Personality and Life Events in a Personality Disorder Sample

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Abstract

Individuals with a personality disorder (PD) tend to experience more negative life events (NLEs) than positive life events (PLEs). In community samples, the Five Factor Model of personality (FFM) predicts both positive and negative life events. The present research examined whether FFM normal personality traits were associated with positive and negative life events among individuals with one of four PDs: avoidant, borderline, schizotypal, and obsessive-compulsive, and tested whether associations between the FFM of personality and PLEs and NLEs were similar across the four PD groups and a control group. Among aggregated PDs, Neuroticism was positively associated with NLEs, whereas Extraversion, Openness to Experience, and Conscientiousness were positively associated with PLEs. Comparisons of each PD group to a control group of individuals with a major depressive disorder indicated that the FFM traits operated similarly across clinical samples with and without PD. Our findings indicate that normal personality traits can be used to help understand the lives of individuals with PD.

Keywords

Five Factor Model; Big Five; personality disorder; personality; life events

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Research indicates that personality disorders (PD) are linked to negative life events (NLEs), including arrest and incarceration (Pagano et al., 2004; Yen et al., 2005), unemployment (Heikkinen et al., 1997; Skodol et al., 2002), and unstable interpersonal relationships (Skodol et al., 2005). Personality disorders have been proposed to reflect extreme and maladaptive manifestations of normal traits (Costa & Widiger, 2002; Lynam & Widiger, 2001), and among community samples, the Five Factor Model of personality (FFM), predicts positive and negative life events (Headey & Wearing, 1989). Personality is an important predictor of life events, and this relationship is particularly striking in the context of personality disorders. Research indicates that certain PDs may be associated with a greater likelihood of experiencing unfavourable life events (Cramer, Torgersen, & Kringlen, 2006; Pagano et al., 2004). Pagano and colleagues (2004) found that individuals with borderline (BPD) or schizotypal (STPD) experience more criminal and legal life events (e.g., criminal conviction or involvement in a lawsuit) than those with avoidant or obsessive compulsive PD, and fewer overall positive life events (PLEs) than individuals with major depressive disorder. Cramer et al. (2006) found a positive association between adverse life events (e.g., divorce, injury, job loss) and several PDs, including borderline and schizotypal. Similarly, Ullrich, Farrington, and Coid (2007) demonstrated that avoidant, borderline, and schizotypal PDs were inversely related to successful intimate relationships, with the latter two PDs also demonstrating inverse associations with indicators of status and wealth. Individuals with a PD, particularly borderline, have been shown to experience fewer interpersonal interactions and more negative interpersonal events (e.g., arguments) than

individuals without a PD (Stepp, Pilkonis, Yaggi, Morse, & Feske, 2009). In contrast, some PDs (e.g., obsessive compulsive, narcissistic) have been linked to favourable life events and components of life success (Cramer et al., 2006; Ullrich et al., 2007). These findings point to potentially important associations among PD and life events; however, the factors that underlie these well-documented relationships have yet to be fully explored.

Life events have prognostic value (Kendler, Hettema, Butera, Gardner, & Prescott, 2003; Yen et al., 2005). For example, NLEs such as marital separation and involuntary job loss can lead to increased suicidality (Kolves, Ide, & De Leo, 2012), substance use (Catalano, Dooley, Wilson, & Hough, 1993; Gallo, Bradley, Siegel, & Kasl, 2000), and increased time to remission of depressive disorder (Spinhoven et al., 2011). The stress generation hypothesis (Hammen, 1991) articulates the pathogenic effects of stressful life events among individuals with depression, and subsequent research has indicated that this model may be extended to explain the exacerbation of psychopathology among PD samples (Daley, Hammen, Davila & Burge, 1998). Indeed, among individuals with a PD, certain life events have been shown to be risk factors for suicide attempts (Yen et al., 2005). At the 3-year follow-up of the Collaborative Longitudinal Personality Disorders Study (CLPS), Yen and colleagues found that even after controlling for other well-documented suicide risk factors (i.e., baseline borderline PD diagnosis, major depressive disorder, substance use disorder, and childhood sexual abuse), NLEs (particularly those related to love and marriage or crime and legal matters) predicted suicide attempts in the months following the event. In a study examining life events preceding suicide among individuals with and without PD, those with PD experienced substantially more NLEs in the months prior to suicide, than those without (Heikkinen et al., 1997). Among individuals with antisocial personality disorder, death of a spouse has been shown to precede suicide attempts, and in those with narcissistic personality disorder, personal injury or illness, arguments with spouse, and financial troubles often precede suicide attempts (Blasco-Fontecilla et al., 2010). In individuals with BPD, negative interpersonal events are particularly likely to trigger suicide attempts (Brodsky, Groves, Oquendo, Mann, & Stanley, 2006). Given these findings, an increased understanding of factors associated with positive and negative life events among PD individuals may be consequential.

