale-Short Form • Career Futures Inventory
Kanten et al.	2017	311	/	Turkey	Undergraduate students	• Mentoring Functions, • Career Adaptabilities, • Career Self-Efficacy, • Career Optimism	• Mentoring Functions Scale • Career Futures Inventory • Career Self-Efficacy Scale • Career Adaptabilities Scale
Moon	2005	177	24.57	America	Undergraduate students	• Career self-efficacy • Attachment styles • Optimism	• The Life Orientation Test-Revised • The Experiences in Close Relationships • Career Decision-Making Self-Efficacy Scale-Short Form
Şener & Kocaoğlu	2016	967	/	Turkey	University students	• Optimism, • Career Decision Efficacy Expection, Professional Results Expect	• Career Decision Self-Efficacy Scale – Short Form Professional Outcome Expectancy Scale • Optimism Scale
Darmayanti & Salim	2020	840	16.39	Indonesia	Senior high school	• Career decision-making self-efficacy • Emotional intelligence • Proactive personality	• Career Decision-Making Self-Efficacy Scale–Short Form. • Trait Emotional Intelligence Questionnaire–Short Form • Proactive Personality Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Salim & Safitri	2020	165	16.20	/	*High school students	• Career decision-making attribution Career decision making self-efficacy Emotional intelligence	• Career Decision Self-Efficacy Scale-Short Form • Assessment of Attribution for Career Decision Making • Trait Emotional Intelligence Questionnaire Short Form
Song & Shin	2016	223	/	South Korea	* Nursing students	• Emotional Intelligence • Career Decision-Making Self-Efficacy • Career Decision Levels	• Emotional Intelligence Scale • Career Decision-Making Self-Efficacy Scale •
Santos et al.	2018	472	25	United Kingdom	University students	• Emotional Intelligence • Career Decision-Making Difficulties: Career Decision Self-Efficacy	• Career Decision-Making Difficulties Revised Form • Emotional Intelligence Scale • Career Decision Self-Efficacy Scale-Short Form
Sidek & Bakar	2020	80	/	/	High school students	• Career decision • Emotional intelligence • Self-efficacy	• Emotional Intelligence Inventory • Career Decision Making Self – Efficacy- Short-Form
Fatin& Salim	2020	833	16-20	Indonesia	12th-grade vocational school students	• Emotional Intelligence • Proactive Personality • Career Decision Self-Efficacy	• Career Decision Self-Efficacy Scale-Short Form • Trait Emotional Intelligence Questionnaire-Short Form • Proactive Personality Scale
Fajobi &Bankole	2019	200	/	Nigeria	Senior secondary schools	• Emotional Intelligence • Career Decision Making Self-Efficacy	• Career Decision-Making Self-Efficacy Short Form Scale • Emotional Intelligence Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Jiang	2016	3185	19.88	China	Undergraduate students	• Emotional intelligence, • Career decision-making self-efficacy • Goal commitment • Professional commitment	• Career Decision-Making Self-Efficacy Short Form Scale • Emotional Intelligence Scale • Professional commitment • Gaol commitment
Murphy	2021	305	/	/	College students	• Career decision-making self-efficacy, • Emotional Intelligence	• Trait Emotional Intelligence Questionnaire Short Form Scale, • Career Decision-Making Self-Efficacy Short Form scale
Parmentier et al.	2021	307	22.33	Belgium	University students	• Career adaptability, • Emotional intelligence, • Anticipatory emotions • Career decision-making self-efficacy	• Career Adapt-Abilities Scale • Emotional Intelligence Scale, *Anticipatory Emotions Scale • Career Decision-Making Self-Efficacy Short Form
Hamzah et al.	2021	205	23	Malaysia	University students	• Career adaptability • Career Decision • Emotional intelligence; • Self-efficacy • Self-esteem	• Schutte Self Report Emotional Intelligence Test • Rosenberg Self-esteem Scale • Career Decision Self-Efficacy Scale–Short Form • Career Adapt-Abilities Scale
Ulaş & Yıldırım	2019	729	21.68	Turkey	University students	• Locus of control • Perceived career barriers • Hopelessness • Career decision-making self-efficacy	• Career Decision-Making Self-Efficacy Scale • Perceived Career Barriers Scale • Locus of Control Scale • Beck Hopelessness Scale • Positive and Negative Affect Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Turan	2021	354	14.3	Turkey	Middle schools	• Locus of control, • Hope, • Career and talent development self-efficacy	• Locus of Control Scale • Children's Hope Scale • Career and Talent Development Self-Efficacy Scale
Meyle	1993	88	18-43	America	College students	• Career Decision Making Self-Efficacy • Locus of Control, • Decision-Making Style, • Coping Style	• The Importance of Others' Expectations for Career Questionnaire • The Assessment of Career Decision Making Scale • The Career Decision-Making Self-Efficacy Scale • The Internal-External Scale • The Coping Scale • The Bern Sex Role Inventory • The Bern Sex Role Inventory • The Traditionality of Significant Others Questionnaire
Taylor & Popma	1990	407	18.9	America	College students	• Career Decision Making Self-Efficacy, • Career Salience • Locus of Control • Vocational Indecision	• The Career Decision-Making Self-Efficacy Scale • The Occupational Self-Efficacy Scale • Rotter Internal-External (I-E) Scale • Career Salience Questionnaire • Career Decision Scale
Kim & Lee	2018	310	23.91	South Korea	College students	• Career adaptability, • Career decision-making self-efficacy, Occupational engagement, • Internal locus of control	• Career Adaptability Scale • Internal Locus of Control Scale • Career Decision Self-Efficacy Scale • Occupational Engagement Scale

Table 1. continued

Authors	Year	N	Mean Age	Country	Sample	Variables	Scales
Lee	2007	502	15.4	China	Secondary students	• Career Maturity • Career Decision-making Self-efficacy, Interdependent Self -construal, • Locus of Control and Gender	• Career Maturity Inventory • Career Decision-Making Self-Efficacy Scale – Short Form • Attitudes Toward Women Scale • Interdependent Subscale of Self-Construal Scale Rotter Internal-External Locus of Control Scale
Bahrani et al.	2021	2700	16.01	Oman	High school students	• Career decision self-efficacy • Career locus of control • Career aspiration	• Career Aspirations Scale • Career Locus of Control Scale • The Career Decision Self-Efficacy Short Form
Burns et al.	2013	158	20.10	/	Athletes	• Career decision-making self-efficacy • Academic support service	• Rotter's Locus of Control Scale • Generalized Self Efficacy Scale • Career Decision-Making Self-Efficacy Scale • Athlete Satisfaction Questionnaire
Sarı & Şahin	2013	302	17.21	Turkey	High school students	• Career Decision Making Self-Efficacy • Hope • Locus of Control	• Career Decision Making Self-Efficacy Scale • Hope Scale • Rotter Internal-External Locus of Control Scale

Table 2

Homogeneity findings regarding the career decision-making self-efficacy of the variables

						Homogeneity Test			Tau Squared	Test of ES	
Variables	*K*	*N*	*r*	*Fisher Z*	*%95-CI*	*Q (r)*	*p*	I^2	*Tau2*	*z*	*p*
Optimism	10	2979	0,46	0.49	0.33-0.57	149.35	0,000	93.97	0.057	6.37	0.000
Proactive Personality	15	10381	0.47	0.51	0.37-0.57	605.51	0.000	97.68	0.062	7.85	0.000
Emotional Intelligence	11	3770	0.45	0.49	0.35-0.54	134.14	0.000	92.54	0.039	7.80	0.000
Locus of Control	9	5551	0.35	0.36	0.02-0.62	1133.15	0.000	99.29	0.283	2.09	0.036

Figure 2.

