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Articles

Concurrent Associations Between Trauma and Borderline Personality Organization in Emerging Adulthood

Aikaterini Malafanti ^{1§*}, Vasiliki Yotsidi ^{1§}, Eleni Giannouli ², Evangelia Paraskevadaki ³, Ioannis Malogiannis ²

Abstract

Introduction: There is limited research on the role of traumatic experiences in the development of borderline personality organization (BPO), which is a level of personality pathology characterized by identity diffusion, primitive defenses, impairment in reality testing, aggression, and deficits in the internalization of moral values, according to Kernberg's psychodynamic model. Even less research evidence exists on the role of adult trauma in BPO.

Aim of this Study: Therefore, the aim of this study was to investigate the concurrent associations between different types of trauma after the age of 18 and BPO in emerging adulthood.

Method: A community sample of 494 Greek emerging adults (aged 18-29 years, $M = 21.38$) completed the Traumatic Antecedents Questionnaire and the Inventory of Personality Organization.

Results: Structural equation modeling indicated low to moderate associations between trauma and BPO. The type of trauma that was most strongly associated with BPO was emotional abuse (including verbal abuse), especially for women. Only for men substance abuse (alcohol and drugs) and traumatic life events (e.g., accident, illness, disaster, death) were significant risk factors for BPO.

Conclusion: This study highlighted the differential and age-specific impact of the various types of concurrent trauma on personality pathology during emerging adulthood. The findings of this study, especially regarding the negative impact of emotional abuse on young women and of substance abuse and traumatic life events on young men, should be considered in designing and implementing developmentally- and trauma-informed as well as gender-sensitive screening and intervention practices with emerging adults. Further research is needed to elucidate the role of chronic, cumulative, and complex trauma in BPO in clinical and non-clinical populations of emerging adults.

¹ Department of Psychology, School of Social Sciences, Panteion University of Social and Political Sciences, Athens, Greece

² 1st Department of Psychiatry, Eginition Hospital, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece

³ StepUpAdvisor – Statistical Consultants, Athens, Greece

[§] Co-first Authors, these authors contributed equally to the manuscript.

E-mail corresponding author: katerina.malafanti@gmail.com

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1. Introduction

In the context of Kernberg's (1975, 1976) evidence-based psychodynamic model of internalized object relations, borderline personality organization (BPO) is a level across the personality pathology spectrum – the other two being the neurotic and the psychotic levels of organization. It is characterized by identity diffusion, that is, unstable, unintegrated or even distorted self and other representations; primitive defense mechanisms in coping with external stress and inner conflict (e.g., splitting, projection, projective identification, primitive idealization, omnipotent control); deficits in reality testing ranging from mild difficulties to psychotic distortions under stress; verbal and/or physical aggression toward self and others or risky behavior; and low internalization of a system of moral values, that is, deficits in superego formation, lack of guilt, and antisocial behavior (Kernberg, 1975, 1976, 1984; see also Caligor et al., 2023; Clarkin et al., 2007; Sesar et al., 2023). Individuals with BPO tend to have conflictual motivations, which represent inner conflicts, are unintegrated and are connected to intense, shallow and uncontrollable emotions. Because repression does not seem to work as in the neurotic level of organization and because primitive defense mechanisms may also fail, individuals with BPO tend to exhibit paranoid ideas, aggression, and destructiveness (Caligor & Clarkin, 2010; Kernberg & Caligor, 2005). This, in turn, is likely to cause a more or less severe dysfunction in the individual's relationships in several life domains.

