



## RESEARCH ARTICLE

## Borderline Personality Disorder with Psychopathic Traits: A Critical Review

Lopez-Villatoro JM<sup>1\*</sup>, Palomares N<sup>1,2,3</sup>, Díaz-Marsá M<sup>3,4</sup> and Carrasco JL<sup>3,4</sup>



<sup>1</sup>Instituto de Investigación Sanitaria del Hospital Clínico San Carlos (IdISSC), Avenida del Profesor Martín Lagos, Spain

<sup>2</sup>Department of Personality, Evaluation and Clinical Psychology, Universidad Complutense de Madrid, Spain

<sup>3</sup>Centro de Investigación en Red de Salud Mental (CIBERSAM), Hospital Gregorio Marañón, Spain

<sup>4</sup>Department of Psychiatry and Medical Psychology, Univesidad Complutense de Madrid, Spain

\*Corresponding author: Jose Manuel Lopez-Villatoro, Instituto de Investigación Sanitaria del Hospital Clínico San Carlos (IdISSC), C/Martin Lagos s/n, 28040 Madrid, Spain, Tel: +34-91-330-3566, Fax: +34-91330-3574, E-mail: [psicolovill@gmail.com](mailto:psicolovill@gmail.com)

### Abstract

**Background:** Borderline personality disorder has been related to personality traits such as antisocial traits, impulsivity or neuroticism. However, little attention has been given to psychopathic traits and the role they play on the disorder.

**Objective:** To review the relationship between psychopathic traits and borderline personality disorder.

**Methods:** A review of scientific literature between 1980 and 2017 was carried out. Papers were in English and had to relate psychopathic traits to borderline personality disorder. A total of 52 articles were included in the study. After full text revision, eighteen papers were selected for review.

**Results:** This review suggests an association between borderline personality disorder and the factor 2 of the concept of "psychopathy", but not between BPD and factor 1. Previous literature is not conclusive about the influence of gender on psychopathic features present on BPD patients.

**Conclusions:** According to the findings recorded in this review, an epidemiological and phenomenological relationship of BPD syndrome and the psychopathic syndrome can be confirmed. However, whether this relationship reflects real comorbidity or is the result of a nosological overlapping of the impulsive/unstable diagnostic criteria of BPD and the impulsive items of factor 2 of psychopathy cannot be resolved as yet.

### Keywords

Borderline personality disorder, Psychopathy, Antisocial personality disorder, Impulsivity, Aggressiveness

### Abbreviations

BPD: Borderline Personality Disorder; F1: Factor 1 of Psychopathy; F2: Factor 2 of Psychopathy; APD: Antisocial Personality Disorder; PCL-R: Hare Psychopathy Checklist-Revised; FFM: Five Personality Factor Model; PTSD: Post-Traumatic Stress Disorder; PPD: Psychopathic Personality Disorder; CAPP: Comprehensive Assessment of Psychopathic Personality; CABP: Comprehensive Assessment of Borderline Personality; BPI: Borderline Personality Inventory; LSRP: Levenson Self-Report Psychopathy Scale; DBT: Dialectic Behavioral Therapy; PID-5: Personality Inventory for DSM-5

### Introduction

Borderline Personality Disorder (BPD) is described as a severe mental condition characterized by high affective instability, impulsive behaviors, autolytic attempts, or unstable interpersonal relationships [1]. Previous literature on BPD has focused mainly on symptoms of mood and anxiety and self-injurious behavior [2,3] but relatively little is known about the association between borderline personality disorder and psychopathic traits.

Psychopathy is a mental condition characterized by a deficit of emotional processing, interpersonal relationships and self-regulation. Individuals with psychopathic traits engage in callous and manipulative behavior with others and exhibit antisocial and impulsive behaviors [4]. The predominant model of psychopathy during the last two decades has been the two-factor model [5],

from which most self-report measures of psychopathy have been constructed.