Forest Plot of the Relationships Between Career Decision-Making Self-Efficacy and Optimism

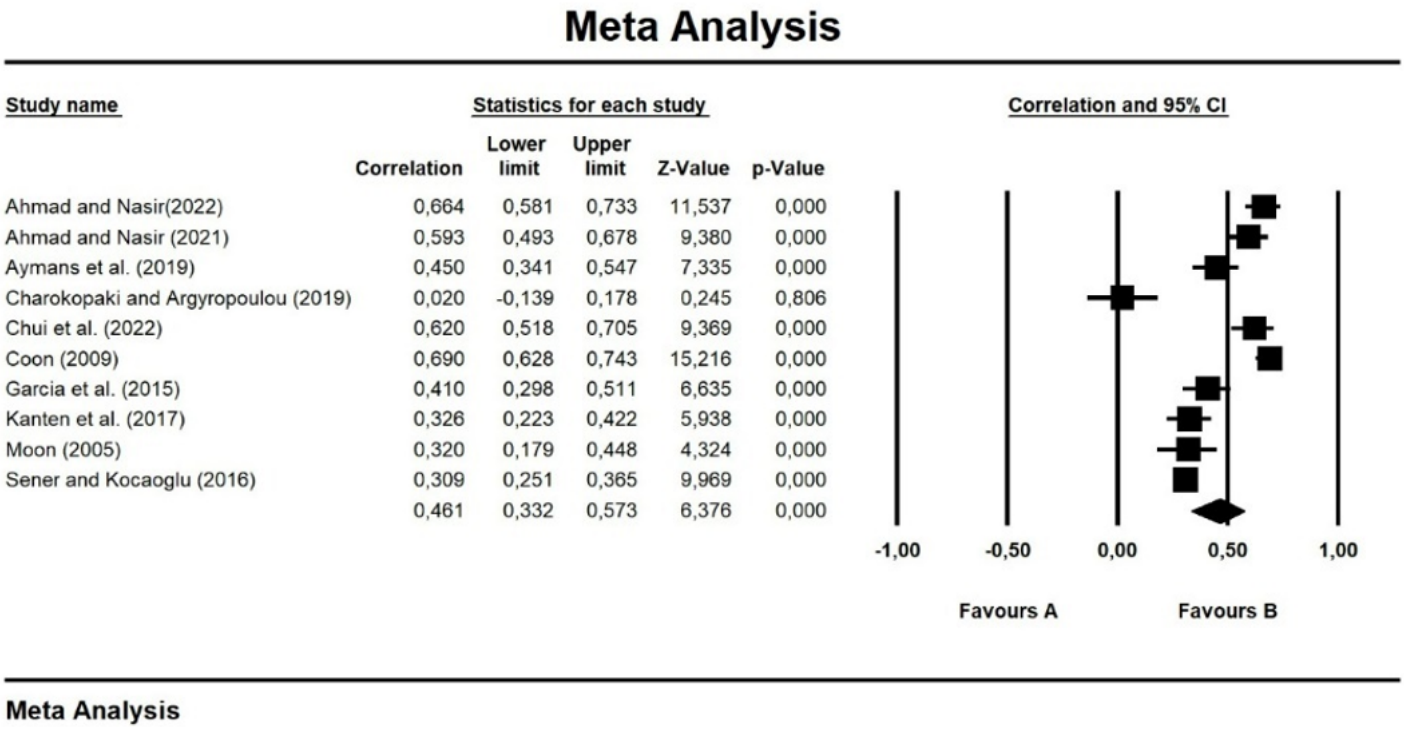
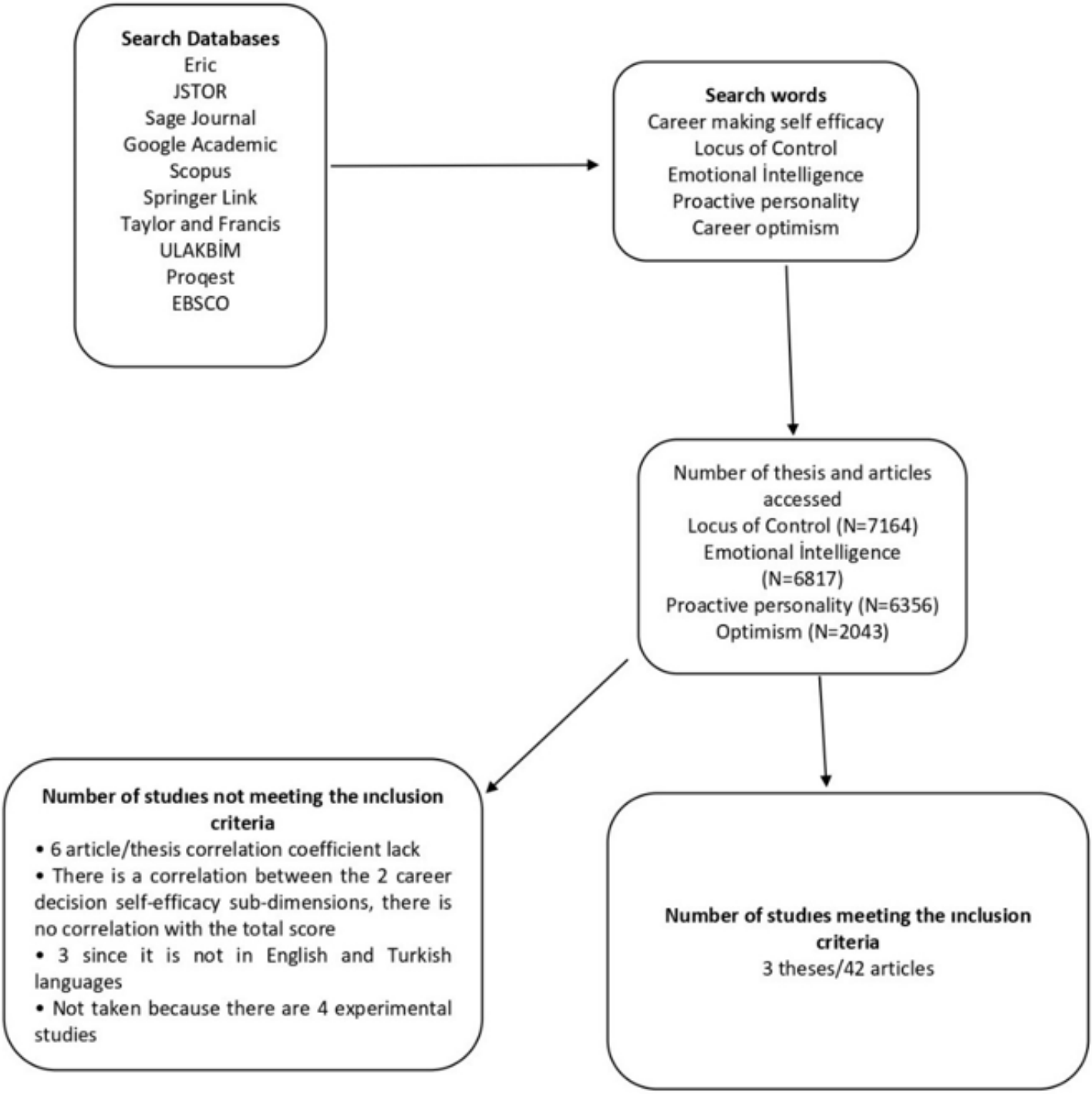


