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THE DARK TRIAD IN PERSONALITY AND ITS RELATIONSHIP WITH ALEXITHYMIA AND EMOTIONAL REGULATION DIFFICULTIES AMONG UNIVERSITY STUDENTS.

Prof. Mohammad Al-Safi Abdul Kareem[1], Dr. Nayilah Mesfer AL-Qahtani[2]

[1]Prof. of Mental Health, Imam Muhammad Ibn Saud Islamic University (IMSIU).
[2]Assistant Professor of Cognitive Psychology, Imam Muhammad Ibn Saud Islamic University (IMSIU), KSA.

msafy@imamu.edu.sa[1]
nmqahtani@imamu.edu.sa[2]

Abstract
The study aimed to explore the relationship between the Dark Triad personality traits, alexithymia, and emotional regulation difficulties among university students. The study was conducted on a sample of 258 students, who were assessed by using the Dark Triad personality scale (Adapted and standardized by Karim, 2016), the Toronto Alexithymia Scale (TAS-20) developed by Bagby et al. (1994) and translated into Arabic by Al-Eidan (2019), and the Emotional Regulation Difficulties Scale (brief version) developed by Bjureberg et al. (2016) and translated into Arabic by Abadi et al. (2019). Results shows statistically significant positive correlation between students' scores on the Dark Triad personality scale and their scores on both the alexithymia and emotional regulation difficulties scales. In addition, results found statistically significant positive correlation between students' scores on the Dark Triad personality scale and their scores on both the alexithymia and emotional regulation difficulties scales. Moreover, there was a statistically significant positive correlation found between students' scores on the Dark Triad personality scale and their scores on both the alexithymia and emotional regulation difficulties scales. Also, results illustrate the prediction of Alexithymia in students based on their scores on the Dark Triad personality traits and emotional regulation difficulties scales. Finally, there weren't statistically significant differences found between students' average scores on the Dark Triad, alexithymia, and emotional regulation difficulties scales based on gender, academic specialization, or their interaction.

Key words, Dark Triad in Personality, Alexithymia, University Students

Introduction

The pace of life is accelerating, and its complexities and pressures are increasing. At the same time, the ambitions of youth are growing day by day, as they form the foundation of societal development. However, their inability to keep up with these changes and the frustrations, obstacles, and challenges they face may lead some to resort to cheating, deception, flattery, and the use of unethical methods to achieve their goals.

These dark traits represent the malicious side of human nature, and as such, they make individuals incapable of adapting, leading to feelings of hopelessness, depression, and the adoption of destructive and aggressive thoughts, behaviors, and attitudes towards themselves and society (Gonzalez, Caminero, Diaz., 2018). According to Paulhus and Williams (2002), there are three socially undesirable dark personality traits:

- Narcissism: Narcissists are characterized by curiosity, entitlement, dominance, and superiority, and they are generally disliked socially.
- Machiavellianism: Machiavellians are cynical, believing that manipulation is the key to success in life and acting accordingly.
- Psychopathy: Psychopathy is considered the darkest trait, marked by impulsivity, a quest for thrill-seeking, and low levels of empathy (Furnham, Richards & Paulhus.,2013).

  Narcissism is associated with traits and behaviors like a desire for revenge,

impulsivity, anger, aggression, anxiety, and neuroticism (Jouda, et al., 2012), as well as self-aggrandizement, substance abuse, unsafe leadership, lack of empathy, and depressive moods (Jonason**,** Webster**,** Schmitt., 2009; Malesza, Ostaszewski,Buchner& Kaczmarek., 2019; Pilch, 2020). Machiavellianism is linked to anti-social behaviors like abuse, theft, vandalism, revenge, lying, pessimism, emotional instability, and stress (O'Boyle, Forsyth, Banks, McDaniel.,2012; Pilch, 2020). Psychopathy is associated with neuroticism, anxiety, depression, indifference to health, impulsive behavior, low empathy, low guilt, drug use, school or work absenteeism, sexual assault, murder, and an increased risk of chronic diseases such as diabetes, hypertension, high cholesterol, and neurological conditions like ADHD, migraines, stuttering, and tinnitus (Jonason, et al., 2009; Malesza,et al, 2019). Previous studies on the differences between males and females regarding the dark triad traits have yielded varying results. For instance, studies by Jouda , Wildmann, Schäfer, Roggero, Hugo (2016) and Karim (2016) found no gender differences in dark personality traits. However, studies by Morris, Criss, Silk & Houltberg (2017) reported significant differences favoring males, and Jouda, et al., (2012) found that males tend to be more narcissistic than females. Additionally, studies by Al-Mansour (2014) revealed a relationship between psychopathic tendencies towards society and gender, favoring males. Studies by Moea, & Abdel-Azim (1996) and El-Khouly (2005) showed significant differences in Machiavellianism between males and females, favoring males, while Masshal (2016) found gender-based differences in the impact on others and personal interest, with no differences in social cunning and selfishness.

