Differentiating Impulsive and Premeditated Aggression: Self and Informant Perspectives Among Adolescents with Personality Pathology

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Abstract

Previous research has articulated the conceptual differentiation of impulsive and premeditated aggression. Little, if any, of this research has examined personological differences among adolescents with aggression-oriented pathology, and little, if any, has examined both self and informant perspectives. The current study examined such differentiation within a Conduct Disorder population in which normal and pathological personality characteristics were examined via self- and informant-report. Results indicated the two forms of aggression were independent: high impulsive aggression was associated with high Neuroticism, but high premeditated aggression was associated with low Agreeableness and high Extraversion. Overall, adolescents high in impulsive aggression had a pattern of personality characteristics that are seen as socially-detached and emotionally volatile. In contrast, adolescents high in premeditated aggression had a pattern of characteristics seen as egocentric and socially-engaged but without concern for others. The results have implications for the social and motivational mechanisms producing the two forms of aggression.

Aggressive behavior is potentially damaging in both normal and pathological populations. In the study of aggression, physical aggression has frequently been classified as either impulsive or premeditated (Barratt, 1991; Barratt, Stanford, Kent, & Felthous, 1997; Dodge & Coie, 1987). Impulsive aggression is reactive, emotionally charged, and uncontrolled; premeditated aggression is proactive, planned, unemotional, and highly controlled (Stanford et al., 2003). Although there are clear conceptual differences between these forms of aggression, empirical differences have been ambiguous.

There are at least two important empirical issues regarding impulsive and premeditated aggression – *whether* they are different and, if so, *how* they are different. Controversy has emerged regarding the independence of the forms of aggression (Bushman & Anderson,

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2001; Kempes, Matthys, de Vries, & van Engeland, 2005; Miller & Lynam, 2006). This controversy casts doubt on the differentiation of the forms of aggression. Similarly, several studies of aggressive adults samples have examined the underlying personological differences between the two forms of aggression. For example, Stanford et al. (2003) found that impulsive aggression was related to high neuroticism, while. premeditated aggression was related to high psychoticism and neuroticism, but to low extraversion. Miller and Lynam (2006) examined the relationship between reactive (impulsive) and proactive (premeditated) aggression and the five-factor model of personality, finding that reactive aggression was related to high neuroticism and low agreeableness, while proactive aggression was related solely to low agreeableness. The analysis of personological differences between the two forms of aggression is important because it helps elucidate the motivational and social mechanisms that underlie aggressive behavior.

The current study addresses these issues, extending previous examinations in at least three ways. First, the current study includes an adolescent community sample diagnosed with Conduct Disorder (CD). Little research has investigated impulsive and premeditated aggression in CD samples, despite the prevalence of aggressive behavior in this population. Most studies of impulsive and premeditated aggression have involved either undergraduate samples or pathological adult samples, and the implications of that research may have limited generalizability to adolescents with CD. Second, the current study includes both self and informant perspectives of the personological correlates of the two forms of aggression. Although many studies usefully examine self-report data, informant-based reports of personality provide valuable complementary information. Informants can provide perspectives that can reveal personological implications hidden in self-report (Oltmanns, Friedman, Fiedler, & Turkheimer, 2004; South, Oltmanns, & Turkheimer, 2005), and they can provide insight into the way that a target individuals' aggression is viewed by others. Finally, the current study examines the differentiation from both a normal personality perspective and a pathological personality perspective. The five-factor model of personality can be extended to the study of pathological personality; within this framework, personality pathology is conceptualized as extreme variations or maladaptive patterns of fundamental personality traits, with each form of pathology displaying a specific profile of trait scores (Lynam & Widiger, 2001). By correlating an individual's five-factor personality profile with profiles of the ten DSM-IV personality disorders, researchers can gain insight into pathological personality as well as normal personality characteristics. To our knowledge, no previous research has analyzed the two traditions in a single study.