Factor 1 (F1) is related to the interpersonal and affective components of psychopathy, such as a lack of remorse or guilt, manipulative, egocentric and grandiose attitude, and/or a lack of empathy. On the other hand, factor 2 (F2) refers to impulsive-antisocial behaviors, such as the susceptibility to boredom, difficulties for planning, irresponsibility, aggression and delinquency [5].

Psychopathy has traditionally been linked to the diagnosis of Antisocial Personality Disorder (APD), but recent research suggests that APD is related only to certain aspects of Factor 2 of psychopathy [6]. Stanlenheim and Von Knorring [7] suggested that borderline personality disorder was even closer to psychopathy than antisocial personality disorder, since APD is mainly limited to behavioral alterations, whereas BPD presents affective and interpersonal deficits in the same line as psychopathy. According to the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> edition (DSM-V) [1] APD shares the domains of the Personality Inventory for DSM-V (PID-5) [8] disinhibition and antagonism with psychopathy but does not include interpersonal efficacy, emotional resilience and intrinsic temperament elements despite of many authors consider as the characteristics of psychopathy [9].

Other studies [10], correlate BPD with factor 2 of psychopathy. Research focused on psychopathy factors suggest that BPD traits are more strongly associated with F2 traits than with F1 traits [11,12]. This relationship may be due to the symptoms shared between the secondary psychopath and patient with BPD, such as impulsivity, emotional instability and reactive aggression [13].

Besides, preliminary research suggests that the presence of high scores in PCL Revised (PCL-R, [4]) may increase the risk of suffering BPD in women, but not in men [13,14]. According to this, Rogers, et al. [15] observed a greater comorbidity between psychopathy and BPD in women than in men. This is why some researchers have argued that psychopathy represents a feminine phenotypic expression of personality disorder [16].

Neurological and cognitive similarities have also been described for both syndromes, psychopathy and BPD, with functional abnormalities observed at the prefrontal level and in the amygdala, associated with such features as reactive aggression, disinhibition and affective intensity [17].

The objective of this study is to review the scientific literature on psychopathy and psychopathic traits and their relationship with borderline personality disorder.

## Methods

The inclusion criteria for papers in this review were:

**Table 1:** Number of papers found for each database.

Databases	Keywords results
PUBMED	2594
PSYCINFO	237
GOOGLE SCHOLAR	8600
SCOPUS	521

1) Publication date between 1980 and 2017; 2) English language and 3) Papers including psychopathy related to borderline personality disorder, or vice versa.

The following keywords were used in the title, summary or full text of the papers in order to make the initial selection of the bibliographic search: "borderline personality disorder", "borderline traits", "borderline states", "psychopathy", "psychopathic".