Increasing evidence suggests that PDs may be understood in terms of a dimensional model of personality (O'Connor, 2005; Samuel & Widiger, 2008; Widiger & Mullins-Sweatt, 2009; 2010). The FFM models both normal and maladaptive personality traits and as such has received considerable attention in PD research, with meta-analyses supporting the use of the FFM for understanding and distinguishing PDs (Saulsman & Page, 2004; Samuel & Widiger, 2008; Widiger & Lowe, 2007). For example, BPD can be viewed as extreme or maladaptive variants of several facets of Neuroticism and Openness, and low levels of some facets of Agreeableness and Conscientiousness, whereas obsessive-compulsive PD (OCPD) is largely a combination of low Openness and extremely high Conscientiousness (Widiger & Mullins-Sweatt, 2009). Among the PDs that have been modeled using the FFM, BPD has perhaps been the most thoroughly examined; Trull, Widiger, Lynam, and Costa (2003) analyzed the relations between a FFM index of BPD and four previously validated self-report and interview measures of BPD, and found that the FFM BPD index was highly correlated with the other measures of BPD. Indeed, correlations between the FFM index and

BPD measures were comparable in magnitude to correlations among the BPD measures. Relations were also assessed between the FFM index and several established correlates of BPD (e.g., history of physical and sexual abuse, social dysfunction, and parental history of mental and substance use disorders), and the FFM BPD index was related to these correlates of BPD at levels equivalent to the self-report and interview measures of BPD. Similarly, FFM measures have been developed to assess other personality disorders including Schizotypal PD (Five-Factor Schizotypal Inventory; Edmundson et al., 2011) and Obsessive Compulsive PD (Five Factor Obsessive-Compulsive Inventory; Crego, Samuel, & Widiger, 2015).

The FFM is an intriguing candidate for elucidating the associations between PD and life events. Evidence from community samples suggests that normal FFM traits influence life events in meaningful ways. For example, in a large panel study occurring over a six-year period, Extraversion consistently predicted both positive friendship (e.g., making lots of new friends) and job events (e.g., getting promoted; Headey & Wearing, 1989). Conversely, Neuroticism predicted both negative financial (e.g., experiencing a financial crisis) and job events (e.g., being fired). Openness to Experience predicted favorable friendship events, as well as unfavorable financial events. More recent research has demonstrated similar results (e.g., Magnus, Diener, Fujita, & Pavot, 1993; Saudino, Pedersen, Lichtenstein, McClearn, & Plomin, 1997). In general, Neuroticism appears to predict NLEs, Extraversion and Conscientiousness predict PLEs, and Openness to experience predicts both positive and negative events (Headey & Wearing, 1989; Magnus et al., 1993). Indeed, personality had been found to have both contemporaneous and predictive associations with health, happiness and interpersonal functioning (Ozer & Benet-Martinez, 2006), and a review of longitudinal research concluded that the predictive power of personality for important life outcomes was equivalent to that of established predictors such as socioeconomic status and cognitive ability (Roberts, Kuncel, Shiner, Caspi & Goldberg, 2007). However, the extent to which associations between life events and the FFM generalize to individuals with PD has not been examined. Addressing these questions may help elucidate the association between PD and life events and may also help to identify potential moderators of negative outcomes among individuals with PD.

