



## Short Communication

# Whose Dark Traits Spoil Family Communication? A Triadic Analysis of Families Raising Adolescents

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**Abstract:** Adolescence is a turbulent stage of development for both adolescents and their families. Family communication remains one of the major means to adjust to developmental tasks in this stage. Since personality traits have a profound effect on the process of communication, Dark Triad (DT) traits were hypothesized to negatively influence family communication. We wanted to further explore the actor and partner effects of family members' DT traits on their perceptions of family communication. Ninety-eight families ( $N = 294$ ) with convenience sampling were recruited for our study. All three family members (i.e., fathers, mothers, and adolescent children) reported their level of DT traits on the Short Dark Triad and perceived quality of family communication on the Communication scale of the Family Adaptability and Cohesion Evaluation Scale-IV. We classified families based on members' level of DT traits, but no significant difference in mothers', fathers', and adolescents' perceptions of family communication was found across types of families. Results of triadic extensions of the actor-partner interdependence model showed that mothers' and adolescents' levels of Machiavellianism negatively affected family communication as perceived by fathers and mothers, respectively. Fathers' level of narcissism affected adolescents' perceptions of family communication negatively. Fathers' level of psychopathy had a negative effect on their own and mothers' perceptions of family communication. Results are in line with general findings about DT traits and highlight their influence in affecting family communication. Specific actor and partner effects are discussed with regard to family roles.

**Keywords:** Dark Triad, family communication, family system perspective, adolescence, triadic analysis

## 1. Introduction

Families' transition to raising adolescents is a turbulent and malleable developmental stage both for parents and adolescents (Hazen et al., 2008; Holmbeck, 1996). Cohesion (i.e., mutual emotional bonding of family members) and flexibility (i.e., change in leadership, roles, and rules; Olson, 2011) are important in providing a secure base for adolescents' separation and in reorganizing the parent-child relationship (McGoldrick & Shibusawa, 2012), respectively. According to Olson (2011), families use positive communication to adjust levels of cohesion and flexibility to challenges of transitions.

Interpersonal communication — including family communication — is a bi- or multidirectional process with two or more interdependent partners (Burlison, 2010). Beatty (1998) argued that understanding interpersonal communication was incomplete without considering personality traits. The Dark Triad (DT; Machiavellianism, narcissism, and

psychopathy; Paulhus & Williams, 2002) is a cluster of socially aversive that could be relevant to negatively influence communication. Several different psychological constructs have been identified as the core of the DT, among others, lack of agreeableness on the Big Five Inventory (Paulhus & Williams, 2002), antagonism of the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition) maladaptive personality traits (Grigoras & Wille, 2017), and lack of empathy (Baron-Cohen, 2012; Bloxson et al., 2021; Heym et al., 2019). Dinić and colleagues (2021, p. 1) tested several of the above-mentioned competing candidates and found that “antagonism shared the highest percentage with the dark traits, especially its facet callousness, which is the best candidate for the Dark Core”. Besides the common core, each trait has its specific characteristics. Machiavellianism is specifically characterised by a cynical view of human nature and manipulation through alliance-building (Christie & Geis, 1970; Jones & Paulhus, 2014). The specific characteristic of narcissism is grandiosity and entitlement (Wink, 1991), whereas psychopaths are distinctively antisocial and impulsive (De Brito et al., 2021).

Previous studies found that DT traits were associated with a negative, hostile, and manipulative communication style (e.g., Baughman et al., 2014; Horan et al., 2015; Jakšić et al., 2021); most characteristically for psychopathy and least for narcissism. Regarding studies using interdependent participants (i.e., romantic partners), Kardum and colleagues (2019) investigated the association between DT traits and mate retention behaviours. They found that psychopathy had the strongest actor and partner effects on mate retention behaviours. Smith and colleagues (2019) found that agreeableness — as measured by NEO-FFI-3 (Neuroticism-Extraversion-Openness Five-Factor Inventory-3) — had a positive female actor effect and positive male actor and partner effects on dyadic adjustment. They also found that antagonism — the maladaptive personality trait counterpart of agreeableness (Birkás et al., 2018) — had both female and male negative partner effects on romantic couples’ quality of adjustment. Investigating the effect of narcissism on aggression in college-student couples, Keller and colleagues (2014) found that narcissism had positive actor and partner effects on aggression for both male and female members of the couple. From an evolutionary perspective, Ináncsi and colleagues (2018) studied the effect of Machiavellianism on relationship evaluation. They found that Machiavellianism was associated with more negative perceptions of the relationship — both for actors and their partners.

