DSM-5 Alternative Model of Personality Disorder Dysfunctional Personality Traits as Predictors of Self-Reported Aggression in an Italian Sample of Consecutively Admitted, Personality Disordered Psychotherapy Patients.

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Abstract

In order to assess the relationships between the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorder (*DSM-5*) Alternative Model of Personality Disorder (AMPD) maladaptive personality traits and self-reports of aggression, 508 Italian adult participants who met at least one *DSM-IV* axis II/*DSM-5* Section II personality disorder diagnosis according to the Structured Clinical Interview for DSM-IV Axis II Personality Disorders, Version 2.0 (SCID-II), were administered the Personality Inventory for *DSM-5* (PID-5), and the Aggression Questionnaire (AQ). According to our multiple regression results, PID-5 Hostility, Callousness, and Risk taking trait scale scores explained a large amount of variance in AQ Physical Aggression score ($R^2_{adjusted}$ = .44, p <.001). Moreover, our hierarchical regression data indicated that the linear combination of Hostility, Callousness and Risk taking explained more than 20% of the variance in the AQ Physical Aggression scale scores that was left unexplained by selected continuously-scored *DSM-IV* axis II/*DSM-5* Section II PDs, whereas SCID-II Paranoid, Narcissistic, Borderline, and Antisocial PDs added only 4% of variance to the amount of variance in AQ Physical Aggression score (i.e., 44%) that was already explained by the PID-5 trait scale scores. As a whole, our findings seemed to suggest that specific *DSM-5* AMPD traits may represent important predictors of subject's disposition towards physical aggression in personality-disordered psychotherapy patients, at least when it was assessed using the AQ PA self-report scale.

Keywords: aggression; alternative model of personality disorders; Personality Inventory for *DSM-5*; personality disorders; psychotherapy patients.

DSM-5 Alternative Model of Personality Disorder Dysfunctional Personality Traits as Predictors of Self-Reported Aggression in an Italian Sample of Consecutively Admitted, Personality Disordered Psychotherapy Patients.

Aggressiveness is a personality characteristic relevant for both clinicians and researchers (Dunne, Gilbert, & Daffern, 2017a, b). Several studies have demonstrated that aggressiveness is a stable personality trait, and that aggressive traits assessed early in life are predictive of later adult criminal behavior (Huesman & Eron, 1992; Huesman, Eron, Lefkowitz, & Walder, 1984; Pulkkinen & Pitkanen, 1993; Raine et al., 2006). A significant association has also been shown in adolescent subjects between aggressiveness and reckless behavior, potentially injurious to self and others (Arnett, 1995; Benning et al., 2005).

Notwithstanding its social and clinical relevance, currently no unique definition of aggression exists, although most of current models of aggression conceive aggression as a multi-dimensional construct. For instance, several distinctions among aggressive behaviors have been proposed (e.g., reactive aggression and proactive aggression; Raine et al., 2006; relational aggression; Reardon, Tackett, & Lynam, 2017); interestingly, these different manifestations of aggression have shown distinct relationships with Five-Factor Model traits (Miller, Zeichner, & Wilson, 2012; Reardon et al., 2017), although Antagonism (i.e., low Agreeableness) seemed to represent a Five-Factor Model dimension that is common to all aggressive behaviors (Dunne et al., 2017a,b).

Refining a previous assessment instrument for measuring aggression, Buss and Perry (1992) proposed the Aggression Questionnaire (AQ) as a self-report measure for aggressive behavior. Based on extensive factor analysis results, Buss and Perry (1992) proposed that the AQ was composed of four distinct, albeit correlated sub-scales. Physical Aggression and Verbal Aggression were developed to index motor aggression, Anger was thought to assess the emotional dimension of aggression, whereas Hostility was intended to measure the

cognitive dimension of aggressive behaviors. Thus, the first two scales represented the instrumental component of aggression; AQ Anger implies physiological activation and represents the emotional component, while hostility involves feelings of opposition and injustice thus representing the cognitive component (Buss & Perry, 1992). From this perspective, anger is thought to act as a psychological bridge connecting instrumental and cognitive components (Buss & Perry, 1992). Providing a scale that exclusively assesses physical aggression represents a major feature of the AQ, because physical aggression represents a particularly obnoxious manifestation of aggression (e.g., Tremblay et al., 2004) which is particularly relevant for PD assessment (e.g., Kolla, Meyer, Bagby, & Brijmohan, 2017). The Italian translation of the AQ showed adequate psychometric properties both in non-clinical samples (Fossati et al., 2003), and among clinical participants (Fossati et al., 2007).

A substantial amount of studies documented a significant association between aggression and personality dysfunctions (Dunne et al., 2017a,b; Lobbestael, Cima, & Lemmens, 2015; Reardon et al., 2017). In their extensive review of the available empirical literature, Lobbestael and colleagues (2015) suggested that Antisocial PD, Borderline PD, and Narcissistic PD were significantly associated with heightened risk for both proactive and reactive aggression, whereas Paranoid PD traits were uniquely related to reactive aggression.

Notwithstanding these relevant findings on the associations between selected PDs and aggression, a substantial body of evidence documented that *Diagnostic and Statistical Manual of Mental Disorder-Fourth Edition* (*DSM-IV;* American Psychiatric Association, 1994*)* axis II/*DSM-5* Section II (APA, 2013) personality disorder diagnosis are plagued by a number of problems, such as lack of empirically validated cutoffs, extensive comorbidity, and temporal instability (Widiger & Trull, 2007). The overlap between criteria of the current *DSM-IV* axis II/*DSM-5* Section II PD diagnose posed significant diagnostic problems

(Dunne, Gilbert, & Daffern, 2017b). Indeed, angry and aggressive behavior is a primary diagnostic feature for both Antisocial PD and Borderline PD, and hostile and antagonistic features are associated with other PD subtypes (APA, 2013; Dunne et al., 2017b). As a result, it is difficult to conclude whether aggressive behavior could be directly inferred by any of the specific PD diagnoses (Dunne et al., 2017b; Gilbert & Daffern, 2011). Moreover, it is not well established whether aggressive behavior is associated with specific personality traits that manifest differently across the PD subtypes, or the result of overall personality pathology (Dunne et al., 2017b). Indeed, PD traits co-occur, and consequently the unique relationship between each PD diagnoses and aggression is highly confounded (Dunne et al., 2017b; Gilbert & Daffern, 2011).