Method

Participants

Adolescents (34 Male, 22 Female, 13–17 years of age; *M* age = 14.37 years) and their primary caregivers were recruited through newspaper advertisements in Houston, Texas.[1] Respondents appearing to meet criteria for the study participated in onsite screening interviews in which physical and psychiatric health (Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version; Kaufman et al., 1997), intellectual function (Wechsler Abbreviated Scale of Intelligence; *M* Full Scale Score = 89.55; The Psychological Corporation, 1999) and history of physical aggression (Lifetime History of Aggression; *M* Score = 19.87; Coccaro, Berman, & Kavoussi, 1997) were assessed. In addition, participants completed the Impulsive/Premeditated Aggression Scale (IPAS; Stanford et al., 2003) and the Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992).

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[1]Data from the participants in this study was also examined in Furr, Dougherty, Marsh, & Mathias (2007). However, the questions and analyses addressed in this article are entirely independent of those addressed in Furr et al. (2007).

All participants met DSM-IV (1994) criteria for Conduct Disorder. Exclusionary criteria included: (1) IQ less than 70; (2) family history of Axis I psychiatric disorders; (3) a significant medical condition; (4) psychoactive medication use within the past year; or (5) positive drug/alcohol screen at time of testing. A trained interviewer, overseen by a psychiatrist, conducted semi-structured diagnostic interviews separately for the adolescent and the primary caregiver. Diagnoses were determined by consensus of the research team through review of all information from both the adolescent and parent, using the *Best Estimate Diagnostic Procedure* (Kosten & Rounsaville, 1992). Potential participants were excluded if they met criteria for DSM-IV disorders besides CD, but comorbidity with Attention Deficit/Hyperactivity Disorder was not exclusionary due to the high co-occurrence of these disorders.

Impulsive/Premeditated Aggression Scale (IPAS)

The IPAS (Stanford et al., 2003) assesses impulsive and premeditated aggressive acts during the last 6 months. Items are rated on a 5-point Likert-type scale (Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree) and are scored to yield two subscale scores: impulsive aggression (IA) and premeditated aggression (PM). The IPAS has been validated for adolescents (Mathias et al., 2007), and its reliability estimates range from .72 to .82 (Kockler et al., 2006; Mathias et al., 2007; Stanford et al., 2003).

Revised NEO Personality Inventory (NEO-PI-R)

The NEO-PI-R (Costa & McCrae, 1992) is a 240-item questionnaire assessing normal personality. The NEO-PI-R provides scores for five personality factors (i.e., Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness), each of which includes six more focused facets (e.g., Impulsivity, Angry Hostility). Items are rated on a 5-point Likert-type scale (Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree). The NEO-PI-R has acceptable convergent and discriminant validity for use among adolescent samples (De Fruyt, Hoekstra, & Rolland, 2000), and longitudinal studies support the translation of NEO-PI-R traits to adolescents as young as 12 years old (McCrae et al., 2002). Adolescents provided self-report, and their primary caregivers provided informant-report ratings of the adolescents.

Personality Disorder (PD) Profile Scores

Derived from the NEO-PI-R responses, two sets of personality pathology scores were computed for each participant. Ten self-reported pathology scores were computed by correlating a participant's profile of self-reported NEO-PI-R facet scores with 10 personality disorder prototype profiles of NEO-PI-R facet scores (Lynam & Widiger, 2001). A positive correlation for a particular prototype indicates that the participant's profile of self-reported facet scores is similar to the profile of traits characterizing people with that pathology. Another 10 pathology scores were computed for each participant by correlating a participant's profile of informant-reported NEO-PI-R facet scores with each of the 10 prototype profiles of NEO-PI-R facet scores. A positive correlation for a particular prototype indicates that the participant's informant sees the participant as having traits characterizing people with that form of pathology.

Results

Descriptive Statistics and Reliabilities

For the IPAS, means and standard deviations are: IA, M = 3.14 and SD = .65; PM, M = 3.39 and SD = .71). For the NEO-PI-R, the self-reported factor means ranged from lows of 2.90 (Agreeableness) and 2.92 (Conscientiousness) to a high of 3.27 (Extraversion), and the informant-reported factor means similarly ranged from 2.49 (Conscientiousness) and 2.68 (Agreeableness) to 3.25 (Extraversion). Self-reported factor standard deviations ranged from .