The present study had two primary aims. First, we tested whether FFM personality traits were associated with positive and negative life events among individuals with one of four personality disorders: avoidant (AVPD), borderline (BPD), schizotypal (STPD), or obsessive-compulsive (OCPD). We also tested whether the FFM personality traits were associated with positive and negative life events similarly across the four PDs and major depressive disorder (MDD) control group.

We predict that in general, the FFM will be associated with positive and negative life events among individuals with a PD in a manner that will parallel findings from community samples (e.g., Headey & Wearing, 1989). Specifically, we predict that Neuroticism will be positively related to NLEs, Extraversion will be positively related to PLEs, and Openness to Experience will be positively associated with PLEs and negatively associated with NLEs. We further predict that Conscientiousness will be positively correlated with PLEs. Given the lack of association between Agreeableness and life events in previous research, we make no

predictions regarding Agreeableness. We predict that the FFM will be related to positive and negative life events similarly between PD groups and the MDD group.

Method

Participants

The Collaborative Longitudinal Personality Disorders Study (CLPS) was a multi-site, naturalistic, longitudinal study of four PD groups: STPD, BPD, AVPD, and OCPD, as well as a non-PD comparison group diagnosed with MDD. A detailed description of the CLPS can be found elsewhere (Gunderson et al., 2000; McGlashan et al., 2000). The sample was recruited in two cohorts from treatment clinics and through the use of advertisements. Participants were between the ages of 18 and 45 ($M = 32.5$, $SD = 8.20$) and met diagnostic criteria for STPD, BPD, AVPD, or OCPD. Trained interviewers conducted assessments at baseline, six months, one year, and then annually. Membership in PD groups was STPD = 88 (13%), BPD = 175 (26%), AVPD = 166 (24%), and OCPD = 155 (23%). There were 98 (14%) participants in the MDD group. The final sample consisted of 682 participants with complete life events data, 435 (64%) of whom were females (Table 1).

Measures

Personality disorder group—Diagnoses were made at baseline using the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV; Zanarini, Frankenburg, Sickel, & Yong, 1996). Personality disorder criteria are rated on a 3-point scale (0 = absent or clinically insignificant; 1 = present, but of uncertain clinical significance; 2 = present and clinically significant). Diagnoses were adequately reliable (Zanarini et al., 2000). Personality disorder group assignment was determined by severity when more than one PD was present.

Major depressive disorder—MDD was assessed using the Structured Clinical Interview for DSM-IV Axis I Disorders – Patient Version (SCID-I/P; First, Gibbon, Spitzer, & Williams, 1996).

Personality—The Five Factor Model of personality was assessed using the Revised NEO Personality Inventory (NEO-PI-R; Costa & McCrae, 1992). The NEO-PI-R is a 240-item, self-report tool designed to measure the five domains of the FFM of personality: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. NEO-PI-R scores at baseline assessment were used.

Life events—Life events were assessed using a modified version of the Psychiatric Epidemiology Research Interview Life Events Scale (Dohrenwend, Krasnoff, Askenasy, & Dohrenwend, 1978). Participants were asked whether any of 45 possible NLEs and 25 possible PLEs had occurred during the prior year. Life events were classified into 10 domains: school (two negative, two positive), work (nine negative, seven positive), love and marriage (eight negative, five positive), children (four negative, three positive), family (one negative, zero positive), residence (two negative, two positive), crime and legal matters (ten negative, two positive), finances (three negative, three positive), social activities (two negative, zero positive), and health (four negative, one positive). Mean PLEs and NLEs per

year were averaged over a period of 7 years, starting one year following baseline assessment, and were used as the outcome variables. Extreme cases on both life events variables were Winsorized so that they fell within $+/- 3.29$ SDs of their means (Tabachnick & Fidell, 2007).