Alexithymia is defined as difficulty in identifying and expressing one's own emotions, along with an externally oriented thinking pattern (Bagby, Taylor & Parker., 1994). Studies have found that dark triad traits, particularly psychopathy and Machiavellianism, are linked to high levels of alexithymia. Individuals with these traits tend to have lower empathy and difficulty understanding both their own and others' emotions (Lefevre et al., 2021). Despite narcissism being associated with an inflated sense of self, some studies suggest that narcissists may have difficulty recognizing their true emotions, making them more prone to alexithymia in certain aspects (Pincus et al., 2009). Machiavellianism shows a strong relationship with alexithymia, as these individuals prefer to control others in cold, rational ways, unaffected by emotions (Wastell, C., & Booth,2003). Psychopathy is marked by high levels of alexithymia, particularly in emotional identification difficulties and a lack of empathy, which explains their aggressive and indifferent behaviors (Jonason, Lyons, Alyson., 2015).

In this context, emotional regulation is the ability to manage and control emotions in adaptive ways (Gross, 2015). Many studies have pointed out that individuals with dark triad traits face significant emotional regulation difficulties. They tend to adopt maladaptive strategies such as suppression, avoidance, and impulsivity (Garofalo et al., 2018). Narcissists may show apparent emotional regulation skills, but these are often superficial and rely on defensive strategies such as denial or projection, making them prone to emotional outbursts when frustrated (Vernon et al., 2008). Machiavellians tend to suppress their emotions and use them manipulatively, though they may experience internal tension from prolonged emotional suppression (Furnham et al., 2013). Psychopathy is characterized by severe emotional regulation difficulties, where impulsivity and the inability to control emotions are linked to aggressive and reckless behaviors, and the low level of empathy makes it harder to manage emotions adaptively (Gomez-Leal, Megías-Robles, Gutiérrez-Cobo, Cabello, Fernández-Abascal, Fernández-Berrocal., 2019).

The absence of emotions and fantasies in patients with psychosomatic disorders, known as alexithymia, plays a role in the development of somatic illnesses (Feldman , Hayes**,** Kumar**&**Greeson., 2002). Empirical evidence demonstrates its connection to various physical disorders (Taylor, 2000), and emotional regulation difficulties have physical effects on an individual (Siener & Kerns, 2011). Several studies indicate the role of emotional regulation difficulties in predicting various mental and physical disorders (Innamorati, Erbuto, Venturini , Fagioli, Ricci , Lester, Amore, Girardi&Pompili., 2016; Almeida et al., 2017), with alexithymic individuals tending to suppress emotional expression and negative emotions, while struggling with cognitive reappraisal, indicating challenges in emotional regulation (Fustos, Gramann, Herbertand Pollatos., 2012).

Due to the harmful nature of the dark triad and its negative impact on personality, some studies have examined variables associated with it, such as cruelty, selfishness, interpersonal difficulties, neuroticism, maladjustment, impulsivity, low conscience, indecisiveness, psychological stress, fanaticism, sadism, mental illness, exploitation, aggression, social rejection, immorality, racism, and ethnic hatred Jakobwitz & Egan, 2006; O'Boyle, et al., 2012; Jones & Figueredo, 2013; Kaufman, Bryce Yaden , Hyde , and Tsukayama , .2019).

It is noteworthy that university students, especially in adolescence, face significant and complex physical, psychological, and social changes that lead to many problems, disorders, and stress. These students may resort to self-deception, adopting false solutions to escape from this harsh reality. The researcher believes there is a relationship between the three dark personality traits and both alexithymia and emotional regulation difficulties. From his observations at the university, the researcher noted the prevalence of certain negative traits among students, such as excessive flattery, false boasting, self-interest, evasion, cheating, deceiving others, manipulating emotions, and self-aggrandizement. Based on a review of previous studies (O'Boyle et al., 2012; Jones & Figueredo, 2013;; Kaufman, et al., 2019), the researcher found that previous studies, especially foreign ones, have focused on the study of these dark traits due to their severity and negative effects on university students' personalities. However, they have not addressed, to the researcher's knowledge, the relationship between the dark triad, alexithymia, and emotional regulation difficulties in university students. This justifies the current study. The problem of this study is outlined in the following questions:

1. What is the significance of the relationship between students' scores on the scales of: the dark triad in personality, alexithymia, and emotional regulation difficulties?
2. What is the significance of the regression coefficient in predicting emotional regulation difficulties based on the dark triad in personality and alexithymia?
3. Do students' scores on the dark triad in personality, alexithymia, and emotional regulation difficulties vary according to gender, academic specialization, and their interaction?

