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Early Maladaptive Schemas in Medical Students and Law Students

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Abstract

Career choice is an important stage in the life of young people. It has been previously reported that career choice may be related to psychological factors. In this study, we aimed to investigate the relationship of early maladaptive schemas with university selection. A total of 135 medical students and 98 law students participated in the study. Sociodemographic data form and Young Schema Questionnarie short form-3 were given to the participants. According to our findings, dependence/incompetence (p = 0.027) and subjugation (p = 0.013) scores were significantly higher in medical school students. The self-punitiveness score was found to be higher (p= 0.032) in law faculty students. In addition, medical faculty students had significantly higher scores (p=0.043) in the impaired autonomy and performance schema domain scores. According to our findings, early maladaptive schemas scores of university students differ according to their departments. These findings may be useful in career selection and higher education programs guidance process.

Keywords: Psychological theories, career choice, personality, college admission test

Öz

Tıp ve Hukuk Fakültesi Öğrencilerinde Erken Dönem Uyumsuz Şemalar

Meslek seçimi gençlerin hayatında önemli bir aşamadır. Meslek seçiminin psikolojik faktörlerle ilişkili olabileceği daha önce bildirilmiştir. Bu çalışmada, erken dönem uyumsuz şemaların üniversite seçimi ile ilişkisini araştırmayı amaçlanmıştır. Çalışmaya toplam 135 tıp öğrencisi ve 98 hukuk öğrencisi katılmıştır. Katılımcılara sosyodemografik veri formu ve Young şema ölçeği kısa form 3 uygulanmıştır. Bulgularımıza göre tıp fakültesi öğrencilerinde bağımlılık/yetersizlik (p=0.027) ve boyun eğicilik (p=0.013) puanları anlamlı olarak daha yüksekti. Hukuk fakültesi öğrencilerinde cezalandırıcılık puanı daha yüksek (p=0.032) bulundu. Ayrıca tıp fakültesi öğrencilerinin bozulmuş özerklik ve performans şema alanı puanları anlamlı olarak daha yüksek (p=0.043) saptanmıştır. Bulgularımıza göre üniversite öğencilerinin erken dönem uyumsuz şema puanları bölümlerine göre farklılık göstermektedir. Bu bulgular, kariyer seçimi ve yüksek öğretim programlarına rehberlik sürecinde faydalı olabilir.

Anahtar Kelimeler: Psikolojik teoriler, kariyer seçimi, kişilik, üniversite giriş sınavı

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INTRODUCTION

A large part of a human life is spent in vocational life. Considering the large share of the profession in one's life, it is seen that the quality of the professional life and its suitability for the person have a significant effect on individual happiness. For this reason, the effect of a career choice compatible with the personality in terms of ensuring life satisfaction cannot be ignored (Holland, 1997). Students have to make decisions by considering many factors such as their interests, abilities, future financial conditions, and employment opportunities. The evaluations and attitudes of the individual towards this preference,

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constitute the results of his/her values and beliefs he/she attributes to the career (Dobie, Carline, & Laskowski, 1997). The choice of profession is suggested to be a product of the interaction process of a person's past with personal and environmental factors (Farmer, 1987). One of the important factors here is the principle of optimal harmony between the student's personality and the chosen department at university (Holland, 1997). According to this principle, as long as the harmony between personality and environment is good, the student is expected to develop. However, studies have generally been conducted over Big Five Personality traits (Lievens, Coetsier, De Fruyt, & De Maeseneer, 2002; Rubinstein, 2005; Vedel, Thomsen, & Larsen, 2015). The most important question is whether the personality directs the individual to a career or does the career determine the personality traits. It is assumed that some academic environments can attract students with certain characteristics (Holland, 1997). In a study conducted on 886 students regarding Big Five Personality characteristics, it was reported that especially Extraversion and Conscientiousness scores were the predictors of academic career choices of high school students (Balsamo, Lauriola, & Saggino, 2012). This theoretically expected result is supported by a few number of prospective studies.