Analytic Plan

All analyses involved cross-sectional examinations of traits and averaged life events. Prior to analysis, four dummy coded PD categories (STPD, BPD, AVPD, and OCPD) and one MDD dummy category were created. In addition, four dummy coded PD × FFM trait interaction terms, and one MDD × FFM trait interaction term were created for each of the five FFM traits, which were centered on their means. The MDD group was used as the comparison group and all MDD terms were therefore excluded from each regression analysis.

We conducted bivariate correlations to examine the relations between the FFM, and PLEs and NLEs. Analyses were conducted within each of the four PD groups separately, as well as with aggregated PDs. Centered scores for each FFM trait at baseline were correlated with average annual positive and negative life events over the seven-year follow-up period.

We conducted regressions to determine if the FFM traits predicted PLEs and NLEs differentially between each PD when compared to MDD. For each regression, the dependent variable was either average PLEs or NLEs. At Step 1, a centered FFM trait was entered. At Step 2, the four PD dummy variables were entered. Finally, at Step 3, we entered PD × FFM trait interaction terms.

Results

Among aggregated PDs, women ($M = 1.75$) experienced more PLEs per year than men ($M = 1.58$), $F(1, 582) = 4.15$, $MSE = 0.96$, $p = .04$, $\eta_p^2 = .01$. There were no differences between women ($M = 2.31$) and men ($M = 2.14$) in the number of NLEs experienced, $F(1, 582) = 1.67$, $MSE = 2.14$, $p = .12$, $\eta_p^2 = .00$, and there were no gender by PD interactions, all $ps > .05$. Overall, there were no differences between individuals with PD ($M = 2.25$) and MDD controls ($M = 2.09$) in the average number of NLEs experienced per year, $F(1, 680) = 0.95$, $MSE = 2.12$, $p = .33$, $\eta_p^2 = .00$. However, individuals with PD ($M = 1.69$) experienced fewer PLEs per year than MDD controls ($M = 1.98$), $F(1, 680) = 7.24$, $MSE = 0.99$, $p < .01$, $\eta_p^2 = .01$.

A one-way ANOVA comparing groups (i.e., STPD, BPD, AVPD, OCPD, and MDD) on number of NLEs identified differences among groups, $F(4, 677) = 7.92$, $MSE = 2.04$, $p < .01$, $\eta_p^2 = 0.04$. Follow-up Tukey's HSD tests indicated that those in the STPD group ($M = 2.37$) experienced more NLEs per year than the AVPD group ($M = 1.80$), $p = .02$ (see Figure 1). The BPD group ($M = 2.65$) experienced more NLEs than those in the AVPD group, $p < .01$, the OCPD group ($M = 2.21$), $p = .05$, and MDD group ($M = 2.09$), $p = .02$. A one-way ANOVA comparing groups on PLEs also identified differences, $F(4, 677) = 9.75$, $MSE = 0.95$, $p < .01$, $\eta_p^2 = 0.05$. Follow-up tests indicated that the STPD ($M = 1.48$), BPD ($M = 1.60$), and AVPD ($M = 1.54$) groups experienced fewer PLEs than the OCPD group ($M = 2.06$), all $ps < .01$. The STPD and AVPD groups experienced fewer PLEs than did MDD

controls ($M = 1.98$), $ps < .01$ (see Figure 1), and the BPD group experienced fewer PLEs than did MDD controls, $p = .02$.

Bivariate correlations indicated that the FFM was associated with life events among PD groups (see Table 2). Among aggregated PDs, NLEs were positively associated with Neuroticism. PLEs were positively correlated with Extraversion, Openness, and Conscientiousness. PLEs were negatively associated with Neuroticism. Examination of disaggregated PDs identified distinct relationships according to PD group. Specifically, the FFM traits were unrelated to NLEs among the STPD group, however, Openness was positively associated with PLEs. Among the BPD group, NLEs were positively correlated with Neuroticism, whereas PLEs were positively associated with Extraversion and Openness. Among the AVPD group, PLEs were positively associated with Extraversion and Openness. Among OCPD, Extraversion was associated with PLEs. In the MDD control group, NLEs were negatively associated with Agreeableness, and PLEs were positively correlated with Extraversion and Openness.