BPO is regarded to represent most personality disorders as described in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013) and in the International Classification of Diseases (ICD-11; World Health Organization, 2022), both of which rely heavily on a categorical conceptualization of personality pathology. However, as Kernberg's psychodynamic model is a dimensional one (Kim & Lee, 2024), it has fundamentally inspired the Alternative DSM-5 Model for Personality Disorders (AMPD), which combines categorical and dimensional models of personality pathology (Clarkin et al., 2020; Natoli, 2019). In addition, Kernberg's integrative model has been pivotal for the development of the multidimensional Psychodynamic Diagnostic Manual (PDM-2; Lingardi & McWilliams, 2017). Apart from historically inspiring diagnostic manuals, Kernberg's model is a constantly evolving one and has been the basis for the formulation of well-established psychodynamic therapeutic models for personality pathology, with the most recent one being that of transference-focused psychotherapy (Kernberg, 2016, 2023). Hence, the contributions of Kernberg's psychodynamic model in understanding personality organization, borderline and narcissistic pathology, and

personality change have been continuing, while they still pave the way for new research in psychoanalysis, psychiatry, and clinical psychology (Doering, 2024; Yeomans et al., 2024).

In Kernberg's model, internalized object relations are defined as units of self-image, object image, and the affectively charged interaction between them (Kernberg, 1976). The internalization of object relations begins early in life as the infant interacts with significant others, continues with further modifications and organization during childhood, adolescence and emerging adulthood, and forms the basis of personality development. Although personality pathology in general, and BPO in particular, results from a complex and dynamic interaction of genetic/neurobiological, psychodynamic, and psychosocial factors (Kernberg, 2015), the disruption in the internalization of object relations is one of the most crucial factors and is typically caused by trauma.

Within the psychoanalytic framework, trauma is conceptualized as acute or cumulative situations or events that cause excessive excitation in individuals. This excitation overwhelms them and exceeds their capacity to tolerate, control, and work through trauma, resulting in persistent negative consequences for their physical and mental health (Boulanger, 2007; Freud, 1915-1917/1963; Laplanche & Pontalis, 1967). Research has documented the high incidence of trauma (Curran et al., 2018; Stoltenborgh et al., 2011) and the negative consequences of it (Devi et al., 2019; Humphreys et al., 2020; van der Kolk, 2014) for the developing individual who is exposed to various types of trauma, such as abuse (physical, sexual, emotional, verbal), neglect (physical, emotional), domestic and community violence, maladaptive parenting, separation from parents, and negative life events (e.g., accident, illness, disaster, death).

In the context of Kernberg's model, trauma is regarded to impede, either directly or indirectly, the internalization of object relations, mainly by disrupting attachment relationships (Clarkin et al., 2007). Across development, various types of adversity have a negative impact on processes such as the integration of (good and bad) self and other representations (identity formation), cognitive and emotional self-regulation, and formation of a system of moral values (e.g., Bortolla et al., 2022; Carvalho Fernando et al., 2014; Critchfield et al., 2008; Sesar et al., 2022; Stern et al., 2018). Primitive defense mechanisms, such as splitting and projection, are activated as the individual attempts to avoid painful traumatic relationships with significant others (Caligor & Clarkin, 2010). Moreover, dissociation, as a typical defensive reaction to trauma, can cause further difficulties in the individual's struggle to work through the traumatic experience (Bichescu-Burian et al., 2017).

A large body of research has shown that childhood trauma (i.e., before the age of 18) is a risk factor for adult personality disorders (e.g., de Aquino Ferreira et al., 2018; Winsper et al., 2016; Yuan et al., 2023 for reviews and meta-analyses). Much less research has focused on childhood trauma and BPO in adults, including emerging adults (aged 18-29 years) and community and clinical samples (Espinosa & Rudenstine, 2018; Fuchshuber et al., 2018, 2019; Igarashi et al., 2010; Malafanti, Yotsidi et al., 2024). These associations are low to moderate and, as expected, are stronger for interpersonal (i.e., abuse, family dysfunction) than non-interpersonal (i.e., negative life events) trauma (Malafanti, Yotsidi et al., 2024).