In order to overcome the difficulties related to *DSM-IV* axis II/*DSM-5* Section II PD diagnoses, *DSM-5* (APA, 2013) provided an Alternative Model of Personality Disorder (AMPD), in Section III. A key aspect of the *DSM-5* AMPD is an empirically based model of maladaptive personality domain and traits (APA, 2013; Krueger & Markon, 2014), which synthesizes existing dimensional models of personality dysfunctions, focused on maladaptive variants (e.g., Clark, 2007). The AMPD comprises five major domains of maladaptive personality—namely, Negative Affectivity (frequent and intense experiences of high levels of a wide range of negative emotions), Detachment (avoidance of socio-emotional experience), Antagonism (behaviors that put the individual at odds with other people), Disinhibition (orientation toward immediate gratification and impulsive behavior), and Psychoticism (a wide range of culturally incongruent odd, eccentric, or unusual behaviors and cognition). These domains may be articulated into 25 specific maladaptive personality traits (e.g., Anxiousness, Depressivity, Attention Seeking, Risk Taking, Eccentricity, etc.), which represent specific aspects of each general maladaptive domain (Krueger & Markon, 2014). *DSM-5* AMPD traits and domains can be well understood as a maladaptive extension of the

Five-Factor Model of personality (e.g., APA, 2013; Suzuki, Samuel, Pahlen, & Krueger, 2015; Wright, Pahlen, & Krueger, 2017).

In order to integrate these personality traits into *DSM-5*, Krueger and colleagues (2012) developed the maladaptive personality trait model and its corresponding instrument, the Personality Inventory for *DSM-5* (PID-5). The PID-5 is a 220-item self-report questionnaire with a 4-point response scale; it yields 25 trait scales that can be combined to also delineate 5 domain scales (Negative Affectivity, Detachment, Antagonism, Disinhibition, and Psychoticism). A substantial body of studies documented that PID-5 has sound psychometric properties, including nomological network validity data (e.g., Al-Dajani et al., 2016; Bach et al., 2017; De Fruyt et al., 2014). The PID-5 has been translated and validated in a number of languages, including Italian (Fossati, Krueger, Markon, Borroni, & Maffei, 2013).

Although Strickland and colleagues (2013) showed that psychopathic callous aggression may be adequately described by traits from the PID-5 in a sample of undergraduate psychology students and Sleep and colleagues (Sleep, Hyatt, Lamkin, Maples-Keller, & Miller, 2018) compared the relations found between the PID-5 and a measure of the Five Factor Model in relation to externalizing and internalizing symptoms, to the best of our knowledge only one study directly examined the relationships between aggression and the *DSM-5* maladaptive domains and facets. Recently, Dunne and colleagues (2017a) found the PID-5 facets of Hostility and Risk Taking to be significantly associated with aggression in a sample of 208 male offenders; the authors proposed that hostile and risk taking traits may explain the associations between aggression and Antisocial, Borderline, Paranoid, and Narcissistic PDs (Dunne et al., 2017a). Dunne and colleagues (2017a) findings highlighted the importance of a facet-level analysis when exploring the PD-aggression relationship and stressed the need for replication studies in community and, mostly, clinical samples.

Against this background, the major aim of the present study was to assess the relationships between PID-5 traits and physical aggression in a sample of psychotherapy participants suffering from at least one personality disorder. This sample was expected to include participants who shared the presence of personality pathology as common clinical issue, while differing in their specific pathological personality profiles. In the present study, we relied on the Aggression Questionnaire (AQ) as a self-report measure of subject's level of aggression; in particular, we focused on the AQ Physical Aggression scale as a measure of physical aggression. Indeed, the relationship between maladaptive personality traits and physical aggression has not been extensively studied in clinical samples (e.g., Dunne et al., 2017a, b; Kolla et al., 2017). Understanding how PID-5 traits relate to aggressiveness and examining similarities and differences between PID-5 Hostility and AQ Hostility, may be useful in advancing our knowledge on the predisposing role of *DSM-5* maladaptive personality traits towards aggressive behaviors. Moreover, because the AQ allowed to assess also verbal aggression, anger and hostility, we also evaluated the associations between these aspects of aggressiveness and PID-5 traits.

In the present study, hierarchical regression models were used to evaluate the relative usefulness of the PID-5 trait scales in explaining the individual differences in self-reports of aggression (i.e., variance in the AQ scale scores) when compared to continuously-scored (i.e., number of diagnostic criteria) *DSM-IV* axis II/*DSM-5* Section II PDs, which were assessed using the Structured Clinical Interview for *DSM-IV* Axis II Personality Disorders, Version 2.0 (SCID-II; First et al., 1994). Although the SCID-II was developed to asses *DSM-IV* Axis II PDs, we considered it as a measure of *DSM-5* Section II PDs because the PD diagnostic criteria which are listed in the *DSM-5* Section II were retained with no changes from the *DSM-IV* Axis II classification system (APA, 2013). In all statistical analyses, we considered SCID-II PDs as continuous variables, because available taxometric studies supported the

hypothesis that *DSM-IV* axis II/*DSM-5* Section II PDs should be conceived as dimensions rather than categories (e.g., Haslam, Holland, & Kuppens, 2007).

Based on Dunne and colleagues' (2017a) findings, we hypothesized that *DSM-5* AMPD Hostility and Risk taking traits represented significant predictors of self-reported physical aggression in multiple/hierarchical regression analyses. Although AQ Hostility (i.e., feelings of opposition and injustice), and PID-5 Hostility (i.e., irritability in response to minor slights and insults) were developed to map different construct, hierarchical regression analyses were carried out in order to evaluate if PID-5 Hostility trait scale scores explain a significant amount of variance in the AQ Physical Aggression scale when the effect of AQ Hostility and Angry scale scores, respectively, was controlled for. Finally, Lobbestael and colleagues' (2015) results led us to hypothesize that SCID-II Paranoid, Narcissistic, Borderline, and Antisocial PDs were significantly associated with the AQ Physical Aggression score in multiple regression analyses.

Methods

Participants

A total of 810 Italian adult participants, who were consecutively admitted January 2014 to December 2017 to the Clinical Psychology and Psychotherapy Unit of the San Raffaele Hospital of Milan, were administered the Italian translations of the Structured Clinical Interview for *DSM-IV* axis II Personality Disorders, Version 2.0 (SCID-II; First et al., 1994), PID-5, and AQ as part of their routine clinical assessment. The present sample includes 268 patients from a previous study (Fossati et al., 2016); however, that aforementioned study did not include any data from the AQ, and the current results represent a novel use of the data. Ninety-two participants (11.4%) were excluded from the study because they yielded missing data on the PID-5 and/or AQ. Little MCAR test χ^2 (1) = 2.29, p > .10 showed that missing values were completely at random. No significant differences

between participants who yielded complete responses and participants who yielded missing values on participant's mean age, $t(808) = -1.28$, $p > .20$, $d = -0.09$ and gender χ^2 (1)= 0.13, $p > .60$, $\varphi = -.02$.