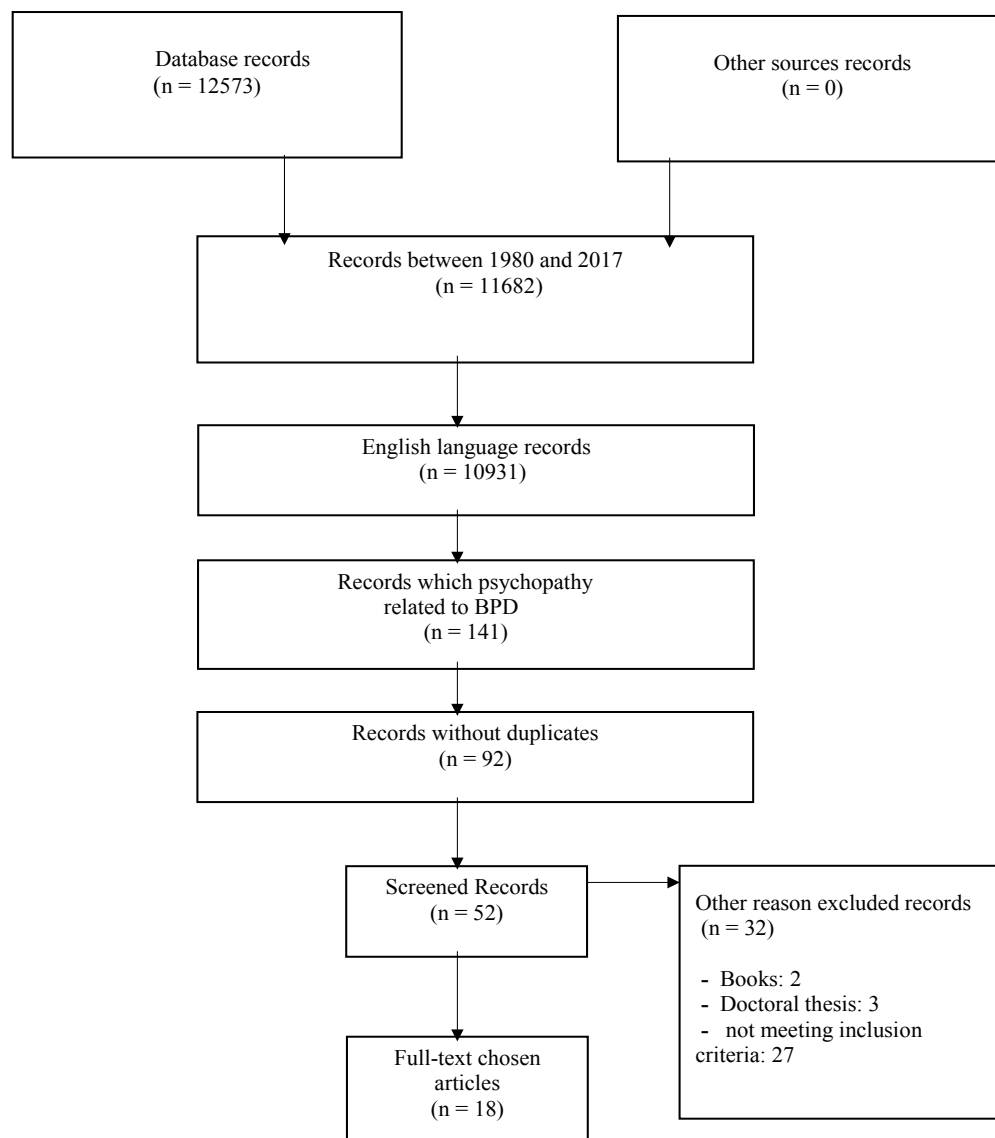
According to their importance in psychiatric and psychological research, the electronic databases used in the review were the following: Pubmed, PsycInfo, Google Scholar and Scopus. Results obtained from the initial selection for each database are shown in (Table 1 and Figure 1).

## Results

Regarding the BPD relationship with both of the psychopathy model factors, a closer association with factor 2 has been reported in several articles compared to factor 1. In this way, Miller, et al. [11] showed a significant correlation between vulnerable narcissism, BPD and factor 2 of psychopathy, and between BPD and F2 as well. However, this study has associated this correlation to the presence of shared personality traits, so the authors controlled certain domains of Five Personality Factor Model (FFM), such as neuroticism and low acceptability, and, after this, the correlation between BPD and factor 2 psychopathy was reduced. Huchzermeier, et al. [12] reported that prisoners with BPD obtained a significantly higher score in F2 compared to the control group while in F1 there were hardly any differences.

In this way, Warren, et al. [18] observed, in a sample of jailed women, a significantly higher score of inmates BPD for F2. Conn, et al. [6] also found a relationship between psychopathy and BPD scores in a sample of imprisoned inmates, a relationship that is mainly due to F2 since F1 did not correlate with BPD scores. Furthermore, this significant and positive link of BPD with F2 was also found in the results of Blonigen, et al. [19], who, in addition, obtained significant correlations between BPD and lifestyle, antisocial traits and their mediating role in the link between psychopathy and post-traumatic stress disorder (PTSD).