Study Terms

- The Dark Triad in Personality:
- The term "dark triad in personality" refers to a set of negative personality traits, consisting of three distinct yet interconnected sub-traits: narcissism, Machiavellianism, and psychopathy (Paulhus & Williams, 2002). The researchers adopt Kareem's (2016) definition of the dark triad as a three-dimensional model of three interrelated personality disorders that affect the individual and cause disturbance, measured by scores on the dark triad scale. These dimensions are:

1. Narcissism: A sense of grandeur, entitlement, a constant desire for power, superiority over others, and an unrealistic sense of prominence.
2. Machiavellianism: Opportunism and the belief that the end justifies the means, viewing others as objects to be used and controlled.

3. Psychopathy: A personality disorder characterized by emotional emptiness, coldness, an internal tendency to oppose society, and a lack of remorse or guilt.

- Alexithymia: Alexithymia is defined as “difficulty identifying emotions and distinguishing between these emotions and physical sensations of emotional arousal; difficulty describing feelings to others, restricted fantasy processes, externally oriented thinking, and low empathy, along with problems in processing emotional information and difficulty identifying facial expressions of others” (Parker et al., 2005, p. 1258). Parker, Taylor and Bagby ,2001,p.1258).
- Emotional Regulation: "The processes by which individuals influence which emotions they have, when they have them, and how they experience and express them, which may be automatic or controlled, conscious or unconscious" (Gross, 1998, p. 275).

Literature Review:

In a study by Sepede, Racciattf, Gorgorettp, Naccp, Pizzigall, Onofrj, Giannantonioi, Niolu, Salernoi and Gambj, (2011), which aimed to investigate the relationship between psychological distress and alexithymic traits in patients with chronic fatigue syndrome with and without comorbid depression, the sample consisted of 57 individuals with chronic fatigue syndrome (17 of whom had clinical depression) and 55 healthy volunteers. Participants were matched in terms of their psychological and physical distress levels and alexithymic traits. The study utilized the Symptom Checklist-90-R (SCL-90-R) and the Toronto Alexithymia Scale (TAS-20). The severity of fatigue in all patients with chronic fatigue syndrome was assessed using the Fatigue Impact Scale (FIS). Results showed that patients with chronic fatigue syndrome had higher levels of physical complaints compared to healthy individuals, while only the subgroup of patients with depression showed increased symptoms of depression and obsessive-compulsive disorder. The TAS-20 scores revealed a selective difficulty in identifying emotions, and depression in patients with chronic fatigue syndrome led to a significant increase in both psychological and physical distress levels and alexithymic traits.

Chen et al. (2011) conducted a study to examine whether there are subtypes of alexithymia that are associated with different emotional expression and regulation traits. The sample consisted of 1,788 university students who completed the Toronto Alexithymia Scale (TAS-20), the Emotional Expression Scale (EES), the Emotion Regulation Questionnaire (ERQ), the Beck Depression Inventory, and the State-Trait Anxiety Inventory (STAI-T). The results identified four subtypes of alexithymia: high extraverted alexithymia, high general alexithymia, high introverted alexithymia, and non-alexithymia. The general alexithymia subtype was characterized by high scores in all three traits, while the introverted alexithymia subtype was marked by difficulty identifying and describing emotions but low external-thinking styles. Non-alexithymic individuals scored low in all factors. High general alexithymia and high introverted alexithymia were associated with a more repressive emotional regulation style, showing poorer emotional states compared to extraverted alexithymia and non-alexithymia.

Avila, de Araujo, Guimarães , Gonçalves, Paschoalin, Aleixo (2014) aimed to explore patterns of pain, sleep, and depression in patients with fibromyalgia treated at a rheumatology center in Brazil. The sample consisted of 40 individuals: 20 with fibromyalgia and 20 controls. Participants completed a clinical questionnaire on social and demographic information, the Fibromyalgia Impact Questionnaire (FIQ), the Pittsburgh Sleep Quality Index (PSQI), the Toronto Alexithymia Scale (TAS-20), and the WHO Quality of Life – Short Form (WHOQOL SF-36). Results indicated that fibromyalgia patients performed worse

on the quality of life scale, had higher PSQI and TAS-20 scores, and showed increased alexithymia and sleep disturbance dimensions.