Comparisons of the predictive power of these traits for life events were relatively stable across each PD group and the MDD control group: Three group-by-trait interactions emerged. Agreeableness was more strongly associated with fewer NLEs among the MDD group than among the STPD group, $b = 0.03$, $t(672) = 2.66$, $p = .01$. Similarly, Openness was more strongly associated with more PLEs among the MDD group than they were among the OCPD group, $b = -0.01$, $t(672) = 2.00$, $p = .05$, and greater Extraversion was more strongly associated with experiencing more PLEs among the MDD group than it was among the STPD group, $b = -0.01$, $t(672) = 2.09$, $p = .04$. Overlap of FFM trait distributions between each PD and the MDD control group was acceptable for testing group-by-trait interactions. Trait means for each PD and the MDD control group were within one standard deviation of one another in all but two cases. In these two cases, trait means fell within 1.5 standard deviations of one another.

Discussion

The results of the present investigation indicate that normal personality traits can be used to help understand the lives of individuals with disordered personality. We predicted that the FFM would correlate with positive and negative life events, and that these relations would be similar to those found among nonclinical samples. This hypothesis was partially supported. Among all PDs combined, Neuroticism was positively associated with NLEs, whereas Extraversion, Openness, and Conscientiousness were positively associated with PLEs. Overall, this pattern of associations is similar to findings from non-clinical samples (e.g., Headey & Wearing, 1989; Magnus et al., 1993). Further evidence of continuity between PD and non-PD groups is provided by our comparisons of PD groups to a control group of individuals with a major depressive disorder, which indicated that, in general these traits operated relatively similarly across clinical samples with and without PD.

Our findings also highlight the importance of concurrently considering normal personality and disordered personality. Although we identified substantial continuity regarding the predictive power of normal personality traits, we also identified some distinct associations

according to PD groups. Among the disaggregated PD groups, the pattern of associations between FFM and life events was most notable in the BPD group. Specifically, among the BPD group, Extraversion and Openness were positively correlated with PLEs, and Neuroticism was positively related to NLEs. Among the AVPD group, Openness and Extraversion were positively associated with PLEs. Among the STPD group, the only relationship we observed was between Openness and PLEs, and among the OCPD group, Extraversion was positively associated with PLEs.

Positive associations between Openness and Extraversion and PLEs are consistent with findings from community samples. The relationship between Neuroticism and NLEs among the BPD group is also consistent with findings from community samples (e.g., Headey & Wearing, 1989), but is particularly interesting in light of the pronounced absence of such relationships among the other PD groups. Indeed, given that BPD pathology is largely characterized by high levels of Neuroticism, it might be reasonable to predict attenuated associations due to ceiling effects. On the contrary, our findings suggest that BPD pathology may amplify the pernicious influence of Neuroticism on life events. More generally, the elevated patterns of prediction for normal traits and life events among the BPD group suggest a broad accentuating effect of BPD pathology on associations between personality and outcomes. These findings are consistent with those of Trull et al. (2003), who found that the Five Factor index of BPD did not fully account for variance captured by traditional measures of BPD.

Results from the STPD group contrast with those of the BPD group such that the schizotypal pathology appears to mute the influence of normal personality traits. Indeed, relative to MDD controls the STPD group exhibited attenuated associations between Agreeableness and fewer negative events and between Extraversion and more positive events. It may be that the social isolation that characterizes STPD individuals inhibits the potential for personality traits to influence life events. This interpretation is consistent with our observation of a somewhat similar pattern of results among the AVPD group. Indeed, among the STPD and the AVPD groups, the most notable association between normal personality and life events involved a positive influence of Openness to Experience, suggesting that willingness to engage with the broader world may improve prospects for these groups that are prone to social isolation.