Based on SCID-II results, 508 participants (70.8% of all participants who reported complete answers on the PID-5 and the AQ) received at least one *DSM-IV* axis II/*DSM-5* Section II personality disorder diagnosis, thus representing our final sample. Considering participants who received at least one PD diagnosis, 268 (52.4%) participants were female, 240 (47.6%) were male. Participant's mean age was 41.56 years, *SD* = 12.73 years. According to SCID-II assessment, the most frequently diagnosed PDs were PD with Other Specification (i.e., Mixed PD), *n* = 164, 32.3%, Narcissistic PD, *n* = 159, 31.3%, Borderline PD, *n* = 81, 15.9%, and Histrionic PD, *n* = 48, 9.4%. Schizoid PD, *n* = 6, 1.2%, represented the least frequently observed *DSM-IV* axis II/*DSM-5* Section II PD diagnosis in our sample.

Four hundred twelve (57.4%) participants received at least one *DSM-5* non-PD psychiatric disorder diagnosis. In this sample, mood disorders (*n* = 178, 24.8%) were the most frequently diagnosed *DSM-5* non-PD psychiatric disorders. Non-PD psychiatric disorder diagnoses were assessed by the clinicians who were following the participants in treatment or by trained clinical psychologists during their initial assessment interviews. Because non-PD psychiatric disorder diagnoses were not assessed using standardized interviews and were not the focus of this research, they were used only for descriptive purposes in the current study.

All participants were admitted to the Clinical Psychology and Psychotherapy Unit in order to receive psychotherapy treatment for interpersonal difficulties and/or problems with behavior and emotional regulation on a strictly voluntary basis; inpatient participants were referred to the Unit by the psychiatrists who were following them in treatment.

Potential participants were screened for the following exclusionary criteria: (1) not being an Italian native speaker; (2) age less than 18 years; (2) education level lower than elementary school; (3) IQ less than 80; (4) diagnosis of schizophrenia, schizoaffective disorder, schizophreniform disorder, or delusional disorder according to *DSM-IV* diagnostic criteria; and (5) diagnosis of dementia or organic mental disorder according to *DSM-IV* diagnostic criteria. All participants in the current research passed this screening procedure.

Participants with psychiatric disorder diagnoses were administered SCID-II interview by expert trained raters and completed the PID-5 and the AQ after acute symptom remission according to the judgment of the clinicians who were following them in treatment to avoid confounding effects of psychiatric disorders on these measures (Zimmerman, 1994). The absence of acute symptom remission was considered an exclusion criterion from the study. SCID-II was considered as a measure of *DSM-5* Section II PDs because the PD diagnostic criteria which are listed in the *DSM-5* Section II were retained with no changes from the *DSM-IV* Axis II classification system (APA, 2013).

Procedures

Participants were asked to sign a written informed consent form to take part in the study. All measures were administered as part of routine clinical assessment. Participants were interviewed and administered the PID-5 and AQ questionnaires individually by clinical psychologists who were blind to the aim of the study. SCID-II interviews were carried out blind to PID-5 and AQ scores, and all self-report questionnaires were administered and scored blind to SCID-II interview scores. The order of measure administration was randomized. All participants volunteered to take part in the study after being presented with a detailed description and all were treated in accordance with the Ethical Principles of Psychologists and Code of Conduct. None of the participants received any direct or indirect incentive for participating.

Translation procedures. In the present study, all measures were administered to participants in their Italian translations. In the translation process, the authors closely followed Denissen, Geenen, van Aken, Gosling, and Potter's (2008) indications. The guiding principle in the translation and back-translation process was to respect the original meaning of the items. This process was iteratively carried until final approval of the official Italian translation of the PID-5 (Fossati et al., 2013), SCID-II (Maffei et al., 1997), and AQ (Fossati et al., 2003).

Measures

Structured Clinical Interview for *DSM-IV* Axis II Personality Disorders, Version 2.0

(SCID-II; First et al., 1994). The SCID-II is a 140-item semi-structured interview designed to provide both a categorical and dimensional (i.e., number of symptoms) assessment of *DSM-IV* PDs. For this study, the SCID-II was preceded by administration of its self-report screening questionnaire (PQ). The validity of the PQ as a measure for screening PD psychopathology has been previously reported (Richman & Nelson-Gray, 1994), and the SCID-II enables direct probing of negative PQ answers when this is considered clinically relevant (First et al., 1994). Only the SCID-II scores for the 10 PDs that were retained as categorical diagnoses in *DSM-5* Section II were considered in the present study. The interrater reliability and internal consistency of the Italian translation of the SCID-II in clinical participants has previously been demonstrated (Maffei et al., 1997).

Because ten trained expert clinical psychologists administered the SCID-II, in the present study we used a pairwise interview design (i.e., joint interview with live observer) in order assess the inter-rater reliability of SCID-II diagnoses. In the present study, the interrater reliability of SCID-II diagnoses was assessed on 435 (53.7%) consecutively admitted participants. For each of the first 435 participants, two interviewers were randomly extracted and assigned the role of interviewer and independent rater, respectively; each clinical

psychologist acted the same number of times as interviewer or independent rater. In the present study, the ICC values for the individual SCID-II PD symptom counts ranged from .84 (Avoidant PD) to .97 (Borderline PD), median ICC value = .93, *SD* = .04, all *p*s < .001. The chance-corrected agreement (i.e., Cohen *κ* coefficient value) on any dichotomous PD diagnosis was .92, $p < .001$, whereas a Cohen *κ* value of .84, $p < .001$ was observed for SCID-II Mixed PD.

Personality Inventory for *DSM-5* *(PID-5; Krueger* et al.*, 2012)*. The PID-5 is a 220-item self-report measure that assess pathological personality traits as defined in the Criterion B of the Alternative Model for Personality Disorders included in *DSM-5* Section III. The PID-5 consists of 25 primary scales that load onto five (Negative Affect, Detachment, Antagonism, Disinhibition and Psychoticism) higher order trait domains (Krueger et al., 2012). PID-5 items are rated on a 4-point Likert-type scale (0 = *very false or often false* to 3 = *very true or often true*) and they are summed to compose PID-5 trait scale scores. Each PID-5 item contributes to only one PID-5 trait scale; similarly, select PID-5 trait scale scores are aggregated to produce non-overlapping domain scales. The reliability and construct validity of the Italian translation of the PID-5 have been demonstrated (Fossati et al., 2013).

In the present study, internal consistency for all PID-5 trait scales was adequate, ranging from .73 (Restricted affectivity; MIC = .28) to .94 (Eccentricity; MIC = .53), with a median Cronbach *α* value of .86, *SD* = .06. Cronbach *α* values (and mean inter-item correlation values; MIC) for NA, Det, Ant, Dis, and Psy were .94 (MIC = .22), .95 (MIC = .29), .94 (MIC = .26), .90 (MIC = .17), and .95 (MIC = .35).