Pabian, De Backer, Vandebosch. (2015) examined the relationship between the Dark Triad of personality traits and cyberbullying among adolescents. The sample consisted of 324 adolescents. The study found that Facebook use and psychopathy were predictors of cyberbullying.

Chabrol et al. (2015) Chabrol, Bouvet & Goutaudier (2017) investigated the relationship between the four Dark Triad traits (Machiavellianism, narcissism, psychopathy, and sadism), antisocial behaviors, and emotional regulation difficulties in 615 high school students. Results revealed that 15% of the total sample exhibited high levels in all Dark Triad traits, and a relationship was found between these traits and antisocial behaviors, depressive symptoms, and emotional regulation difficulties.

Karim (2016) conducted a study to explore the level of Dark Triad traits, extremism tendencies, and sadistic behaviors among university students. The sample consisted of 800 students. Results showed that the level of Dark Triad traits and sadistic behaviors were lower than average, while the tendency toward extremism was higher than average. No significant gender differences were found in the overall Dark Triad scores.

Roeser, McGregor, Stegmaier, Mathew, Kübler, and Meule (2016) examined the relationship between the Dark Triad traits and unethical behavior in 195 participants. Results suggested that Dark Triad traits were associated with unethical behavior, with Machiavellianism linked to complex deception and psychopathy related to reckless cheating.

Maroti, Molander, Bileviciute-Ljungar., (2017) compared emotional differences between patients with burnout syndrome and chronic fatigue syndrome. The sample consisted of 31 burnout patients, 38 chronic fatigue syndrome patients, and 30 controls. The study found that chronic fatigue syndrome patients scored higher on alexithymia scales but showed similar results on emotional awareness measures compared to the control group. They also expressed greater difficulty identifying emotions.

Bileviciute-Ljungar & Friberg (2020) explored the relationship between emotional awareness and sleep disturbances in patients with fibromyalgia and chronic fatigue syndrome. The sample included 23 fibromyalgia patients and 30 matched healthy controls. Results indicated significant differences between the patient group and the control group, with 70% of the patients experiencing increased waking events during sleep.

Coleman et al. (2017) examined the relationship between the Dark Triad traits and emotional regulation difficulties in 657 individuals with mood disorders. The results indicated that males were more likely to exhibit narcissism and showed higher levels of aggression and hostility. There was no significant relationship between narcissism and emotional regulation difficulties.

Saad (2017) investigated the relationship between the Dark Triad traits and the Big Five personality traits among 491 fourth-year students at Alexandria University. Results showed a negative relationship between agreeableness and narcissism, and between conscientiousness and Machiavellianism and psychopathy. There were significant differences in Machiavellianism and psychopathy by gender, favoring males.

Vedel & Thomsen (2017) examined the relationship between the Dark Triad traits and academic specialization choices among 487 university students. The results showed that psychology students scored lower on Dark Triad traits, while students majoring in economics/business scored higher.

Kajonius & Bjorkman (2020) investigated the relationship between the Dark Triad traits and empathy. The study found that individuals with Dark Triad traits had lower levels of empathy, primarily due to a lack of behavioral actions rather than cognitive capacity.

Tukaiev, Vasheka , Dolgova , Fedorchuk and Palamar (2020) aimed to determine the psychological nature and mechanisms behind alexithymia through its relationship with neurobiological features, mental states, and emotional regulation traits. The sample consisted of 329 healthy participants aged 18-26. Results showed that alexithymia was associated with weak nervous system function, lower stress resistance, and emotional traits such as extraversion, anxiety, neuroticism, and verbal aggression.

Doerfler, Tajmirriyahi, Dhaliwal, Bradetich, Ickes, . Levine. (2021) tested the impact of Dark Triad traits on risky decision-making during the COVID-19 pandemic in a sample of 294 U.S. adults. The results indicated that individuals with higher psychopathy scores were more likely to engage in risky behavior that endangered others' lives during the pandemic.

Preece, Mehta, Petrova , Sikka, Bjureberg, Becerra and Gross(2023) examined whether individuals with varying levels of alexithymia used different emotion regulation strategies. The sample included 501 participants from the U.S. Results suggested that higher levels of alexithymia were linked to poor emotional regulation, with individuals exhibiting less adaptive emotion regulation strategies.

Study Hypotheses:

1. There is a statistically significant positive correlation between students' scores on the Dark Triad personality scale (subscales and total score) and their scores on the alexithymia scale.
2. There is a statistically significant positive correlation between students' scores on the Dark Triad personality scale (subscales and total score) and their scores on the emotional regulation difficulties scale.
3. Emotional regulation difficulties can be predicted by the Dark Triad personality traits and alexithymia.
4. There are no statistically significant effects of (gender – major) and their interaction on the variance in Dark Triad traits, alexithymia, and emotional regulation difficulties.