20 (Openness) to .34 (Extraversion), and informant-reported factor standard deviations ranged from .24 (Openness) to .40 (Agreeableness).

The IPAS and the NEO-PI-R showed generally acceptable levels of reliability. Reliabilities for the self-reported NEO-PI-R scales ranged from .46 (Openness) to .81 (Extraversion and Conscientiousness) (M = .73), and reliabilities for the informant-reported NEO-PI-R scales ranged from .66 (Openness) to .87 (Agreeableness) (M = .80). Note that the relatively low reliability Openness scale indicates that the analysis of this scale should be interpreted with caution.[2]

Overlap Between Impulsive Aggression (IA) and Premeditated Aggression (PM) Scale Scores

Overlap between scores on IA and PM was minimal. The correlation between the scales was small and nonsignificant (r = .16, p > .05), which is consistent with previous findings that the two forms of aggression are relatively independent when measured by the IPAS (Stanford et al., 2003).

Differentiating the Personality Correlates of IA and PM

To examine the personological implications of impulsive aggression and premeditated aggression, we conducted correlational and regression analyses, presented in Tables 1 and 2. The left-most columns of the tables present correlations between the IA and PM scales on one hand and the NEO trait and pathology profile scores on the other hand (as completed through self-reports and informant-reports). The right-most columns present the results of several multiple-regression analyses. In each regression analysis, IA and PM scores were predictors of either NEO-PI-R factor scores or pathology scores. One set of analyses focused on self-reported NEO-PI-R factor scores, one set focused on informant-reported NEO-PI-R factor scores, one set focused on pathology scores derived from self-reported NEO-PI-R profiles, and one set focused on pathology scores derived from informant-reported NEO-PI-R profiles.

As presented in Table 1, analyses of trait scores begin to reveal the natures of impulsive aggression and premeditated aggression. Impulsive aggression is most closely associated with high Neuroticism, as measured through self-reports and informant-reports. Facet-level analyses provide deeper insight into the association between IA and Neuroticism – IA is most strongly reflected in Anxiety, Depression, and Impulsivity. In contrast, PM is associated with low Agreeableness (from self-reports) and high Extraversion (from informant-reports). Again, facet-level analyses provide additional insight into the association between PM and informant-reported Extraversion – it is strongly associated with Assertiveness and Activity but not with Gregariousness and Warmth. This pattern of associations suggests that adolescents with high PM are seen as having relatively high energy and high dominance, but also seen as being relatively cold and as not desiring to genuinely affiliate with others.

As presented in Table 2, analyses of personality pathology scores also provide informative perspectives on impulsive and premeditated aggression. In general, results suggest that adolescents with relatively high IA are seen as somewhat socially-detached but not with a disregard for others. Self-reports provide little insight, but informant-reports reveal that targets' IA is associated with a variety of pathology scores. Adolescents with high IA are seen as having traits that are positively related to Schizoid PD and Schizotypal PD (Cluster A disorders), negatively related to Antisocial PD, Histrionic PD, and Narcissistic PD (Cluster B disorders), and positively related to Avoidant PD and Dependent PD (Cluster C disorders). In general, results suggest that adolescents with relatively high PM are egocentric and socially-engaged

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[2]Although the sample sizes for the sexes preclude precise estimation of sex differences in the results that follow, an examination revealed no sex differences that affect the conclusions drawn in the current paper.

but independent and without concern for others' rights or welfare. Specifically, adolescents with high PM describe themselves with traits related to Antisocial PD, Narcissistic PD, and (a lack of) Dependent PD. Similarly, informants describe adolescents with high PM as having traits associated with Antisocial PD and Narcissistic PD, and they additionally describe them as having traits that are negatively related to Schizoid PD and Schizotypal PD, Avoidant PD, and Dependent PD.

Discussion

The current study examined two issues in the empirical differentiation of impulsive and premeditated aggression. Results indicated that the two forms of aggression were relatively independent, and they provided insight into the personological nature of the difference between impulsive and premeditated aggression. An important aspect of the current study was the ability to examine the personological differences from both self and informant perspectives. Consistent with previous research in personality pathology (Klonsky, Oltmanns, & Turkheimer, 2002), informant reports provided a valuable and distinctively different perspective on the personalities of the CD adolescents in the current study. Analyses revealed several normal and pathological differences between the two forms of aggression.

