



Career Indecision and Career Anxiety in High School Students: An Investigation through Structural Equation Modelling

Funda NALBANTOGLU YILMAZ¹, Hicran CETIN GUNDUZ²

ARTICLE INFO

Article History:

Received: 04 Apr. 2018

Received in revised form: 29 Aug. 2018

Accepted: 03 Nov. 2018

DOI: 10.14689/ejer.2018.78.2

Keywords

career anxiety, career indecision, adolescence, structural equation modelling

ABSTRACT

Purpose: The purpose of this study is to investigate the relationship between career indecision and career anxiety (career anxiety in terms of the effect of family and choice of profession) in high school students through structural equation modeling (SEM).

Research Methods: The method used in the study is the relational model. The study group consisted of 444 students studying at 11th and 12th-grades. Research data was collected using The Scale for Career Anxiety and Career Decision Inventory.

Findings: According to the model established, it was concluded that career indecision had an important effect on career anxiety in terms of family effect and choice of profession. In other words, for high school

students, as scores related to career indecision increased, their scores related to career anxiety they experienced in terms of family effect and choice of profession also increased.

Implications for Research and Practice: In order to decrease career anxiety that high school students experience during the career decision process, it is suggested to determine reasons for career indecision, and to plan career guidance process. In addition, supporting occupational development process with family guidance and professional counseling studies, giving weight to counseling services within the scope of attention, abilities and occupational values, supporting career research, and creating opportunities would also support professional decision-making skills. By this way, difficulties in decision-making related to occupational indecision and career anxiety may be precluded.

© 2018 Ani Publishing Ltd. All rights reserved

¹ Nevşehir Hacı Bektaş Veli University, TURKEY. e-mail: fundan@nevsehir.edu.tr, ORCID: orcid.org/0000-0002-3228-4605

² Başkent University, TURKEY. e-mail: hicrancetin@gmail.com, ORCID: orcid.org/0000-0002-5899-9772

Introduction

Preparation for career is one of the important tasks for adolescents (Akos & Niles, 2007). High school years is an important time period for preparation of adolescents' transition from school to work or to university life, and these preparations leads to a career decision in the future (Rowland, 2004). Career development which begins in childhood years continues through lifetime (Hartung, Porfeli & Vondracek, 2005).

According to Dogan and Bacanli (2012), career decision is an individual's selection of an occupational program or career by having a tendency towards the one which is the most suitable to him/ her among many choices. Brown et al. (1996) describe career decision as "thought processes in which a person integrates personal information with occupational information to access a career decision". Career research and career decision process are in the center of career development during adolescence (Super, 1957). Adolescents' career development is influenced significantly by factors like social conditions, role models and peer relationships (Gottfredson, 1981). According to Gati (1986), career indecision can be described as being unable to make a decision because of interceptive situations within the decision process. Career decision is a complex process. In this process, some adolescents may face indecisiveness. Adolescent students are mostly responsible for making decisions about a career field, occupational education or higher education. According to Mann, Harmoni and Power (1989), those kinds of decisions may have lifelong results for occupational future, psychological well-being, health and social acceptance of adolescents (as cited in Dogan & Bacanli, 2012, p.912). For those reasons, high school years reflect a time period that should be supported for adolescents' career development and career-occupation choices in the future.

In Turkey, high school students follow a tendency towards education on a common program at 9th and 10th-grades, and make field/branch choices after that. During transition to secondary education, some of the students have tendency towards occupational and technical education, and they make occupational choices. These choices, in addition to determining higher education programs they may be enrolled in the future, also determine their decisions in whether they will continue to higher education or not. Just as Cakir (2004) stated, it is quite difficult to expect high school students at such an early age to make realistic decisions. Many adolescents in this period experience career indecisions.

When the literature on career-occupational indecisiveness is reviewed, among reasons of indecision, there are self-esteem (Aydin, 2014), self-competence (Wulff & Steitz, 1999), locus of control (Woodburry, 1997), career beliefs (Peng & Herry, 2000), career decision skills (Mitchell & Krumboltz, 1987), and lack of information (Gati, Krausz & Osipow, 1996). In addition, it is seen that indecision is related to university education, peer equality, career beliefs, inner satisfaction, responsibility, tendency towards job life, experimenting with a job, standing up to uncertainty, risk-taking (Akkoc, 2012), focus of control and career result expectation (Buyukgoze Kavas, 2011), irrational beliefs related to job decision (Bacanli, 2012; Stead, Graham & Foxcroft, 1993), career beliefs (Mitchell & Krumboltz, 1987, Peng & Herry, 2000; Stead, Graham

& Foxcroft, 1993), and fathers' attitudes towards career development (Hamamci & Hamurlu, 2005). There are findings in the literature revealing that as career exploration behavior increases, career indecision decreases accordingly (Park, Woo, Park, Kyea & Wong, 2017).

It seems inescapable for young people who experience occupational indecisiveness and feel uncertainty about the future to experience career anxiety during the years they make almost irreversible and important decisions about their life. According to Mallet and Vignoli (2005), career anxiety is related to an individual's anxiety about academic and professional career, fear of disappointing family, and fear of going away from family and close friends because of a job or an academic necessity (as cited in Vignoli, Croity-Belz, Chapeland, Fillipis & Garcia, 2005, p.155; Vignoli, 2015, p.185). In other words, during high school years, career anxiety may come up in many subjects like students' failing to satisfy family expectations or being unable to achieve the goals desired, and not being able to choose the desired occupation.

Cetin Gunduz and Nalbantoglu Yilmaz (2016), in their scale development study they conducted with high school students in Turkey, determined career anxiety of high school students as career anxiety in terms of the effect of family and career anxiety in terms of the choice of profession. Accordingly, for the dimension of "career anxiety in terms of the effect of family", high school students felt anxious that their families would not understand their career plans properly, they would prevent them, or students would not be able to express themselves; and for the dimension of "career anxiety in terms of the choice of profession", high school students felt anxious regarding the appropriateness of the job they wanted to choose, whether they would be happy or not, and the possibility of disappointment. Especially when the effect of family is taken into account on the choice of profession and on the process of decision-making (Akdeniz, 2009, Ozyurek & Kilic-Atici, 2002), family influence on difficulties of decision-making (Bacanli & Hamamci, 2015), and anxiety that adolescents experience related to their families while making decisions become more understandable. Individuals who have difficulty in choosing a profession generally experience career anxiety (Fouad, 2007), and this situation seems to support the opinion that the effects related to families constitute a part of career anxiety. Similarly, in view of the fact that choice of profession is a multi-dimensional process, there are frequent changes in Turkish Education System, and the educational structure focuses mainly on academic success, it seems inescapable to experience anxiety in terms of the choice of profession as one of the dimensions of career anxiety.