Study Procedures:

Sample of the Study:

- The study population consisted of all students at Imam Muhammad bin Saud University, including both theoretical and practical specializations, for the academic year 2024/2025.
- The sample for the psychometric tools standardization included 51 students from Imam Muhammad bin Saud University (theoretical and practical specializations), excluding the main study sample.
- The main study sample included 258 students (113 males, 145 females), with 157 students from theoretical specializations and 101 students from practical specializations, with an average age of 21.4 years.

Study Tools:

1. Dark Triad Personality Scale (Prepared by: Paulhus & Jones, 2014; Translated and Standardized by: Karim, 2016): This scale was developed to measure three dark personality components: narcissism, Machiavellianism, and psychopathy. It consists of 27 items, distributed across the three components.
2. Toronto Alexithymia Scale (TAS-20): This scale was developed by Bagby et al. (1994) and consists of 20 items with a five-point response scale. It measures three subscales: difficulty identifying feelings, difficulty describing feelings, and externally-oriented thinking. It has good construct validity and internal consistency.

Study Results:

Results of Hypothesis 1: **The first hypothesis states: "There is a statistically significant positive correlation between students' scores on the Dark Triad Personality scale (the dimensions and the total score) and their scores on the Alexithymia scale.**" To verify this hypothesis, the researcher calculated the Pearson correlation coefficient between students' scores on the Dark Triad Personality scale and their scores on the Alexithymia scale. The results are shown in the following table:

Table (1) Significance of Correlation Coefficients between Students' Scores on the Dark Triad Personality Scale and Their Scores on the Alexithymia Scale (N = 258)

Variable		Alexithymia
Dark Triad Personality	Narcissism	0.498
	Machiavellianism	0.587
	Psychopathy	0.654
	Total Score	0.692

Significant at 0.01 level

It is evident from Table (1) that there is a statistically significant positive correlation between students' scores on the Dark Triad Personality scale (both the dimensions and the total score) and their scores on the Alexithymia scale, with the correlation coefficients between each of: (Narcissism, Machiavellianism, Psychopathy, and Total Score) and Alexithymia being (0.498, 0.587, 0.654, 0.692) respectively. These positive correlation coefficients are statistically significant at the 0.01 level, indicating the confirmation of the first hypothesis.

Results of Hypothesis 2: **The second hypothesis states: "There is a statistically significant positive correlation between students' scores on the Dark Triad Personality scale (the dimensions and the total score) and their scores on the Emotional Regulation Difficulties scale**." To verify this hypothesis, the researcher used the Pearson correlation coefficient, and the results are shown in the following table:

Table (2) Significance of Correlation Coefficients between Students' Scores on the Dark Triad Personality Scale and Their Scores on the Emotional Regulation Difficulties Scale (N = 258)

Variable		Emotional Regulation Difficulties
Dark Triad Personality	Narcissism	0.195
	Machiavellianism	0.296
	Psychopathy	0.337
	Total Score	0.343

Significant at 0.01 level

It is evident from Table (2) that there is a statistically significant positive correlation between students' scores on the Dark Triad Personality scale (the dimensions and the total score) and their scores on the Emotional Regulation Difficulties scale, with the correlation coefficients between each of: (Narcissism, Machiavellianism, Psychopathy, and Total Score) and Emotional Regulation Difficulties being (0.195, 0.296, 0.337, 0.343) respectively. These positive correlation coefficients are statistically significant at the 0.01 level, indicating the confirmation of the second hypothesis.

Results of Hypothesis 3: **The third hypothesis states: "Emotional regulation difficulties can be predicted through the Dark Triad Personality and Alexithymia**." To verify this hypothesis, multiple regression analysis using the stepwise methodwas used, and the results are shown in Table (3).

Table (3) Regression Model for the Dark Triad Personality and Alexithymia (Independent Variables) Predicting Emotional Regulation Difficulties (Dependent Variable)

Model	Dependent Variable	Multiple Correlation Coefficient (R)	R Squared (R^2)	Standard Error
Psychopathy and Alexithymia	Emotional Regulation Difficulties	0.1540	3.218	0.3920

The results from Table (3) show that the multiple correlation coefficient value is 0.3920, indicating a positive relationship between Psychopathy, Alexithymia, and Emotional Regulation Difficulties. Additionally, the R^2 value is 0.1540, meaning that Psychopathy and Alexithymia explain 14.4% of the variance in Emotional Regulation Difficulties.

