

## THE RELATIONSHIP BETWEEN DARK TRIAD, ATTACHMENT STYLES AND DEPRESSIVE SYMPTOMS: MEDICAL DOCTOR SAMPLE

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### Abstract

The aim of this cross-sectional study is to examine the relationship between attachment styles (avoidant and anxious attachment), Dark Triad (Machiavellianism, narcissism, and psychopathy), and depressive symptoms of medical doctors between the ages of 22-65 working in Turkey. The sociodemographic form, Experiences in Close Relationships Inventory, Abbreviated Dark Triad Scale, and Beck Depression Inventory prepared by the researchers were used in the study. The sample group was reached using the snowball sampling method and through online channels. A total of 77 medical doctors were reached. After the data collection phase is completed, statistical analysis will be performed with the SPSS 21 package program. Within the scope of the research, Independent Samples t Test and Mann-Whitney U test were used to determine the significance of the difference between two variables. The relationships between the independent and dependent variables of the study were examined with Pearson and Spearman Correlation Analysis and Linear Regression Analysis. It was examined whether there were any differences in attachment styles and depression according to the doctors' areas of specialization (surgeon and non-surgeon). In the study, it was observed that the total mean scores of the dark triad traits, Machiavellianism and psychopathy of doctors specializing in surgery were significantly higher than those of non-surgeons. Significant and moderate positive correlations were observed between anxious attachment and avoidant attachment scores and depression.

**Keywords:** Dark triad, attachment styles, depression, medical doctors, surgeons.

### 1. Introduction

This study seeks to answer the question of whether there are differences between surgeons and non-surgeons in terms of their dark triad personality traits. Surgeons need to have a certain level of intelligence, skills, and work discipline in order to reach their current position in their profession. Due to their position, surgeons are respected both in society and the medical community. In addition to intelligence, skills, and work discipline, a surgeon is also expected to have certain skills in areas such as being able to continue working under pressure and in difficult situations and risk management (Başkavak, 2023). Whether surgeons exhibit their own personality traits is a subject of research. Various studies have investigated the “surgeon personality” (McGreevy & Wiebe, 2002; Sier et al., 2022; Whitaker, 2017). These studies share similar results regarding surgeon personality. It can be observed that surgeons show less neurotic and more extroverted personality traits (Sier et al., 2022) compared to people who are not interested in being surgeon, and similar results occur among doctors who specialize in surgical branches and doctors who are not specialized in surgical branches (Whitaker, 2017). Paulhus and Williams (2002) named the aggressive but also non-pathological personality traits of Machiavellianism, narcissism and psychopathy as the Dark Triad. All three are socially malignant character traits and include behavioral tendencies toward positive self-presentation, emotional coldness, hypocrisy, and aggression. Machiavellianism is characterized by moral indifference, using and exploiting others in line with one's interests, while narcissism is associated with grandiosity, seeing oneself as superior and more important, and being self-centered. Psychopathy includes characteristics such as emotional ruthlessness, lack of remorse, and risky behavior. One of the aims of this study is to examine whether there are differences in Dark Triad personality traits between surgeons and non-surgeon doctors. Factors such as the high social status of surgeons (Smith, 2018), the intense competitive environment in this profession and the need to minimize emotions during challenging surgical conditions (Mullins-Sweatt et al., 2006) create an element of curiosity for examining this professional group. There are various studies observing the relationship between Dark Triad personality traits and attachment styles (Jonason et al., 2012; Mikulincer & Shaver, 2019).

Additionally, there are various studies observing the relationship between Dark Triad personality traits and depressive moods (Paulhus & Williams, 2002; Kowalski et al., 2018). This study aims to examine the relationship between medical doctors' Dark Triad personality traits, depression, and attachment styles. Additionally, exploring these relationships in the context of doctors' specialties is expected to contribute to the existing literature.