Although significant associations have been found between adult trauma and personality disorders in clinical and non-clinical samples (Jowett et al., 2020 for a review), and between post-traumatic stress disorder and personality disorders (particularly borderline personality disorder; e.g., Ford & Courtois, 2021), there is a notable gap in the literature on the concurrent associations between trauma and BPO during emerging adulthood. The few existing studies examining trauma in adulthood have found rather low associations with BPO in clinical and non-clinical samples (Espinosa & Rudenstine, 2018; Igarashi et al., 2010). Furthermore, these studies did not examine gender differences in these associations. Existing data suggest gender differences in the prevalence of trauma, such as higher rates of sexual and emotional abuse in women and higher rates of domestic violence in men (Moody et al., 2018; Wamser-Nanney & Cherry, 2018). However, the moderating role of gender in the associations between trauma and psychopathology in general is underexplored (Gallo et al., 2018; Kobulsky et al., 2018; Schilling et al., 2007; Waxman et al., 2014). These studies did not include all types of trauma or did not measure adult trauma and/or personality pathology, and none of them included BPO.

Furthermore, research on trauma and BPO in emerging adulthood is warranted because BPO is expected to interfere with the formation of identity and meaningful relationships, which are the major developmental tasks of this period (Erikson, 1963). These developmental tasks imply that the internalization of object relations is still in progress. Moreover, this period is characterized by a “borderline” sense of being in-between adolescence and adulthood (Arnett, 2024). Adolescence and emerging adulthood are the ages of onset of personality pathology, which in many cases may manifest itself as subclinical/subthreshold personality traits that interfere with the attainment of adult status (Chanen & Thompson, 2019; Chanen et al., 2020). Therefore, clinicians should be aware of the role of adult trauma in personality pathology and inform their practice to incorporate concurrent psychosocial risk factors to better address the developmental and mental health needs of young people.

1.1 Aim and Hypotheses of this Study

The aim of this study was to examine the concurrent relationships between traumatic experiences and BPO in a community sample of emerging adults. This is a much-neglected area of research. Higher BPO scores are expected among emerging adults who report more traumatic experiences occurring after the age of 18. The strongest associations with BPO will be found with the types of trauma that are expected to be more prevalent after the age of 18, such as emotional abuse, witnessing trauma, other psychosocial trauma (e.g., accident, illness, disaster, death), alcohol and drug use (personal use and familial use), rather than those that typically occur at younger ages, such as neglect, physical abuse, and separation. This hypothesis is consistent with similar existing data (Igarashi et al., 2010; for meta-analyses see Porter et al. (2020) and Yuan et al. (2023); for a review see Back et al. (2021)). In addition, in line with data from other studies with community samples (Fuchshuber et al., 2018, 2019; Igarashi et al., 2010), we expect the associations between trauma and BPO to be low to moderate.

Finally, gender differences are expected in the impact of trauma on BPO and, more specifically, women are expected to be more vulnerable in terms of personality pathology if they experience types of abuse that are relational in nature, such as emotional abuse, whereas for men more violent and antisocial types of abuse, such as physical abuse, traumatic life events, alcohol and substance abuse, and witnessing violence, are expected to have a greater impact, in line with existing research evidence (Gallo et al., 2018; Kobulsky et al., 2018; Schilling et al., 2007; Waxman et al., 2014). Based on the above, the hypotheses of our study are the following:

Hypothesis 1. Higher BPO scores among emerging adults are associated with traumatic experiences after the age of 18.

Hypothesis 2. Gender modifies the impact of traumatic experiences on BPO.

2.1 The association of BPO with relational types of abuse would be stronger for women.

2.2 The association of BPO with violent and antisocial types of abuse would be stronger for men.

2. Method

2.1 Participants

From the initial sample of 543 emerging adults, 49 cases were excluded as multivariate outliers, resulting in a final sample of 494 participants aged 18-29 years ($M = 21.38$, $SD = 2.44$). More information on the participants' sociodemographic characteristics is presented in Table 1.