Table (4) Results of Multiple Regression Analysis Predicting Emotional Regulation Difficulties from the Dark Triad Personality and Alexithymia

Source of Variance	Sum of Squares	Degrees of Freedom)	Mean Square	F Value	Significance Level
Regression	0.769431	2	0.010240	23.172	0.01
Residuals	2641.174	255	10.358		
Total	3121.194	257			

The results in Table (4) show that the F value is 23.172, which is statistically significant at the 0.01 level, indicating that Psychopathy and Alexithymia have an effect on Emotional Regulation Difficulties. Table (12) shows the source of this effect.

Table (5) Multiple Regression Coefficients for Personality Traits and Alexithymia as Independent Variables and Emotional Regulation Difficulties as the Dependent Variable

Variables	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	t Value	Significance Level
Constant	27.158	2.301	11.803	0.01
Psychopathy	0.302	0.87	0.265	0.05
Alexithymia	0.163	0.76	0.164	0.05

It is clear from Table (5) that the independent variables (Psychopathy and Alexithymia) have a statistically significant effect on the dependent variable (Emotional Regulation Difficulties). The multiple regression equation that helps predict Emotional Regulation Difficulties from the Dark Triad and Alexithymia in university students is:

Emotional Regulation Difficulties = -27.158 + (0.302 × Psychopathy) + (0.163 × Alexithymia)

These results indicate that Psychopathy and Alexithymia contribute significantly to predicting Emotional Regulation Difficulties among university students. These results can be interpreted as showing that higher scores in Psychopathy and Alexithymia lead to higher Emotional Regulation Difficulties, suggesting that these traits play a role in increasing such difficulties. Alexithymia may be a response to coping with stressful life events, and thus disrupting this mechanism increases Emotional Regulation Difficulties because the individual may avoid facing negative events (Pompili, Serafini, Innamorati , Lester , Shrivastava , Girardi ,Nordentoft., 2011). This result differs from the study of Sheridan, Drennan, Coughlan, O'Keeffe , Frazer, Kemple , Alexander, Howlin , Fahy, Kow, O'Callaghan., (2015)

which indicated a moderate impact of Alexithymia on self-efficacy, optimism, hope, self-effectiveness, determination, gratitude, and life satisfaction.
Therefore, the researcher believes that there are several other factors influencing Emotional Regulation Difficulties in students, in addition to the Dark Triad and Alexithymia, including: inappropriate parental treatment, family disintegration, exposure to abuse, coping strategies for psychological stress, loss of a significant person in the individual's life, failure in emotional relationships, feelings of depression, hopelessness, loneliness, social isolation, alienation, unemployment, and addiction in its various forms.

Results of Hypothesis 4: **The fourth hypothesis states: "There are no statistically significant differences between students' scores on the Dark Triad Personality, Alexithymia, and Emotional Regulation Difficulties scales based on gender, academic specialization, and their interaction**." To verify this hypothesis, the researcher used Multivariate Analysis of Variance to calculate the differences in students' average scores on the Dark Triad Personality, Alexithymia, and Emotional Regulation Difficulties scales according to gender, academic specialization, and their interaction. The validity of the data for performing the multivariate analysis was verified using Box's Test of Equality of Covariance Matrices (1.156), which was not statistically significant, indicating the assumption of equality of covariance matrices. Also, Levene's Test for homogeneity of variances showed non-significant values for the three dependent variables (2.482, 0.193, 0.137), indicating the assumption of equal variances among the groups. The Wilks' Lambda test (1.832, 0.280, 0.916) showed non-significant values for gender, academic specialization, and their interaction. Table (6) presents the means and standard deviations for the samples based on gender and academic specialization, while Table (6) presents the results of the multivariate analysis of variance.

Table (6) Means and Standard Deviations on the Dark Triad Personality, Alexithymia, and Emotional Regulation Difficulties Scales by Gender and Academic Specialization

Variable	Gender				Academic Specialization			
	Male (N = 113)		Female (N = 145)		Male (N = 113)		Female (N = 145)	
	mean	standard deviation	mean	standard deviation	mean	standard deviation	mean	standard deviation
Narcissism	30.301	2.622	30,021	3,261	29,987	3,429	30,386	2,149
Machiavellianism	32.230	3.012	32,772	3,312	32,408	3,557	32,733	2,518
Psychopathy	31.372	3.174	31,855	3,743	31,579	3,756	31,743	3,097
Dark Triad	97.301	0.816	98,315	0,698	97,503	9,455	98,396	2,015
Alexithymia	33.789	0.299	34,510	0,265	34,076	3,184	34,366	2,848
Emotional Regulation Difficulties	42.757	0.345	42,574	0,694	42,599	3,598	42,713	3,318