## 2. Materials and methods

Participation in the study was voluntary and no identifying information was requested from the participants. A questionnaire form including Informed Consent Form, Personal Information Form, Experiences in Close Relationships Inventory-II, Abbreviated Dark Triad Scale, and Beck Depression Inventory were applied to the participants. The administration of the questionnaire form took approximately 8-10 minutes and 77 participants between the ages of 22-65 were reached within the scope of this study. The participants were reached by snowball sampling method. All the participants were medical doctors. Informed consent was obtained from all participants, and ethical approval was granted by Fatih Sultan Mehmet Vakıf University Ethics Committee (Date: 05.12.2024). The Experiences in Close Relationships Inventory-II (ECR-II), a 36-item Likert-type scale, assesses anxiety and avoidance. The validity and reliability study by Selçuk et al. (2005) reported Cronbach's alpha coefficients of .86 for anxiety and .90 for avoidance. The Short Dark Triad scale measures three subdimensions: Machiavellianism, narcissism, and psychopathy. The Turkish adaptation by Özsoy et al. (2017) reported Cronbach's alpha values of .79 for Machiavellianism, .70 for narcissism, and .79 for psychopathy. The Beck Depression Inventory, developed by Beck (1974) and adapted into Turkish by Hisli (1989), measures depressive symptoms, with reliability coefficients of .80 and .74 from item analysis and split-half techniques. Cronbach's alpha values of the scales used in the study were examined. After examining the reliability coefficients of the scale and its subdimensions and observing that the reliability coefficients were high, descriptive statistics values were examined. In the study, the numbers and percentage distributions of sociodemographic variables were examined and each scale and its sub-dimension was examined with the Kolmogorov-Smirnov Test, which is a normal distribution test. Since the scales provided the assumption of normal distribution, parametric tests were used in the analysis. Independent sample t-test was used to calculate the difference between the mean scores for binary categorized variables. Pearson and Spearman correlation analysis were used to examine the relationships between the scales and their sub-dimensions. Multiple linear regression analysis was applied to examine the predictors of the dark triad scale. The data collected from the participants using the questionnaire form was transferred to the computer environment. The data transferred to the computer environment was analyzed with SPSS version 21.

## 3. Bulgular

77 Medical Doctors participated in the study. 55 (71.4%) of the participants were female and 22 (28.6%) were male. There were 21 (27.3%) participants who evaluated their income status as good, 52 (67.5%) participants who evaluated it as moderate, and 4 (5.2%) participants who evaluated it as poor. 60 (77.9%) stated their marital status as married, 15 (19.5%) participants as single, and 2 (2.6%) participants stated that they were in a romantic relationship. Of the doctors who participated in the study, 2 (2.6%) were intern doctors, 18 (23.4%) were general practitioners, 8 (10.4%) were assistant doctors, 35 (45.5%) were specialist doctors, and 14 (18.2%) were surgeons. When asked "If you were to be born again, would you choose the same job?" 15 participants (19.5%) answered "always," 19 (24.7%) often, 23 (29.9) sometimes, 10 (13%) rarely, and 10 (13%) never. When asked "Do you find your job important and meaningful?" 28 participants (36.4%) answered "always," 25 (32.5%) often, 13 (16.9%) sometimes, 5 (6.5%) rarely, and 6 (7.8%) never. The age range of the participants was between 21 and 65 years. The average age was 39.60. The total mean score of the participants from the Dark Triad Scale is 69.35 (SD=12.46), the total mean score of the Machiavellianism sub-dimension, which is a sub-dimension of the Dark Triad scale, is 25.41 (SD=6.43), the total mean score of the Narcissism sub-dimension is 24.80 (SD=5.19), the total mean score of the Psychopathy sub-dimension is 19.12 (SD=4.98). The total mean score of the Avoidant Attachment sub-dimension, which is a sub-dimension of the Close Relationship Experiences Inventory-2, is 52.01 (SD=18.68), the total mean score of the Anxious Attachment sub-dimension is 61.24 (SD=17.32). The total mean score of Depression is 13.46 (SD=9.81). The normality distribution of the scores obtained from the scales was examined with the Kolmogorov-Smirnov test, and as a result, it was observed that only the depression score ( $p<.05$ ) did not show normal distribution. The participants in the study were divided into 2 as surgeons and non-surgeons. There were 14 (%18.2) surgeons and 63 (%81.8) non-surgeons. As a result of the independent sample t-test conducted to examine whether there was a significant difference between the total Dark Triad score averages of these two groups, a statistically significant difference was observed