Buss-Perry Aggression Questionnaire (AQ; Buss & Perry,1992). The AQ is a 29 item self-report questionnaire based on a 5-point Likert scale (ranging from *1 = absolutely false* to *5 = absolutely true*) that was specifically developed to assess aggression. AQ instructions asked participants to indicate how uncharacteristic or characteristic each statement is in describing

himself/herself. This measure yielded four subscales – Physical Aggression (9 items), Verbal Aggression (5 items), Anger (7 items) and Hostility (8 items) – measuring four components of the aggression responses, and a total score; the higher the total score, the higher the level of aggression (Buss & Perry, 1992). The Italian translation of the AQ showed adequate reliability and construct validity (Fossati et al., 2003). In our sample, Cronbach α values (and mean inter-item correlation values; MIC) for the AQ Physical Aggression scale, Verbal Aggression scale, Anger scale, Hostility scale, and AQ total score were .90 (MIC = .51), .65 (MIC = .27), .86 (MIC = .46), .82, (MIC = .37) and .92 (MIC = .29), respectively. In the present study, we relied on the AQ Physical Aggression scale as a measure of physical aggression.

Data analysis

Cronbach α coefficient and mean inter-item correlation (MIC) were used as internal consistency measures. Pearson *r* coefficients with Bonferroni-corrected nominal *p*-level (i.e., $p < .05$) were used to evaluate the bivariate associations between the AQ scale scores, and the SCID-II and PID-5 continuously scored variables.

SCID-II PD scales and PID-5 trait scales showing positive bivariate associations (i.e., Pearson *r* values) with the AQ scales that were significant after Bonferroni correction were entered as predictors in separate multiple regression models; the variance inflation factor (VIF) was used to detect predictor collinearity (Cohen, Cohen, West, & Aiken, 2003). Only independent variables that proved to be significant predictors of the AQ scores in multiple regression models were retained for hierarchical multiple regression analyses.

Hierarchical multiple regression analyses were performed in order to assess if the PID-5 trait scale scores were significantly associated with the AQ scores over and above the amount of variance that was explained by SCID-II continuously assessed (i.e., number of

criteria) PD scales. Multicollinearity was tested by means of VIF index. Change in adjusted R^2 value (Cohen, 1988) was computed as effect size measures.

Results

Descriptive statistics for AQ scales, SCID-II PD scales (i.e., number of PD criteria met for each *DSM-IV* axis II/*DSM-5* Section II PD), and PID-5 traits scales, and Pearson *r* coefficients for the associations between AQ scale scores, and SCID-II PD scale scores and PID-5 trait scale scores are listed in Table 1. For Pearson *r* coefficients, the nominal significance level (i.e., $p < .05$) was corrected according to the Bonferroni procedure for multiple comparisons and set at $p < .00143$.

Consistent with previous reports (e.g., Krueger et al., 2012), in our study the 25 PID-5 trait scales were on average moderately and positively, inter-correlated, median *r* value = .31, *SD* = .17. The SCID-II PD scales and PID-5 trait scales that showed positive and significant Pearson *r* coefficient values in bivariate association analyses with the AQ scale scores were entered in multiple linear regression models. Multiple regression analysis results are summarized in Table 2.

Because the AQ provides a Hostility subscale, which was designed to measure the cognitive component of aggression according to Buss and Perry's (1980) model of aggression, we performed hierarchical regression analyses in order to evaluate if PID-5 Hostility trait scale scores did not explain a significant amount of variance in the AQ Physical Aggression scale scores when the effect of AQ Hostility scale scores was controlled for. As it was expected, in Step 1 of the hierarchical regression model the AQ Hostility scale was a significant predictor of the AQ Physical Aggression scale, $\beta = .28$, $p < .001$, change in adjusted R^2 value = .08, $p < .001$. When PID-5 Hostility trait scale was entered in Step 2, AQ Hostility dropped to non-significance, $\beta = -.03$, $p > .40$, whereas PID-5 Hostility trait scale was the only significant predictor of AQ PA scale, $\beta = .62$, $p < .001$, change in adjusted R^2

value = .29, p <.001, overall model adjusted R^2 value = .36, p <.001. Interestingly, the PID-5 Hostility scale score remained a significant predictor of the AQ Physical Aggression scale score in Step 2 of hierarchical regression analysis, β = .30, p <.001, change in adjusted R^2 value = .04, p <.001, even when AQ Anger scale score was controlled for in Step 1, β = .64, p <.001, overall model adjusted R^2 value = .45, p <.001.

Interestingly, similar considerations held for the AQ Verbal Aggression scale. AQ Hostility scale was a significant predictor of the AQ Verbal Aggression scale, β = .28, p <.001, in Step 1 of the hierarchical regression model, adjusted R^2 value = .08, p <.001. When PID-5 Hostility trait scale was entered in Step 2, AQ Hostility remained a significant predictor of the AQ Verbal Aggression scale β = .12, p <.05, whereas PID-5 Hostility trait scale, β = .53, p <.001, PID-5 Attention seeking trait scale, β = .14, p <.01, PID-5 Deceitfulness trait scale, β = -.26, p <.01, PID-5 Impulsivity trait scale, β = .18, p <.01, PID-5 Eccentricity trait scale, β = .19, p <.01, were significant predictor of AQ Verbal Aggression scale, change in adjusted R^2 value = .32, p <.001, overall model adjusted R^2 value = .40, p <.001. Similarly, PID-5 Hostility scale scores, remained a significant predictor, β = .24, p <.001, of the AQ Verbal Aggression scale score in Step 2 of hierarchical regression analysis when AQ Angry was controlled for in Step 1. Finally, the PID-5 Hostility scale scores, β = .54, p <.001, and PID-5 Impulsivity scale scores, β = .28, p <.001 remained significant predictors of the AQ Angry scale score in Step 2 of hierarchical regression analysis, change in adjusted R^2 value = .39, p <.001, even when AQ Hostility scale score was controlled for in Step 1, β = .44, p <.001, Step 1 adjusted R^2 value = .19, overall model adjusted R^2 value = .58, p <.001.