Figure 1

PRISMA Flow Chart of the Search Procedure



association with CDMSE. This result shows that optimism, proactive personality, emotional intelligence, and locus of control significantly contribute to CDMSE. This finding is consistent with previous research suggesting that individuals' career decision-making self-efficacy is related to the specified variables. The first result of our meta-analysis study is that optimism is significantly related to career decision-making self-efficacy and has a moderate effect size in all studies dealing with optimism. Optimism has a significant and positive relationship with an individual's career decision-making self-efficacy (Aymans, Kortsch, & Kauffeld., 2019; Chui, Li, & Ngo, 2022; Garcia, Restubog, Bordia, Bordia, & Roxas, 2015; Kanten et al. ., 2017). Optimism contains a positive-emotional element. Career optimism can be expressed as the tendency to expect the best possible outcome or to emphasize the positive aspects of an individual's future career development (Rottinghaus et al., 2005). Perera and McIlveen (2014) concluded in their study that they created a career-structuring model and that optimism is an essential indicator for better psychological adjustment in the transition to university. In addition, Tolentino, Garcia, Lu, Restubog, Bordia, and Plewa (2014) suggest that optimism can be crucial in adapting to changes after graduation (Tolentino et al., 2014). From this point of view, individuals with positive expectations about their careers may believe more in their competency in making career decisions because they focus on positive features and aspects of themselves.

Another result of our meta-analysis study is that proactive personality is significantly associated with career decision-making self-efficacy and has a moderate effect size in all studies dealing with proactive personality traits. Individuals' proactive personality traits have a significant and positive relationship with their career decision-making self-efficacy (Fatin & Salim, 2020; Kim & Park, 2017; Xin, Tang, Li, & Zhou, 2020). Career decision-making self-efficacy can be expressed as an essential indicator of individuals' professional attitudes and the results they achieve in line with these attitudes (Gadassi, Gati, & Wagman-Rolnick, 2013; Tian et al., 2014). Today, competition, adaptation, self-development,