We are not aware of any study systematically investigating the effects of DT traits on communication partners. Most of what we know comes from minimal acquaintance paradigms, and results (Rauthmann, 2012; Rauthmann & Kolar, 2013) show that narcissists are judged somewhat “brighter” than psychopathic and Machiavellian individuals. However, some of these findings might not hold for long-term relationships, since DT individuals might be misperceived at zero acquaintance (e.g., misperceiving grandiosity for self-esteem in narcissists [Giacomin & Jordan, 2019]).

## **1.1 Aims of the research and hypothesis**

In general, we hypothesized that DT traits — obviously and similarly to other contexts — would negatively affect communication in the family. Based on previous study results (Baughman et al., 2014; Horan et al., 2015; Jakšić et al., 2021; Rauthmann, 2012; Rauthmann & Kolar, 2013), we also hypothesized that Machiavellianism and psychopathy would have a larger effect on family communication than narcissism. However, we were not aware of any DT study on this topic that used the family systems perspective to account for the interdependence of family members. Therefore, the novelty of our study lies in the further exploration of how family members’ DT traits would affect their own (actor effect) and other family members’ (partner effect) perception of family communication. Trying to fill this research gap, we studied families raising adolescents. We hoped that the normative family crisis of adolescence could serve as a looking glass to tap nuanced associations between DT traits and perceived family communication.

## **2. Method**

### **2.1 Participants and procedure**

Families raising 14-18 years old adolescents who cohabitated with their biological mothers and fathers were recruited for the study. Families came from the acquaintanceship of psychology students who collected the data. Thus, the sample should be considered a non-representative convenience sample. A final dataset with 98 families’ complete data ( $N = 294$ ) was used for analysis. Data were collected prior to the COVID-19 pandemic. Both measures were

completed by all three members of the triad, i.e., mothers, fathers, and adolescents. Measures were only completed by evaluating the self and none of the other family members. The study received ethical approval from the United Ethical Review Committee for Research in Psychology (Ref. No.: 2016/063).

The relationship of parents lasted 21.59 years on average ( $SD = 3.83$ ) and 96 pairs were married. Mothers and fathers were 43.79 years old ( $SD = 3.57$ ) and 46.54 years old ( $SD = 4.29$ ) on average, respectively. With regard to mothers' highest level of education, two of them finished elementary school, 15 vocational secondary school, 37 passed a secondary school matriculation, and 44 graduated from higher education. With regard to fathers' highest level of education, 35 of them finished vocational secondary school, 28 passed a secondary school matriculation, and 35 graduated from higher education. Adolescents (47 females) were all enrolled in formal education and were 16.00 years old ( $SD = 1.29$ ) on average. Twenty-one adolescents had no siblings, 37 had one sibling, 32 had two siblings, seven had three siblings, and one adolescent had four siblings.

## 2.2 Measures

The DT traits of family members were measured with the Short Dark Triad (SD3; Jones & Paulhus, 2014), a 27-item self-report measure of Machiavellianism (e.g., 'Whatever it takes, you must get the important people on your side'), narcissism (e.g., 'I know that I am special because everyone keeps telling me so'), and psychopathy (e.g., 'People often say I'm out of control'). Agreement with each item is reported on a 5-point Likert scale.

Perceived quality of family communication was measured with the Communication scale of the Family Adaptability and Cohesion Evaluation Scale-IV (FACES-IV; Olson, 2011). This 10-item scale measures positive communication skills utilized in the family (e.g., 'Family members are very good listeners'). Participants evaluated on a 5-point Likert scale how accurately statements described their family.