Table 1. Sociodemographic Characteristics of the Sample ($N = 494$)

Sociodemographic Characteristics	<i>f</i>	%
Gender		
Men	205	41.5
Women	287	58.1
Non-binary	2	0.6
Educational level		
Secondary education	13	2.6
Post-secondary education	2	0.4
University student	427	86.4
Tertiary education	23	4.7
Master student	22	4.5
Master	4	0.8
PhD student	3	0.6
Occupation		
Non-working university student	332	67.2
Working university student	105	21.3
Unemployed	12	2.4
Civil servant	7	1.4
Private employee	26	5.3
Self-employed	8	1.6
Other	4	0.8
Country of origin		
Greece	477	96.6
Cyprus	13	2.6
Other	4	0.8
Housing status		
Alone	107	21.7
With parents	293	59.3
With other relatives	48	9.7
With friend or romantic partner	36	7.3
Other	10	2.0

Recruitment was done from the general population of emerging adults by posting the link to the electronic form of the measures (Google Forms) on e-class platforms of several university departments located in Athens, Greece, after acquiring the university teachers' permission. The link was also posted on social media groups of university students from institutions all over Greece. In addition, participants were asked to forward the link to individuals aged 18-29 years using snowball sampling. The only inclusion criteria were that participants should fall within the 18-29 years age range and have a good understanding of written Greek language.

2.1 Measures

Sociodemographic information. Participants were asked to provide information on age, gender, educational level, occupation, country of origin and housing status.

Traumatic Antecedents Questionnaire (TAQ; Herman & van der Kolk, 1987; Spinazzola, 2019). The Greek version of the TAQ was used (Karamanolaki et al., 2016; Saleptsi et al., 2004). It consists of 41 items that assess individuals' recall of the frequency and intensity of positive and traumatic experiences at different ages, on a 4-point scale ranging from 0 (*never or not at all*) to 3 (*often or very much*). The last item assesses distress during the completion of the questionnaire and provides information about post-traumatic stress. In this study, we present data only for adult trauma (after the age of 18), that is, neglect, separation, emotional abuse, physical abuse, sexual abuse, witnessing trauma, other trauma (e.g., accident, illness, disaster, death), and alcohol and drug use. The *don't know* answers were coded as missing values. The TAQ was originally developed as an interview (Herman et al., 1989). As a questionnaire, the original measure has been found to have good convergent validity with post-traumatic stress disorder and complex trauma (Luxenberg et al., 2001). The Greek version of the TAQ has adequate internal consistency reliability, validity and measurement invariance across gender (Malafanti, Yotsidi et al., 2024). In this study, we used the above eight theoretical subscales of the TAQ, rather than the four-factor structure of the Greek version, with the aim of assessing as many specific types of trauma as possible. In addition, in this study, Cronbach's alpha of the Greek version of the TAQ was .64. The rather moderate internal consistency of the measure may be attributed to the fact that it assesses a variety of traumatic experiences (for similar results see Malafanti, Yotsidi et al., 2024).

2.2 Inventory of Personality Organization (IPO; Clarkin et al., 2001; Kernberg & Clarkin, 1995; Lenzenweger et al., 2001). It consists of 83 items assessing BPO according to Kernberg's object relations model, on a 5-point scale ranging from 1 (*never true*) to 5 (*always true*). Subscales include identity diffusion, primitive defenses, reality testing, aggression, and moral values. From a 155-item initial version of the IPO (Kernberg & Clarkin, 1995), a 57-item version containing the three primary subscales, that is, identity diffusion, primitive defenses, and reality testing (Lenzenweger et al., 2001) and an 83-item with two additional subscales, that is, aggression and moral values (Clarkin et al., 2001), were tested. In these studies, the internal consistency of the original scale and subscales was satisfactory ($> .80$). The Greek version of the IPO has adequate internal consistency reliability, validity and measurement invariance across gender (Giannouli & Malogiannis, 2019; Malafanti, Yotsidi et al., 2024). In this study, we used the total score of the BPO. In addition, in this study, Cronbach's alpha of the Greek version of the IPO was high: .94.