Several limitations of this research warrant discussion. First, our sample was constrained to four personality disorders and major depressive disorder. As such, we could not investigate relationships across the entire spectrum of personality disorders. Second, we examined NLEs and PLEs as broad categories. Thus, our findings offer a less nuanced picture of the relationships among PDs, the FFM, and life events, than if we had examined life events within specific domains separately, or considered individual life events. Third, participants' perceptions of life events were not assessed. Certain life events could potentially be perceived as positive *or* negative; for example, in some instances, a marital separation or broken engagement may be viewed positively. In an attempt to guard against this issue, we primarily investigated events consistently rated as either negative or positive by judges in Dohrenwend et al.'s initial study, and excluded several more ambiguous events. Finally, our assessment of the FFM relied on the NEO-PI, which is designed as a measure of normal

traits. More recently developed measures that assess maladaptive variants of FFM traits in the context of PD have demonstrated incremental validity over NEO-PI traits for important outcomes (e.g., Edmundson et al., 2011, Crego, Samuel, & Widiger, 2014) and future research that employs such measures has the potential to further contribute to the understanding of FFM and life events among clinical samples.

Despite these limitations, the present research has several implications. First, the determination of the extent to which the FFM explains life events among PD groups may contribute to an understanding of the factors that lead to undesirable outcomes among PD individuals. Moreover, as our findings are relatively congruent with prior research from normal populations, it may be appropriate to extrapolate research from community samples to understanding the lives of PD individuals. Finally, in addition to highlighting the potential utility of normal personality for understanding the lives of individuals with PD, our findings of distinct patterns of association according to diagnostic group suggests that the concurrent consideration of both normal and disordered personality features contribute to understanding life events among PD individuals.

Acknowledgments

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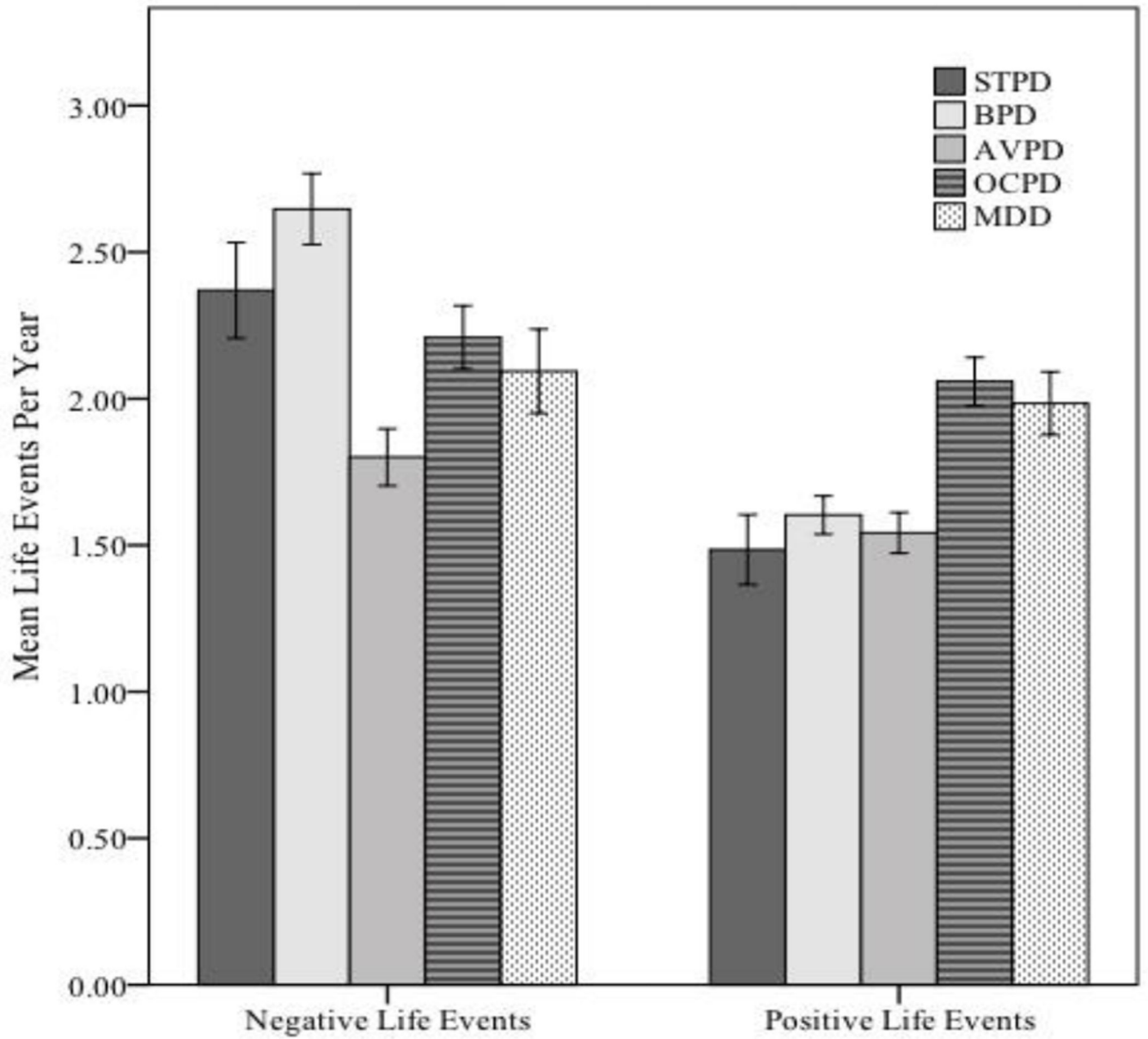
Figure 1.
Life Events by Diagnostic Group