## 2.3 Statistical analytic plan

All statistical analyses were run with IBM SPSS Statistics Version 22. We computed means and standard deviations to describe variables and Cronbach's  $\alpha$  values as indices of internal reliabilities of scales. Associations between variables were tested with Pearson's correlations. Families were classified based on members' DT Z-scores using *K*-means clustering. With regard to the size of the current sample, four clusters were required. We used ANOVAs to compare mothers', fathers', and adolescents' perceptions of family communication across the four family types.

To account for the interdependence of the members of the triad, we used a triadic extension of the Actor-Partner Interdependence Model (APIM; Kashy & Kenny, 2000; Kenny & Cook, 1999; Kenny et al., 2006). The APIM is a model of dyadic relationships accounting for interdependence with appropriate statistical techniques for measuring and testing it. In the current study, the model is extended to triadic relationships, i.e., the family system. Actor effects refer to how an individual's DT trait affects their own perception of the quality of family communication. Partner effects refer to how an individual's perception of the quality of family communication is affected by other family members' DT traits. Regarding statistical analysis, there are different ways to test actor and partner effects. We used structural equation modelling (SEM) which allows to estimate several equations at the same time. Because SEM (with maximum likelihood estimation) was used as a complex of interconnected linear regression analyses, no fit indices were calculated. Estimated standardized regression weights are reported with 95 percentile confidence intervals.

## 2.4 Results

Means, standard deviations, zero-order correlations, Cronbach's  $\alpha$ , skewness and kurtosis values are shown in Table 1. According to Bryne (2010), absolute values of skewness smaller than 2 and absolute values of kurtosis smaller than 7 can be considered indicators of a distribution that do not violate the normality assumption of multivariate analyses. Based on this rule of thumb, we used parametric tests for hypothesis testing and explorative analyses. All internal reliabilities proved to be good except for the fathers' self-report of Machiavellianism which was unacceptable. Thus, results including the variable of paternal Machiavellianism should be treated with caution.

**Table 1.** Means, standard deviations of and zero-order correlations between variables. Internal reliability of scales

		Machiavellianism			Narcissism			Psychopathy			Perceived quality of family communication			
		Mat	Pat	Adol	Mat	Pat	Adol	Mat	Pat	Adol	Mat	Pat	Adol	
Machiavellianism	Pat	.317**												
	Adol	.148	.199											
	Mat	.452***	.151	-.115										
Narcissism	Pat	.316**	.435***	.003	.382***									
	Adol	-.031	.190	.360***	.053	.255*								
	Mat	.685***	.175	.030	.594***	.251*	.096							
Psychopathy	Pat	.371***	.474***	.191	.275**	.667***	.342**	.367***						
	Adol	.162	.173	.693***	-.042	.069	.570***	.190	.328**					
	Mat	-.163	-.081	-.248*	.022	-.225*	-.109	-.190	-.331**	-.256*				
Perceived quality of family communication	Pat	-.307**	-.133	-.175	-.164	-.251*	-.129	-.319**	-.426***	-.290**	.611***			
	Adol	-.073	-.149	-.204*	.067	-.211*	.003	-.087	-.161	-.233*	.616***	.407***		
<i>M</i>		26.41	29.74	28.28	24.00	26.76	26.82	18.44	22.51	22.60	38.52	37.93	38.45	
<i>SD</i>		4.86	5.80	5.54	5.90	6.38	6.65	5.30	6.09	6.92	5.89	5.47	5.64	
Cronbach's $\alpha$		.72	.50	.75	.83	.85	.85	.77	.78	.82	.86	.80	.81	
Skewness		-0.25	1.08	0.22	0.75	0.09	0.28	0.90	0.72	0.39	-0.90	-0.75	-0.29	
Kurtosis		0.04	4.35	0.27	0.51	-0.11	-0.34	1.27	0.65	-0.44	0.72	0.54	-0.20	

Note: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ . Mat = Maternal; Pat = Paternal; Adol = Adolescent. Standard error for skewness was 0.24 in each case. Standard error for kurtosis was 0.48 in each case