2.3 Procedure

All participants gave their consent after being informed about the aim of the research and their rights (e.g., to withdraw from the study at any time) and after being ensured for the anonymity

and confidentiality of their personal data, given the sensitive nature of the topic. This study is part of a larger research project on personality disorders conducted by the Unit of Personality Disorders, Eginition Hospital, 1st Psychiatric Clinic of the National and Kapodistrian University of Athens. The project has been approved by the Research Ethics Committee of Eginition Hospital (approval number: 404/5.7.2021) and conformed to the Declaration of Helsinki ethical principles for medical research involving human subjects. (For other parts of this study see Giannouli & Malogiannis, 2019; Malafanti, Giannouli et al., 2024; Malafanti, Yotsidi et al., 2024).

2.4 Data analysis

Missing values were treated using the pairwise method, thus maintaining the full final sample ($N = 494$). For predictive models, mean scores were used, allowing for the inclusion of all participants as these scores can be estimated despite the presence of missing values. To account for skewed distributions, data were log-transformed and multivariate outliers based on Mahalanobis' distance were excluded from the analysis. Structural equation modeling (SEM) was performed, using Browne's Asymptotically Distribution-Free (ADF) Criterion with 1,000-sample bootstrapping. Standardized coefficients are presented. Values of 0.2, 0.5, and 0.8 indicate small, moderate, and large effect sizes, respectively (Cohen, 1992). Chi-square statistic (χ^2/df), Goodness of Fit Index (GFI) and Root Mean Square Error of Approximation (RMSEA) were reported as indicators of goodness of fit. Acceptable fit was defined as $\chi^2/df < 5$, GFI > 0.90 and RMSEA < 0.08 (Browne & Cudeck, 1993). Analyses were performed using IBM SPSS 28.0 and IBM AMOS 29.0.

3. Results

3.1 Descriptive Statistics and Correlations

As can be seen in Table 2, the prevalence of the different traumatic experiences, distress (item 41) and the levels of BPO were low in this community sample of emerging adults, as it was initially hypothesized. In addition, the partial correlation coefficients, controlling for gender, between traumatic experiences and BPO, although statistically significant, were rather low (see Table 3). The highest correlations ($> .30$) were found between emotional abuse and BPO, between emotional abuse and neglect, between emotional abuse and witnessing trauma, and between physical abuse and other trauma (e.g., accident, illness, disaster, death). These results confirmed our first hypothesis that higher BPO scores among emerging adults would be associated with traumatic experiences after the age of 18. Also, based on our results, different types of trauma were significantly found to correlate with each other, probably because various types of trauma may also coexist in someone's life. The correlation between distress during the

completion of the questionnaire, as an index of post-traumatic stress, and BPO, controlling for gender was statistically significant: $.182, p < .001$. However, this correlation was low.

Table 2. Descriptive Statistics of the Sample ($N = 494$)

Variables	<i>M</i>	<i>SD</i>	Median	Min	Max
Traumatic experiences					
Neglect	.65	.47	.60	.00	2.20
Separation	.52	.58	.38	.00	3.00
Emotional abuse	.51	.54	.40	.00	3.00
Physical abuse	.13	.29	.00	.00	1.67
Sexual abuse	.02	.07	.00	.00	.50
Witnessing trauma	.15	.22	.00	.00	1.33
Other trauma	.20	.27	.17	.00	1.50
Alcohol and drugs	.20	.44	.00	.00	2.50
Distress	.83	.80	1.00	.00	3.00
Borderline personality organization	1.85	.41	1.81	1.06	3.43

Note. Traumatic experiences: 0-3; Borderline personality organization: 1-5.