This positive correlation between F2-BPD and a negative correlation between F1-BPD was also demonstrated in Hunt, et al. [20] study, showing that this relationship was similar for men and women. Results indicated a moderate negative genetic and non-shared environmental factors overlap between F1 and borderline fea-



**Figure 1:** Flow Diagram: A total of 92 papers were found in this initial selection after eliminating duplicates. A second selection was made after discarding those papers not meeting the inclusion criteria. A total of 52 articles were collected and reviewed in full text. Finally, after the full text analysis, a total of 18 scientific articles were selected.

n = number of records; BPD = Borderline Personality Disorder.

tures. On the contrary, there was a genetic and non-shared environmental factors overlap between F2 and BPD. According to the authors, these results indicate that factors increasing F1 are protective against the BPD features and factors increasing F2 give rise to BPD features, and vice versa.

Following this association between BPD and psychopathy factors, Sprague, et al. [21] found a negative association of F1 and a positive association of F2 with borderline traits showing, moreover, how this BPD-F2 relationship is stronger in women than in men. Contrary to this, results of Verona, et al. [13] showed that BPD-F2 association is strong in both sexes, while BPD-F1 ratio only occurred in men. The study by Khan, et al. [22] also observed a similar significant BPD-F2 association for both sexes. These results agree with those of Viljoen, et al. [23] who, using classifications of prototypes of the Psychopathic Personality disorder (PPD) and BPD of Comprehensive Assessment of Psychopathic Person-

ality (CAPP, [24]) and the Comprehensive Assessment of the Borderline Personality (CABP, Cook, et al. [25]) found some results indicating that PPD and BPD symptoms are gender-related, but there seems to be no consistency with BPD and PPD being gender variants of the same disorder.

This overlap between borderline personality disorder and psychopathic features was also studied by Chabrol and Leichsenring [26] in a non-clinical sample of adolescents, using the Borderline Personality Inventory (BPI) and Levenson Self-Report Psychopathy Scale (LSRP), showing significant correlations between the core criteria of the borderline personality organization and the psychopathic features. In this way, Centifanti, et al. [27] examined the relationship between the different facets of psychopathy, psychopathic traits and the strategies used by men and women to mate. The authors concluded that egocentric psychopathic traits are related to antisocial psychopathic traits, BPD traits,

strategies of retention of the couple, furtive search for partners and coercion, and that antisocial psychopathic traits show a stronger association with the borderline traits.

Similarly, Newhill, et al. [28] divided borderline personality disorder into four subgroups, with different levels of psychopathy, with the aim of studying the possible benefits of each subgroup from the Dialectical Behavior Therapy (DBT). Subgroup 1, called impulse/antisocial, achieved high levels of psychopathy and, according to the study, would benefit from a greater emphasis on learning impulse control and behavior planning skills. Subgroup 2, called low psychopathic, had the lowest psychopathic score and would benefit from a traditional DBT treatment. Subgroup 3, called interpersonally exploitative/narcissistic, represents the affective and interpersonal aspects of Factor 1 of psychopathy. According to Newhill, et al. [28] this group would benefit from an interpersonal skills training of the DBT. Finally, subgroup 4, called high psychopath/antisocial, scored high on psychopathy but the authors didn't specify the possible benefits from this therapy.

In this way of studying the possible relationship between these two disorders, the study by Chakhssi, et al. [29] focused on a clinical case in which a schema therapy treatment is applied to a forensic patient with psychopathic features. Schema therapy is a psychotherapeutic approach with demonstrated efficacy in patients with borderline personality disorder. After the completion of the therapy the patient recovered a high level of functionality, with a full-time job, and without interpersonal relationship problems (with his wife or his son, for example). In addition, the patient abandoned drug abuse and criminal behavior. These improvements were still observed three years after the end of treatment.

Also, this relationship is observed in the review of Murphy and Vess [30] about the overlap between Cluster B personality disorders and between these and psychopathy, within which we have found the study by Stanlenheim and von Knorring [7] whose results shown an association between BPD and psychopathy, an association that also occurs between psychopathy and APD, but while APD is limited to the behavioral descriptors of psychopathy, BPD also includes symptoms of emotional instability and interpersonal relationships problems that resemble the affective and interpersonal deficits of the psychopath. However, Herpertz, et al. [31] studied emotional processing in psychopaths and BPD patients through psychophysiological measures, indicating a general affective information deficit process, regardless of whether the stimuli were negative or positive, in the psychopaths, while BPD subjects showed adequate emotional processing.