Career anxiety is thought to be a kind of social anxiety because it concerns the status of an individual as a student or as a person who has a profession in society as a whole. During adolescence years, career anxiety increases gradually. Students become more worried about their academic and occupational future (Mallet, 2002).

Anxiety is one of the most investigated psychological constructs in experimental studies about career-occupational indecisiveness (Fuqua, Seaworth, & Newman, 1987). Goodstein (1965) separated anxiety as a symptom of career indecision from a more serious kind of anxiety, and in this process considered anxiety as a factor

preventing the gain of career development skills and of information that will lead to effective decisions. Career indecision and career anxiety are also important for career consultants. Anxiety of consultees constrains them from taking steps to overcome their indecisiveness about their career, and to decrease their anxiety (Weinstein, Healy & Ender, 2002). Occupational decision processes create stress leading to exploration activities (Blustein & Philipps, 1988). When the literature is reviewed, the relationship between anxiety and indecision is explained in two ways. The first opinion is that individuals who have a high level of anxiety have difficulty in decision making because of their anxiety in decision processes. The second opinion is that anxiety is a situation emerging after the difficulty experienced thereafter the decision making process (Aydin, 2014).

There are several studies in the literature about career indecision and anxiety (Corkin, Arbona, Coleman & Ramirez, 2008; Fuqua, Blum & Hartman, 1988; Fuqua, Newman & Seaworth, 1988; Fuqua, Seaworth & Newman, 1987; Hartman, Fuqua, & Blum, 1985; Kaplan & Brown, 1987; Mojgan, Kadir & Soheil, 2011; O'Hare & Tamburri, 1986, Oztemel, 2013; Saka & Gati, 2007). For example; Stead, Graham, and Foxcroft, (1993) pinpoint that there is a significant relationship between career decision and irrational beliefs with anxiety and its related dimensions. Miller and Rottinghaus (2014) stated that the existence of a meaning in life mediates relationship between career indecision and anxiety. It is observed that students with career indecision experience anxiety because they have difficulty in decision making (Goldstein, 1965), or they hold over decision making because of high level of anxiety (Haag-Mutter, 1986 cited in Aydin, 2014, p.33). In some studies, state anxiety was found to be the most powerful predictor of both career decision and also career indecision (Campagna & Curtis, 2007). In a study conducted with 133 undergraduate students, Fuqua et.al. (1987) emphasized the relationship between career indecision and anxiety. There is an important and consistent relationship between career indecision and several types of anxiety.

In the literature, studies related to career indecision and career anxiety are quite limited except for studies in career indecision and anxiety (Daniels, Stewart, Stupnisky, Perry & Verso, 2011; Vignoli, 2015). In this direction, the purpose of this study is to investigate the relationship between high school students' career anxiety in terms of family effect and choice of profession with their career indecision through the structural equation modeling. For this aim, the following hypotheses were proposed:

1. There is a significant relationship between high school students' career indecision states and career anxiety in terms of the family effect.
2. There is a significant relationship between high school students' career indecision states and career anxiety in terms of the choice of profession.

Method

Research Design

The research is based on the relational model. The relational model is a research model aiming to search for an existence or a degree of interchange between two or more variables (Karasar, 2012).

Research Sample

The study group consisted of 444 students from the 11th and 12th-grades from different high schools in Nevsehir city center in 2016-2017 academic year. In order to select the students, convenience sampling method was used. Among students, 59 % (n= 262) were at the 11th-grade and 41 % (n= 182) were at the 12th grade. 55, 2 % (n= 245) of the students were females and 44, 8 % (n= 199) were males. In structural equation model analyses, it is stated that sample size can be at least 10 times as much of a number of parameters predicted by the model (Jackson, 2003 cited in Kline, 2011, p.12; Moshagen & Musch, 2014). Moshagen and Musch (2014) indicate that for sample sizes exceeding 300, robust Weighted Least Squares estimation methods can give appropriate predictions. At the same time, Hoogland and Boomsma (1998) assert that in strongly kurtotic distributions, the sample size must be at least ten times as much of the number of free parameter (as cited in Wang & Wang, 2012). In this respect, it can be said that the number of the participants in this study is adequate.

Research Instruments and Procedures

In the study, The Scale for Career Anxiety (SCA) and The Career Decision Inventory (CDI) were used.

The Scale for Career Anxiety: In this study, the scale developed by Cetin Gunduz and Nalbantoglu Yilmaz (2016) was used to measure career anxiety of high school students. The scale includes 5 items about the family effect within the career development process, and 9 items about the choice of profession within the career development process (there are 14 items in total). SCA is scored on a 5-point Likert scale. Higher scores obtained from parts of the scale focusing on anxiety in terms of the family effect and the choice of profession means that career anxiety is experienced at a high level. In the development process of the scale, in order to test correctness of the structure as a model, Confirmatory Factor Analysis (CFA) was conducted ($\chi^2/sd= 2.518$, RMSEA= 0.067, CFI= 0.95, NFI= 0.92, NNFI= 0.94, GFI= 0.92 and AGFI= 0.90). With respect to this research data, CFA was repeated in this study. Just like in the original factor structure, factor structure of the scale was determined to show the best model-data fit in two-factor first-order model ($\chi^2/sd= 3.22$, RMSEA= 0.071, CFI= 0.94, NFI= 0.93, NNFI= 0.93, GFI= 0.98 and AGFI= 0.97).

In the development phase of the scale, reliability was measured by Cronbach Alpha internal consistency coefficient. The reliability of the scale in career anxiety in terms of the choice of profession was found to be 0.797, and the reliability in career anxiety in terms of the family effect was found as 0.742. As for the reliability of the scale used in this study, Cronbach Alpha reliability coefficient related to career anxiety in terms of

the family effect and the choice of profession was found as 0.835 and 0.865, respectively. McDonald ω (McDonald's omega) reliability coefficient was found as 0.85 and 0.87 respectively for career anxiety in terms of the family effect and the choice of profession depending on path coefficients obtained from CFA and amount of error.

