BRIEF COMMUNICATION

Dimensions of youth psychopathy differentially predict concurrent pro- and antisocial behavior

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Objective: To investigate the unique contribution of narcissism and impulsivity, in addition to callous-unemotional (CU) traits, in explaining concurrent prosocial and antisocial behavior.
Method: Two hundred and forty-nine schoolchildren (53% female; age 9-12 years) completed the self-report Strengths and Difficulties Questionnaire (SDQ) and the Antisocial Process Screening Device (APSD). Two statistical models were tested, predicting conduct problems (CP) and prosocial behavior (PB). In the first one, CU traits and gender were entered into the equation. The second model added narcissism and impulsivity.
Results: Gender, narcissism and impulsivity, but not CU, were statistically significant predictors of CP in the second model ($F_{3,226}$ = 45.07, $p < 0.001$, R^2 = 43.7%; betas: gender = -0.20, narcissism = 0.29, impulsivity = 0.36, CU = 0.06). PB was significantly predicted by all domains except gender ($F_{3,226}$ = 42.57, $p < 0.001$, R^2 = 42.4%; betas: gender = 0.08, narcissism = -0.16, impulsivity = -0.23, CU = -0.41).
Conclusion: Our results confirmed that CU traits refer to a distinct manifestation of psychopathy in youth, but we also found that narcissism and impulsivity are equally important when predicting CP. Previous reports of sex differences on APSD and SDQ domains were also corroborated.

Keywords: Child psychiatry; diagnosis and classification; personality disorders - cluster B (antisocial-borderline-histrionic-narcissistic); violence/aggression; gender differences

Introduction

Children with dysfunctional levels of aggression and antisocial behavior may meet criteria for a diagnosis of conduct disorder (CD). CD is characterized by behavior that violates the rights of others or societal norms[1] and interferes with typical social and/or academic functioning.[2] The presence of conduct problems (CP) during childhood and adolescence places individuals at risk of serious outcomes such as delinquency, criminal involvement, substance misuse, relationship problems, and severe psychopathy.[3] Within the most recent iteration of the DSM-5, the definition of CD has been developed to include a specifier to this diagnosis for those who also display limited prosocial emotions, such as deficits in empathy and in expression of guilt.[2] These characteristics overlap with the concept of callous-unemotional (CU) traits.

CU traits are a category of behavior characterized by persistent, negative acts intended to harm others, as well as the absence of emotional responsiveness and little to no empathy. In this sense, CU traits can be considered as a developmental precursor to psychopathy.[1] To date, it has been proposed that CU traits may be associated

with genetic, brain-based, and environmental factors,[4-5] which predispose a child to this particular and persistent interpersonal style. CU traits are typically associated with adverse outcomes such as increased CP, substance use, and risk-taking behaviors. Elevated levels of CU traits have been shown to delineate a group of individuals with more severe behavioral difficulties and with very similar rates of CD and oppositional defiant disorder as opposed to those with non-elevated CU traits,[6] who tend to be more heterogeneous with regards to behavioral symptoms. Additionally, the combination of early psychopathic traits such as impulsivity, CU traits, and aggression has established influences on propensity, situational context, and deterrence of violent offending trajectories.[7-9]

Although CU traits may play a key role in youth psychopathy, there is no consensus as to whether the presence of CU traits is sufficient to classify this subgroup of youth. To date, researchers have repeatedly neglected the contribution of traits such as narcissism and impulsivity to the development of psychopathy – realms that are equally important in determining potential prospects of future psychopaths.[10,11] This is alarming, since early treatment is imperative to attenuate the numerous consequences related to psychopathy along the lifespan. For instance, longitudinal research has shown that narcissism, impulsivity, and CU traits as measured by the Antisocial Process Screening Device (APSD) significantly predicted the "meanness" (e.g., lack of empathy, callousness, cruelty) domain of the Triarchic Psychopathy

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Measure (TriPM) later on, in young adulthood (β = 0.39, 0.24, and 0.44, respectively).[12] In addition, data from a child sample highlights the role of narcissism as an important predictor of aggression above and beyond CU traits.[10] Nevertheless, no studies have investigated the magnitude to which impulsivity and narcissism would explain concurrent pro- and antisocial behaviors in school children. To shed some light on this topic, the present study aimed to investigate the unique contribution of narcissism and impulsivity – in addition to CU traits – in explaining those behaviors, while also taking into account the role of gender.