Figure 3

Funnel Plot of Effect Sizes of Correlations Between Optimism and CDMSE

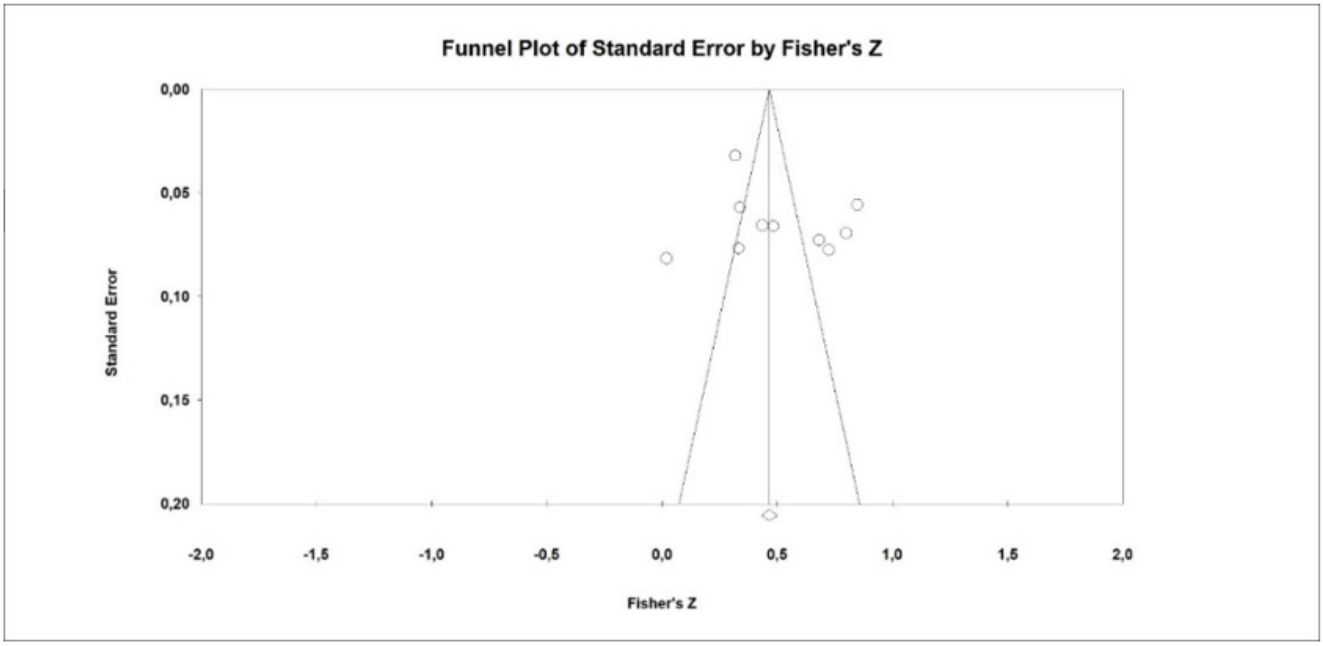


Figure 4

Forest Plot of the Relationships Between CDMSE and Proactive Personality

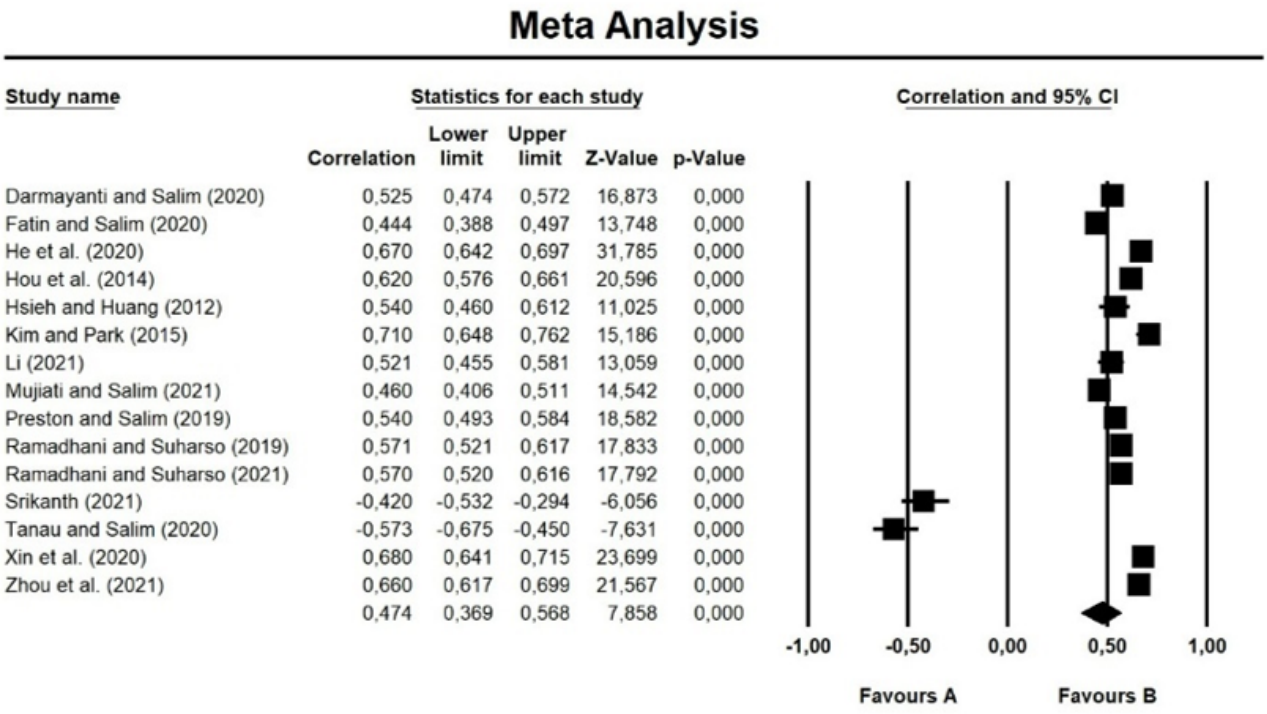
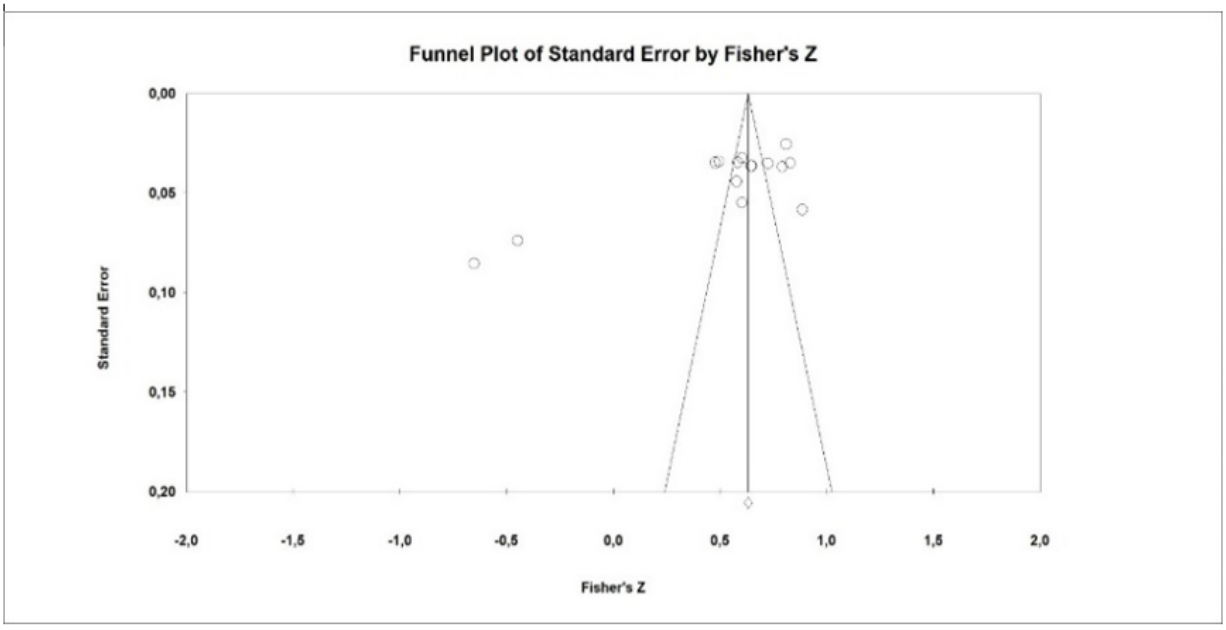


Figure 5

Funnel Plot of Effect Sizes of Correlations Between Proactive Personality and CDMSE



and continuous development have become essential features, especially considering the labor market and education levels. At this point, it may be useful to mention the proactive personality. Being proactive gives individuals an advantage in influencing their environment and others and taking the initiative in the face of events and situations (Bateman & Crant, 1993). In addition, Bergeron, Schroeder, and Martinez (2014) provide evidence that people with proactive characteristics can experience high levels of self-efficacy. Indeed, social cognitive career theory suggests that efficacy beliefs affect career development (Brown, Lent, Telander, & Tramayne., 2011). A proactive personality provides essential power to the individual to compete (Parker & Collins, 2010). Proactive personality traits contain positive features that will meet all these requirements, considering the rapidly changing education policies, the education-teaching processes that are constantly open to innovations, and the competitive labor market. From this point of view, individuals with proactive personality traits may feel more competent in making career decisions by being aware of these strengths. At the same time, these individuals may be able to determine jobs and occupations suitable for their characteristics and show flexibility according to the situation.

Another result of our meta-analysis study is that emotional intelligence is significantly related to career decision-making self-efficacy and has a moderate effect size in all studies dealing with emotional intelligence. As can be seen in various studies, individuals' emotional intelligence has a significant and positive relationship with their career decision-making self-efficacy (Hamzah et al., 2021; Jiang, 2016; Park, Lee, Kim, Kim, & Jahng., 2019; Santos, Wang, & Lewis., 2018). Individuals with high emotional intelligence are better at understanding their emotions. In addition, these individuals tend to integrate their emotional experiences with their thoughts and behaviors. From this point of view, it can be said that individuals with high emotional intelligence