The Career Decision Inventory: In this study, CDI developed by Cakir (2004) was used to measure high school students' career indecision levels. CDI consists of five factors as "Internal Conflicts (Internal)", "Lack of Self-Knowledge (Knowledge)", "Lack of Knowledge in Job or Field (Lack)", "Irrational Beliefs about Career Decision (Belief)", and "External Conflicts (External)". There are a total of 30 items in the inventory. Items are scored on a 5-point Likert scale. Low scores obtained from the scale indicate career decisiveness while high scores indicate career indecision.

In the development phase of the inventory, exploratory factor analysis was used in order to determine its structure. In this study, the factor structure of the inventory was examined using CFA. According to CFA results, it was determined that second-order CFA fit indexes of the inventory was found to be at an acceptable level ($\chi^2/sd= 2.18$, RMSEA= 0.052, CFI= 0.97, NFI= 0.95, NNFI= 0.97, GFI= 0.97 and AGFI= 0.97). According to this, it can be said that 5 factors in the inventory constituted a single indecisiveness general structure. In addition, a moderate level, positive and significant relationship was found among factors of the inventory; and a high level, positive and significant relationship was found between indecisiveness general structure and the factors.

As for the reliability of the scale used in this study, Cronbach Alfa and McDonald ω reliability coefficients were re-calculated. Cronbach Alfa reliability coefficient of the inventory was found as 0.874 for Internal, 0.804 for Knowledge, 0.799 for Lack, 0.669 for Belief, and 0.680 for External. McDonald ω coefficient of the inventory was found as 0.87 for Internal, 0.81 for Knowledge, 0.80 for Lack, 0.68 for Belief, and 0.70 for External.

Data Analysis

The model established in order to explain career anxiety of high school students (in terms of the family effect and the choice of profession) in relation with the concept of career indecision was examined using SEM. Before starting data analysis, missing values or extreme values in the data and premises of the statistical process to be held were determined. It was detected that there were missing data among the data of 482 students. In order to determine whether there was one-way extreme value, standard Z-scores were examined. Raw scores obtained from factors of the scales were transformed into Z scores, and obtained Z scores were seen in a ± 3 range. Multiple extreme values were investigated via Mahalanobis distance. In this investigation, it was found that there were multiple extreme values in the data. In this direction, each subject who included more than one missing value and showed extreme value was excluded from the data set, and a study group was constituted.

Univariate and multivariate normality assumptions were examined. Skewness-kurtosis coefficients for univariate normality was calculated and these coefficients

were found in the ± 1 range; however, standardized skewness (z-statistics), which is calculated by dividing skewness coefficient of some variables to standard error, were determined to be bigger than 2.58. The distribution is considered non-normal when the standardized skewness (z-statistics) exceeds 2.58 (Buyukozturk, 2007). On the other hand, in normality analysis (Mardia test) conducted by the help of the LISREL program, it was found that the data did not meet multivariate normality assumption. In this condition, by using a prediction method that did not require the normality assumption, structural equation model analyses could be conducted.

Finney and Distefano (2013) state that in situations where the data is non-normal and/or is categorical, Weighted Least Squares (WLS), Robust Diagonally Weighted Least Squares (DWLS), and Satorra-Bentler chi-square can be used; and Finney, Distefano and Kopp (2016) state that in addition to these, Robust Maximum Likelihood prediction can also be used. Baghdarnia, Soreh, and Gorji, (2014) and Mindrila (2010) indicate that in conditions where the data is not distributed multivariate and normal, DWLS method can provide appropriate parameter predictions. In addition, in situations where continuous data do not meet normality assumptions or some/all variables are discrete, WLS method is suggested (Aksu, Eser & Guzeller, 2017; Browne, 1984; Kline, 2011; Schermelleh-Engel, Moosbrugger & Müller, 2003). However, it is stated that because the WLS method requires a big sample size, DWLS method gives better results for small samples (Kline, 2011; Mindrila, 2010). In this respect, in analyses, robust DWLS prediction method was used.

In data analysis, fit indexes were examined to reveal adequacy of the model tested. In the study, χ^2/sd , RMSEA (Root Mean Square Error of Approximation), GFI (Goodness of Fit Index), AGFI (Adjustment Goodness of Fit Index), CFI (Comparative Fit Index), NFI (Normed Fit Index), and NNFI (Non-Normed Fit Index) were investigated out of model fit indexes. If the χ^2/sd value is less than 3, it is an excellent fit and if it is less than 5, it is admissible (Sumer, 2000 cited in Cokluk, Sekercioglu & Buyukozturk, 2010, p.271). If RMSEA value is less than 0.08, it is an acceptable fit; and if it is less than 0.05, it is an excellent fit (Browne & Cudeck, 1993 cited in Jöreskog & Sörbom, 1993, p.124). For GFI and AGFI, value greater than 0.90 indicates an acceptable fit and value greater than 0.95 indicates an excellent fit (Hooper, Coughlan & Mullen, 2008). For CFI, NFI, and NNFI, values greater than 0.90 indicate an acceptable fit and values greater than 0.95 indicate an excellent fit (Hu & Bentler, 1999). In the analyses conducted, LISREL 8.72 program was used.

Results

In this study, a model was created to explain high school students' career anxiety (in terms of the family effect and the choice of profession) related with career indecision. In the process of constituting the model, alternative models were tried with reference to literature. The goodness of fit indexes were examined about the models created, and the model giving the best results was identified.

Test of the Measurement Model

Three variables were described in the measurement model. These variables were career anxiety in terms of the family effect (family), career anxiety in terms of the choice of profession (profession), and career indecision (indecision) measured by using CDI. In Table 1, standardized coefficients-values (standardized factor loading) and t-values about measurement model were given.