The personalities of CD adolescents high in impulsive aggression were primarily characterized by high neuroticism in both self- and informant-reports. This suggests that impulsive aggression may be rooted in negative emotionality, a conclusion further supported by the positive relationships found between impulsive aggression and scores related to Cluster C personality disorders. The presence of such associations in informant-reports may indicate that others view the CD adolescents high in impulsive aggression as being socially awkward and unusual.

In contrast, CD adolescents high in premeditated aggression were viewed by others as outgoing and dominant, and they described themselves as being disagreeable and cold. The complementary perspectives of the self- and informant-based reports may underscore an interpersonal orientation based on deception and manipulation. The personalities of CD adolescents high in premeditated aggression displayed none of the negative emotionality or social awkwardness seen in adolescents high in impulsive aggression. These adolescents also displayed pathological relationships which indicate that they may be interpersonally detached or manipulative (traits related to Cluster B personality disorders).

Summary

This study was designed to evaluate whether impulsive and premeditated aggression are independent in CD adolescents, and to examine potential personological differences between the two forms of aggression. Both normal and pathological perspectives on personality were assessed via self- and informant-reports on the NEO-PI-R, while the two subtypes of aggression were measured by self-report on the IPAS. Independence between the two forms of aggression was displayed through both correlational analysis and personological differences. Impulsive aggression was associated with high neuroticism as well as to trait profiles related to Cluster A and C personality disorders, while premeditated aggression was associated with low agreeableness, high extraversion, and trait profiles related to Cluster B personality disorders.

Acknowledgments

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Table 1

Associations Between Impulsive Aggression, Premeditated Aggression, and NEO-PI-R Trait Scores

| | Correlations | | | | Regression Analyses | | | | | |
| | With Self-report NEO | | With Informant-report NEO | | With Self-report NEO | | | With Informant-report NEO | | |
Factor/Facet	r_{IA}	r_{PM}	r_{IA}	r_{PM}	R^2	β_{IA}	β_{PM}	R^2	β_{IA}	β_{PM}
Neuroticism	.59 ***	.16	.37 **	.01	.37***	.58 ***	.11	.11 *	.34 *	−.11
Anxiety	.38**	−.06	.39 **	.10	.17**	.41 **	−.08	.11 *	.34 *	−.03
Angry Hostility	.24+	.17	.04	.02	.11 *	.24 +	.18	.00	.03	.01
Depression	.52***	.03	.36 **	−.08	.29***	.54 ***	−.01	.14 *	.36 **	−.18
Self-Consciousness	.34**	.06	.32 *	−.02	.12*	.34 *	.00	.09+	.30 *	−.13
Impulsiveness	.54***	.31 *	.18	.12	.35***	.50 ***	.24 *	.02	.13	.04
Vulnerability	.36**	.12	.19	−.07	.16**	.36 **	.11	.05	.18	−.16
Extraversion	.01	.01	−.10	.38 **	.00	.00	.01	.18**	−.16	.42 **
Warmth	.06	−.22	.03	.11	.07	.09	−.26+	.03	.03	.15
Gregarious	.00	−.06	−.11	.07	.00	.01	−.06	.02	−.11	.12
Assertive	−.02	−.04	−.06	.43 **	.00	.00	−.03	.18**	−.15	.43 **
Activity	−.19	.13	−.04	.40 **	.06	−.21	.19	.17**	−.12	.42 **
Excitement seeking	−.03	.15	−.33 *	.14	.03	−.05	.17	.15*	−.37 **	.20
Positive Emotions	.14	.11	.13	.33 *	.02	.11	.07	.12*	.08	.33 *
Openness	.12	−.19	.24 +	.09	.05	.17	−.20	.07	.24 +	.06
Fantasy	.05	−.06	.12	−.06	.01	.09	−.03	.02	.13	−.09
Aesthetics	.07	−.11	.13	.06	.02	.11	−.09	.03	.14	.08
Feelings	.29*	−.06	.18	.08	.10+	.31 *	−.10	.03	.16	.02
Actions	−.06	.06	.21	−.02	.01	−.09	.04	.04	.21	−.09
Ideas	−.16	−.20	.17	.23 +	.06	−.13	−.18	.08	.15	.22
Values	.15	−.12	−.06	−.02	.04	.16	−.17	.00	−.03	.04
Agreeableness	−.06	−.27 *	.22 +	−.09	.11 *	−.05	−.32 *	.07	.26 +	−.12
Trust	.04	−.13	.08	−.19	.03	.05	−.16	.04	.14	−.16
Straightforwardness	−.22	−.08	.23 +	−.05	.06	−.23 +	−.07	.06	.26 +	−.07