Methods

Participants and procedures

A total of 249 schoolchildren (aged 9 to 12 years, 54.9% girls) participated in this research. All participants attended mainstream primary schools in the London area. This study was approved by the ethics committee of the Department of Psychology, Goldsmiths, University of London. Informed consent was obtained from the parents or guardians of each participant. The data presented in this study were collected as part of a larger study of child behavioral difficulties. All measures were completed by the participants, and there were no a priori exclusion criteria.

Measures

Antisocial Process Screening Device (APSD)[13]

The APSD is one of the most widely used measures to assess psychopathic traits in youth. It is a 20-item rating scale that can be completed by a parent or teacher, or self-rated. It comprises three subscales (CU, narcissism, and impulsivity). In the present study, self-reported APSD yielded adequate indices of internal consistency (Cronbach's α = 0.71; Guttman's λ^6 = 0.79).

Strengths and Difficulties Questionnaire (SDQ)[14]

The SDQ assesses five dimensions: peer relations (PR), conduct problems (CP), emotional problems (EP), prosocial behaviors (PB), and hyperactivity. It comprises 25 items on a three-point Likert-type scale (0 = not true, 1 = somewhat true, and 2 = certainly true). Again, the self-reported SDQ presented adequate indices of internal consistency in the present study (Cronbach's α = 0.75; Guttman's λ^6 = 0.82).

Data analysis

The dataset was coded and analyzed using SPSS version 20 and JASP version 0.8. To characterize the sample, frequencies, correlations, means, and standard deviations were calculated for the variables of interest. Inferential t-tests were used for comparisons between means for boys and girls. Hierarchical regression analyses were performed to understand the unique contributions of the predictors CU traits, narcissism, and impulsivity to pro- and antisocial behaviors defined as outcomes.

Results

Descriptive statistics and gender differences

For SDQ PB and CP, mean (SD) values were 7.99 (1.80) and 2.77 (1.99), respectively. Mean (SD) values for APSD CU traits, narcissism, and impulsive behavior were, respectively, 2.99 (1.77), 4.04 (2.67), and 4.18 (2.02). Aside from CU traits, all other variables showed statistically significant differences between boys and girls. Boys scored higher on CP, impulsive behavior, and narcissism than girls ($t_{1,228}$ = -4.89, p < 0.001, d = -0.65; $t_{1,226}$ = -2.27, p = 0.02, d = -0.30; $t_{1,226}$ = -3.53, p < 0.001, d = -0.47, respectively), whereas girls displayed elevated PB scores ($t_{1,225}$ = 2.89, p = 0.004, d = 0.39).

Correlations and predictors

As expected, CP was negatively linked with PB (r = -0.46), and positively associated with CU traits (r = 0.34), narcissism (r = 0.53), and impulsivity (r = 0.55). PB was negatively associated with CU traits, narcissism, and impulsivity (r = -0.56, -0.45, and -0.46, respectively). CU traits were associated with narcissism (r = 0.39) and impulsivity (r = 0.36). Finally, narcissism was positively linked with impulsivity (r = 0.46). All correlations were significant at p < 0.001.

Hierarchical regression analyses were performed with CU traits and gender as predictors firstly (Model 1). To understand the increment in the model, narcissism and impulsivity were added in the second step (Model 2). Interestingly, when using gender and CU traits alone to predict conduct problems, the model explained 19.4% of the variance. Nevertheless, adding narcissism and impulsivity resulted in a substantial increase in the amount of variance explained by the predictors (from 19.4 to 43.7%), although CU traits failed to retain their statistical significance. For the model exploring predictors of prosocial behaviors, the second model displayed better results when compared to the model that considered CU traits and gender alone. The amount of variance explained increased from 34% (first model) to 42.4% (second model), and gender failed to retain its statistical significance from step one to two (Table 1).