*K*-means clustering using family members' DT Z-scores (nine variables) resulted in the four family types presented in Figure 1. The analysis differentiated between (1) average families ( $n = 54$ ) with all family members in the average range (i.e., between  $-0.5$  and  $+0.5$  Z-scores) for DT traits; (2) families with mothers high (above  $+1.0$  Z-score) and fathers elevated (above  $+0.5$  Z-score) on all DT traits (Dark parents;  $n = 10$ ); (3) families with fathers high on all DT traits and adolescents elevated on narcissism (Dark father;  $n = 16$ ); and (4) families with adolescents with elevated Machiavellianism and psychopathy scores (Machiavellian-psychopathic adolescent;  $n = 18$ ). Using one-way ANOVAs to compare perceptions of family communication quality, resulted in no significant difference between family types for any family members perception ( $F(3, 94) = 1.408, p = .245$ ;  $F(3, 94) = 1.334, p = .268$ ;  $F(3, 94) = 1.010, p = .392$  for mothers', fathers', and adolescents' perception of the quality of family communication, respectively).

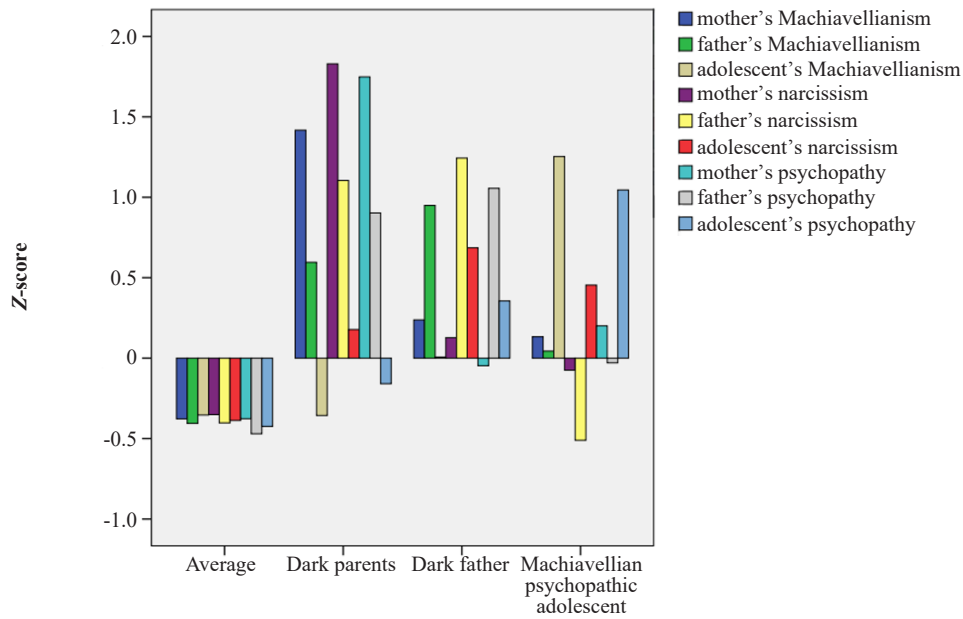
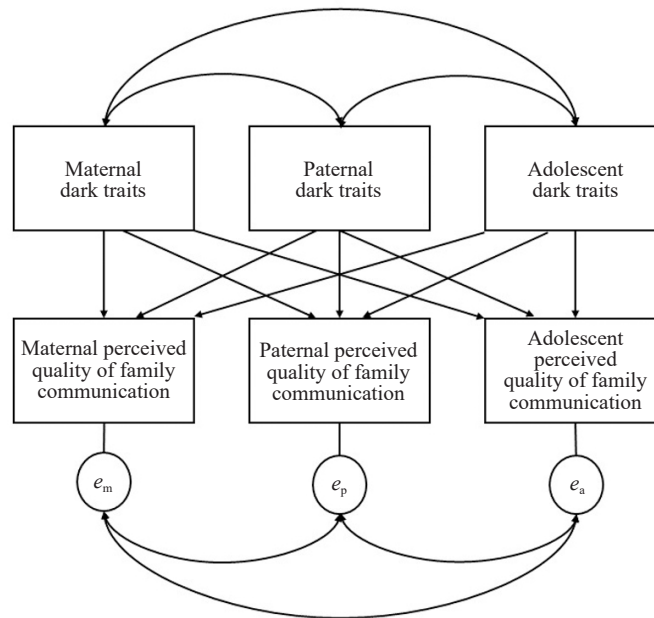


Figure 1. Family types based on members' DT Z-scores; results of K-means clustering

Triadic extensions (Figure 2) of the actor-partner interdependence model (Kashy & Kenny, 2000) were used to test actor and partner effects of DT traits on family members' perception of family communication. Results are presented in Table 2 and Table 3. Regarding Machiavellianism, no significant actor effects emerged. Fathers and mothers perceived less positive family communication if mothers and adolescents had stronger Machiavellian traits, respectively.