In our sample, Pearson r values of .21, p <.001, .21, p <.001, .26, p <.001, and .19, p <.01, were observed for the associations between PID-5 Hostility trait scale scores and the number of *DSM-IV* axis II/*DSM-5* Section II Paranoid, Narcissistic, Borderline, Antisocial

PD criteria, respectively. PID-5 Callousness trait scores correlated (Pearson *r* values) .28, .26, .16, .23, all *p*s <.001, with the number of *DSM-IV* axis II/*DSM-5* Section II criteria that were assessed using the SCID-II for Paranoid PD, Narcissistic PD, Borderline PD, and Antisocial PD, respectively. Finally, PID-5 Risk taking scale scores were not associated with the number of SCID-II assessed *DSM-IV* axis II/*DSM-5* Section II criteria for Paranoid PD, $r = .05$, $p > .30$, but it was significantly associated with Narcissistic PD, $r = .20$, $p < .001$, Borderline PD, $r = .30$, $p < .001$, and Antisocial PD, $r = .28$, $p < .001$.

Hierarchical regression models of SCID-II Paranoid PD, Narcissistic PD, Borderline PD, Antisocial PD, and PID-5 Hostility, Callousness, and Risk taking trait scales as predictors of the AQ Physical Aggression scale are summarized in Table 3. Moreover, Table 3 listed hierarchical regression models of SCID-II PD scale scores and PID-5 trait scale as predictors of AQ Verbal Aggression, Angry and Hostility scales, respectively. In hierarchical regression model A, the SCID-II PD scale were entered as predictors in step 1, whereas in hierarchical regression model B the PID-5 trait scales were entered as predictors in step 1.

Discussion

Although a number of studies are currently available on the associations between aggression, normative personality traits and PDs in several populations, including clinical samples, to our knowledge the present study represents the first attempt at testing the relationships between self-reports of aggression, and *DSM-5* AMPD dysfunctional personality traits assessed with the PID-5 in a sample of personality-disordered psychotherapy patients. Moreover, the present study was the first to provide a comparison between the two *DSM-5* systems for assessing personality pathology in their efficiency in predicting the subject's disposition towards physical aggression. The association that were observed in our sample of Italian psychotherapy patients between continuously-scored *DSM-IV* axis II/*DSM-5* Section II Paranoid, Narcissistic, Borderline, and Antisocial PD, and the frequency of self-reported

physical aggression acts (i.e., AQ Physical Aggression scale score) were completely consistent with the available evidence on the relationship between PDs and aggression (e.g., Lobbestael, Cima, & Lemmens, 2015).

Confirming and extending Dunne and colleagues' (2017a) seminal findings on adult offenders, our multiple regression data seemed to suggest that specific *DSM-5* AMPD traits, at least as they were operationalized in the PID-5, may constitute important predictors of a subject's disposition towards physical aggression, at least when it was assessed using the AQ Physical Aggression self-report scale. Indeed, a personality profile that was characterized by persistent or frequent angry feelings, irritability, and mean, nasty, or vengeful behavior (i.e., high Hostility; APA, 2013; Krueger & Markon, 2014), lack of concern for others' feelings and lack of guilt or remorse about the negative or harmful effects of one's actions on others (i.e., high Callousness; APA, 2013; Krueger & Markon, 2014), and engagement in dangerous, risky, and potentially self-damaging activities, with a lack of concern for one's limitations and denial of the reality of personal danger (i.e., high Risk taking; APA, 2013; Krueger & Markon, 2014) represented a major risk factor for self-reported physical aggression among our personality-disordered psychotherapy participants. This finding was consistent with research indications suggesting that personality profiles based on basic traits/facets work better in describing clinically relevant phenomena than personality profiles based on general domains of personality (Krueger & Markon, 2014; Samuel & Widiger, 2008). Indeed, in our sample, the self-reported frequency of physical aggression acts was significantly associated with *DSM-5* AMPD traits that were specific facets of three distinct *DSM-5* AMPD dysfunctional personality domains, namely, Negative Affectivity (Hostility), Antagonism (i.e., Callousness), and Disinhibition (i.e., Risk Taking) (APA, 2013; Krueger et al., 2012).

In line with Dunne and colleagues' (2017a), our findings stressed the role of specific dysfunctional traits related to negative affectivity (i.e., hostility) and behavior disinhibition (i.e., risk taking) in explaining the risk for physical aggression in personality-disordered psychotherapy patients. In particular, the significant role of risk taking as a predictor of self-reported physical aggression (i.e., AQ Physical Aggression score) seemed to support the view that impulsive-like behaviors should be conceived as belonging to distinct personality factors in order to understand their consequences on relevant external variables (Whiteside & Lynam, 2001).

Indeed, in our study no significant association was observed between the PID-5 Impulsivity scale score, which represents a measure of "narrow" impulsivity closely resembling Barratt's (Barratt & Patton, 1983; Barratt, Stanford, Kent, Felthous, 1997) concept of motor impulsivity (i.e., acting on the spur of the moment in response to immediate stimuli; APA, 2013; Krueger & Markon, 2014) and the AQ Physical Aggression scale score. This finding was largely consistent with previous data (Dunne et al., 2017a), as well as with theories dissociating impulsive behavior from the risk for violent behavior (e.g., Barratt et al., 1997). It should be observed that the PID-5 Impulsivity score showed a strong association with the Barratt Impulsivity Scale-11 total score in an Italian sample of psychotherapy patients ($r = .61$, $p < .001$; Fossati et al., 2016). We are aware that Five Factor Model Impulsivity facet showed a significant relationship with aggressive behavior (e.g., Jones, Miller, & Lynam, 2011; Miller et al., 2012); however, it is noteworthy that Impulsivity, as it is operationalized in NEO-Personality Inventory, is part of the Neuroticism trait, and is akin to negative urgency (Whiteside & Lynam, 2001). Dvorak, Pearson and Kuvaas (2013) found that none of the impulsivity-like traits had unique associations with aggressive behaviors, although they reported a significant moderator effect of negative urgency. Finally, it is possible that our negative finding concerning the relationship between narrow impulsivity

and physical aggression may simply reflect the fact that different manifestations of aggression (e.g., reactive aggression vs. proactive aggression; Raine et al., 2006) are known to be related to different Five-Factor Model personality traits (Miller et al., 2012), while the AQ does not allow for distinguishing among different expressions of aggression.

It should be observed that the relationship between the PID-5 trait scale scores and the AQ Physical Aggression scale score was not simply an artifact of between-scale item overlap; indeed, only one Callousness item (i.e., item 11 "I often get into physical fights") had a content related to physical aggression. Similarly, the substantial relationship between the *DSM-5* AMPD Hostility trait, at least as it was operationalized in the PID-5, and self-reported physical aggression acts that was observed in our clinical sample did not seemed the result of "jingle-jangle" fallacies; hierarchical regression analysis showed that the PID-5 Hostility scale score remained a significant predictor of the AQ Physical Aggression score even when the AQ Hostility scale score was controlled for. Rather, our data seemed to indicate that the cognitive component of aggression according to Buss and Perry's model (1992) of aggressive behavior, which is operationalized in the AQ Hostility scale, did not bear any significant relationship with the AQ Physical Aggression scale score when the PID-5 Hostility scale score was taken into account. In other terms, our data suggested that among psychotherapy patients, a specific component of negative affectivity trait (i.e., Hostility) included in its relationship with self-reported physical aggression also the cognitive features of aggressive behavior.