Discussion

In the current study, we primarily sought to examine the extent to which impulsivity and narcissism predicted concurrent prosocial and antisocial behaviors in schoolchildren over and above CU traits alone. To achieve these goals, hierarchical regression models were used. We found that there are differential predictors of the domains of pro- and antisocial behavior, which should not simply be seen as two sides of the same coin.

For PB, CU traits are the strongest (negative) predictor, although narcissism and impulsivity are also significant negative predictors. On the other hand, for prosocial behavior, when a model including CU traits, narcissism, and impulsivity was tested, CU traits were not a statistically significant predictor of antisocial behavior in this community sample of children. This finding is particularly

Table 1 Psychopathic personality traits predicting pro- and antisocial behaviors in 9-to-12-year-olds

	Prosocial behavior				Conduct problems			
	B	SE	β	p-value	B	SE	β	p-value
Model 1								
Constant	8.88	0.37	-	0.001	3.63	0.44	-	0.001
CU traits	-0.57	0.05	-0.55	0.001	0.34	0.06	0.30	0.001
Gender	0.55	0.19	0.15	0.006	-1.22	0.23	-0.30	0.001
Model fit	$F_{2,226} = 59.16$, p < 0.001 $R^2_{adj} = 34\%$				$F_{2,227} = 28.35$, p < 0.001 $R^2_{adj} = 19.4\%$			
Model 2								
Constant	10.10	0.40	-	0.001	1.43	0.43	-	0.001
CU traits	-0.42	0.05	-0.41	0.001	0.07	0.06	0.06	0.231
Gender	0.32	0.18	0.08	0.090	-0.80	0.20	-0.20	0.001
Narcissism	-0.10	0.04	-0.16	0.008	0.21	0.04	0.29	0.001
Impulsivity	-0.20	0.05	-0.23	0.001	0.36	0.05	0.36	0.001
Model fit	$F_{4,226} = 42.57$, p < 0.001 $R^2_{adj} = 42.4\%$				$F_{4,227} = 45.07$, p < 0.001 $R^2_{adj} = 43.7\%$			

SE = standard error.
For all predictors, collinearity values were acceptable, with the variance inflation factor ranging from 1.005 to 1.439. All tested models survived analyses of residuals (Durbin-Watson's values of 1.967 and 1.826 for prosocial behaviors and conduct problems, respectively).

interesting given the recent addition of the limited prosocial emotions specifier in DSM-5.[2]

One of the key reasons for including this specifier into the DSM-5 is to allow for specialized care, treatment, and research pathways for children who show both negative (i.e., antisocial) and positive behaviors (i.e., display of appropriate prosocial emotions). Our research has shown that early personality features (narcissism) and behavioral features (impulsivity) also make important contributions to child behavioral presentation. It should be noted that impulsivity was a statistically significant variable in all models tested in this study. In this sense, therapies directed at aggressive behaviors may be particularly relevant.[10] A similar pattern was observed for narcissism, which was also a statistically significant predictor of pro- and antisocial behavior, although less strong than impulsivity. Here, implications for clinical treatment might include transferring excessive focus from the individual (i.e., avoidance of fostering egocentricity features) and stressing perspective-taking abilities and empathy.[15,16]

To conclude, it is certainly relevant to consider gender and CU traits as important risk factors for the development of the psychopathic personality. However, a more comprehensive examination including the exploration of narcissism and impulsivity not only gives us a more robust picture – as explained by a significant increase in the variance explained – but also implications in terms of intervention designs aiming to prevent CP and promote prosocial behaviors among at-risk populations.[13] In addition, understanding the role of CU traits, alongside narcissism and impulsivity, in predicting CP may help researchers identify homogenous groups with greater accuracy, as well as contribute to capturing a richer picture of etiologies and trajectories of antisociality.[17,18]

Disclosure

The authors report no conflicts of interest.

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