Early maladaptive schemas "EMS" are emotional and cognitive patterns that begin and develop in childhood, which are repetitive, shaping one's relationship with oneself and one's environment, and which are mostly dysfunctional. Although the dimensions of these schema patterns are different, the size and the severity of the negative emotions and behaviors revealed by their triggers are associated with the degree of the pattern (Young, Klosko, & Weishaar, 2006). Accordingly, these subschemas, which developed in the early period; contribute to the behavior and preferences of the person, and being triggered by the events in life, they can affect the behavior and preferences of the individual without being aware. The emergence of schemas is mostly caused by regularly repeated detrimental experiences (Young et al., 2006). The resulting schemas are important predictors of behavior, thoughts and feelings of the individuals. The presence of schemas does not directly indicate that the person has an active psychopathology. There are many studies showing the presence of EMSs in the 'healthy' population (Dozois, Martin, & Bieling, 2009; Ehsan & Bahramizadeh, 2011; Shorey et al., 2017; Zhu et al., 2016). Current studies conceptualize EMSs in the domain of 18 schemas and 4 schema domains. The four basic schema domains consist of the following titles; Disconnection and Rejection, Impaired Autonomy and Performance, Excessive Responsibility and Standards, and Impaired Limits (Bach, Lockwood, & Young, 2018). These domains contribute to the development of subschemas and arise against the backdrop of unmet needs.

The schema-focused model of occupational stress and work dysfunctions suggest that; besides the orientation of the individuals with EMS, to the event, situations and people who unconsciously activate their schemas, they are also unconsciously oriented to the occupational groups that their schemas attract and these may play a role in making their choice (Bamber & McMahon, 2008). Some previous studies suggest that some EMSs might be associated with certain occupations (Bamber & McMahon, 2008; Kaeding et al., 2017). People are probably preferring work environments and occupations that are close to them, on the basis of their EMS (Bamber & McMahon, 2008). Contrarily, in a study in the United States, in which middle and high school students participated, it was found that the effect of parents in career choice was insignificant as an environmental factor. According to this study, it has been observed that one's own preferences are more prominent and determinant in choosing a profession (Bregman & Killen, 1999). However, according to schema theory, people's preferences emerge with early childhood experiences and parent-child relationships.

In Turkey, the "Center of Assessment Selection and Placement (OSYM)" state institution was established in 1974 in order to select and place the successful candidates among the ones who applied to enter higher education programs. Although the style of the examination changes from time to time, the examination system for transition from secondary education to higher education, which is held every year since 2017–2018 academic year, now continues as the Examination for Higher Education Institutions (YKS). This exam consists of 2 stages: Basic Proficiency Test (TYT) and Field Proficiency Test (AYT) (OSYM). In our country, the choice of license depends on a just one exam result. The condition of success ranking for the faculties and the limited number of quotas can prevent people from choosing the departments they always wanted and getting settled. Although external factors affect the selections, people have also the chance to choose different departments with similar scores. Candidates should take the score type of their target department into account, while making their choices. For some departments and programs, there is a success rank limit. For example, the lowest achievement rank for faculties of law

which accept students with equal weight (Maths, Turkish and History I and Geography I) score type, is 125,000; on the other hand, in faculties of medicine which accept students with numerical score type (Maths and Science), the minimum rank should be 50,000. Although faculties of medicine and faculties of law accept students based on different type of scores, students with similar success rate profiles to be evaluated through choosing these two departments for the study. It is an expected result that personality traits play a role in career choice. From the aspect of schema theory, it may be expected that people prefer professional environments suitable for their schema.

In this study, we aimed to examine the differences between the early maladaptive schemas of the law students and medical students, from the perspective of schema theory. In some studies, the relationship between EMS and interpersonal orientation and peer connectedness (Yoo, Park, & Jun, 2014), mindfulness levels (Yalcin, Kavakli, Kesici, & Ak, 2017), self-efficacy (Hosseinzadeh, Sayadi, & Orazani, 2021), attachment and mental health symptoms (Kaya & Aydin, 2021), anxiety and depression (Cámara & Calvete, 2012) in university students has been investigated. However, data on studies focusing on EMS differences among university students are limited. Also, as far as we know, there is no study comparing the EMS of medical school and law school students. The hypothesis of the study is that; there will be differences in EMSs between students who prefer the two departments.

MATERIALS and METHODS

Participants and Procedure

This research is a quantitative, cross-sectional study designed to evaluate the relationship between department selection and early maladaptive schemas of medical and law students. Students who still attend to the faculty of medicine and faculty of law, and who achieved to be among the first 50.000 in the central university exam success ranking in Turkey, were invited, so that we could evaluate the young people in a similar success ranking. Another reason for this is that it is not possible for students who cannot enter the first 50.000 ranking, to choose a faculty of medicine, according to the exam regulations. Considering that different departments may correspond to different working conditions, economic conditions and social status in the long term, it is planned to include students in the first 2 years of university in the study.