Table 1*Results of the Measurement Model*

Variable	Standardized factor loading	t	R ²	Variable	Standardized factor loading	t	R ²
Family				Profession			
CA1	0.74	15.65	0.55	CA6	0.65	15.06	0.43
CA2	0.84	22.00	0.70	CA7	0.73	16.68	0.53
CA3	0.72	14.73	0.52	CA8	0.59	13.06	0.35
CA4	0.72	15.07	0.52	CA9	0.67	15.60	0.45
CA5	0.59	10.95	0.34	CA10	0.49	10.50	0.24
Indecision				CA11	0.76	18.19	0.57
Internal	0.76	15.91	0.58	CA12	0.66	15.14	0.44
Knowledge	0.71	12.72	0.51	CA13	0.65	14.01	0.42
Lack	0.73	15.11	0.53	CA14	0.60	13.88	0.36
Belief	0.66	12.93	0.43				
External	0.66	11.37	0.44				

CA: Career Anxiety

It can be seen in Table 1 that standardized factor loads related to the measurement model were great. In addition to this, all factor loads were statistically significant ($p < .01$).

According to fit indexes obtained about the measurement model, it can be said that measurement model was fitted ($\chi^2/sd= 3.47$, RMSEA= 0.075, GFI= 0.97, AGFI= 0.96, CFI= 0.95, NFI= 0.94, NNFI= 0.95).

Test of the Structural Model

After evaluating the statistical appropriateness of the measurement model, fit indexes and modification suggestions about the structural model were examined. It was determined that some modification suggestions made a significant contribution to chi-square value. In this respect, among observable variables of the same latent

variable (CA12-CA13), a modification was made. Fit indexes and acceptable ranges obtained after that modification were given in Table 2.

Table 2

Fit Indexes Related to the Structural Model

Fit Index	Model Values	Fit Index	Model Values
χ^2/sd	3.57	CFI	0.95
RMSEA	0.076	NFI	0.93
GFI	0.96	NNFI	0.94
AGFI	0.95		

When the model fit indexes and acceptable ranges were examined in Table 2, it could be indicated that the structural model was verified. After determining model fit, t-values between variables and standardized coefficients were examined.

When t-values related to the structural model established to explain high school students' career anxiety in terms of the family effect and the choice of profession related to career indecision were examined, it was determined that t-values of the model were significant. Standardized values about the model were given in Figure 1.

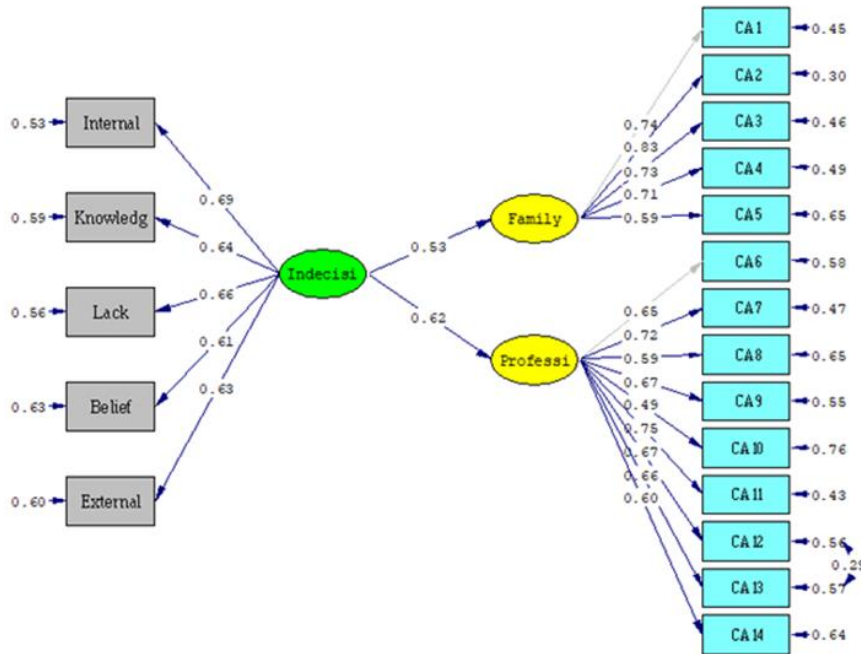


Figure 1. Path Diagram of Standardized Values

Standardized coefficient between latent variables below 0.10 is evaluated as small, about 0.30 is evaluated as medium, and over 0.50 is evaluated as a great effect (Kline, 2005 cited in Aksu, Eser and Guzeller, 2017, p.184). With respect to this, it could be implied that standardized coefficients between Career Indecision (Indecision) - Career Anxiety in terms of the Family Effect (Family) and Career Indecision - Career Anxiety in terms of the Choice of Profession (Profession) had a great effect. Regression equations obtained as a result of analysis were given below:

Career Anxiety in terms of the Family Effect = $0.53 * \text{Career Indecision}$ $R^2 = 0.28$

Career Anxiety in terms of the Choice of Profession = $0.63 * \text{Career Indecision}$ $R^2 = 0.40$

With reference to regression equations obtained, there was a positive and a statistically significant relationship between career indecision and career anxiety in terms of the family effect (0.53). In addition, career indecision score explained 28% of career anxiety in terms of the family effect. There was a positive and a significant relationship between career indecision and career anxiety in terms of the choice of profession (0.63). Nevertheless, career indecision score explained 40% of career anxiety in terms of the choice of profession. Accordingly, it could be stated that as the scores high school students obtained from CDI increased (as their career indecision increased), their career anxiety in terms of the family effect and their career anxiety in terms of the choice of profession also increased.

Discussion, Conclusion and Recommendations

Career indecision can be defined as an individual's changing career decisions or his/her being unable to make a choice when it is time to decide (Kuzgun, 2000). First of all, from the viewpoint of a student's career development, career indecision is seen as being unable to choose a university or an occupation (Callahan & Greenhaus, 1992). Anxiety is a negative emotion affecting them starting from primary school to graduate degrees (Zeidner, 2007 cited in Daniels et. al., 2011, p.411). Fouad (2007) implies that individuals who experience difficulty in making a career decision usually experience career anxiety. For those reasons, it is not surprising that anxiety damages students' self-competence in making career decisions (Daniels et. al., 2011).