Following the study about the overlap between Cluster B personality disorders and psychopathy, Vossen, et al. [32] explored the relationships between machiavel-

lianism, narcissism and psychopathy and cluster B personality disorders, showing gender differences for all traits and disorders, with men with significantly higher scores in machiavellianism, psychopathy and APD and women in BPD, histrionic disorder of personality and narcissistic personality disorder. It was also shown that for men, psychopathy was the only significant predictor of BPD, while for women, both psychopathy and machiavellianism were the strongest BPD predictors.

Finally, the review by Sarkar, et al. [17], extended the BPD-psychopathy association through the neurobiological level, finding structural alterations in both of the cases in frontal, temporal and limbic regions, which implies executive functions and memory tasks deficits and emotional processing as well (Table 2).

## Discussion

In this review, we have synthesized the existing literature on the relationship between psychopathy and borderline personality disorder.

The selected studies suggest an association between BPD and factor 2 of psychopathy whereas only the study by Khan, et al. [22] finds a significant correlation between BPD and factor 1 although to a lesser extent than for F2. These results agree with those observed in the previous literature, where studies such as those of Widiger [10], Miller, et al. [11] and Huchzermeier, et al. [12] establish a stronger association between BPD and F2 than between BPD and F1. They explain this relationship through the fact that secondary psychopaths and BPD patients share symptoms such as impulsivity, emotional instability and reactive aggression [13]. This explanation found also agrees with the results of the study by Miller, et al. [11], who explains the association between BPD and F2 by an overlap of shared personality traits.

This association is also confirmed in genetic and neurobiological data with the results from the study by Hunt, et al. [20] and the study by Sarkar, et al. [17]. The first study observed that factors increasing F1 are protective of BPD symptoms and that those increasing F2 produce BPD symptoms and vice versa, due to a non-shared genetic and environmental overlap between F1 and BPD and a positive overlap between F2 and BPD. The second study showed how in BPD and in psychopathy similar structural and functional deficits are observed in frontal, temporal and limbic regions, which implies a series of neuropsychological alterations. However, it highlights the scarcity of experimental neurobiological and neuropsychological data that defend the superposition of traits. More information on this could influence both the concept and the treatment of both disorders.

Huchzermeier, et al. [12] and Murphy and Vess [28] results also associate F2 with Antisocial Personality Disorder. However, Murphy and Vess [30] indicated that the correlation between APD and F2 is weaker than the correlation between BPD and F2, according to Stanlen-