	Correlations				Regression Analyses					
	With Self-report NEO		With Informant-report NEO		With Self-report NEO			With Informant-report NEO		
Factor/Facet	r_{IA}	r_{PM}	r_{IA}	r_{PM}	R^2	β_{IA}	β_{PM}	R^2	β_{IA}	β_{PM}
Altruism	.06	−.20	.10	−.03	.07	.06	−.27 +	.01	.10	−.05
Compliance	−.03	−.24 +	.13	−.04	.08 +	−.01	−.29 *	.02	.15	−.04
Modest	−.01	−.26 +	.08	−.11	.09 +	.01	−.29 *	.02	.11	−.12
Tender	−.07	−.07	.34 **	.08	.03	−.09	−.11	.11 *	.33 *	.01
Conscientiousness	−.01	−.05	.27 *	.25 +	.01	−.02	−.10	.14 *	.24 +	.24 +
Competence	.02	.01	.19	.42 **	.00	.01	−.01	.19 **	.12	.40 **
Order	−.11	.10	.25 +	.03	.03	−.13	.12	.07	.27 +	.01
Dutiful	−.13	−.22 +	.27 *	.04	.09 +	−.11	−.25 +	.08	.28 *	.02
Achievement	.24+	.24 +	.18	.34 *	.10 +	.20	.20	.13 *	.13	.31 *
Self-Discipline	−.05	−.19	.27 *	.26 +	.06	−.05	−.23 +	.16 **	.25 +	.26 *
Deliberate	.00	−.15	.07	.10	.05	.00	−.21	.02	.07	.12

Note. N = 56.

†
p < .10,

*
p < .05,

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p < .01,

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p < .001.

Table 2

Associations Between Impulsive Aggression, Premeditated Aggression, and Personality Pathology Profile Scores

Personality Disorder	Correlations				Regression Analyses					
	With Self-report NEO		With Informant-report NEO		With Self-report NEO			With Informant-report NEO		
	r_{IA}	r_{PM}	r_{IA}	r_{PM}	R^2	β_{IA}	β_{PM}	R^2	β_{IA}	β_{PM}
Paranoid	.21	.19	.18	.16	.07	.18	.17	.05	.16	.14
Schizoid	−.01	−.04	.37 **	−.24 +	.00	.00	−.05	.23 **	.42 **	−.31 *
Schizotypal	.18	.03	.30 *	−.18	.03	.18	.00	.14 *	.34 *	−.24 †
Antisocial	.12	.30 *	−.34 **	.19	.10 †	.07	.30 *	.17 **	−.38 **	.25 †
Borderline	.33 *	.22	.00	−.05	.14 *	.31 *	.17	.00	.01	−.05
Histrionic	.14	.20	−.33 *	−.01	.05	.11	.19	.11 *	−.34 *	.05
Narcissistic	.07	.33 *	−.24 +	.29 *	.11 *	.01	.34 *	.17 **	−.30 *	.34 *
Avoidant	.17	−.08	.41 **	−.24 +	.04	.19	−.11	.27 ***	.47 ***	−.32 *
Dependent	.09	−.27 *	.25 +	−.38 **	.09 †	.14	−.30 *	.25 ***	.32 *	−.44 ***
Obsessive-Compulsive	−.09	−.04	.25 +	.19	.01	−.08	−.03	.09 †	.23 †	.16

Note. N = 56.

†
p < .10,

*
p < .05,

**
p < .01,

***
p < .001.