In this study, the influence of students' career decision (career indecision) conditions on career anxiety in terms of the family effect and career anxiety in terms of the choice of profession was investigated. According to the findings, it was found that career indecision had a significant effect on career anxiety in terms of the family effect and the choice of profession. In other words, as high school students' career indecision increased, their career anxiety in terms of the family effect and the choice of profession increased as well. The literature also supports that there is a positive and a significant relationship between students' career indecision and anxiety (state and/or trait anxiety) they experience (Ali & Tariq, 2009; Corkin, Arbona, Coleman & Ramirez, 2008; Fuqua, Seaworth & Newman, 1987; Fuqua, Newman & Seaworth, 1988; Miller & Rottinghaus, 2014; Mojgan, Kadir & Soheil, 2011; Oztemel, 2013; Saka & Gati, 2007; Vignoli, 2015). However, there is limited research conducted in order to determine the

relationship between career indecision and career anxiety (Daniels et. al., 2011; Vignoli, 2015). In this direction, it can be asserted that research findings would make important contributions to literature. Daniels et. al., (2011) and Vignoli (2015) found that there was a positive and a significant relationship between career anxiety and career indecision. The result of this study is consistent with the results of the previous studies.

A positive relationship was found between career indecision and career anxiety in terms of the family effect and the choice of profession. As career indecision increased, the career anxiety experienced increased as well. It seems to be a natural process for students, who face difficulties related to the education system, parent expectations, being unable to find adequate educational and social opportunities towards self-knowledge, examination system, and the process of career decision, to experience anxiety in terms of their family and choice of profession along with occupational indecisiveness they experience. Another possible explanation regarding the research findings is that lack of information and inadequacy of coping strategies in terms of the choice of profession, self-knowledge and setting goals may be related to professional indecision and career anxiety. For example, Bacanlı (2012) expresses that students who cannot make a decision about career experience more career decision difficulty. Kirdok and Harman (2018) found that high school students with an external locus of control experienced more difficulty in the decision-making process because of the lack of necessary information or inconsistent information.

In this respect, in order to decrease career anxiety that high school students experience in the process of career decision, it is suggested to determine reasons which make them indecisive about their career, and to plan a career guidance process. Adolescents who experience career indecision may experience indecision because of anxiety, but they may also experience anxiety for not being approved by their families because of career indecision, and for not being able to share their dreams with their families. Similarly, during high school years, career indecision may cause a feeling of anxiety related to the occupation to be chosen or dreams. It is beyond any doubt that psychosocial programs aimed at decreasing career indecision and career anxiety would support students. However, it is also crucial to support students before high school years in determining which schools to go and which occupation they want to choose. It is important to accept career development as a process, and support career development starting from the preschool period.

Similarly, in the process of occupational decision-making, reinforcing coping skills of students, improving decision-making strategies, supporting family counseling services, and providing support systems to adolescents via psychological counseling and career counseling services are possible venues for future studies. In addition, starting from preschool years, supporting occupational development process with family guidance and professional counseling studies, especially before the transition to secondary education and during secondary education, giving weight to counseling services within the scope of attention, fostering abilities and occupational values, supporting career research, and creating opportunities would also improve professional decision-making skills. By this way, difficulties in decision-making related to occupational indecision and career anxiety may be precluded.

In the study, it was concluded that as career indecision of students' increased, their career anxieties in terms of the family effect and the choice of profession increased as well. As they had difficulty in making decisions about their career, their career anxiety increased. As their career anxiety increased, it could be more difficult for them to choose the appropriate occupation. Goodstein (1965) underlies anxiety at the foundation of failure in career decision (as cited in Gordon, 2007, p.29). For this reason, in the high school period, when the career decision is important, it is suggested to analyze career anxiety of students, and to foster career guidance to decrease career anxiety. By following this direction, career decision process of individuals can be enhanced.

Anxiety interferes with the development of necessary skills for career decision-making process (Fuqua et. al., 1988). As a matter of fact, some students may feel anxiety about their decision even after they make a decision. For these reasons, in career guidance processes held in schools, career anxiety and career indecision should be evaluated together.

This study, besides helping us develop a viewpoint about career indecisions and career anxiety adolescents experience during high school years, has some limitations. First of all, the study is conducted with high school students at 11th and 12th-grades; as a result, it is impossible to discuss results for students at 9th and 10th-grades. In addition, data is not collected on the basis of a separation among different school types and fields/branches, and this is also regarded as a limitation. In future studies, studies including 9th and 10th-grade students and adults would help to understand the subject better.

Besides, in this study, the relationship between career indecision and career anxiety was investigated. However, variables like socio-economic situation, gender, and self-competence were not examined. In future studies, whether there are intermediary variables between career indecision and career anxiety can be investigated.

References

- Akdeniz, S. (2009). *Career decision-making self-efficacy, perceived parent attitudes and some personality characteristics* (Unpublished master dissertation). Selcuk University Institute of Social Sciences, Konya.
- Akkoc, F. (2012). Lise öğrencilerinin mesleki kararsızlıkları ile kariyer inançları arasındaki ilişki [The relationship between the vocational indecision and career beliefs of high school students]. *Dokuz Eylül Üniversitesi Buca Eğitim Fakültesi Dergisi*, 32, 49-70.
- Akos, P., & Niles, S. G. (2007). Promoting educational and career planning in schools. In B. T. Erford (Eds.), *Transforming the school counseling profession* (2nd ed., pp. 195-210). Columbus, OH: Pearson Merrill Prentice Hall.
- Aksu, G., Eser, M. T., & Guzeller, C. O. (2017). *Açımlayıcı ve doğrulayıcı faktör analizi ile yapısal eşitlik modeli uygulamaları*. Ankara: Detay Yayıncılık.