**Table 2:** Results summary.

<b>Title</b>	<b>Authors</b>	<b>Year of Publication</b>	<b>Results</b>
Searching for a Vulnerable Dark Triad: Comparing Factor 2 Psychopathy, Vulnerable Narcissism, and Borderline Personality Disorder	Miller J, Dir A, Gentile B, Wilson L, Pryor L, Campbell W	2010	Significant correlation between vulnerable narcissism, BPD and F2; and between BPD and F2. After controlling certain FFM domains, the correlation between BPD and F2 is reduced.
The Relationship Between DSM-IV Cluster B Personality Disorders and Psychopathy According to Hare's Criteria: Clarification and Resolution of Previous Contradictions	Huchzermeier C, Geiger F, Brub E, Godt N, Kohler D, Hinrichs G, Aldenhoff J	2007	APD and BPD obtained a significantly higher score in F2 compared to the control group whereas there were hardly any differences for F1.
Psychopathy in women: Structural modeling and comorbidity	Warren J, Burnette M, South S, Chauhan P, Bale R, Friend R, Van Patten I	2003	Inmates with BPD show significantly higher scores for F2.
Subtypes of psychopathy: Proposed differences between narcissistic, borderline, sadistic, and antisocial psychopaths	Murphy C, Vess J	2003	BPD was more associated with psychopathy than APD.
Borderline Personality Disorder Among Jail Inmates: How Common and How Distinct?	Conn C, Warden R, Stuewing J, Kim E, Harty, Harty L, Hastings M, Tangney J	2010	The prevalence of BPD in the sample was 41% of men compared to 52% of women. The prevalence of psychopathy was 19% of men and 5% of women. The results show a relationship between BPD and F2. F1 did not correlate with either the total BPD scores or three of the four subscales.
Borderline Personality Disorder as a Female Phenotypic Expression of Psychopathy?	Sprague J, Javdani S, Sadeh N, Newman J, Verona E	2012	Men showed a higher score on psychopathic measures and women on BPD features. A negative association of F1 and a positive association of F2 with borderline features were found. The relationship of F2 with the borderline traits was stronger in women than in men.
Gender and Factor-Level Interactions in Psychopathy: Implications for Self-Directed Violence Risk and Borderline Personality Disorder Symptoms	Verona E, Sprague J, Javdani S	2012	F2 was more strongly associated with BPD symptoms in both sexes, whereas F1 was only associated to BPD symptoms in men.
Are Psychopathic and Borderline Personality Disorder Distinct, or Differently Gendered Expressions of the Same Disorder? An Exploration Using Concept Maps	Viljoen S, Cook A, Lim Y, Layden B, Bousfield N, Hart S	2015	PPD and BPD symptoms are gender-related, but it does not seem to be consistency to affirm that BPD and PPD are gender variants of the same disorder.
Exploring the Dark Side: Relationships between the Dark Triad Traits and Cluster B Personality Disorder Features	Vossen T, Coolidge F, Segal D, and Muehlenkamp J	2017	Men obtained significantly higher scores in machiavellianism, psychopathy and APD and women in BPD, Histrionic and Narcissistic Personality Disorder. For men, psychopathy was the only significant predictor of BPD, while for women, both psychopathy and machiavellianism were predictors.
Borderline personality organization and psychopathic traits in nonclinical adolescents: Relationships of identity diffusion, primitive defense mechanisms and reality testing with callousness and impulsivity traits	Chabrol H, Leichsenring F	2017	The approval rate of BPI and LSRP were high. Significant correlations between the structural criteria of the borderline personality organization and the psychopathic features.

Identifying the Manipulative Mating Methods Associated with Psychopathic traits and BPD Features	Centifanti L, Thomson N, Kwok A	2017	Egocentric psychopathic traits are related to antisocial psychopathic traits and BPD traits. Antisocial psychopathic traits show a stronger association with BPD traits.
Facets of Psychopathy in Relation to Potentially Traumatic Events and Posttraumatic Stress Disorder among Female Prisoners: The Mediating Role of Borderline Personality Disorder Traits	Blonigen D, Sullivan E, Hicks B, Patrick C	2012	BPD traits had significant and positive associations with F2, as well as with lifestyle, antisocial traits and the psychopathy-PTSD link.
Students, sex, and psychopathy: Borderline and psychopathy personality traits are differently related to women and men's use of sexual coercion, partner poaching, and promiscuity	Khan R, Brewer G, Kim S, Centifanti L	2017	Correlations between BPD traits and F1 and between BPD traits and F2 were significant, although the association was significantly stronger with F2. BPD features are similarly related to F2 for both sexes.
Genetic and environmental overlap between borderline personality disorder traits and psychopathy: evidence for promotive effects of factor 2 and protective effects of factor 1	Hunt E, Bornovalova M, Patrick C	2014	F1 is negatively related and F2 is positively related to BPD in men and women. F1 and F2 and BPD traits are influenced by genetic and non-shared environmental factors. The results indicated a moderate negative genetic and non-shared environmental overlap between F1 and BPD traits and a genetic and non-shared environmental overlap between F2 and the BPD.
Differences between psychopathy and other personality disorders: evidence from neuroimaging	Sarkar S, Clark B, Deeley Q	2011	People with psychopathy and people with BPD show frontal and limbic structural and functional alterations.
Emotion in Criminal Offenders With Psychopathy and Borderline Personality Disorder	Herpertz S, Werth U, Lukas G, Qunaibi M, Schuerkens A, Kunert H, Freese R, Flesch M, Mueller-Isberner R, Osterheider M, Sass H	2001	A general deficit in affective information processing was observed in psychopaths, regardless of whether the stimuli are negative or positive. Subjects with BPD showed adequate emotional processing.
Treating the Untreatable: A Single Case Study of a Psychopathic Inpatient Treated With Schema Therapy	Chakhssi F, Kersten T, de Ruiter C, Bernstein D	2014	After the completion of the therapy, the patient regained a high level of functionality and had no interpersonal relationship problems. The patient abandoned drug abuse and criminal behavior. These improvements were still observed three years after the end of treatment.
Psychopathy scores reveal heterogeneity among patients with borderline personality disorder	Newhill C, Vaughn M, DeLisi M	2010	The "impulse /antisocial" subgroup obtained high levels of psychopathy and would benefit from behavior planning skills. The subgroup "psychopathic", was the lowest psychopathic score and would need a traditional DBT treatment. The "interpersonally exploitative/ narcissistic" subgroup represents the F1 aspects and would require DBT interpersonal skills training. The "psychopath/high antisocial" subgroup obtained a high score in psychopathy.