between the Dark Triad score average of surgeons ( $M=77.85$ ) and the score average of non-surgeons ( $M=67.46$ ) ( $t(75)=-2.964$ ;  $p<.05$ ). When the Machiavellianism scores were examined, the score average of surgeons ( $M=29.85$ ) was significantly higher than the score average of non-surgeons ( $M=24.42$ ) ( $t(75)=-3.004$ ;  $p<.05$ ). No significant difference was observed between the mean scores of the two groups in terms of narcissism scores ( $t(75)=-0.893$ ;  $p<.05$ ). When the psychopathy scores were examined, it was observed that the psychopathy scores of the surgeons ( $M=22.07$ ) were significantly higher than the scores of the non-surgeons ( $M=18.47$ ) ( $t(75)=-2.527$ ;  $p<.05$ ). The relationships between the Dark Triad Scale and its subdimensions were examined using Pearson Correlation Analysis. According to the results of this examination, a positive relationship was observed between the Dark Triad score and Machiavellianism score ( $r=.808$ ;  $p<0.001$ ), narcissism score ( $r=.744$ ;  $p<.001$ ) and psychopathy score ( $r=.683$ ;  $p<0.001$ ). A positive relationship was observed between Machiavellianism and narcissism ( $r=.404$ ;  $p<.001$ ). A positive relationship was observed between Machiavellianism and psychopathy ( $r=.309$ ;  $p<.05$ ). A positive relationship was observed between psychopathy and narcissism ( $r=-.296$ ;  $p<.05$ ). According to the results of the Spearman correlation analysis, a positive relationship was observed between the participants' avoidant attachment score and depression score ( $r=.531$ ;  $p<.001$ ) and a positive relationship between the anxious attachment score and depression score ( $r=.408$ ;  $p<.001$ ). Multiple linear regression analysis was used to examine whether the total score obtained by the surgeons from the Dark Triad scale was predicted by the sub-dimensions of the scale. When the Pearson correlation coefficients between the Dark Triad total score and the independent variables were examined, it was found that all three variables showed a positive and statistically significant relationship with the total score (Machiavellianism  $r = .746$ ,  $p = .001$ ; narcissism  $r = .832$ ,  $p = .000$ ; psychopathy  $r = .773$ ,  $p = .001$ ). All three variables significantly predict the dependent variable ( $p<.001$ ). The strongest predictor is narcissism ( $\beta=.456$ ), followed by Machiavellianism ( $\beta = .430$ ) and psychopathy ( $\beta = .388$ ).

#### 4. Discussion

The study reached 77 participants between the ages of 22-65. All of these participants were medical doctors. In terms of gender distribution, the majority of the participants were women. The majority of the participants were physicians who specialized in a field. The marital status of the majority of the participants was married. The majority evaluated their income as medium. The study examined the dark triad personality traits of the doctors in terms of their areas of expertise (surgical and non-surgical). In the study, it was observed that surgeons scored significantly higher than non-surgeon doctors on the dark triad scale and its sub-dimensions, Machiavellianism and psychopathy. There are very limited studies on the dark triad personality traits of surgeons in the literature. The studies reached were studies on the psychopathy axis rather than all of the dark triad traits (Muscatello et al. 2018). In the studies that are more common in the literature, it has been observed that surgeons/those who want to be surgeons differ from the non-surgeon population in terms of personality traits (Bisset et al., 2020; McGreevy & Wiebe, 2002; Muscatello et al., 2018; Sier et al., 2022; Sier et al., 2024; Stienen et al., 2018; Whitaker, 2017). In these studies, it is observed that surgeons' scores in the Conscientiousness, Openness, and Extraversion dimensions in terms of Five-Factor Personality Traits are higher than the average, while their scores in the Neuroticism dimension are lower than the average (Bisset et al., 2021; McGreevy & Wiebe, 2002; Sier et al., 2022; Sier et al., 2024; Whitaker, 2018). Some parallels are observed between the results obtained in our research and the studies mentioned. For example, characteristics such as fearlessness and anxiety tolerance, which are determining factors for psychopathy, can be explained by both psychopathy and low neuroticism. Excitement seeking and social assertiveness may be two overlapping areas for psychopathic tendencies and extraversion. In addition, characteristics such as power and status orientation, social skills and leadership tendencies may be common areas for Machiavellianism and extraversion (Babiak et al., 2010; Lilienfeld, 1997; Muscatello et al., 2018). The findings of this study are consistent with studies in which people in high-level positions in the business world have higher psychopathic traits than the society average and a positive relationship is observed between psychotic traits and strategic thinking (Babiak et al., 2010). Similar to this study, Muscatello et al. (2018) observed that medical students who wanted to specialize in surgical departments had higher psychopathy scores than other medical students. In light of all this information, it was observed that surgical branches are preferred more by medical students with psychopathy personality traits (Muscatello et al., 2018), and similarly, in this study, surgeons differed from their colleagues in terms of the dark triad personality traits (psychopathy and Machiavellianism). The fact that psychopathy and Machiavellianism personality traits are at a non-pathological level (the surgeons in question are not considered pathological in this study) may contribute to professional success by providing individuals with advantages in terms of fearlessness, strategic thinking, and a less empathic approach (Babiak et al., 2010; Lilienfeld, 1997; Muscatello et al., 2018). Although relationships were found between depression and attachment types in the study, no differences were observed between the surgeon and

non-surgeon groups in terms of these variables. The most important limitation of the study is that it reached a small number of physicians and a very small number of surgeons. Although the small sample size poses a problem in terms of generalizability of the results, this study can be considered as a pioneering study. Similar studies can be conducted with larger sample groups. Another limitation of the study is that the data was collected only through online channels. Also, stratified random sampling could have improved external validity instead of snowball sampling.

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