



## Short Communication

The *mania* and *ludus* love styles are central to pathological personality traits<sup>☆</sup>Peter K. Jonason<sup>a,b,\*</sup>, Abigail H. Lowder<sup>c</sup>, Virgil Zeigler-Hill<sup>d</sup><sup>a</sup> University of Padova, Italy<sup>b</sup> University of Kardinal Stefan Wyszyński, Poland<sup>c</sup> Putnam Valley High School, United States of America<sup>d</sup> Oakland University, United States of America

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## ABSTRACT

If love is fundamentally important, those with pathological personality traits should desire to find it like anyone else. However, people's pathologies may influence their love styles leading to problematic relationship patterns. We examined how pathological personality traits were associated with love styles in adolescents ( $N = 311$ ). While each personality pathology was associated with somewhat unique forms of love, collectively they were all associated with the *mania* love style. The traits, *sans* negative affectivity, were also associated with the *ludus* love style. And, limited detachment and disinhibition were linked to the *eros* love style. Results are discussed in terms of how learning about the potentially problematic love styles associated with pathological personality traits can inform interventions to improve an important outcome in people's lives.

A recent movement in studying pathological personality traits was to measure them as continuous in nature (Krueger, Derringer, Markon, Watson, & Skodol, 2012). These traits are analogues of the traditional Big Five traits of emotional stability (i.e., negative affectivity; the tendency to experience an array of negative emotions), extraversion (i.e., detachment; characterized by introversion, social isolation, and anhedonia), agreeableness (i.e., antagonism; aggressive tendencies accompanied by assertions of dominance and grandiosity), conscientiousness (i.e., disinhibition; impulsivity and sensation seeking), and openness (i.e., psychoticism; a disconnection from reality and a tendency to experience illogical thought patterns). Despite the dimensional nature of these traits, little research has examined their nonpathological correlates (e.g., romantic and sexual attitudes). For instance, pathological personality traits may be associated with interest in casual sex and less interest in romantic relationships (Jonason, Zeigler-Hill, & Hashmani, 2019). However, "interest in relationships" may fail to capture nuance in the nature of the relationship styles linked to these traits. Here we examine how pathological personality traits are associated with love styles.

A fundamental assertion from personality psychology is that traits—pathological or not—should influence the way or styles by which people interact with the world. Love may manifest itself in several

styles like *eros* (i.e., passionate), *ludus* (i.e., game-playing), *storge* (i.e., friendship), *pragma* (i.e., practical), *mania* (i.e., possessive, dependent), and *agape* (i.e., altruistic) love styles (Hendrick & Hendrick, 1992; Lee, 1973). These love styles have implications for relationship satisfaction and stability (Hendrick, Hendrick, & Adler, 1988).

There is considerable evidence that the Big Five personality traits are associated with love styles. Neuroticism is positively associated with manic and ludic love styles and negatively associated with storge and pragmatic love styles (Davies, 1996; Middleton, 1993; Woll, 1989). Agreeableness is positively related to the erotic, storge, and agapic love styles and negatively related to the pragmatic love style (Middleton, 1993). Conscientiousness is positively associated with the erotic and agapic love styles and negatively associated with the manic style as well. Openness is positively associated with the erotic and manic love styles and negatively with the pragmatic love style (Middleton, 1993). Extraversion is positively correlated with the erotic and ludic love styles and is negatively correlated with the pragmatic love style; extraversion has also been negatively and positively linked with storge (Davies, 1996; Fehr & Broughton, 2001; Woll, 1989). Despite the varied nature of these correlations, individual differences in pathological personality traits may be related to love styles given that these traits are considered to be maladaptive manifestations of the Big Five traits.

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On the “darker” side of personality, there is some evidence that some personality “pathologies” may be related to love styles. Eysenckian psychoticism is negatively correlated with agapic and storge love styles and positively correlated with the ludic style (Davies, 1996). Among the Dark Triad traits, Machiavellianism (i.e., cynicism, deception) is associated with all but the erotic love style, narcissism (i.e., grandiosity, entitlement) is associated with the ludic and pragmatic love styles, and psychopathy (i.e., callousness, antisocial behavior) is associated with the ludic love style and negatively correlated with the agapic and pragmatic love styles (Jonason & Kavanagh, 2010). Despite the limited nature of these correlations, they provide evidence that aversive aspects of personality may be associated with love styles.