Note:  $e_m$  = error of maternal perceived quality of family communication;  $e_p$  = error of paternal perceived quality of family communication;  $e_a$  = error of adolescent perceived quality of family communication.

Figure 2. The statistical analytic schema of the triadic extension of actor-partner interdependence model

**Table 2.** The actor and partner effects of family members' dark traits on family members' perceived quality of family communication; results of triadic extensions of the actor-partner interdependence model with 500 bootstrap samples

		Machiavellianism		Narcissism		Psychopathy	
		$\beta$	$p$	$\beta$	$p$	$\beta$	$p$
		(95% CI)		(95% CI)		(95% CI)	
Actor effects	Mother's dark trait to mother's perceived quality of family communication	-.131 (-.329 – .077)	.289	.124 (-.215 – .400)	.358	-.066 (-.289 – .201)	.661
	Father's dark trait to father's perceived quality of family communication	-.018 (-.270 – .172)	.777	-.200 (-.459 – .086)	.153	<b>-.311</b> <b>(-.473 – -.106)</b>	<b>.010</b>
	Adolescent's dark trait to adolescent's perceived quality of family communication	-.181 (-.371 – .020)	.089	.069 (-.184 – .302)	.582	-.201 (-.409 – .034)	.084
	Mother's dark trait to father's perceived quality of family communication	<b>-.282</b> <b>(-.436 – -.028)</b>	<b>.016</b>	-.084 (-.380 – .170)	.559	-.175 (-.350 – .020)	.080
	Mother's dark trait to adolescent's perceived quality of family communication	-.012 (-.222 – .179)	.833	.176 (-.058 – .379)	.107	-.017 (-.268 – .217)	.913
Partner effects	Father's dark trait to mother's perceived quality of family communication	.007 (-.268 – .188)	.965	-.260 (-.532 – .049)	.101	<b>-.254</b> <b>(-.442 – -.052)</b>	<b>.012</b>
	Father's dark trait to adolescent's perceived quality of family communication	-.109 (-.286 – .083)	.263	<b>-.296</b> <b>(-.524 – -.054)</b>	<b>.030</b>	-.089 (-.331 – .135)	.421
	Adolescent's dark trait to mother's perceived quality of family communication	<b>-.230</b> <b>(-.417 – -.002)</b>	<b>.047</b>	-.049 (-.346 – .253)	.631	-.160 (-.341 – .026)	.082
	Adolescent's dark trait to father's perceived quality of family communication	-.129 (-.325 – .085)	.265	-.074 (-.310 – .210)	.467	-.155 (-.376 – .064)	.141

Note: significant effects are highlighted in bold.

**Table 3.** Correlations between independent variables and correlations between errors of dependent variables in triadic extensions of the actor-partner interdependence models

		Machiavellianism		Narcissism		Psychopathy	
		$r$	$p$	$r$	$p$	$r$	$p$
Correlations between independent variables (i.e., dark personality traits)	Maternal-Paternal	.317	.003	.382	< .001	.367	< .001
	Maternal-Adolescent	.148	.149	.053	.600	.190	.066
	Paternal-Adolescent	.199	.055	.255	.015	.328	.002
Correlations between errors of dependent variables (i.e., perceived quality of family communication)	Maternal-Paternal	.587	< .001	.602	< .001	.535	< .001
	Maternal-Adolescent	.600	< .001	.595	< .001	.592	< .001
	Paternal-Adolescent	.390	< .001	.400	< .001	.361	< .001

Regarding narcissism, no significant actor effects emerged. Adolescents perceived more negative family communication in families with more narcissistic fathers. Regarding psychopathy, both actor and partner effects were found. Fathers with higher levels of psychopathy perceived communication to be less positive in their families. Mothers with more psychopathic spouses perceived their families as utilizing less positive communication skills.