Figure 6

Forest Plot of the Relationships Between CDMSE and Emotional Intelligence

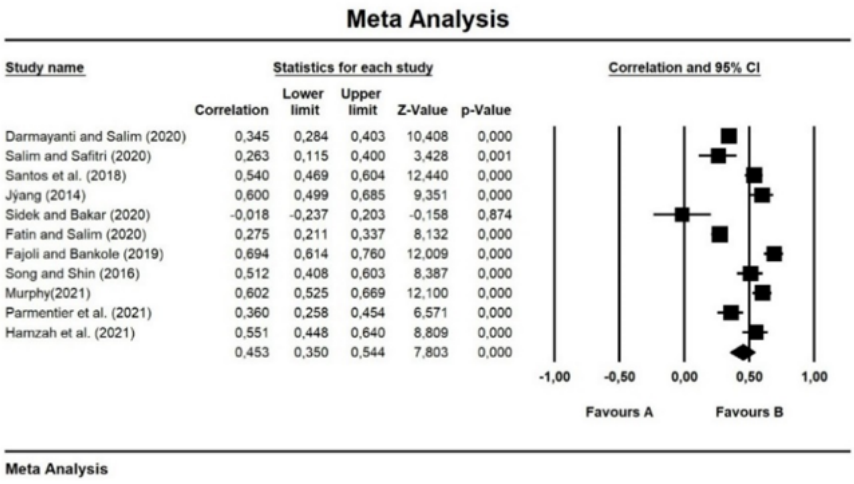
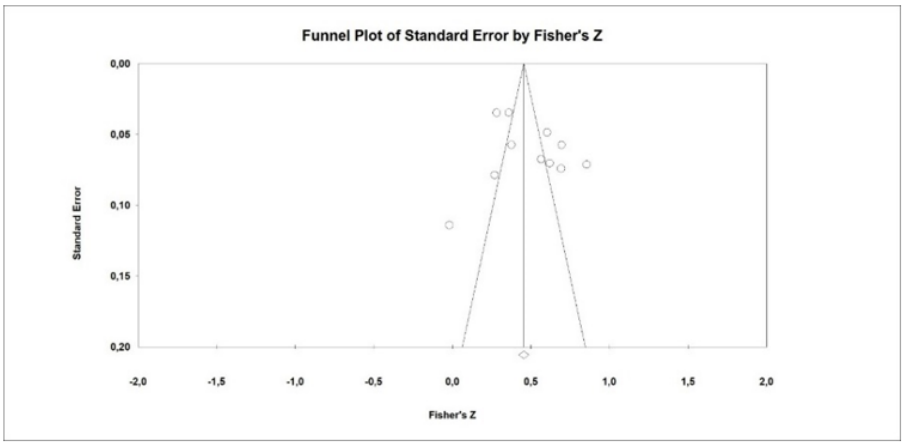


Figure 7

Funnel Plot of Effect Sizes of Correlations Between Emotional Intelligence and CDMSE



CANADIAN JOURNAL OF CAREER DEVELOPMENT | REVUE CANADIENNE DE DÉVELOPPEMENT DE CARRIÈRE

are more self-confident when they make career decisions (Di Fabio & Saklofske, 2014). The process of choosing a profession and making a career decision is a process that includes both the cognitive and emotional experiences of individuals. In this context, emotional intelligence can have a more flexible stance in arranging and changing the thoughts of individuals. In this case, it may be that the individual can manage his thoughts more healthily, show a more flexible attitude about the opportunities he encounters, and believe in himself more when making a career decision.

Another result of our meta-analysis study is that locus of control is significantly related to career decision-making self-efficacy and has a moderate effect size in all studies dealing with the locus of control. As seen in previous studies, individuals' locus of control has a significant relationship with their career decision-making self-efficacy (Kim & Lee, 2018; Ulaş & Yıldırım, 2019). Locus of control refers to individuals' bipolar (internal and external) tendencies to be responsible for the outcome of behavior (Rotter, 1966). While the internal locus of control is based on features such as ability and effort, the external locus of control is based on issues that the individual cannot control, such as luck. The critical element here can be to consider the types of locus of control. Individuals with an internal locus of control may experience greater control over career decision-making, as they will base their beliefs on career decision-making competencies based on their abilities. In addition, individuals who realize that the result they have achieved differs in line with their efforts may think that their efforts will similarly affect the result in their career decisions. These individuals also tend to perform more effectively in unfamiliar contexts. On the contrary, individuals with an external locus of control may feel that they are not in control because they tend to use factors other than themselves in their decisions. They may be more passive or reluctant in their career decision processes.

Figure 8

Forest Plot of the Relationships Between CDMSE and Locus of Control

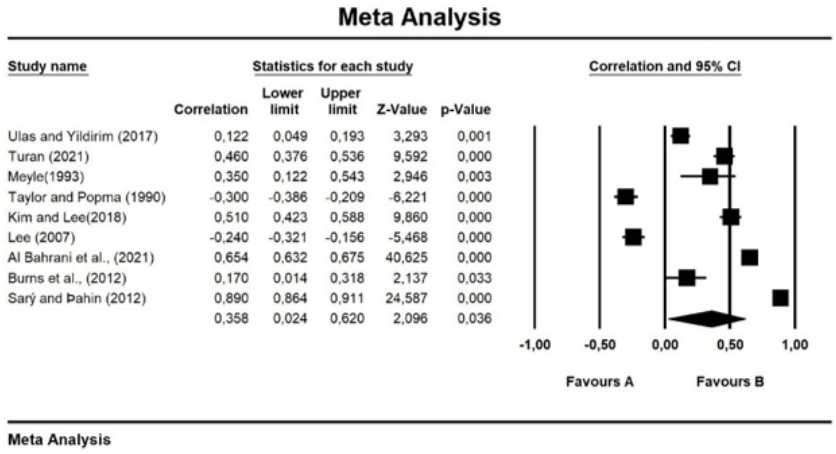
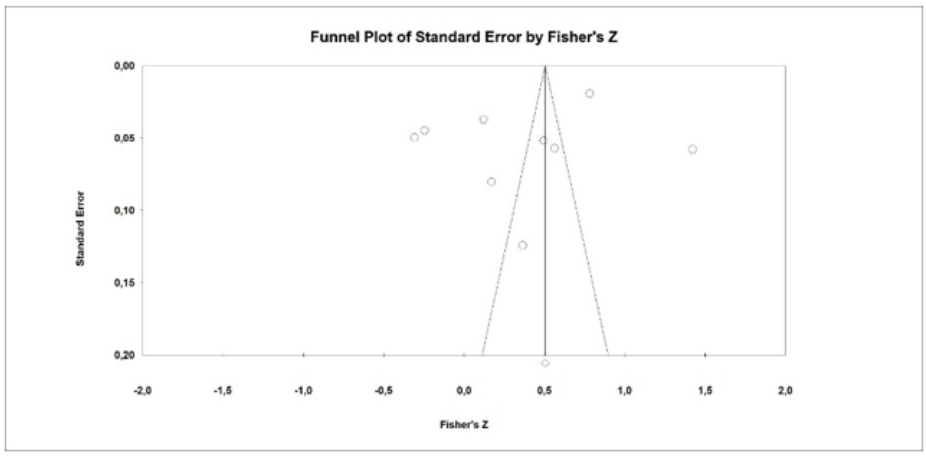


Figure 9

Funnel Plot of Effect Sizes of Correlations Between Locus of Control and CDMSE



Limitations and Future Directions

Although the results of our meta-analysis study are convincing, there are limitations to the generalizability of our findings. Our analysis mainly

considered cross-sectional studies. Also, the studies included in our meta-analysis were relatively limited, as our research only considered published articles and dissertations in specific databases. We also included studies published in English and Turkish in our study. This was another limitation. Finally, we did not reach all studies dealing with the relationships between the variables we identified in our research and career decision-making self-efficacy.