In this study, we make several predictions. First, given the “disordered” nature of pathological personality traits, we expect them all to be correlated with the manic love style. This love style is characterized by a possessive manner which may be one of the interpersonal dysfunctions that is created by pathological personality traits. A fear of loss may be a sensible fear when considering their problematic personality. They may have even had prior experiences where their pathologies pushed romantic partners away. Second, caring little about others (i.e., detachment), being impulsive (i.e., disinhibition), and being combative (i.e., antagonistic) may promote one to pursue a game-playing (i.e., ludic) love style. And third, people who are limited on detachment and impulsive may prefer erotic love because they, respectively, enjoy intimacy and their emotional systems may be tuned for excitement that is characteristic of erotic love. Importantly, we examine these associations in a sample of adolescents.

## 1. Method

### 1.1. Participants and procedure

Participants were 311 adolescents (274 girls)<sup>1</sup> aged 13 to 19 ( $M = 16.01$ ;  $SD = 1.15$ )<sup>2</sup> who voluntarily completed an online questionnaire via paper fliers (i.e., location of author 2) and snowball methods of collection (e.g., Facebook). Most of the participants were white/Caucasian (72%) and heterosexual (60%).<sup>3</sup> Parental consent for participants under 18 years of age was obtained by having participants provide their parent's email address, who were then sent the hyperlink. If the parents consented, they were instructed to forward a hyperlink to their child who then completed the measures. All participants provided their own informed consent via tick-box. In total, we sent out 776 surveys: return/completion rate of 39.3% perhaps because of filtering at the parent and participant levels. The survey took approximately 10 min to complete at which time participants were thanked and debriefed. This study was not pre-registered but the data file and demographic questions for this study are available on the Open Science Framework at <https://osf.io/rtv7m>

### 1.2. Measures

Individual differences in pathological personality traits were assessed with the Personality Inventory for the DSM-5BF (Krueger et al., 2012) which has proved valid in adolescent samples (De Clercq et al., 2014). The scale is composed of 25 items—five items for each pathological personality trait—asking participants how true (1 = *very false*;

5 = *very true*) each item was towards describing them in terms of their *antagonism* (e.g., “I use people to get what I want”), *psychoticism* (e.g., “My thoughts often don't make sense to others”), *detachment* (e.g., “I don't like to get too close to people”), *negative affectivity* (e.g., “I worry about almost everything”), and *disinhibition* (e.g., “People would describe me as reckless”). Items on the respective scales were averaged to create indexes of each personality pathology (Cronbach's  $\alpha = 0.66$  to  $0.77$ ).

Individual differences in love styles were assessed with The Love Styles scale (Hendrick & Hendrick, 1986) which has proved valid in adolescents (Neto & da Conceição Pinto, 2003). Participants were asked to imagine their ideal relationship and respond to the items as if they were in that relationship. The scale is composed of 42 items—seven items for each love style—where participants rate how much (1 = *not at all*; 5 = *very much*) they agreed with statements capturing the love styles of *eros* (e.g., “My partner and I have the right physical ‘chemistry’”), *ludus* (e.g., “I have sometimes had to keep my partner from finding out about other lovers”), *storge* (e.g., “Our friendship merged gradually into love over time”), *pragma* (e.g., “One consideration in choosing my partner was how he/she would reflect on my career”), *mania* (e.g., “I cannot relax if I suspect that my partner is with someone else”), and *agape* (e.g., “I would endure all things for the sake of my partner”). Items on the respective scales were averaged to create indexes of each style ( $\alpha = 0.64$  to  $0.82$ ).

## 2. Results

In Table 1 we report the correlations between pathological personality traits and love styles. Antagonism was associated with more manic and ludic love and with less agapic love. Psychoticism was associated with greater agapic, ludic, storge, and manic love styles. Detachment was associated with ludic and manic love styles and a limited erotic love style. Negative affectivity was associated with agapic and manic love. Disinhibition was associated with agapic, ludic, erotic, and manic love styles. To control for shared variance in pathological personality traits we conducted six standard multiple regression analyses and report residual correlations ( $\beta$ s) here with overall model fit ( $F$ s). Detachment ( $\beta = -0.26$ ,  $p < .01$ ) predicted erotic love ( $F = 5.00$ ,  $p < .01$ ). Detachment ( $\beta = 0.17$ ,  $p < .01$ ) and antagonism ( $\beta = 0.28$ ,  $p < .01$ ) predicted ludic love ( $F = 9.36$ ,  $p < .01$ ). Psychoticism ( $\beta = 0.24$ ,  $p < .01$ ) predicted storge love ( $F = 2.71$ ,  $p < .05$ ). Disinhibition ( $\beta = -0.15$ ,  $p < .05$ ) predicted pragmatic love ( $F = 1.48$ ,  $ns$ ). Negative affect ( $\beta = 0.36$ ,  $p < .01$ ) and psychoticism ( $\beta = 0.18$ ,  $p < .01$ ) predicted manic love ( $F = 21.01$ ,  $p < .01$ ). Antagonism ( $\beta = -0.24$ ,  $p < .01$ ) and psychoticism ( $\beta = -0.24$ ,  $p < .01$ ) predicted agapic love ( $F = 7.78$ ,  $p < .01$ ).