### 3. Discussion

According to our results, family members' perceptions of family communication did not differ across the four types of families in our study. Thus, more subtle dynamics in the family could account for the potential associations between family members' level of DT traits and their perceptions of family communication. Confirming our hypotheses, the results of APIM showed that DT traits negatively affected perceptions of family communication, which is in line with their socially aversive (Jones & Paulhus, 2014), unempathetic (Baron-Cohen, 2012; Heym et al., 2019), disagreeable (Paulhus & Williams, 2002), and antagonistic (Grigoras & Wille, 2017) nature. Specifically, mothers' and adolescents' Machiavellianism had a negative effect on fathers' and mothers' perceptions of family communication, respectively. Paternal Machiavellianism had no effect. Whereas Machiavellian emotional distance and strategic calculation harm intimate relationships in general (Jones & Paulhus, 2014), we assume that these traits violate the expected behaviour of an adult man (i.e., the father) the least. Therefore, each family member's perception of family communication quality was independent of paternal Machiavellianism. Because of the unacceptable reliability of the Machiavellianism scale of SD3 in fathers' reports, this line of reasoning should be treated as highly hypothetical.

Fathers' narcissism had a negative effect on adolescents' perception of family communication, whereas fathers' psychopathy negatively affected fathers' own and mothers' perception of family communication. Conversational narcissism (Leit, 2016) and coercive control (Leedom, 2017) or verbal aggression (Garofalo et al., 2020) can account for the detrimental effect of narcissism and psychopathy in general, respectively. Different affected targets might also merit attention. Reflected in the absence of actor effect, we assume that the narcissistic functioning (Jones & Paulhus, 2014; Wink, 1991) of fathers prevents them from perceiving the negative effect they have on family communication. Therefore, no actor effect was found in their case. At the same time, we assume that narcissistic (Jones & Paulhus, 2014; Wink, 1991) fathers might interfere with some of the main developmental goals of adolescents, namely questioning authority, and separation (Hazen et al., 2008; Holmbeck, 1996).

Regarding psychopathy, we assume that it could prevent fathers not only from engaging in positively valenced interactions but also from perceiving interactions as satisfying. It would be interesting to study whether this perception of relatively negative communication patterns contributed to fathers' — who are relatively high in psychopathy — satisfaction with family life. At the same time, the less parental involvement of psychopaths (Međedović & Petrović, 2019) is assumed to account for the lack of paternal psychopathy's effect on adolescents' perceptions — as contrasted to the partner effect of narcissism.

In general, our results showed that mothers' and adolescents' Machiavellianism and fathers' narcissism and psychopathy affected other family members' perception of the quality of family communication. Compared to Machiavellianism, narcissism and psychopathy reflect more dominant strategies (Rauthmann & Kolar, 2013). Thus, the dominant position of fathers within the family might be reflected in our results that their narcissism and psychopathy influenced the perception of family communication. At the same time, it is a more subtle form of exploitation — namely Machiavellianism — that affected these perceptions from less dominant members of the family (i.e., mothers and adolescents). The fact that Hungary still has a highly individualistic, masculine, and uncertain avoiding national culture (Hofstede Insights, n.d.) that contributes to the overrepresentation of classical, father-dominated family structure might give an empirical base for this assumption.

Besides convenience sampling and limited sample size, aggregating families with daughters and sons are all limitations to our study. Future studies with larger, representative samples should address these issues. Despite limitations, our study was still the first to reveal the negative effects of DT traits on family communication. Future studies should further investigate the topic — especially whether the gender of the adolescent could moderate any of the above reported and tested effects. To obtain the statistical power for that would require a much bigger sample. Developmental researchers could be interested in how actor and partner effects are moderated by the challenges

of different developmental stages and associated developmental tasks. Observational studies could remedy some methodological shortcomings of the current study.

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## Conflict of interest

None of the authors has any conflict of interest to disclose.

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