Marginally, the PID-5 Hostility scale score remained a significant predictor of the frequency of self-reported physical aggression acts even when the AQ Anger scale score, which measure the affective component of the aggressive reaction (Buss & Perry, 1992), was controlled for in hierarchical regression analysis. This finding seemed to suggest that the *DSM-5* AMPD Hostility trait, as least as it was operationalized in the PID-5 Hostility scale,

was not related to heightened risk for self-reported violent behavior (i.e. physical aggression) because of dispositional anger, but also because of passive-aggressive and vengeful behaviors that are not included in Buss & Perry's (1992) definition of anger.

Although the major aim of the present study was to assess the relationship between physical aggression and PID-5 trait scales, we also considered the relationships between verbal aggression, angry and hostility, at least as they are operationalized in the AQ, and *DSM-5* AMPD traits, at least as they are operationalized in the PID-5. Interestingly, *DSM-5* AMPD traits explained an amount of variance in self-reports of verbal aggression that could be considered large by conventional standards (e.g., Cohen, 1988). Similar considerations held for AQ Angry and Hostility scales. Moreover, hierarchical regression analysis showed that the PID-5 Hostility scale score remained a significant predictor of the AQ Verbal Aggression and Angry scores even when the AQ Hostility scale score was controlled for.

It should be observed that our results were at least partially aligned with research findings on the relationships between Five-Factor Model traits and aggression. A large body of empirical literature identified hostility as a risk factor for aggression and violence (Witt, van Dorn, & Fazel, 2013), and numerous FFM studies have demonstrated small to moderate correlations between the FFM Angry–Hostility facet and aggression (Jones et al., 2011; Miller, Lynam, et al., 2003; Miller et al., 2012). Moreover, Five-Factor Model research provided support for an association between callousness/low altruism and aggression, in both meta-analytic research (Jones et al., 2011) and longitudinal studies (Blonigen, Hicks, Krueger, Patrick, & Iacono, 2005). Finally, some Five-Factor Model studies pointed to a potential relationship between Risk taking/Excitement seeking and aggression, particularly, reactive aggression (Dunne et al., 2017b; Miller et al., 2012), although the empirical evidence is limited. Indeed, the *DSM-5* AMPD traits and domains were consistently shown to represent

maladaptive variants of the normative Five-Factor Personality facets and general traits (APA, 2013; Suzuki et al., 2015; Suzuki et al., 2017).

Interestingly, these *DSM-5* AMPD traits explained an amount of variance in self-reports of physical aggression that could be considered large by conventional standards (e.g., Cohen, 1988). Moreover, our hierarchical regression data indicated that the linear combination of Hostility, Callousness and Risk taking explained more than 20% of the variance in the AQ Physical Aggression scale scores that was left unexplained by selected continuously-scored *DSM-IV* axis II/*DSM-5* Section II PDs, whereas SCID-II Paranoid, Narcissistic, Borderline, Antisocial PD-Criterion A, and Antisocial PD-Criterion B added only a small amount of variance (i.e., 4%; Cohen, 1988) to the amount of variance in physical aggression self-reports (i.e., 44%) that was already explained by the PID-5 assessed *DSM-5* AMPD traits. On the one hand, this finding was somewhat unexpected considering that aggressive behavior is explicitly listed among *DSM-IV* axis II/*DSM-5* Section II criteria for Borderline PD and Antisocial PD (APA, 1994, 2013). However, it could be observed that PD diagnoses, at least as they are assessed by SCID-II interview, operationalized a polythetic diagnostic approach to PDs, giving equal weight to all criteria (McGlashan et al., 2005). Thus, although we relied on continuously-scored *DSM-IV* axis II/*DSM-5* Section II PDs, the relationships between Paranoid PD, Borderline PD, Narcissistic PD, and Antisocial PD traits and physical aggression, respectively, may be minimized by the high variability of PD symptoms. On the other hand, our data were consistent with previous reports showing that Five-Factor Model facets and traits may provide a useful framework for understanding aggressive behavior (Dunne et al., 2017b; Miller et al., 2012), as well as other clinically relevant manifestations (Widiger, 2011). Mostly, our hierarchical regression results added further evidence to the burgeoning literature documenting the clinical usefulness of *DSM-5* AMPD dysfunctional personality traits (e.g., Bach et al., 2016; Fossati et al., 2015; Few et al.,

2013; Krueger & Markon, 2014). Indeed, a strength of the *DSM-5* AMPD trait model is that PDs can be understood as specific constellations of maladaptive traits, rather than discrete entities from each other and from normal personality (Hopwood et al., 2013). Indeed, eliminating the confounding influence of overlapping criteria between subtypes may assist clinicians in determining whether a disposition toward aggressive can be inferred by specific combinations of maladaptive personality traits (Dunne et al., 2017a, b).

The results of our study should be considered in the light of several limitations. Our sample was composed only of participants voluntarily seeking treatment; this inherently limits the generalizability of our findings to other clinical and forensic samples. Moreover, clinical samples are likely to represent biased study groups (Berkson, 1946). Finally, our participants' mean age was 41.56 years. Although aggression remains prevalent in adulthood (Marsland, Prather, Petersen, Cohen, & Manuck, 2008; Murray-Close, Ostrov, Nelson, Crick, & Coccaro, 2010) and there may be benefits in considering middle adulthood and later life in the study of personality disorders (e.g., Oltmanns, & Balsis, 2011), participants' age may have reduced the relationships between PDs and aggression (e.g., Stevenson, Meares, & Comerford, 2003). Therefore, future research examining a broader age is required.

Psychometric instruments for assessing *DSM-IV* axis II PDs (and thus for *DSM-5* Section II PDs), including semi-structured interviews are known to be plagued with poor convergent validity (Zimmerman, 1994); using different instruments for assessing *DSM-IV* axis II/*DSM-5* Section II PDs may yield different estimates for the associations between PDs and AQ PA scale score. Moreover, in the present study we relied on joint interview (with live observer) method (i.e., a pairwise interview design) in order assess the inter-rater reliability of SCID-II diagnoses. Previous data documented that reliability of psychological diagnoses obtained from the SCID may be lower than commonly believed due to a reliance on methods (e.g., audio/video recordings) different from test-retest method for estimating reliability

(Chmielewski, Clark, Bagby, & Watson, 2015). Chmielewski and colleagues (2015) showed that diagnostic reliability using the audio-recording method was higher ($\bar{\kappa}$ = .80), than that observed relying on the test–retest method ($\bar{\kappa}$ = .47). These considerations stress the need for further studies on independent samples before accepting our conclusions.