- Ali, U., & Tariq, M. (2009). Anxiety as a determinant of career indecision in college students. *Pakistan Journal of Psychology*, 40(1), 17-27.
- Aydin, C (2014). *The investigation of career indecision of university students in terms of self-esteem, locus of control and perfectionism* (Unpublished master dissertation). Ankara University Educational Sciences Institute, Ankara.
- Bacanli, F. (2012). Kariyer karar verme güçlükleri ve meslek seçimine ilişkin akılcı olmayan inançların ilişkisi [Relationships between career decision-making difficulties and irrational beliefs about career choice]. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 4(37), 86-95.
- Bacanli, F., & Hamamci, Z. (2015). Lise öğrencileri için kariyer karar verme güçlükleri ölçeğinin faktör yapısının ve güvenilirliğinin yeniden incelenmesi [The examination of factor structure and reliability of career decision-making difficulties scale for high school students]. *Türk Eğitim Bilimleri Dergisi*, 13(2), 109-122.
- Baghdarnia, M., Soreh, R4. F., & Gorji, R. (2014). The Comparison of two methods of maximum likelihood and diagonally weighted least squares in testing construct validity of achievement goals. *Journal of Educational and Management Studies*, 4(1), 22-38.
- Blustein, D. L., & Phillips, S. D. (1988). Individual and contextual factors in career exploration. *Journal of Vocational Behavior*, 33, 203-216.
- Brown, D., Brooks, L., & Associates (1996). *Career choice and development* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Browne, M. W. (1984). Asymptotically distribution-free methods for the analysis of covariance structures. *British Journal of Mathematics and Statistical Psychology*, 37, 62-83.
- Buyukgoze Kavas, A. (2011). *Testing a model of career indecision among university students based on social cognitive career theory* (Unpublished doctoral dissertation). The Graduate School of Social Sciences of Middle East Technical University, Ankara.
- Buyukozturk, S. (2007). *Sosyal bilimler için veri analizi el kitabı* [Data analysis for social sciences]. Ankara: Pegem Yayıncılık.
- Callahan, G. A., & Greenhaus, J. H. (1992). The career indecision of managers professionals: An examination of multiple subtypes. *Journal of Vocational Behavior*, 41, 212-231.
- Campagna, C.G., & Curtis, G.J. (2007). So worried I don't know what to be: Anxiety is associated with increased career indecision and reduced career certainty. *Journal of Psychologists and Counsellors in Schools*, 17(1), 91-96.

- Corkin, D., Arbona, C., Coleman, N., & Ramirez, R. (2008). Dimensions of career indecision among Puerto Rican college students. *Journal of College Student Development, 49*, 81–94.
- Cakir, M. A. (2004). Mesleki karar envanterinin geliştirilmesi [The development of career decision inventory]. *Ankara Üniversitesi Eğitim Bilimleri Fakültesi Dergisi, 37*, 1-14.
- Cetin-Gunduz, H., & Nalbantoglu-Yilmaz, F. (2016). Lise öğrencilerinin kariyer kaygılarını belirlemeye yönelik ölçek geliştirme çalışması [Scale development study for determining the career anxiety of high school students]. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 12*(3), 1008-1022.
- Cokluk, O., Sekercioglu, G., & Buyukozturk, S. (2010). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları* [Multivariate statistics for social sciences: SPSS and LISREL applications]. Ankara: Pegem Yayıncılık.
- Daniels, L. M., Stewart, T. L., Stupnisky, R.H., Perry, R. P., & Verso, T. L. (2011). Relieving career anxiety and indecision: the role of undergraduate students' perceived control and faculty affiliations. *Soc Psychol Educ., 14*, 409–426.
- Dogan, H., & Bacanli, F. (2012). The effect of a career decision-making group guidance program on career decision-making difficulties [Special Issue]. *Energy Education Science and Technology Part B: Social and Educational Studies, 1*, 912-916.
- Finney, S.J., & Distefano, C. (2013). Nonnormal and categorical data in structural equation modeling. In G. R. Hancock & R. O. Mueller (Eds.), *Structural equation modeling* (pp. 439-492). U.S.A.: Information Age Publishing.
- Finney, S. J., Distefano, C., & Kopp, J. P. (2016). Overview of estimation methods and preconditions for their application with structural equation modeling. In K. Schweizer & C. Distefano (Eds.), *Principles and methods of test construction: Standards and recent advances* (pp. 135-165). Boston: Hogrefe.
- Fouad, N. A. (2007). Work and vocational psychology: Theory, research, and applications. *Annual Review of Psychology, 58*, 543–564.
- Fuqua, D. R., Blum, C. R., & Hartman, B. W. (1988). Empirical support for the differential diagnosis of career indecision. *Journal of Counseling Psychology, 36*, 364–373.
- Fuqua, D. R., Seaworth, T. B., & Newman, J. L. (1987). The relationship of career indecision and anxiety: A multivariate examination. *Journal of Vocational Behavior, 30*(2), 175-186.
- Fuqua, D. R., Newman, J. L., & Seaworth, T. B. (1988). Relation of state and trait anxiety to different components of career indecision. *Journal of Counseling Psychology, 35*, 154–158.
- Gati, I. (1986). Making career decisions: A sequential elimination approach. *Journal of Counseling Psychology, 33*, 408-417.

- Gati I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision-making. *Journal of Counseling Psychology, 43*(4), 510-526.
- Goodstein, L. D. (1965). Behavior theoretical views of counseling. In B. Stefflre (Eds.), *Theories of counseling* (pp. 140-192). New York: McGraw-Hill.
- Gordon, V. N. (2007). *The undecided college student: An academic and career advising challenge*. U.S.A.: Charles C. Thomas Publisher.
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology, 28*, 545-579.
- Hamamci, Z., & Hamurlu, M. K. (2005). Anne babaların meslek gelişimine yardımcı olmaya yönelik tutumları ve bilgi düzeylerinin çocuklarının mesleki kararsızlıkları ile ilişkisi [Relationship between the level of knowledge and attitudes of parents about helping their children for career development and career indecision of their children]. *İnönü Üniversitesi Eğitim Fakültesi Dergisi, 6*(10), 55-69.
- Hartman, B. W., Fuqua, D. R., & Blum, C. R. (1985). A path analytic model of career indecision. *Vocational Guidance Quarterly, 33*(3), 231-240.
- Hartung, P. J., Porfeli, E. J., & Vondracek, F. W. (2005). Vocational development in childhood: A review and reconsideration. *Journal of Vocational Behavior, 66*, 385-419.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modeling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods, 6*(1), 53-60.
- Hu, L.T., & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55.
- Jöreskog, K., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Chicago, IL: Scientific Software International Inc.
- Kaplan, D. M., & Brown, D. (1987). The role of anxiety in career indecisiveness. *Career Development Quarterly, 36*, 148-162.
- Karasar, N. (2012). *Bilimsel araştırma yöntemi* [Scientific research method]. Ankara: Nobel Yayıncılık.
- Kirdok, O., & Harman, E. (2018). High school students' career decision-making difficulties according to locus of control. *Universal Journal of Educational Research, 6*(2), 242-248.
- Kline, R.B. (2011). *Principles and practice of structural equation modeling*. New York: The Guilford Press.
- Kuzgun, Y. (2000). *Meslek danışmanlığı kuramlar uygulamalar* [Occupational counseling theories]. Ankara: Nobel Yayıncılık.