BPD: Borderline Personality Disorder; FFM: Five Factor Personality Model; F1: Factor 1 of Psychopathy; F2: Factor 2 of Psychopathy; APD: Antisocial Personality Disorder; PPD: Psychopathic Personality Disorder; BPI: Borderline Personality Inventory; LSRP: Levenson Self-Report Psychopathy Scale; PTSD: Posttraumatic Stress Disorder; DBT: Dialectical Behavioral Therapy.

heim and Von Knorring [7], since BPD includes symptoms of emotional and interpersonal instability, observed in the psychopath, which does not occur in APD, limited to behavioral alterations.

Previous research suggests a higher comorbidity between psychopathy and BPD in women than in men [15]. Certain researchers argued that psychopathy represents a feminine phenotypic expression of personality

disorder [16]. The influence of gender in the BPD-psychopathy association has shown little consistency in the results of this review. The articles showed a greater association between men with psychopathy and between women with BPD. However, only one study [21] showed a stronger relationship between the borderline traits and F2 in women, while another [13] showed a greater correlation between F1 and BPD symptoms in men. The rest of articles observed a strong association between psychopathy and BPD for both sexes.

Finally, only two articles studied a common treatment for psychopathy and BPD. Specifically, both studies have studied the efficacy of treatments applied to BPD, such as schema therapy [29] or Dialectical Behavior Therapy (DBT) [28], in psychopathic patients, obtaining in both cases positive results.

These common features between BPD and psychopathy are reminiscent of the heboidophrenia historical concept described by Kahlbaum [33]. This disorder affects mental and social behavior changing character and personality and includes antisocial behavior and criminal actions. For Kahlbaum, heboidofrenia is manifested in adolescents who do not follow the norms of co-existence behavior, that are characterized by their own limits search that derive from their own identity, which leads them to impulsive and risky behaviors.

According to the findings compiled in this review, an epidemiological and phenomenological relationship of BPD syndrome and the psychopathic syndrome can be confirmed. BPD features are highly represented in subjects with psychopathy as well as psychopathic traits are highly prevalent in patients with BPD. However, whether this relationship reflects real comorbidity or is the result of a nosological overlapping of the impulsive/unstable diagnostic criteria of BPD and the impulsive items of factor 2 of psychopathy cannot be resolved as yet.

An interesting line of future research might address how psychopathic features, in a dimensional way, could affect the phenomenological presentation of the different BPD subjects, probably defining distinct clinical subtypes associated to different functional outcomes. This could improve our predictive capacities over the course and outcome of the patients and should provide further knowledge about specific treatment needs for BPD patients with increased psychopathic rates.