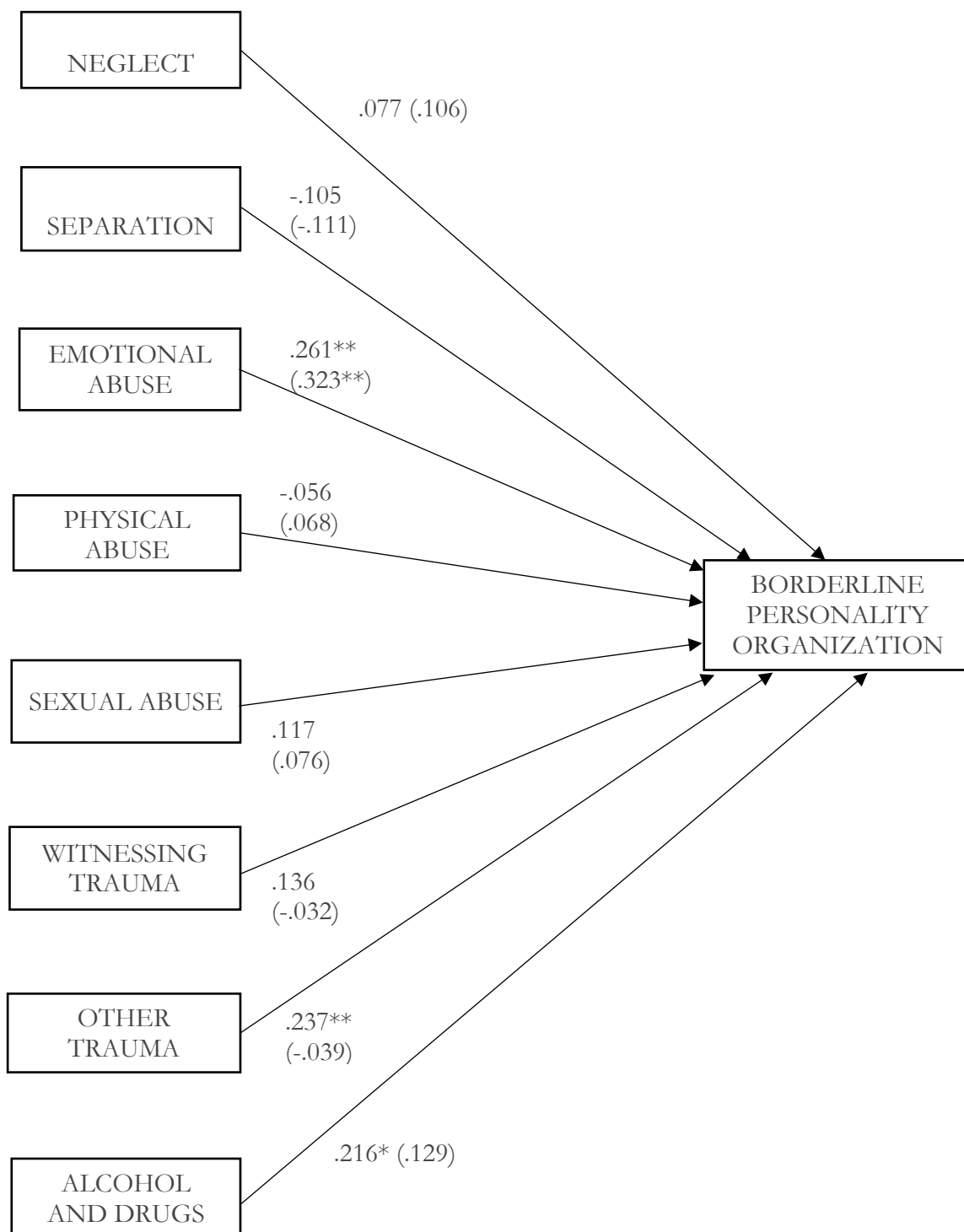
Structural Equation Modeling

Structural equation modelling for the prediction of BPO from the different traumatic experiences showed acceptable fit: $\chi^2/df = 4.16$, GFI = .912, RMSEA = .057 (see Figure 1).