- Mallet, P. (2002). Anxiety aroused by thoughts on future academic and professional careers during adolescence: The development of a major form of social anxiety. *Carriérologie*, 8, 599-618.
- Miller, A. D., & Rottinghaus, P. J. (2014). Career indecision, meaning in life, and anxiety: An existential framework. *Journal of Career Assessment*, 22(2), 233-247.
- Mindrila, D. (2010). Maximum likelihood (ML) and diagonally weighted least squares (DWLS) estimation procedures: A comparison of estimation bias with ordinal and multivariate non-normal data. *International Journal of Digital Society (IJDS)*, 1(1), 60-66.
- Mitchell, L., & Krumboltz, J. (1987). The effects of cognitive restructuring and decision-making training on career indecision. *Journal of Counseling and Development*, 66, 171-174.
- Mojgan, F., Kadir, R., & Soheil, S. (2011). The relationship between state and trait anxiety with career indecision of undergraduate students. *International Education Studies*, 4(3), 31-35.
- Moshagen, M., & Musch, J. (2014). Sample size requirements of the robust weighted least squares estimator. *Methodology*, 10(2), 60-70.
- Peng, H., & Herr, E. L. (2000). Evaluation of a distance education course in students decision-making and beliefs about careers. *Psychological Reports*, 87, 1218 -1228.
- O'Hare, M. M., & Tamburri, E. (1986). Coping as a moderator of the relationship between anxiety and career decision-making. *Journal of Counseling Psychology*, 33, 255-264.
- Oztemel, K. (2013). An investigation of career indecision level of high school students: Relationships with personal indecisiveness and anxiety. *The Online Journal of Counseling and Education*, 2(3), 46-58.
- Ozyurek, R., & Kilic-Atici, M. (2002). Üniversite öğrencilerinin meslek seçimi kararlarında kendilerine yardım eden kaynakların belirlenmesi [Determining sources which are effective in university student' career decision-making]. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 2(17), 33-42.
- Park, K. Woo, S. Park, K. Kyea, J., & Yang, E. (2017). The mediation effects of career exploration on the relationship between trait anxiety and career indecision. *Journal of Career Development*, 44(5), 440-452.
- Rowland, K.D. (2004). Career decision-making skills of high school students in the Bahamas. *Journal of Career Development*, 31(1), 1-13.
- Saka, N., & Gati, I. (2007). Emotional and personality-related aspects of persistent career decision-making difficulties. *Journal of Vocational Behavior*, 71, 340-358.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of Psychological Research Online*, 8(2), 23-74.

- Stead, G.B., Graham, W. M. B., & Foxcroft, C. (1993). The relationship between career indecision and irrational beliefs among university students. *Journal of Vocational Behaviour*, 42(2), 155 – 169.
- Super, D.E. (1957). *The psychology of careers*. New York: Harper and Brothers.
- Vignoli, E. (2015). Career indecision and career exploration among older French adolescents: the specific role of general trait anxiety and future school and career anxiety. *Journal of Vocational Behavior*, 89, 182-191.
- Vignoli, E., Croity-Belz, S., Chapeland, V., Fillipis, A., & Garcia, M. (2005). Career exploration in adolescents: The role of anxiety, attachment and parenting style. *Journal of Vocational Behavior*, 67, 153-168.
- Wang, J., & Wang, X. (2012). *Structural equation modeling applications using m-plus*. United Kingdom: Higher Education Press.
- Weinstein, F. M., Healy, C. C., & Ender, P. B. (2002), Career choice anxiety, coping and perceived control. *The Career Development Quarterly*, 50, 339-349. doi:10.1002/j.2161-0045.2002.tb00582.x
- Wulff, M.B., & Steitz, J.A. (1999). A path model of relationship between career indecision, androgyny, self-efficacy, and self-esteem. *Perceptual and Motor Skills*, 88, 935-940.

Lise Öğrencilerinde Meslekî Kararsızlık ve Kariyer Kaygısı: Yapısal Eşitlik Modeliyle Bir İnceleme

Atıf:

- Nalbantoglu Yilmaz, F. & Cetin Gunduz, H. (2018). Career indecision and career anxiety in high school students: An investigation through structural equation modelling. *Eurasian Journal of Educational Research*, 78, 23-42, DOI: 10.14689/ejer.2018.78.2

Özet

Problem Durumu: Çocukluk yıllarında başlayan kariyer gelişimi yaşam boyunca devam eden bir süreçtir. Bu süreçte ergenlik dönemi kariyer gelişimi ve kariyer kararı verme açısından önemli dönemlerden birisidir. Ergenlerin sosyal ortamları, rol modelleri ve akran ilişkileri gibi faktörlerin etkisi ile kariyer gelişimleri önemli ölçüde etkilenmektedir. Kariyer araştırması ve kariyer karar verme süreci, ergenlik döneminde kariyer gelişiminin merkezindedir. Bu süreçte bazı ergenler kararsızlıkla karşılaşabilirler. Ergen öğrenciler çoğu zaman bir kariyer alanı, mesleki eğitim veya yükseköğretim seçenekleri ile ilgili kararlar almakla yükümlüdürler. Türkiye’de lise eğitimine devam eden gençler 9. ve 10. sınıflarda ortak programa dayalı bir eğitim

aldıktan sonra alan/dal seçimlerine yönelmektedir. Ortaöğretime geçişte öğrencilerin bir grubu ise mesleki ve teknik eğitime yönelerek meslek seçimlerinde bulunmaktadır. Yapılan bu seçimler gelecekte seçilecek yükseköğretim programını belirlemenin yanında, yükseköğretime devam edip etmeme yönündeki kararları da belirlemektedir.

Neredeyse yaşamları için geri dönülmez ve önemli kararlar aldıkları yıllarda mesleki olarak kararsızlıklar yaşayan, geleceğe ilişkin belirsizlikler hissedilen gençlerin kariyer kaygısı yaşamaları da kaçınılmaz görülmektedir. Lise yıllarında kariyer kaygısı öğrencilerin ailelerinin beklentilerini karşılayamamak ya da üst öğrenimde istediği alanlara yönelememek, istediği mesleği seçememek gibi pek çok konuda kendisini gösterebilir.