The findings of our meta-analysis study offer several implications for researchers and practitioners in career counseling. It also provides insight into the factors associated with CDMSE. A comparison between English and Turkish studies can be made to identify cultural differences in future studies.Since this study we have done identifies variables with solid relationships with CDMSE, it will contribute to the design of future research on CDMSE. In future studies, psychoeducational programs can be prepared to increase factors such as emotional intelligence, optimism, and proactive personality in experimental studies to increase career decision-making self-efficacy. In addition, considering the factors associated with CDMSE in our meta-analysis study may enable us to focus on optimism, proactive personality, emotional intelligence, and locus of control variables in future studies to improve CDMSE. In future studies, group guidance activities or psychoeducational studies can be carried out for individuals to have positive expectations for the future, to adapt to innovations and to educate themselves in different ways, to regulate and manage their emotions, and to feel more control and responsibility in order to increase their career decision-making self-efficacy. In addition, seminars can be given to school psychological counselors and field experts in this direction.

References

Ahmad, B., & Nasir, N. (2021). Positive career shocks anda career optimism: Testing the mediating role of career decision-making self-efficacy. *Journal of Asian Business and Economik Studies, 30*(2), 106-125. https://doi.org/10.1108/JABES-07-2021-0110

Ahmad, B., & Nasir, N. (2022). Choose to be optimistic, it feels better! the role of career decision-making self-efficacy on the relationship between boundaryless career orientation and career optimism. *South Asian Journal of Human Resources Management, 10*(1), 1-27. https://doi.org/10.1177/23220937221090413

Aymans, S. C., Kortsch, T., & Kauffeld, S. (2019). Gender and career optimism- The effects of gender-specific perceptions of lecturer support, career barriers and self-efficacy on career optimism. *Higher Education Quarterly, 74*(3), 273-289. https://doi.org/10.1111/hequ.12238

Bahrani, M.A., Shindi, Y.A., Allawati, S., & Bakkar, B. (2021). A path analysis of effect of the career locus of control dimensions and career decision self-efficacy on career aspiration. *İnternational Journal of Adolescence and Youth, 26*(1), 367-375. https://doi.org/10.1080/02673843.2021.1961831

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Prentice-Hall, Inc.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26. https://doi.org/10.1146/annurev.psych.52.1.1

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of organizational behavior, 14*(2), 103-118. https://doi.org/10.1002/job.4030140202

Bateman, T.S., & Crant, J.M. (1993). The proactive personality scale and objective job performance among real estate agents. *Journal of Applied Psychology, 80*, 532-537. https://psycnet.apa.org/doi/10.1037/0021-9010.80.4.532

Bergeron, D. M., Schroeder, T. D., & Martinez, H. A. (2014). Proactive personality at work: Seeing more to do and doing more?. *Journal of Business*

and Psychology, 29(1), 71-86.

Borenstein, M., Hedges, L. V., Higgins, J. P. T., and Rothstein, H. R. (2014). *Meta-analize giriş,* (Çev. S. Dinçer). Anı Yayınları.

Brackett, M.A., Mayer, J.D., & Warner, R.M. (2004). Emotional intelligence and its relation to everyday behavior. *Personality and Individual Differences, 36*(2004), 1387-1402. https://doi.org/10.1016/S0191-8869(03)00236-8

Brown, S. D., Lent, R. W., Telander, K., & Tramayne, S. (2011). Social cognitive career theory, conscientiousness, and work performance: A meta-analytic path analysis. *Journal of Vocational Behavior, 79*(1), 81–90. https://doi.org/10.1016/j.jvb.2010.11.009

Burns, G.N., Jasinski, D., Dunn, S., & Fletcher, D. (2013). Academic support services and career decision-making self-efficacy in student athletes. *National Career Development Association, 61*(2), 161-167. https://doi.org/10.1002/j.2161-0045.2013.00044.x

Charokopaki, A., & Argyropoulou, K. (2019). Optimism, career decision self-efficacy and career indecision among Greek adolescents. *Education Quarterly Reviews, 2*(1), 185-197.

Chui, H., Li, H., & Ngo, H. Y. (2022). Linking protean career orientation with career optimism: career adaptability and career decision self-efficacy as mediators. *Journal of Career Development, 49*(1), 161-173. https://doi.org/10.1177/0894845320912526

Coaching For Success, Inc. (2006), "*Proactive people make most cash*", http://www.coach.net/assess13.html

Coon, K. L. (2008). P*redicting career decision-making difficulties among undergraduate students: the role of career decision making self efficacy, career optimism, and coping.* Southern Illinois University at Carbondale.

Covey, R. S. (1998). *Önemli işlere öncelik*, (Çev. O. Deniz Tekin). Varlık Yayınları.

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

Darmayanti, K. K. H., & Salim, R. M. A. (2020). The enhanced career decision-making self-efficacy by emotional intelligence depended on proactive personality. *Electronic Journal of Research in Education Psychology, 18*(50), 121-142. https://doi.org/10.25115/ejrep.v18i50.2685

Di Fabio, A., & Kenny, M. E. (2011). Promoting emotional intelligence and career decision making among Italian high school students. *Journal of Career Assessment, 19*(1), 21–34. https://doi.org/10.1177/1069072710382530

Di Fabio, A. (2012). *Emotional intelligence: A new variable in career decision-making.* Emotional intelligence: New perspectives and applications, 51-66.

Di Fabio, A., & Saklofske, D. H. (2014). Comparing ability and self-report trait emotional intelligence, fluid intelligence, and personality traits in career decision. *Personality and Individual Differences, 64*, 174-178.

Dinçer, S. (2014). *Uygulamalı meta analiz*. Pegem Akademi.

Fajobi, O.O., & Bankole, K.M. (2019). Emotional intelligence as predictor of career decision making- self- efficacy in Ondo west local government of Ondo State. *FUOYE Journal of Education, 2*(2), 131-136.

Fatin, A., & Salim, R. M. A. (2020). Emotional intelligence, career decision self-efficacy, proactive personality: Study on Indonesian vocational students. *Psychology and Education, 57*(2), 91-94. https://doi.org/10.17762/pae.v57i2.15

Gadassi, R., Gati, I., & Wagman- Rolnick, H. (2013). The adaptability of career decision-making profiles: Associations with self-efficacy, emotional difficulties, and decision status. *Journal of Career Development, 40*(6), 490-507. https://doi.org/10.1177/0894845312470027

Garcia, P. R. J. M., Restubog, S. L. D., Bordia, P., Bordia, S., & Roxas, R. E. O. (2015).

Career optimism: The roles of contextual support and career decision-making self-efficacy. *Journal of Vocational Behavior, 88*, 10-18. https://doi.org/10.1016/j.jvb.2015.02.004

Gati, I. ve Tal, S. (2008). *Decision-making models and career guidance*. (In J. A. Athanasou & R. Van Esbroeck (Eds.)), International handbook of career guidance (pp. 157–185). Springer.