In our study, we relied on a self-report instrument (i.e., the AQ) as a measure of aggressive behavior. Although in their seminal peer nomination study Buss and Perry (1992, p. 458) concluded that there is "unequivocal evidence for the construct validity of the Physical Aggression scale", which is the main focus of our study, and Archer and Webb (2006) showed that all four AQ scales were at least moderately related to act-based measures of direct and indirect aggression, future study should examine the relationships between actual acts of aggression and *DSM-5* AMPD traits. Moreover, different models and instruments of aggression exist (e.g., proactive and reactive aggression; Raine et al., 2006); thus, our findings could not be uncritically extended to other measures of aggressive behavior. Finally, we relied on the self-reported version of the PID-5; this may have led to spurious increase of the associations between the PID-5trait scales and the AQ Physical Aggression scale scores in our regression analyses because of shared method variance. Even keeping these limitations in mind, we think that our findings may prove useful in extending our knowledge on the association between physical aggression and *DSM-5* AMPD dysfunction personality traits in psychotherapy patients.

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Table 1.

Aggression Questionnaire Scales, Structured Clinical Interview for DSM-IV Axis II Personality Disorders Scales (i.e., Number of Criteria DSM-IV Axis II/DSM-5 Section II Met for Each Personality Disorder), and Personality Inventory for DSM-5 Trait Scales: Descriptive Statistics and Correlations (i.e., Pearson r Coefficients) between Problem Personality Measures and Aggression Questionnaire Scale Scores (N = 508).

			Aggression Questionnaire			
			Physical	Verbal	Anger	Hostility
	M	*SD*	*r*	*r*	*r*	*r*
SCID-II						
Avoidant PD	0.81	1.26	**-.20**	**-.24**	**-.16**	.11
Dependent PD	1.01	1.37	-.12	**-.22**	-.13	.09
Obsessive-Compulsive PD	0.91	1.25	-.13	.00	-.11	-.13
Paranoid PD	0.66	1.03	**.20**	**.15**	.13	**.17**
Schizotypal PD	0.30	0.95	.07	-.02	.03	.04
Schizoid PD	0.18	0.79	-.02	.06	.00	.01
Histrionic PD	1.28	1.69	.01	.08	.04	.00
Narcissistic PD	2.77	2.27	**.19**	**.20**	**.15**	.04
Borderline PD	1.94	2.30	**.31**	**.14**	**.32**	**.25**
Antisocial PD	0.26	0.87	**.36**	**.14**	**.16**	.02
PID-5						
Anxiousness	1.67	0.71	.12	.12	**.29**	**.52**
Emotional Lability	1.64	0.72	**.19**	**.22**	**.45**	**.52**
Hostility	1.15	0.62	**.61**	**.54**	**.72**	**.49**
Perseveration	1.24	0.54	**.15**	**.20**	**.33**	**.43**
Restricted Affectivity	1.01	0.58	.07	.06	.06	**.23**
Separation Insecurity	1.23	0.75	.13	.09	**.28**	**.42**
Submissivness	1.04	0.70	-.01	**-.16**	.06	**.28**
Anhedonia	1.58	0.75	.03	.03	.12	**.45**
Depressivity	1.34	0.74	.09	.10	.22	**.56**
Intimacy Avoidance	0.74	0.62	.05	.02	.04	**.18**
Suspiciousness	1.17	0.58	**.31**	**.24**	**.37**	**.65**
Withdrawal	1.09	0.67	.10	.06	**.14**	**.38**
Attention Seeking	1.07	0.75	**.30**	**.35**	**.42**	**.30**
Callousness	0.54	0.45	**.50**	**.30**	**.42**	**.40**
Deceitfulness	0.66	0.55	**.38**	**.17**	**.36**	**.36**
Grandiosity	0.61	0.56	**.31**	**.26**	**.30**	**.28**
Manipulativeness	0.65	0.63	**.35**	**.25**	**.30**	**.20**
Distractibility	1.32	0.73	**.19**	.13	**.31**	**.42**
Impulsivity	1.15	0.74	**.42**	**.36**	**.58**	**.33**
Rigid perfectionism	1.25	0.66	.10	**.27**	**.26**	**.28**
Risk taking	1.17	0.59	**.43**	**.24**	**.37**	.09
Irresponsibility	0.89	0.58	**.33**	**.17**	**.36**	**.37**
Eccentricity	1.05	0.74	**.31**	**.35**	**.46**	**.48**
Cognitive dysregulation	0.69	0.57	**.28**	**.23**	**.40**	**.47**
Unusual beliefs	0.64	0.58	**.25**	**.21**	**.32**	**.33**
M			19.41	14.33	18.68	23.83
SD			7.90	3.70	6.26	6.32

Note. Physical: Physical Aggression; Verbal: Verbal Aggression; SCID-II: Structured Clinical Interview for *DSM-IV* Axis II Personality Disorder scales; PD: Personality disorder; PID-5: Personality Inventory for *DSM-5* trait scales. For Pearson *r* coefficients, the nominal significance level (i.e., $p < .05$) was corrected according to the Bonferroni procedure for multiple comparisons and set at $p < .00143$. Bold highlights Bonferroni-significant *r* coefficients (i.e., $r \geq |.141|$).

Table 2.

Structured Clinical Interview for DSM-IV Axis II Personality Disorders Scales (i.e., Number of Criteria DSM-IV Axis II/DSM-5 Section II Met for Each Personality Disorder), and Personality Inventory for DSM-5 Trait Scales as Predictors of the Aggression Questionnaire Scales: Multiple Regression Analysis (N = 508).