Araştırmanın Amacı: Literatür incelendiğinde kariyer kararsızlığı ve kariyer kaygısı arasındaki ilişkiyi inceleyen sınırlı sayıda çalışma bulunmaktadır. Kaygı ve kariyer kararsızlığı konusunda yapılan çalışmalarda ise çoğunlukla üniversite öğrencilerinden veri toplanmıştır. Bu nedenle çalışmanın bulgularını kariyer kararsızlığı ve kariyer kaygısı konusunda yapılan çalışmalara ışık tutması beklenmektedir. Bu amaçla çalışmada kariyer kararsızlığı ve kariyer kaygısı arasındaki ilişki yapısal eşitlik modellemesi ile incelenmiştir.

Araştırmanın Yöntemi: Araştırmanın çalışma grubu, 2016-2017 Eğitim Öğretim Yılı Nevşehir il merkezindeki farklı liselerin 11 ve 12. sınıflarında okuyan 444 öğrenciden oluşmaktadır. Araştırmaya katılan öğrencilerin belirlenmesinde uygun örnekleme kullanılmıştır. Araştırmaya katılan öğrencilerin %59'u (n= 262) 11. sınıf, %41'i (n= 182) 12. sınıf öğrencisi, %55,2'si (n= 245) kız ve %44,8'i (n= 199) erkektir. Araştırmada veri toplama aracı olarak Kariyer Kaygısı Ölçeği (KKÖ) ve Mesleki Karar Envanteri (MKE) kullanılmıştır. Lise öğrencilerinin aile etkisine ve meslek seçimine yönelik kariyer kaygılarını mesleki kararsızlık ile açıklamak üzere kurulan model yapısal eşitlik modeliyle incelenmiştir.

Araştırmanın Bulguları: Araştırmada lise öğrencilerinin aile etkisine ve meslek seçimine yönelik kariyer kaygılarını açıklamak üzere bir model oluşturulmuştur. Model oluşturulurken alan yazından hareketle alternatif modeller denenmiştir. Oluşturulan modellere ait uyum iyiliği indeksleri incelenmiş ve en iyi uyumu veren model açıklanmıştır. Yapısal eşitlik modeli analizinde ilk olarak ölçme modeli test edilmiştir. Ölçme modelinde üç değişken tanımlanmıştır. Bu değişkenler; öğrencilerin kariyer kaygılarını gösteren aile etkisine (aile) ve meslek seçimine yönelik (meslek) kariyer kaygıları ile mesleki karar envanteri ile ölçülen mesleki kararsızlık (kararsızlık)'dır. Ölçme modelinde tüm faktör yükleri istatistiksel olarak anlamlıdır ($p < .01$). Ölçme modeline ilişkin elde edilen uyum indekslerine göre ise ölçme modelinin doğrulandığı söylenebilir ($\chi^2/sd= 3.47$, RMSEA= 0.075, GFI= 0.97, AGFI= 0.96, CFI= 0.95, NFI= 0.94, NNFI= 0.95). Elde edilen regresyon denklemlerinden hareketle, mesleki kararsızlık ile aile etkisine yönelik kariyer kaygısı arasında pozitif yönde istatistiksel olarak anlamlı bir ilişki vardır (0.53). Ayrıca, mesleki kararsızlık puanı aile etkisine yönelik kariyer kaygısının %28'ini açıklamaktadır. Mesleki kararsızlık ile meslek seçimine yönelik kariyer kaygısı arasında ise pozitif yönde anlamlı bir ilişki vardır (0.63). Bununla

birlikte, mesleki kararsızlık puanı meslek seçimine yönelik kariyer kaygısının ise %40'ını açıklamaktadır. Buna bağlı olarak lise öğrencilerinin mesleki karar envanterinden aldıkları puan arttıkça (mesleki kararsızlık düzeyleri arttıkça), aile etkisine yönelik ve meslek seçimine yönelik kariyer kaygılarının arttığı söylenebilir.

Araştırmanın Sonuçları ve Önerileri: Araştırmada mesleki kararsızlığın aile etkisine ve meslek seçimine yönelik kariyer kaygıları üzerinde anlamlı bir etkisi olduğu sonucuna ulaşılmıştır. Bir başka deyişle, lise öğrencilerinin mesleki kararsızlık durumları arttıkça aile etkisine ve meslek seçimine yönelik yaşadıkları kariyer kaygıları da artmaktadır. Mesleki kararsızlık ile aile etkisine ve meslek seçimine yönelik kariyer kaygısı arasında pozitif bir ilişki bulunmuştur. Mesleki kararsızlık arttıkça yaşanan kariyer kaygısı da artmaktadır. Araştırmada öğrencilerin mesleki kararsızlık durumları arttıkça aile etkisine ve meslek seçimine yönelik yaşadıkları kariyer kaygılarının da arttığı belirlenmiştir. Öğrenciler mesleki karar vermede zorlandıkça kariyer kaygıları artmaktadır.

Mesleki kararsızlık ile aile etkisine ve meslek seçimine yönelik kariyer kaygısı arasında pozitif bir ilişki bulunmuştur. Mesleki kararsızlık arttıkça yaşanan kariyer kaygısı da artmaktadır. Bu doğrultuda lise öğrencilerinin meslek seçim sürecinde yaşadıkları kariyer kaygılarının azaltılabilmesi için mesleki kararsızlık yaşamalarını sağlayan nedenler belirlenerek mesleki rehberlik sürecini planlamak önerilmektedir. Mesleki kararsızlık yaşayan ergenler kaygı sebebiyle kararsızlık yaşayabileceği gibi, mesleki kararsızlıklar nedeniyle de aileleri tarafından onaylanmamak, mesleki hayallerini ailelerine anlatamamak konularında kaygı duyabilirler. Benzer şekilde lise yıllarında mesleki kararsızlık seçilecek meslek ya da hayallerle ilgili kaygı hissedilmesine neden olabilir. Mesleki kararsızlıkları ve kariyer kaygısını azaltmaya yönelik psiko-sosyal programların öğrencilere destek olacağı şüphesizdir. Ancak öğrencilerin gelecekte hangi okula gitmek istedikleri, hangi mesleği seçmek istedikleri ile ilgili olarak lise yılları öncesinde desteklenmesi, mesleki gelişim bir süreç olarak değerlendirilip okul öncesi yıllardan itibaren mesleki gelişimin desteklenmesi önemlidir.

Anahtar Kelimeler: Kariyer kaygısı, kariyer kararsızlığı, ergenlik, yapısal eşitlik modellemesi.