Table 3. Partial Correlation Coefficients (Pearson’s r) Controlling for Gender ($N = 494$)

Variables	1	2	3	4	5	6	7	8
1. Neglect	--							
2. Separation	.157***	--						
3. Emotional abuse	.388***	.202***	--					
4. Physical abuse	.217***	.167***	.166***	--				
5. Sexual abuse	.083	.038	-.024	.069	--			
6. Witnessing trauma	.293***	.256***	.324***	.228***	.065	--		
7. Other trauma	.124**	.241***	.202***	.348***	.040	.255***	--	
8. Alcohol and drugs	.251***	.071	.191***	.276***	.092*	.195***	.190***	--
9. BPO	.264***	-.016	.354***	.163***	.081	.180***	.136**	.240***

Note. BPO = Borderline personality organization. All variables were log-transformed. * $p < .05$. ** $p < .01$. *** $p < .001$.



Note. Standardized regression weights' estimates were produced using Browne's Asymptotically Distribution-Free (ADF) Criterion with 1,000 samples bootstrapping. For each variable, the first coefficient is for men and the one in parenthesis is for women. All variables were log-transformed. * $p < .05$. ** $p < .01$.

Figure 1. Structural Equation Modeling for the Associations Between Traumatic Experiences and Borderline Personality Organization

Emotional abuse in adulthood significantly and positively predicted BPO for both men and women, although this prediction was stronger for women. Alcohol and drugs and other trauma (e.g., accident, illness, disaster, death) significantly and positively predicted BPO only for men. The largest (i.e., moderate) effect size was observed regarding emotional abuse for women. All other effect sizes were small. These results provided preliminary evidence for our second hypothesis that the impact of traumatic experiences on BPO would be modified by gender. Nevertheless, emotional abuse in emerging adulthood appeared to be a common risk factor for BPO among young people, although it had a stronger prediction for women than men.

It should be noted that, before bootstrapping, witnessing trauma was a significant predictor of BPO only for men, whereas alcohol and drugs predicted BPO for both men and women. Yet, the non-significance of these results after bootstrapping suggests issues with robustness across repeated sampling, which can be attributed to the non-normality of the data (Hesterberg, 2015).

4. Discussion

As expected, the results of this study indicated that emerging adults with higher levels of BPO were likely to have experienced various traumatic experiences after the age of 18. These findings support existing research on the concurrent and longitudinal links of trauma with personality disorders and BPO (for reviews and meta-analyses see de Aquino Ferreira et al., 2018; Winsper et al., 2016; Yuan et al., 2023). Especially for BPO, which was assessed in this study, Kernberg's model posits that trauma, directly or indirectly, severely affects the internalization of object relations and this, in turn, may lead to primitive defense mechanisms, identity diffusion, problems in reality testing, aggression toward self and others, and deficits in superego formation, which are the main characteristics of BPO (Kernberg, 1975, 1976, 1984).

It is important to note, however, that our predictions were not supported for all types of trauma assessed and that certain types of trauma occurring after the age of 18 appear to pose a greater risk of BPO than others. The rather small magnitude of these predictions may be due to the fact that the etiopathogenesis of BPO involves a complex and dynamic interplay of several factors, such as genetic/neurobiological, psychodynamic, and psychosocial ones, and not only trauma (Kernberg, 2015). Another reason for these findings may be the low prevalence of traumatic experiences, distress and BPO in this community sample of emerging adults. Existing research has also shown low to moderate associations in clinical and nonclinical populations (Fuchshuber et al., 2018, 2019; Igarashi et al., 2010; Malafanti, Yotsidi et al., 2024; Porter et al., 2020).

As hypothesized, emotional abuse was the type of trauma with the strongest association with BPO for both men and women, a finding similar to those of other studies (Back et al., 2021;

Igarashi et al., 2010; Porter et al., 2020; Yuan et al., 2023). This finding provides support to the basic premise of Kernberg's model, namely that trauma is likely to cause personality pathology by disrupting parent-child attachment (Clarkin et al., 2007). Verbal abuse, invalidating parenting practices, vague and inconsistent family rules, unfair discipline, and parents using the child as a confidant (i.e., the facets of emotional abuse assessed in this study) appeared to increase the risk of personality pathology in emerging adulthood regardless of gender. More research is needed on this type of abuse, which is quite common, although relatively neglected (Dube et al., 2023; Xiao et al., 2023) and is associated with personality pathology in emerging adulthood. Findings also indicated that substance abuse (alcohol and drugs), by emerging adults and/or their family members, was a risk factor for personality pathology among men who are on the cusp of adulthood, a finding congruent to that of other studies (Scalzo et al., 2018). In addition, traumatic life events, such as accidents, illness and death, were more common among men with a more pathological personality structure.

