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**DARK TRIAD AS A PREDICTOR OF BULLYING IN HIGH  
SCHOOL STUDENTS**

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***Abstract***

The Dark Triad, which unites three socially aversive personality traits (Machiavellianism, subclinical narcissism, and subclinical psychopathy) is associated with callousness, manipulation, violation of social norms, cynicism, lack of empathy, deceptiveness, exploitation of others. Studies of adults showed clear sex differences of the Dark triad traits, non-linear age differences, and links with violence and aggression. The present study investigated 1) sex and age differences in the Dark Triad traits, which are manifested in adolescence; 2) the relation between the Dark Triad and bullying. 325 high school students (aged 13–18) took part in the study of links between bullying and the Dark Triad. There were used two measures of the Dark Triad – The Short Dark Triad questionnaire (SD3) and The Portrait Dark Triad Questionnaire (PDTQ) and two measures of bullying – Bullying Scale and Victimization Scale. Significant differences were observed between boys and girls in bullying and psychopathy. Age-related differences within the given age range were not found either for the Dark Triad or for bullying. Correlation analysis identified significant relation between all Dark Triad indicators and bullying and relation between psychopathy and victimization. Stepwise regression analysis revealed different results for two measures of the Dark Triad: the main predictor of bullying was psychopathy when the dark traits were measured by SD3 and Machiavellianism when the dark traits were measured by PDTQ.

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**Keywords:** Dark Triad, Machiavellianism, narcissism, psychopathy, bullying.



## 1. Introduction

The term “Dark Triad” was introduced by D. L. Paulhus and Kevin Williams (2002) to refer to the constellation of Machiavellianism, subclinical narcissism, and subclinical psychopathy. While the three traits are relatively independent, they have clear links with one another, as well as similar (though not the same) relationships with a range of psychological characteristics. Dark Triad personalities tend to exhibit a superiority complex, social dominance, egocentrism, disregard for social norms, emotional coldness, lack of empathy etc. All Dark Triad traits have their own distinctions in the normal (nonclinical) population, and are linked with specifics of relationships, approaches to resolving difficult situations, and self-concepts. It is considered that the Dark Triad traits could be at the root of aggressive behavior and it is confirmed by the relationships of the Dark Triad with reactive and proactive aggression (Dinić & Wertag, 2018), violence (Pailing, Boon & Egan, 2014), scholastic cheating (Williams, Nathanson, & Paulhus, 2010), low self-control and, in particular, bullying. There are few studies that evaluate the correlation between the Dark Triad and bullying, but their results do not contradict the hypothesis (relation of the Dark Triad and aggression).

The very first study conducted on adults (aged 18 to 70) showed a correlation between various bullying indicators (verbal and physical, as well as direct and indirect) and all Dark Triad components. The correlation was closest with psychopathy and rather low with narcissism (Baughman, Dearing, Giammarco & Vernon, 2012). Workplace bullying correlates with Machiavellianism, narcissism, psychoticism, aggression, and disinhibition (Linton & Power, 2013). The Dark Triad plays an important role in cyberbullying and cyber-aggression. Using adolescent and adultsamples, it was shown, that cyberbullying correlates with psychopathy (Pabian, De Backer & Vandebosch, 2015), as well as with psychopathy, sadism and Machiavellianism (Geel, Goemans, Toprak & Vedder, 2017). Psychopathy and sadism together with negative social potency and negative social reward motivation predict cybertrouling (Craker & March, 2016). The combination of Machiavellianism and low self-control predicts victimization (Goodboy & Martin, 2015)

It is shown, that males (boys) participate in bullying more frequently, than females (girls) and more frequently become the victims of Bullying (for example, Volk, Schiralli et al, 2018). There were found sex differences for the correlations of bullying and dark personality traits (Dinić, Wertagm 2018). Personality profiles of bullies turned to be stable across cultures (Volk, Schiralli et al, 2018).

## 2. Problem Statement

Studies of bullying among school children reveal that more than 30% of children participate in bullying and as many suffer from victimization (Veldkamp, van Bergen, Zeeuw et al., 2017). Understanding of the sources of bullying behaviours requires analysis of personality predictions of bullying, of peer and family relations, of the dynamics of age changes, sex differences.

## 3. Research Questions

In our study we analyzed age and sex differences of bullying and victimization and relate self-reported bullying with the Dark Triad personality traits.

#### 4. Purpose of the Study

The aims of the study were: a) to examine relationships between the Dark Triad traits and bullying behaviours on high school students; b) to detect the role of sex and age in these relationships.