For the study, the sociodemographic data form created by the researchers and Young Schema Inventory– Short Form 3 (YSQSF3) were delivered to the volunteers online. Ethics committee approval was received from Ufuk University Faculty of Medicine Ethics Committee for Non-Invasive Studies, with the date: 09.12.2021 and the decision number: 2021.12.19.02/05. This study complied with the ethical standards set in the Helsinki Declaration of 1975, as revised in 2000.

The forms for the study were delivered to the participants online. An invitation link containing information about the study was sent to all participants before delivery of the study forms. A total of 256 people participated in the study. In the analyses of the data, the data of 22 people were not taken into consideration due to random marking and unreasonable survey completion times (under 25 minutes), and thus the analyses were completed with the data of 233 people. When the distribution is made according to the departments, the data on 135 medical students and 98 law students were included in the analyses. In the power analysis, when the Confidence Level was determined as 99% and the Confidence Interval as 5%, it was found that the participation of 96 people could have been adequate for healthy statistics.

Scales

Sociodemographic data form: It is the form created by the research team, where the characteristics of the participants such as age, gender, university department are investigated.

Young Schema Inventory – Short Form 3 (YSQSF3)

In this study, early maladaptive schemas were evaluated with the 3rd version of the short form of the Young Schema Scale (YSQ-SF3). The scale includes 18 schema dimensions and consists of 90 items (Jefferey E Young & Brown, 2005). The Turkish validity and reliability study of the scale was conducted (Soygüt, Karaosmanoğlu, & Çakir, 2009). While calculating the scores of the schema domains, the average score was assessed through dividing by the number of schemas in each domain (Bach et al., 2018).

Data Analysis

The data was evaluated with the IBM SPSS 15.0 for Windows Evaluation Version (the Statistical Package Program for the Social Sciences). The sociodemographic

information of the patients was shown as percentages. Numerical variables were indicated as mean and standard deviation values, while categorical variables were given as numbers and percentages. In the normality analysis, the knowledge that; if the skewness and kurtosis indices calculated by dividing the skewness and kurtosis coefficients of Tabachnick and Fidell by their standard errors are within the limits of ±2, it can be accepted as the evidence of a normal distribution, was used (Tabachnick, Fidell, & Ullman, 2007). Participants were divided into two as medical studenst and law students, and two-sample independent t-test and Pearson Chi-Square tests were used to evaluate the differences between the groups. p<0.05 was considered as statistically significant in all tests.

RESULTS

Our analyzes were performed on the data of 135 medical students and 98 law students participating in the study. According to demographic data, there was no significant difference between the groups in terms of age (p=0.078) and gender (p=0.815). In the university ranking, the success ranking of the law students were found to be higher (p=0.000) (Table 1).

In the second stage, the scores of 18 early maladaptive schemas in medical students and law students were investigated. Dependence/incompetence (p=0.027) and subjugation (p=0.013) scores were significantly higher in medical school students; while the score of self-punitiveness was higher (p=0.032) in law school students (Table 2).

Finally, the scores in the schema domains were evaluated comparing the two groups. Medical students scored significantly higher in the impaired autonomy and performance domain (p=0.043) (Table 3).

Table 1: Sociodemographic data

	Medical students	*Law students*	*p*
Age (mean ± SD)	19.70 (±1.63)	20.05 (±1.25)	0.078[1]
Gender n (%)			
Male	46 (34.1%)	37 (37.8%)	0.815[2]
Female	88 (65.2%)	60 (61.2%)	
Do not want to specify	1 (0.7%)	1 (1.0%)	
Marital status? n (%)			
Single	133 (98.5%)	96 (98.0%)	0.479[2]
Married	0 (0.0%)	1 (1.0%)	
Do not want to specify	2 (1.5%)	1 (1.0%)	
Success ranking in the university exam? n (%)			
0–1000	4 (3.0%)	7 (7.1%)	0.000*[2]
1000–5000	17 (12.6%)	48 (49.0%)	
5000–30000	108 (80.0%)	37 (37.8%)	
30000–50000	6 (4.4%)	6 (6.1%)	

SD, standard deviation. * p<0.05.[1] two-samples t-test.[2] Pearson chi-square test.