Note: Mean yearly NLEs and PLEs by group. Error bars represent −/+ 1 *SE*.

Table 1

Demographics

Group	n	Age M(SD)	% Female
PD	584	32.5(8.20)	64
STPD	88	34.6(8.02)	46
BPD	175	31.8(7.83)	75
AVPD	166	31.8(8.36)	65
OCPD	155	32.6(8.41)	61
MDD	98	32.8(8.21)	62

Note. PD = personality disorder (STPD, BPD, AVPD, and OCPD combined); STPD = schizotypal personality disorder; BPD = borderline personality disorder; AVPD = avoidant personality disorder; OCPD = obsessive-compulsive personality disorder; MDD = major depressive disorder.

Table 2

Bivariate Correlations Between the FFM and Life Events by PD Group

FFM Trait	PD n = 584		STPD n = 88		BPD n = 175		AVPD n = 166		OCPD n = 155		MDD n = 98	
	−	+	−	+	−	+	−	+	−	+	−	+
N	.09*	−.07	−.01	−.02	.15*	.07	.05	−.13	.05	.02	.14	.02
E	.04	.22*	.06	.07	.02	.23*	−.05	.18*	−.02	.18*	−.08	.31*
O	.00	.19*	.02	.24*	−.06	.23*	−.04	.21*	.04	−.01	−.10	.25*
A	−.06	.03	.15	.12	−.03	.04	−.05	.05	−.09	−.05	−.23*	.13
C	−.05	.09*	.03	−.03	−.01	.04	−.06	.04	−.14	.05	−.05	.04

Note. PD = personality disorder (STPD, BPD, AVPD, and OCPD combined); STPD = schizotypal personality disorder; BPD = borderline personality disorder; AVPD = avoidant personality disorder; OCPD = obsessive-compulsive personality disorder; MDD = major depressive disorder; N = neuroticism, E = extraversion; O = openness to experience; A = agreeableness; C = conscientiousness; − = average negative life events per year over seven years, + = average positive life events per year over seven years.

*
p < .05, two-tailed.