#### 5. Research Methods

##### 5.1. Sample

The study had 325 participants, grade 8–11 students who live in Moscow: 182 girls (56%) and 143 boys (44%) aged 13–18 (M=15.05, SD=1.09).

##### 5.2. Measures

Two questionnaires adapted for adolescents were used to diagnose the Dark Triad: the Short Dark Triad Questionnaire, SD3 (Jones & Paulhus, 2014; Egorova, Sitnikova & Parshikova, 2015) and the Dark Triad Portrait Questionnaire (developed for this study).

The Short Dark Triad Questionnaire (SD3) consists of 27 statements and measures the levels of Dark Triad indicators—Machiavellianism, narcissism, and psychopathy—as well as a composite score. Each statement is evaluated on a 5-point Likert scale. Response categories range from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating an increased tendency toward the Dark Triad.

The Portrait Dark Triad Portrait Questionnaire (PDTQ) consists of six portraits (brief descriptions of hypothetical individuals with Dark Triad traits). The respondent is asked to evaluate how similar he or she is to these individuals. The questionnaire measures the levels of Dark Triad indicators and a composite score. Each statement is evaluated on a 6-point Likert scale. Response categories range from 1 (not like me at all) to 6 (very much like me), with higher scores indicating an increased tendency toward the Dark Triad.

There are a number of reasons for employing two measures: the use of brief questionnaires inevitably results in loss of information. Using two Dark Triad measures therefore makes the results more reliable. Furthermore, the different formats for collecting information (direct and indirect self-evaluations) yield more reliable data.

Correlations between the indicators for Machiavellianism, narcissism, and psychopathy obtained using the two questionnaires are presented in Table 1.

**Table 01.** Correlations between Dark Triad indicators for the entire sample

Dark Triad	SD 3			Portrait questionnaire		
	Mac	N	PP	Mac	N	PP
<b>SD3</b>						
Machiavellianism	-	17**	42***	56***	18**	37***
Narcissism		-	37***	30***	63***	14*
Psychopathy			-	54***	34**	46***
Composite	67***	69***	75***	51***	42***	37***
<b>PDTQ</b>						
Machiavellianism				-	36***	56***

Narcissism					-	18***
Psychopathy						-
Composite	71***	70***	80***	62***	51***	43***

Note: \* -  $p < 0,05$ , \*\* -  $p < 0,01$ , \*\*\* -  $p < 0,001$ .

Correlations between the scores for each Dark Triad trait from the two questionnaires equals 0.56 for Machiavellianism, 0.63 for narcissism, and 0.46 for psychopathy. Thus, the two measures yield similar but not the same results, as was expected when including both measures in the study.

Cronbach’s alpha reliability coefficients for the scales of the two questionnaires are in the 0.52–0.68 range, which is acceptable for brief questionnaires (Table 2)..

**Table 02.** Cronbach’s alpha reliability coefficients

Questionnaire	Scale	Cronbach’s alpha	McDonald’s omega
<b>SD3</b>	Machiavellianism	0.68	<b>0.75</b>
	Narcissism	0.68	<b>0.75</b>
	Psychopathy	0.66	<b>0.71</b>
<b>PTDQ</b>	Machiavellianism	0.60	
	Narcissism	0.65	
	Psychopathy	0.52	

Bullying was assessed using two scales, developed for this study.

1. The Bullying Scale is aimed at determining whether the respondent has been involved in incidents of bullying others. It consists of six portraits (e.g., “s/he makes up mean names for those s/he doesn’t like,” “s/he might break, damage, or even steal items belonging to someone s/he doesn’t like”). Respondents rate how similar they are to the individuals described in these portraits. Response categories range from 1 (not like me at all) to 6 (very much like me), with higher scores indicating an increased tendency toward bullying.

Consistency of points on the Bullying scale equals 0.79 (Cronbach’s alpha) and 0.86 (McDonald’s omega).

2. The Victimization Scale contains 5 statements aimed at identifying incidents when the respondent was the victim of bullying (e.g., “people spread various rumors about me to turn my friends against me,” “there are people in school who constantly tease me and laugh at me”). Response categories range from 1 (not like me at all) to 6 (very much like me), with higher scores indicating an increased tendency toward victimization.

Correlation of points on the Victimization scale equals 0.81 (Cronbach’s alpha) and 0.84 (McDonald’s omega).