Table 2: Early maladaptive schemas in participants

EMS	*Medical students*	*Law students*	*p*
Emotional deprivation	10.75 (±5.35)	11.50 (±6.07)	0.333
Abandonment/instability	13.41 (±4.84)	13.12 (±4.60)	0.651
Mistrust/abuse	15.61 (±5.77)	15.14 (±5.50)	0.537
Social isolation/alienation	15.44 (±6.17)	15.54 (±5.97)	0.898
Defectiveness/shame	11.81 (±5.56)	11.61 (±6.20)	0.801
Failure to achieve	11.45 (±5.13)	10.95 (±5.59)	0.478
Dependence/ incompetence	9.90 (±4.01)	8.74 (±3.72)	0.027*
Vulnerability to harm	14.50 (±5.56)	13.46 (±5.31)	0.150
Enmeshment	12.87 (±4.14)	11.93 (±4.82)	0.110
Subjugation	11.77 (±4.73)	10.28 (±4.07)	0.013*
Self-sacrifice	15.55 (±5.00)	15.79 (±5.49)	0.720
Emotional inhibition	14.05 (±4.64)	14.74 (±4.69)	0.403
Unrelenting standards	17.46 (±4.84)	17.66 (±5.14)	0.757
Entitlement	16.92 (±4.64)	17.20 (±4.69)	0.645
Insufficient self-control	15.22 (±4.68)	14.58 (±3.95)	0.252
Approval/admiration-seeking	18.00 (±4.82)	18.13 (±5.13)	0.840
Pessimism/negativity	16.55 (±5.21)	16.12 (±5.58)	0.551
Self-punitiveness	14.79 (±3.66)	15.92 (±4.27)	0.032*

SD, standard deviation. * p<0.05. **EMS,** early maladaptive schemas.

Table 3: Early maladaptive schema domains in participants

EMS domain	*Medical students*	*Law students*	*p*
Disconnection and rejection	14.04 (±4.22)	14.11 (±4.65)	0.897
Impaired autonomy and performance	12.32 (±3.38)	11.41 (±3.28)	0.043*
Excessive responsibility and standards	15.93 (±3.33)	16.46 (±3.80)	0.264
Impaired limits	16.71 (±3.55)	16.64 (±3.32)	0.872

SD, standard deviation. * p<0.05, two-samples t-test. **EMS,** early maladaptive schemas.

DISCUSSION

Our findings partially supported the hypothesis that there would be a difference in EMSs between medical school and law school students. According to our findings regarding the 18 schemas, we found that medical students scored higher in dependence/incompetence schema and subjugation schema, and law students scored higher in the self-punitiveness schema. Among them, dependence/incompetence and subjugation are evaluated under "impaired autonomy and performance"; the self-punitiveness schema is evaluated under the "excessive responsibility and standards" domain. However, our results may not enable us to clearly explain the difference in these schema scores in terms of a cause-effect relationship. We discuss some possible interpretations of our findings below.

It is a concept which has been suggested for many years that; students probably choose the most suitable academic environment for their personal characteristics and that personality group differences may occur between academic departments (Goldschmid, 1967). In a recent review written based on the big five personality concept, it was reported that arts/humanities and psychology students scored high on Neuroticism and Openness; while political science students scored high in Openness. Also, students of economics, law, political science and medicine scored low for extraversion; medical, psychology, arts & humanities students scored low for compatibility; and arts & humanities students scored low on conscientiousness (Vedel, 2016). It is one of the persistent results that medical and psychology students score high on conscientiousness (Vedel et al., 2015).

According to the schema theory, early childhood experiences play an important role in people's perception of themselves and the outer world (Young et al., 2006). Schema patterns, in a sense, serve as an important part of personality (Young et al., 2006). The existence of a schema can be reflected in daily life in different ways. The person may avoid situations in which the schema will be activated (avoidance) or act contrary (overcompensation). Another strategy is to act in line with the schema and validate it (surrender). In this sense, the same schema can be reflected in daily life with different attitudes. Studies on the relation of EMSs with psychopathology models are frequently encountered in the literature. However, EMSs are stable structures and their examination in non-clinical samples may also provide greater objectivity, avoiding exaggerated results (Carr & Francis, 2010)

According to our findings, the schemas that we have found to be significantly different in medical students, were dependence/incompetence and subjugation schemas.