It is important to note that these statistically significant and meaningful findings emerged despite the low prevalence of traumatic experiences, distress and BPO in this community sample. They provide support to the view that in emerging adulthood, a period characterized by a "borderline" sense of being in-between adolescence and adulthood (Arnett, 2024), BPO may manifest itself as subthreshold/subclinical personality traits that nevertheless may hinder maturation and entry into adulthood (Chanen & Thompson, 2019; Chanen et al., 2020). We should pay special attention to emotional and verbal abuse (disruption of relationships), alcohol and drug use (antisocial behavior) and traumatic life events (psychosocial factors), which may pose a risk for personality pathology during this sensitive developmental period.

Regarding gender differences, as expected, whereas current emotional abuse was mostly related to personality pathology among women, men were at higher personality pathology risk when they were experiencing the use of alcohol and drugs in their family members and/or themselves and had recently encountered traumatic life events. This pattern of findings is in accordance with the few existing data on the gender-moderated impact of trauma on mental health, although in most studies only childhood trauma was assessed (Gallo et al., 2018; Kobulsky et al., 2018; Schilling et al., 2007; Waxman et al., 2014). It seems, then, that young women are more vulnerable to relational harm than men. This finding may add to the existing literature on the vulnerability of women to intimate partner violence (for a review see Bellot et al., 2024). For example, if emotional abuse experienced by young women has negative effects at the personality level (e.g., identity diffusion, impaired reality testing), it may hinder women in protecting themselves from (re)victimization. Of course, this hypothesis needs further investigation. In addition, young men are likely to be more susceptible to the externalized, antisocial, and violent

types of trauma (Zahn-Waxler et al., 2008). In addition, we can reasonably hypothesize that, among young men with BPO features, self-destructive behaviors (typical of BPO), may take the form of substance abuse and of proneness to traumatic events such as accidents and diseases.

5. Limitations and Suggestions for Future Research

The study is limited in that it examined only the concurrent links between trauma and BPO in a community sample of university students (mainly), which was not representative of the population of emerging adults. Future research is needed to investigate BPO as a function of the continuity and discontinuity of trauma across developmental periods (beginning from early childhood), the post-traumatic stress reactions, and the impact of constellations of various types of trauma (i.e., complex trauma) in clinical and nonclinical samples of emerging adults. Further research, through the lens of Kernberg's psychodynamic model, into gender differences in the ways specific types of adult trauma are associated with personality pathology in young people is also warranted.

6. Conclusion

Despite its limitations, this study highlighted the differential and age-specific impact of the various types of concurrent trauma on personality pathology during emerging adulthood. The findings of this study, especially regarding the negative impact of emotional abuse on young women and of substance abuse and traumatic life events on young men, should be considered in designing and implementing developmentally- and trauma-informed as well as gender-sensitive screening and intervention practices with emerging adults.

Ethical approval

The study was approved by the Research Ethics Committee of Eginition Hospital, 1st Psychiatric Clinic, School of Medicine, National and Kapodistrian University of Athens, Athens, Greece (approval number: 404/5.7.2021).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data are not openly available due to privacy/ethical restrictions but are available on reasonable request from the corresponding author.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any potential conflict of interest.

Authors' Contribution

AM[†]: Conceptualization, Methodology, Investigation, Data curation, Formal analysis; Writing – original draft; VY[†]: Conceptualization, Methodology, Writing – original draft, Supervision; EG: Methodology, Resources, Writing - review & editing, Supervision, Project administration; EP: Formal analysis, Visualization, Writing - review & editing; IM: Methodology, Resources, Writing - review & editing, Supervision, Project administration.

[§] Shared first authorship

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