Table (7) F-Values and Their Significance for Multivariate Analysis of Variance for Differences in Study Variables Based on Gender, Academic Specialization, and Their Interaction

Source of Variance	Study Variables	Sum of Squares	Degrees of Freedom	Mean Square	F Value	Significance Level
Gender	Narcissism	4.863	1	4.863	0.540	Not significant
	Machiavellianism	16.666	1	16.666	1.634	Not significant
	Psychopathy	24.641	1	24.641	2.009	Not significant
	Dark Triad	49.851	1	49.851	0.724	Not significant
	Alexithymia	31.092	1	31.09	3.363	Not
	Emotional Regulation Difficulties	2.004	1	2.004	0.163	Not significant
Academic Specialization	Narcissism	9.797	1	9.797	1.087	Not significant
	Machiavellianism	4.866	1	4.866	0.477	Not significant
	Psychopathy	0.023	1	0.002		Not significant
	Dark Triad	30.620	1	0.445		Not significant
	Alexithymia	1.390	1	0.150		Not significant
	Emotional Regulation Difficulties	0.798	1	0.065		Not significant
Gender × Specialization	Narcissism	0.560	1	0.062		Not significant
	Machiavellianism	0.030	1	0.003		Not significant
	Psychopathy	30.203	1	2.463		Not significant
	Dark Triad	39.969	1	0.580		Not significant
	Alexithymia	23.696	1	2.653		Not significant
	Emotional Regulation Difficulties	0.385	1	0.031		Not significant
Error	Narcissism	2289,349	254	9,013		
	Machiavellianism	2590,368	254	10,198		
	Psychopathy	3115,107	254	12,264		
	Dark Triad	17492,582	254	68,868		

	Alexithymia	2348,065	254	9,244		
	Emotional Regulation Difficulties	3117,425	254	12,273		
Total	Narcissism	236731,000	258			
	Machiavellianism	275712,000	258			
	Psychopathy	261498,000	258			
	Dark Triad	2488004,000	258			
	Alexithymia	303987,000	258			
	Emotional Regulation Difficulties	472284,000	258			

It is clear from Table (7) that:

- There are no statistically significant differences between the means of male and female students on the Dark Triad Personality, Alexithymia, and Emotional Regulation Difficulties scales.
- There are no statistically significant differences between the means of students with theoretical and practical specializations on the Dark Triad Personality, Alexithymia, and Emotional Regulation Difficulties scales.

Discussion:

The positive correlation between the dark triad of personality and alexithymia can be explained in light of the nature of the age group of students and the characteristics of the dark personality traits. These students are in a developmental phase marked by rebellion, a desire for independence, and the pursuit of social status. However, they often face reality, leading them to seek ways to escape from the distressing and painful reality by using alexithymia as a means to beautify and improve their reality. Alexithymia is a form of positive illusion that requires conscious or unconscious distortion of reality (Kelly, et al., 2009). Excessive alexithymia may indicate a pathological personality, where individuals with either a higher or lower level of alexithymia are more prone to mental illness (Kelly, et al., 2009; Campbell, Fitzpatrick , Haines, Kinmonth, Sandercock, Spiegelhalter, Tyrer., 2000).

Al-Khassousi (2020) mentions that alexithymia provides a temporary sense of comfort and false happiness because it depends on indulging in fantasies, wishes, and self-deception. As Lockie (2003) suggests, alexithymia can be explained by the individual's failure to pay attention to certain clues, while excessively focusing on evidence that serves their personal needs and desires, ignoring the consequences of their actions and behaviors on others. Alexithymia is also a state of ill intent or disengagement from responsibility. Therefore, dark personality traits involve shared characteristics that include various deceptive techniques such as lying, cheating, manipulation, and antisocial behavior (Mededovic & Petrovic, 2016; Roeser, et al., 2016; Paulhus & Williams, 2002).

A narcissist has a sense of grandeur, entitlement, and a false sense of superiority. They tend to have a weak self-respect and, due to their exaggerations, become preoccupied with fantasies of unachieved accomplishments. They crave admiration from others for their imagined achievements to protect their self-esteem (Moussa & Jasem, 2016). Meanwhile, Machiavellians have a deceptive belief that the end justifies the means and attempt to manipulate others, seeing them as tools to achieve their goals. Results from Jones,et al. (2016) indicate that Machiavellianism is associated with complex alexithymia. Psychopathy is linked to alexithymia due to its internal tendency to oppose society without remorse, mistrust,

hypocrisy, lack of empathy, pathological narcissism, inability to love, impulsivity, lack of insight, and failure to plan life (Persson, 2019).