Goleman, D. (1996). *Emotional intelligence: Why it can matter more than IQ.* Bloomsbury Publishing.

Hackett, G., and Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior, 18*(3), 326–339. https://doi.org/10.1016/0001-8791(81)90019-1

Hamzah, S. R. A., Kai Le, K., & Musa, S. N. S. (2021). The mediating role of career decision self-efficacy on the relationship of career emotional intelligence and self-esteem with career adaptability among university students. *International Journal of Adolescence and Youth, 26*(1), 83-93. https://doi.org/10.1080/02673843.2021.1886952

He, Z., Zhou, Y., Li, F., Rao, Z., & Yang, Y. (2021). The effect of proactive personality on college students' career decision-making difficulties: Moderating and mediating effects. *Journal of Adult Development, 28*(2), 116-125. https://doi.org/10.1007/s10804-020-09359-9

Hou, C., Wu, L., & Liu, Z. (2014). Effect of proactive personality and decision-making self-efficacy on career adaptability among Chinese graduates. *Social Behavior and Personality: an international journal, 42*(6), 903-912. https://doi.org/10.2224/sbp.2014.42.6.903

Hsieh, H. H., & Huang, J. T. (2014). The effects of socioeconomic status and proactive personality on career decision self-efficacy. *The Career Development Quarterly, 62*(1), 29-43. https://doi.org/10.1002/j.2161-0045.2014.00068.x

Huedo-Medina, T.B., Sánchez-Meca, J., Marín-Martínez, F., & Botella, J. (2006). Assessing heterogeneity in meta-analysis: Q statistic or I^2 index? *Psychological Methods, 11*(2), 193–206. https://doi.org/10.1037/1082-989X.11.2.193

Jiang, Z. (2016). Emotional intelligence and career decision-making self-efficacy: Mediating roles of goal commitment and professional commitment. *Journal of Employment Counseling, 53*(1), 30-47. https://doi.org/10.1002/joec.12026

Kalafat, T. (2012). Kariyer geleceği ölçeği (KARGEL); Türk örneklemi için psikometrik özelliklerin incelenmesi. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 4*(38), 169-179.

Kanten, S., Kanten, P., & Ülker, P. (2017). The effects of mentoring functions on career adaptabilities and career self-efficacy: The role of career optimism. *European Journal of Multidisciplinary Studies, 2*(7), 259-272. https://doi.org/10.26417/ejms.v6i2.p259-272

Kim, N. R., & Lee, K. H. (2018). The effect of internal locus of control on career adaptability: The mediating role of career decision-making self-efficacy and occupational engagement. *Journal of employment counseling, 55*(1), 2-15. https://doi.org/10.1002/joec.12069

Kim, H. S., & Park, I. J. (2017). Influence of proactive personality on career self-efficacy. *Journal of Employment Counseling, 54*(4), 168-182. https://doi.org/10.1002/joec.12065

Koyuncu, A. (2015). K*ariyer kararı yetkinlik beklentisinin yordayıcıları olarak kaygı ve öznel iyi oluş (Yayınlanmamış yüksek lisans tezi)*. Mevlana Üniversitesi, Konya.

Lee, C.M. (2007). *Career maturity, career decision-making self-efficacy, interdependent self-construal, locus of control and gender role ideology of Chinese adolescents in Hong Kong (Doctoral Thesis).* Hong Kong Baptist University, Hong Kong.

Li, J. (2021). The influence of family function and proactive personality on career decision-making self-efficacy of teenagers. *Advances in Vocational and Technical Education, 3*(2), 121-125. https://doi.org/10.23977/avte.2021.030223

Lipsey, M., & Wilson, D. B. (2001). *Practical meta-analysis*. SAGE Publications

Meyle, S.C. (1993). *An examination of the relationship between career decision-making self-efficacy and susceptibility to external ınfluences: Locus of control, decision-making style, and coping style.* (Master's Thesis). Department of Counseling and Educational Psychology, Loyolo University, Chicago.

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analyses: *The PRISMA statement. Annals of Internal Medicine, 151*(4), 264–269. https://doi.org/10.7326/0003-4819-151-4-200908180-00135

Moon, A. E. (2005). *Influences on career self-efficacy: examining attachment*. (Unpublished Master's Thesis). Virginia Commonwealth University, USA.

Murphy, V.Y. (2021). *Examining the relationship between emotional intelligence and career decision-making self-efficacy: An ınfluence on career development for college students.* Graduate Faculty Saint Leo University.

Mujiati, S., & Salim, R. M. A. (2021). Proactive personality and attributions: study of 12 th grade vocational students' career decision self-efficacy. *North American Journal of Psychology, 23*(1), 65-76.

Özden, K. (2014). *Üniversite öğrencilerinde psikolojik iyi oluşun psikososyal yordayıcılarının sosyal bilişsel kariyer kuramı açısından incelenmesi.* (Yayınlanmamış yüksek lisans tezi). Arel Üniversitesi, İstanbul.

Park, I. J., Lee, J., Kim, M., Kim, J. Y., & Jahng, S. (2019). Affect in daily career decision self-efficacy and career choice anxiety. *The Career Development Quarterly, 67*(4), 313-326. https://doi.org/10.1002/cdq.12201

Parker, S. K., & Collins, C. G. (2010). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management, 36*(3), 633–662. https://doi.org/10.1177/0149206308321554

Parmentier, M., Pirsoul, T., & Nils, F. (2021). Career adaptability profiles and their with emotional and decision -making correlates among Belgian undergraduate students. *Journal of Career Development, 49*(4), 934-950. https://doi.org/10.1177/0894845321100553

Patsopoulos, N. A., Evangelou, E., & Ioannidis, J. P. (2008). Sensitivity of between-study heterogeneity in meta-analysis: Proposed metrics and empirical evaluation. *International Journal Of Epidemiology, 37*(5), 1148-1157. https://doi.org/10.1093/ije/dyn065

Perera, H. N., & McIlveen, P. (2014). The role of optimism and engagement coping in college adaptation: A career construction model. *Journal of Vocational Behavior, 84*(3), 395-404. https://doi.org/10.1016/j.jvb.2014.03.002

Peters, J. L., Sutton, A. J., Jones, D. R., Abrams, K. R., & Rushton, L. (2006). *Comparison of two methods to detect publication bias in meta-analysis.* JAMA, 295(6), 676–680.

Peterson, C., & Seligman, M. E. P. (2004). *Character strengths and virtues: A classification and handbook.* New York: Oxford University Press/ Washington, DC: American Psychological Association.

Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behavior at school. *Personality and individual differences, 36*(2), 277-293. https://doi.org/10.1016/S0191-8869(03)00084-9

Preston, M., & Salim, R. M. A. (2019). Parenting style, proactive personality, and career decision self-efficacy among senior high school students. *Humanıtas:*

Indonesian Psychological Journal, 16(2), 116.