The dependence/incompetence schema refers to the belief that people cannot fulfill their responsibilities without help from others (Young et al., 2006). Subjugation, on the other hand, indicates the submission of the individuals to the expectations and wishes of others because they feel obligated to do so. This schema can be examined under two main headings, in terms of needs (such as their own desires and expectations) and in terms of emotional expression (especially the feeling of anger). Subjugation may have maladaptive consequences such as somatic symptoms, passive-aggressive attitudes, and outbursts of anger (Young et al., 2006). Being able to adapt to teamwork is among the basic skills of being a good medical doctor. Working in the field of medicine and providing treatment services are associated with the work of healthcare professionals in harmony. At the same time, because of its nature, medical education is based on the 'master-apprentice' relationship. Thus, it can be said that there is a hierarchical order both in the educational process and in the following professional process. In this sense, these two schemas in medical students can be a professional advantage. Individuals with these obvious schemas are probably preferring faculties of medicine. At the same time, patients need to trust doctors in their relationships with their doctor. In this sense, doctors may be using overcompensation mechanisms as a strategy to cope with these two schemas. Another possible interpretation is that; since the scores of these two schemas are low in law students, they are detected to be relatively high in medical students. Because of their nature, professions in the field of law are identified with individuality and independence. Therefore, it is a possible reason of the lower scores that they received from these two schemas.

Previous studies reported that medical students scored high on extraversion and agreeableness, and that conscientiousness significantly predicted academic achievement (Lievens et al., 2002). Extraversion and agreeableness are the factors that influence collaboration, teamwork, and communication skills. While extraversion is related to the frequency of social communication, agreeableness, in a way, refers to the emotional intensity in relationships (such as being friendly, empathetic) (Lievens et al., 2002). Conscientiousness, on the other hand, refers to being careful, responsible and hardworking. In addition, it is associated with people's

ability to be organized in work. In a sense, it can be said that the abilities to adapt to teamwork is an important feature of individuals who choose the faculty of medicine. It is possible that characteristics of dependence/incompetence and subjugation also point to this teamwork.

The self-punitiveness schema, which we detected with higher scores in law students, refers to the belief that mistakes made by people (including themselves) must be strictly paid for. Mitigating factors, including human flaws, are overlooked, there is an unwillingness to empathize with emotions, and it may manifest itself through difficulties with forgiveness (Young et al., 2006). The belief that people should pay for their mistakes seems to be an ideal stage for professions in the field of law. Professions in the legal field can also refer to the authority for a person not to be punished (overcompensation) or to get the punishment he deserves (surrender). By their very nature, professions in the legal field are directly related to self-punitiveness. In the medical field, whether people are good or bad does not matter in terms of 'ethical principles' . Ethical principles necessitate the presentation of equal and best medical service for every person.

When we evaluated the schema domains, we detected that medical students scored higher in the domain of impaired autonomy and performance. This domain includes; subjugation, failure to achieve, dependence/incompetence, abandonment/instability, vulnerability to harm and enmeshment schemas. It can be said the general characteristics of their families of individuals with high scores in this domain are being intertwined, distrustful for the child or overprotective. Individuals with high scores in this domain have conflicting expectations of acting independently between themselves and their environment and being successful (Rafaeli, Bernstein, & Young, 2010). Individuals with schemas belonging to this domain could not gain individual independence, and they are afraid of facing an unsuccessful result if they make their own decisions, and they exhibit avoidance behavior (Bach et al., 2018). It may be suggested that the difference in this domain is due to the higher scores in the subjugation and dependence/incompetence schemas of medical students.

To summarize, doctor of medicine as a profession, which requires teamwork in a hierarchical order, can provide a suitable environment for individuals with dependence/incompetence and subjugation schemas. Contrarily, professions in the field of law are independent and individual processes. Penalizing or not giving punishment, which is the basis of the legal field, seems to be compatible with the surrender and overcompensation coping strategies of the self-punitiveness schema.

Our limitations in the study can be listed as the measurements being based on self-report scales, cross-sectional design and not addressing gender differences. In addition, factors other than personality traits that contribute to the choice of work profession were not evaluated. The results cannot be generalized to other cultures; since the economic returns, working conditions and social status of different professions will be different in different communities. Therefore, future longitudinal studies with larger participants will be useful.

CONCLUSION

In this study, the differences in personality traits of students at medical and law faculties were evaluated in terms of schema theory. Although the study has a cross-sectional design, as far as we know, there is no study comparing EMSs in students from two faculties. It will be useful about the determination of the psychological factors in the career choices of students with similar success levels. In the light of our results, it will be useful to have more information about psychological factors in order to guide young people to the right career choice in the guidance services to be made about their career choices.

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