## 6. Findings

### 6.1. Descriptive Statistics

Average scores and the differences in average scores for all Dark Triad indicators and for bullying are presented in Table 3. Almost all average scores are higher for boys than for girls, but the differences are not significant in the two indicators for narcissism and the indicator for Machiavellianism diagnosed using the SD3. No significant differences were observed when comparing students in grades 8–9 with students in grades 10–11 for the entire sample, or when comparing the 50 oldest respondents with the 50 youngest respondents.

Thus, this study does not confirm the hypothesis put forward in a number of works regarding rising levels of subclinical psychopathy and proneness to bullying throughout the teenage years

**Table 03.** Means, sex differences and age differences

Dark Triad	Girls		Boys		t	PP
	Mac	N	PP	Mac		
<b>SD3</b>						
Machiavellianism	3,43	0,72	3,55	0,68	-1,56	0,12
Narcissism	2,76	0,78	2,90	0,67	-1,63	0,11
Psychopathy	2,52	0,70	2,69	0,73	-2,08	0,04
Composite	2,90	0,54	3,04	0,50	-2,42	0,02
<b>PDTQ</b>						
Machiavellianism	2,11	1,17	2,37	1,14	-1,98	0,05
Narcissism	2,55	1,29	2,44	1,28	0,78	0,44
Psychopathy	1,90	1,15	2,23	1,13	-2,49	0,01
Composite	2,19	0,94	2,35	0,85	-1,54	0,12
<b>Ballying Questionnaire</b>						
Ballying	1,37	0,67	1,55	0,82	-2,05	-2,15
Victimization	1,47	0,56	1,63	0,69	0,04	0,03

### 6.2. Correlation and Regression Analysis

Correlation analysis showed clear links between the Dark Triad and bullying (correlation indicators in the 0.16–0.48 range,  $p < 0.001$ ). Based on the SD3, the highest correlation was found between psychopathy and bullying (0.39); correlation was lower between bullying and the two other components of the Dark Triad (0.21 and 0.16). Results based on the Dark Triad Portrait Questionnaire were slightly different: the highest correlation was found between bullying and Machiavellianism (0.48); correlation between bullying and psychopathy was the same (0.38), and correlation between bullying and narcissism was (0.30). The Victimization Scale had the only correlates – with psychopathy. A small but statistically significant correlation was found in diagnosing psychopathy based on both the SD3 and the Portrait Questionnaire (Table 4).

**Table 04.** Intercorrelation between Dark Triad indicators and bullying

Questionnaire	Dark Triad	Bullying	Victimization
SD3			
SD3	Machiavellianism	21**	
	Narcissism	16**	
	Psychopathy	39***	15*
	Composite	31***	
PDTQ			
PTDQ	Machiavellianism	48***	17*
	Narcissism	30***	
	Psychopathy	38***	
	Composite	47***	

Note: \* –  $p < 0.05$ , \*\* –  $p < 0.01$ , \*\*\* –  $p < 0.001$ .

Regression analysis. The following factors were included as independent variables (whose variation is presumed to determine variation in bullying): age, sex and the Dark Triad traits (Machiavellianism, narcissism and psychopathy). Stepwise regression analysis revealed different results for two measures of the Dark Triad: the main predictor of bullying was psychopathy (with standardized regression coefficients  $\beta=0.48$  for psychopathy and  $0.01-0.08$  for other variables). Adjusted  $R^2$  equals 0.25.

When the dark traits were measured by PDTQ, betas were: 0.36 for Machiavellianism, 0.24 for psychopathy, and 0.17 for narcissism. Adjusted  $R^2$  equals 0.38. In other words Portrait Questionnaire was more sensitive to the relationships of the Dark Triad and bullying.

The contribution of the dark traits, age and sex in victimization was very modest. Adjusted  $R^2$  is 0.02 and 0.03 for two questionnaires.

Including in the regression analysis the interaction between the dark traits i.e., Machiavellianism-narcissism, Machiavellianism-psychopathy, narcissism-psychopathy, and Machiavellianism-narcissism-psychopathy, significantly increases adjusted  $R^2$  (0.37 0.52).

## 7. Conclusion

The study examines the relationship between Dark Triad indicators and bullying in Russian high school students. The results received in the study of Russian high school sample are very similar to those presented in literature.

1. Correlation analysis demonstrates relationships between bullying and three dark traits, but regression analysis does not confirm this result.

2. Psychopathy has clear and the largest links with bullying and victimization. Narcissism, which is considered to be the brightest trait of the Dark Triad, – has the weakest link.

3. Compared with girls, boys scored higher on psychopathy, bullying and victimization.

4. There are no age-related differences within the given age range.

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