Ramadhani, R., & Suharso, P. L. (2020, November). *Effects of parental involvement, proactive personality, and gender on career decision self-efficacy among high school student.* In 3rd International Conference on Intervention and Applied Psychology (ICIAP 2019) and the 4th Universitas Indonesia Psychology Symposium for Undergraduate Research (UIPSUR 2019) (pp. 226-235). Atlantis Press.

Ramadhani, R., & Suharso, P. L. (2021). How proactive personality mediates the relationship between parental ınvolvement and career decision self-efficacy. *Psychology and Educatıon, 58*(2), 135-140.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied, 80*, 1–28. https://doi.org/10.1037/h0092976

Rottinghaus, P.J., Day, S.X., & Borgen, F.H. (2005). The Career Futures Inventory: A measure of career-related adaptability and optimism. *Journal of Career Assessment, 13*, 3–24. https://doi.org/10.1177/1069072704270271

Rottinghaus, P. J., Jenkins, N., & Jantzer, A. M. (2009). Relation of depression and affectivity to career decision status and self- efficacy in college students. *Journal of Career Assessment, 17* (3), 271-285. https://doi.org/10.1177/1069072708330463

Rottinghaus, P. J., Buelow, K. L., Matyja, A., & Schneider, M. R. (2012). The career futures inventory– revised: Measuring dimensions of career adaptability. *Journal of Career Assessment, 20*(2), 123-139. https://doi.org/10.1177/1069072711420849

Salim, R. M. A., & Safitri, S. (2020). Career decision-making attribution and self efficacy: the moderating role of emotional intelligence. *Jurnal Psikologi, 19*(1), 1-14.

Salovey P., & Mayer J.D. (1990) Emotional intelligence. *Imanigation, cognition, and personality 9*(3), 185-211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Santos, A., Wang, W., & Lewis, J. (2018). Emotional intelligence and career decision-making difficulties: The mediating role of career decision self-efficacy. *Journal of Vocational Behavior, 107*, 295-309. https://doi.org/10.1016/j.jvb.2018.05.008

Sarı, S.V. ve Şahin, M. (2012). Lise son sınıf öğrencilerinin mesleğe karar verme öz-yeterliklerini yordamada umut ve kontrol odağının rolü. *Kastamonu Eğitim Dergisi, 21*(1), 97-110.

Savickas, M. L., Briddick, W. C., & Watkins, C. E., Jr. (2002). The relation of career maturity to personality type and social adjustment. *Journal of Career Assessment, 10* (1), 24-41. https://doi.org/10.1177/1069072702010001002

Seibert, S.E., Crant, J.M., & Kraimer, M.L. (1999). Proactive personality and career success. *Journal of Applied Psychology, 84* (3),416–27. https://doi.org/10.1037/0021-9010.84.3.416

Sidek, M. S., & Bakar, A. Y. A. (2020). Emotional intelligence and self-efficacy career decision making among high school students. *Education and Social Sciences Review, 1*(1), 1-7. https://doi.org/10.29210/07essr47600

Solmuş, T. (2004). İş yaşamı, denetim odağı ve beş faktörlük kişilik modeli. *Türk Psikoloji Bülteni, 10*, 196-205.

Song, H. Y., & Shin, S. H. (2016). The effects of emotional intelligence on the career decision-making self-efficacy and career decision levels of the nursing students. Journal of the Korea Academia-*Industrial cooperation Society, 17*(9), 628-640. https://doi.org/10.5762/KAIS.2016.17.9.628

Sovet, L., & Metz, A.J. (2014). Parenting styles and career decision-making among french and korean adolescent. *Journal of Vocational Behavior 84*, 345–355. https://doi.org/10.1016/j.jvb.2014.02.002

Spurk, D., & Volmer, J. (2013). Validation of a German

version of the career futures inventory (CFI): Career adaptability, career optimism, job market knowledge, and career success. German *Journal of Work and Organizational Psychology, 57*(2), 77–95

Srikanth, P. B. (2012). Self efficacy & career self management: moderating role of proactive personality. *Indian Journal of Industrial Relations, 48*(2), 274-289.

Sener, E., & Kocaoglu, M. (2016). *The effect of optimism level' on career decision-making competence and professional results expect1*. In First Printing: 29 th December, 2016, Sakarya Publication: ICLEL Conferences Sakarya University Faculty of Education 54300 Sakarya, TURKEY (Vol. 3, p. 205).

Tanau, F. O., & Salim, R. M. A. (2020). Proactive personality and career decision self-efficacy: The mediating role of planned happenstance. *Humanitas, 17*(2), 123.

Taylor, K.M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22*, 63-81. https://doi.org/10.1016/0001-8791(83)90006-4

Taylor, S.E., Peplau, L.A., & Sears, D.O. (2006). *Social psychology*. Pearson Education

Taylor, K.M., & Popma, J. (1990). An examination of the relationship among career-decision-making self-efficacy, career salience, locus of control, and vocational indecision. *Journal of Vocational Behavior, 37*, 17- 31. https://doi.org/10.1016/0001-8791(90)90004-L

Tian, L., Guan, Y., Chen, S. X., Levin, N., Cai, Z., Chen, P., & Zhang, S. (2014). Predictive validity of career decision-making profiles over time among Chinese college students. *Journal of Career Development, 41*(4), 282-300. https://doi.org/10.1177/0894845313495590

Tolentino, L. R., Garcia, P. R. J. M., Lu, V. N., Restubog, S. L. D., Bordia, P., & Plewa, C. (2014). Career adaptation: The relation of adaptability to goal orientation, proactive personality, and career optimism. *Journal of Vocational Behavior, 84*(1), 39-48. https://doi.org/10.1016/j.jvb.2013.11.004

Turan, M.E. (2021). The relationship between locus of control and hope in adolescents: The mediating role of career and talent development self-efficacy. *Australian Journal of Career Development, 30*(2), 129-138. https://doi.org/10.1177/1038416221100888

Ulaş, O., & Yıldırım, İ. (2019). Influence of locus of control, perceived career barriers, negative affect, and hopelessness on career decision-making self-efficacy among Turkish university students. I*nternational Journal for Educational an Vocational Guidance, 19*, 85-109. https://doi.org/10.1007/s10775-018-9370-9

Valach, L., Young, R. A., & Lynam, M. J. (1996). Family Health-promotion Projects: An Action-theoretical Perspective. *Journal of Health Psychology, 1*(1), 49-63. https://doi.org/10.1177/135910539600100105

Xin, L., Tang, F., Li, M., & Zhou, W. (2020). From school to work: Improving graduates' Career decision-making self-efficacy. *Sustainability, 12*(3), 804. https://doi.org/10.3390/su12030804

Zhou, S., Wu, S., Yu, X., Chen, W., & Zheng, W. (2021). Employment stress as a moderator of the relationship between proactive personality and career decision-making self-efficacy. *Social Behavior and Personality: an international journal, 49*(10), 1-13. https://doi.org/10.2224/sbp.10735