	Aggression Questionnaire							
	Physical		Verbal		Anger		Hostility	
SCID-II	β	VIF	β	VIF	β	VIF	β	VIF
Paranoid PD	.14***	1.03	.10*	1.03	--	--	.16***	1.00
Narcissistic PD	.17***	1.05	.19***	1.05	.18***	1.02	--	--
Borderline PD	.28***	1.03	.14**	1.03	.33***	1.03	.24***	1.00
Antisocial PD	.31***	1.02	.10*	1.02	.11**	1.02	--	--
Adjusted R^2	.25***		.08***		.15***		.09***	
PID-5								
Anxiousness	--	--	--	--	.01	2.45	.08	2.69
Emotional Lability	-.07	1.99	-.13**	1.98	.06	2.46	.06	2.68
Hostility	.48***	2.46	.54***	2.51	.60***	2.55	.02	2.69
Perseveration	-.10*	1.90	-.07	2.12	-.03	2.32	.00	2.35
Restricted Affectivity	--	--	--	--	--	--	.01	1.91
Separation Insecurity	--	--	--	--	.02	1.76	.06	1.83
Submissivness	--	--	--	--	--	--	-.02	1.53
Anhedonia	--	--	--	--	--	--	.08	3.47
Depressivity	--	--	--	--	--	--	.16**	4.16
Intimacy Avoidance	--	--	--	--	--	--	-.08	1.64
Suspiciousness	.01	1.65	.00	1.65	-.03	1.70	.39***	1.74
Withdrawal	--	--	--	--	-.06	1.85	.07	2.88
Attention Seeking	-.04	1.87	.15**	1.87	.07	2.22	.10*	2.30
Callousness	.15**	2.19	-.07	2.20	-.01	2.46	.08	2.54
Deceitfulness	.03	2.98	-.25***	2.98	-.04	3.04	.04	3.18
Grandiosity	.02	1.92	.00	1.92	-.05	1.94	-.04	1.99
Manipulativeness	.01	2.60	.12	2.60	-.05	2.67	-.05	2.75
Distractibility	.02	2.17	--	--	-.02	2.26	-.02	2.34
Impulsivity	.07	2.14	.17***	2.11	.24***	2.24	.00	1.99
Rigid perfectionism	--	--	.11*	1.65	.06	1.73	.02	1.73
Risk taking	.23***	1.69	-.01	1.64	.07	1.78	--	--
Irresponsibility	.00	2.39	-.08	2.22	-.01	2.61	-.06	2.68
Eccentricity	-.04	2.94	.19***	3.01	.04	3.10	.04	3.14
Cognitive dysregulation	-.01	2.99	-.07	2.85	.01	3.04	.05	3.11
Unusual beliefs	.01	2.20	-.03	2.19	-.01	2.25	.01	2.27
Adjusted R^2	.45***		.39***		.59***		.56***	

Note. Physical: Physical Aggression; Verbal: Verbal Aggression; SCID-II: Structured Clinical Interview for *DSM-IV* Axis II Personality Disorder scales; PD: Personality disorder; PID-5: Personality Inventory for *DSM-5* trait scales. --: Statistic not computed.

* $p < .05$

** $p < .01$

*** $p < .001$

Table 3.
Structured Clinical Interview for DSM-IV Axis II Personality Disorder Paranoid Personality Disorder, Narcissistic Personality Disorder, Borderline Personality Disorder, Antisocial Personality Disorder Criteria Scales, and Personality Inventory for DSM-5 Trait Scales as Predictors of the Aggression Questionnaire Scales: Hierarchical Regression Analysis Results (N = 508).

	Aggression Questionnaire							
	Physical		Verbal		Anger		Hostility	
Model A	β	VIF	β	VIF	β	VIF	β	VIF
Step 1								
Paranoid PD	.14***	1.03	.10*	1.03	--	--	.10***	1.00
Narcissistic PD	.17***	1.05	.19***	1.05	.18***	1.02	--	--
Borderline PD	.29***	1.03	.14***	1.03	.33***	1.03	.24***	1.00
Antisocial PD	.31***	1.02	.10*	1.02	.11***	1.02	--	--
Adjusted R^2	.25***		.08***		.15***		.09***	
Step 2								
Paranoid PD	.05	1.10	.05	1.09	--	--	.04	1.07
Narcissistic PD	.03	1.16	.06	1.19	.02	1.07	--	--
Borderline PD	.11**	1.20	.01	1.29	.07*	1.23	.03	1.10
Antisocial PD	.20***	1.11	.02	1.10	.00	1.05	--	--
Emotional Lability	--	--	-.12*	1.76	--	--	--	--
Hostility	.39***	1.82	.42***	1.93	.57***	1.44	--	--
Depressivity	--	--	--	--	--	--	.36***	1.24
Suspiciousness	--	--	--	--	--	--	.45***	1.44
Attention Seeking	--	--	.09	1.51	--	--	.13***	1.12
Callousness	.12**	1.84	--	--	--	--	--	--
Impulsivity	--	--	0.12*	1.77	.26***	1.51	--	--
Rigid perfectionism	--	--	0.13*	1.32	--	--	--	--
Risk taking	.18***	1.29	--	--	--	--	--	--
Eccentricity	--	--	.04	1.91	--	--	--	--
Change in Adjusted R^2	.24***		.25***		.43***		.46***	
Overall Adjusted R^2	.49***		.32***		.58***		.55***	
Model B								
Step 1	β	VIF	β	VIF	β	VIF	β	VIF
Emotional Lability	--	--	-.14**	1.62	--	--	--	--
Hostility	.42***		.45***	1.74	.58***	1.35	--	--
Depressivity	--	--	--	--	--	--	.36***	1.21
Suspiciousness	--	--	--	--	--	--	.47***	1.32
Attention Seeking	--	--	.10*	1.41	--	--	.13***	1.10
Callousness	.16***		--	--	--	--	--	--
Impulsivity	--	--	.11*	1.63	.29***	1.35	--	--
Rigid perfectionism	--	--	.12**	1.28	--	--	--	--
Risk taking	.26***		--	--	--	--	--	--
Eccentricity	--	--	.04	1.91	--	--	--	--
Adjusted R^2	.44***		.32***		.58***		.55***	
Step 2								
Emotional Lability	--	--	-0.12*	1.76	--	--	--	--
Hostility	.39***	1.82	0.42***	1.93	.57***	1.44	--	--
Depressivity	--	--	--	--	--	--	.36***	1.24
Suspiciousness	--	--	--	--	--	--	.45***	1.44
Attention Seeking	--	--	0.09	1.51	--	--	.13***	1.12
Callousness	.12**	1.84	--	--	--	--	--	--
Impulsivity	--	--	0.12*	1.77	.26***	1.51	--	--
Rigid perfectionism	--	--	0.13**	1.32	--	--	--	--
Risk taking	.18***	1.29	--	--	--	--	--	--
Eccentricity	--	--	0.04	1.91	--	--	--	--
Paranoid PD	.05	1.10	.05	1.09	--	--	.04	1.07
Narcissistic PD	.03	1.16	.06	1.19	.02	1.07	--	--
Borderline PD	.11**	1.20	.01	1.29	.07*	1.23	.03	1.10
Antisocial PD	.20***	1.11	.02	1.10	.00	1.05	--	--
Change in Adjusted R^2	.05***		.01		.00		.00	
Overall Adjusted R^2	.49***		.33***		.58***		.55***	

Note. Physical: Physical Aggression; Verbal: Verbal Aggression; SCID-II: Structured Clinical Interview for *DSM-IV* Axis II Personality Disorder scales; PD: Personality disorder; PID-5: Personality Inventory for *DSM-5* trait scales. --: Statistic not computed. * p <.05; ** p <.01; *** p <.001.