These findings align with Jonason et al. (2015), who reported that narcissism is related to lying and exaggerating one's abilities, while Machiavellianism is connected to telling more lies to achieve personal gains. Psychopathy is related to lying without reason. The findings also corroborate studies by Zuckerman & O'Loughlin (2006) and Campbell et al. (2000), which pointed out that excessive alexithymia is an indicator of narcissism and that individuals with higher or lower levels of alexithymia are more prone to mental illness. The researcher agrees with Moussa and Jasem (2016) regarding the contradiction in narcissism, which involves a preoccupation with fantasies of success, power, and ideal love.

The positive correlation between the dark triad and emotional regulation difficulties can be explained by the contradictions that students experience in life, their inability to cope with the rapid social changes, and their adoption of self-centered strategies to achieve their goals. This results in an aggressive response towards themselves and a desire to escape from life through suicidal thoughts as a protest against their inability to meet their goals and the disappointment and feelings of helplessness they experience. Muris, Merckelbach, Otgaar, & Meijer, (2017) mention shared negative traits among individuals with dark traits, such as aggression, deviance, impulsivity, disorganized lifestyles, fragile social relationships, entitlement, self-aggrandizement, lack of ethics, cheating, and lying, which form a fertile environment for emotional regulation difficulties.

Students' inability to solve their problems rationally and their desire to escape emotional pressure and psychological pain push them to consider suicide as an ideal solution, especially if they feel neglected by others and lack familial and social warmth. In this context, Al-Bahiri, Mohamed. (2010) mention that individuals with higher emotional regulation difficulties are characterized by adjustment disorders, mood disturbances, distorted self-concept, aggression, disconnection from reality, emotional instability, and personal issues, traits clearly seen in individuals with the dark triad.

These findings align with Chabrol **,** Melioli **,** Leeuwen**, and** Rodgers**,** (2015), who found a strong relationship between dark traits and emotional regulation difficulties. It also agrees with Harrop, Preston, Khazem, Anestis, Junearick, Green & Anestis (2017), which pointed to impulsivity and cruelty among psychopaths and frustrated belonging among narcissists as associated with emotional regulation difficulties.

However, the results of this study diverge from those of Coleman, Lester, Keers, Munafò, Breen & Eley (2017), which found no significant relationship between dark traits and emotional regulation behaviors.

Statistical Analysis of Gender, Specialization, and Interaction

The results showed no significant statistical effect of the interaction between gender, specialization, and their combined effect on the variance in the scores of students on the measures of the dark triad, alexithymia, and emotional regulation difficulties, which confirms the fifth hypothesis.

The lack of significant differences between male and female students in the dark triad can be explained by the nature of socialization methods, which have become less differentiated between males and females, along with the similar life circumstances and social, economic, and cultural pressures faced by both genders. Dark traits do not correlate with a specific gender, as they can emerge in both males and females.

As mentioned by Qassem and Khalil (2017), and Moussa and Jasem (2016), poor socialization, blind imitation of Western cultures, economic and social instability, detachment from religion and ethics, and denial of individual rights lead people to adopt Machiavellian

behaviors to achieve goals and secure more rights, while unrealistic parental evaluations and overindulgence can foster narcissism.

The findings of the current study align with studies by Jonny (2016) and Karim (2016), which reported no differences in dark personality traits based on gender. However, the current study diverges from Muris et al. (2017), which indicated significant gender differences in the dark triad traits, favoring males, and Al-Mansour (2014), which showed gender differences in psychopathic attitudes, again favoring males.

The lack of significant differences in alexithymia between male and female students suggests that both genders use it as a coping mechanism to escape from distressing realities and achieve personal gains through manipulating others and distorting facts.

Similarly, no significant differences were found between students in theoretical and practical specializations on the dark triad scale. Dark traits are not confined to specific academic specializations, as traits like excessive flattery, false boasting, self-interest, deceit, and manipulation of others' feelings can emerge in both types of students.

Recommendations

Based on the study's findings, the researcher recommends the following:

- Early diagnosis of dark personality traits in students to facilitate preventive and therapeutic counseling processes.
- Raising awareness among parents about the importance of supporting their children during their university years.
- Providing necessary support for both male and female students in all academic specializations through counseling and therapeutic programs aimed at reducing the dark triad traits, alexithymia, and emotional regulation difficulties.
- Encouraging university professors to help students regain their psychological balance by training them to give meaning to their lives and fulfill their psychological needs, such as the need for belonging and acceptance.

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