## 3. Discussion

With a dimensional view of pathological personality traits, a wide array of new questions open-up to researchers. The most obvious and, perhaps, pressing questions center on understanding the clinical relations such a perspective—and related measures—can provide researchers and clinicians. Less obvious questions may center on how these traits manifest in subclinical matters like romantic relationships (Jonason et al., 2019). In this brief report, we examined the correlations between pathological personality traits and love styles. Notably, all the traits were correlated with the manic love style. Being erratic, impulsive, antagonistic, negative in affect, and detached from others may lead to and create relationship dysfunctions that may serve as “relationship dealbreakers” (Jonason, Garcia, Webster, Li, & Fisher, 2015) leading to a possessive, insecure, and protective style of love. In addition, we found, like with psychopathy (Jonason & Kavanagh, 2010), a game playing love style was linked to being antagonistic, impulsive, and erratic as well as caring little about others. Taken together, the emphasis on game-playing and possessiveness may create a negative

<sup>1</sup> Participant's sex had no effect on our variables nor did it moderate any of the correlations below (Bonferroni corrected).

<sup>2</sup> While age was correlated with the erotic (0.19) and pragmatic (0.13) love styles, on the whole, age was not related to love styles or personality (Bonferroni corrected).

<sup>3</sup> In addition, 28% were bisexual, 6% were homosexual, 4% were some other sexuality, and 2% preferred not to say. Because of this imbalance, we did not examine sexual orientation further.

**Table 1**  
Descriptive statistics and correlations between love styles and pathological personality traits.

	1	2	3	4	5	6	7	8	9	10
1. Antagonism										
2. Psychoticism	0.27**									
3. Detachment	0.09	0.37**								
4. Negative Affectivity	0.20**	0.47**	0.34**							
5. Disinhibition	0.39**	0.48**	0.19**	0.42**						
6. Agape	-0.12*	0.24**	0.07	0.18**	0.15**					
7. Ludus	0.31**	0.18**	0.20**	0.09	0.18**	-0.12*				
8. Storge	-0.01	0.18**	0.03	0.07	0.02	0.27**	0.09			
9.Pragma	0.02	0.05	0.08	0.08	-0.06	0.09	0.20**	0.27**		
10. Eros	0.02	0.08	-0.17**	0.11	0.13*	0.50**	0.02	0.23**	0.17**	
11. Mania	0.17**	0.37**	0.12*	0.46**	0.32**	0.45**	0.13*	0.24**	0.18**	0.36**
Overall M (SD)	2.09 (0.76)	3.08 (0.87)	2.52 (0.78)	3.34 (0.80)	2.44 (0.86)	3.28 (0.83)	1.80 (0.59)	3.26 (0.77)	2.45 (0.80)	3.11 (0.85)

\*  $p < .05$ .  
\*\*  $p < .01$ .

feedback cycle where those with pathological personality traits, who may genuinely want to connect interpersonally and sexually with others, may undermine their ability to find the very love and sex they seek. For example, game-playing may lead to increased romantic failures and rejections which will set up negative expectancies which, in turn, will create relationship insecurity. Then, as an avoidance strategy, those characterized by pathological personality traits may continue to play games.

Despite the simplicity of the methods and the novelty of the questions we considered, the study is limited in several ways. First, the study is merely correlating two different self-report measures and, thus, the results are limited to both the measures used and our ability to know if the results reflect real-world outcomes. Second, the sample was problematic because it was W.E.I.R.D. (Henrich, Heine, & Norenzayan, 2010), grossly imbalanced in terms of sex, and may be contaminated by volunteer bias (e.g., low response rates). This means, however, that our findings may be more relevant to Western teenage girls than teenagers in general although we found no strong evidence for moderation by participant's sex for the correlations. Nevertheless, we have provided simple and straightforward details about how pathological personality traits are associated with love styles which can provide important information for interpersonal satisfaction and the effectiveness of interventions. We revealed that pathological personality traits related to possessiveness and game-playing that may be part of a negative feedback cycle worthy of consideration in future research.

**CRedit authorship contribution statement**

**Peter K. Jonason:**Conceptualization, Methodology, Investigation, Writing - original draft, Writing - review & editing, Visualization, Resources, Project administration, Formal analysis.  
**Abigail H. Lowder:**Methodology, Writing - review & editing, Data curation, Formal analysis.  
**Virgil Zeigler-Hill:**Writing -

review & editing.

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