## Conclusions

This review suggests an overlap between borderline personality disorder and factor 2 of psychopathy, which refers to a series of impulsive behaviors such as a lack of planning and irresponsibility and antisocial behavior such as aggression and delinquency [5]. No relationship has been found between the BPD and factor 1, which refers to interpersonal and affective symptoms such as a lack of guilt and empathy, grandiosity, etc. [5].

Although preliminary research suggests that the re-

lationship between psychopathic traits and BPD may be conditioned by gender, specifically by a greater presence of psychopathy in female BPD, [14,16], review of literature did not show consistent evidence for an association with sex.

However, whether this relationship reflects real comorbidity between BPD and factor 2 of psychopathy cannot be resolved as yet. So, future research could focus on the way that psychopathic characteristics affect the phenomenological presentation of BPD and defines different clinical subtypes or different functional outcomes in BPD patients.

## Conflicts of Interest and Source of Funding

None of the authors have any financial interests or possible conflicts affecting the objectives or the results of the present manuscript.

## References

- (2013) Diagnostic and Statistical Manual of Mental Disorders. (5<sup>th</sup> edn), American Psychiatric Association, Washington, DC.
- Gunderson J (2001) Borderline personality disorder: A clinical guide. American Psychiatric Press, Washington, DC.
- Linehan M (1993) Cognitive-behavioral treatment of borderline personality disorder. Guilford Press, New York.
- Hare R (1991) The Hare Psychopathy Checklist-Revised. (2<sup>nd</sup> edn), Multi-Health Systems, Toronto, Ontario, Canada.
- Hare R (2003) Manual for the Hare Psychopathy Checklist-Revised. Multi-Health Systems: Toronto, Ontario, Canada.
- Conn C, Warden R, Stuewing J, Kim E, Harty L, et al. (2010) Borderline personality disorder among jail inmates: How Common and How Distinct? *Correct Compend* 35: 6-13.
- Stalenheim E, von Knorring L (1998) Personality traits and psychopathy in a forensic psychiatric population. *European Journal of Psychiatry* 12: 83-94.
- Krueger RF, Derringer J, Markon KE, Watson D, Skodol AE (2012) Initial construction of a maladaptive personality trait model and inventory for DSM-5. *Psychol Med* 42: 1879-1890.
- Lilienfeld SO, Patrick CJ, Benning SD, Berg J, Sellbom M, et al. (2012) The role of fearless dominance in psychopathy: Confusions, controversies, and clarifications. *Personal Disord* 3: 327-340.
- Widiger TA (2006) Psychopathy and DSM-IV psychopathology. In: CJ Patrick, *Handbook of the psychopathy*. Guilford Press, New York, 156-171.
- Miller JD, Dir A, Gentile B, Wilson L, Pyror L, et al. (2010) Searching for a vulnerable dark triad: Comparing factor 2 psychopathy, vulnerable narcissism, and borderline personality disorder. *J Pers* 78: 1529-1564.
- Huchzermeier C, Friedeman G, Emelie B, Godt N, Köhler D, et al. (2007) The relationship between DSM-IV cluster B personality disorders and psychopathy according to Hare's criteria: Clarification and resolution of previous contradictions. *Behav Sci Law* 25: 901-911.
- Verona E, Sprague J, Javdani S (2012) Gender and factor-level interactions in psychopathy: Implications for

- self-directed violence risk and borderline personality disorder symptoms. *Personality Disorders: Theory, Research, and Treatment* 3: 247-262.
14. Coid JW (1993) An affective syndrome in psychopaths with borderline personality disorder? *Br J Psychiatry* 162: 641-650.
  15. Rogers R, Jordan MJ, Harrison KS, Hoboken N (2007) Facets of psychopathy, Axis II traits, and behavioral dysregulation among jail detainees. *Behav Sci Law* 25: 471-483.
  16. Cale EM, Lilienfeld SO (2002) Histrionic personality disorder and antisocial personality disorder: Sex differentiated manifestations of psychopathy? *J Pers Disord* 16: 52-72.
  17. Sarkar S, Clark B, Deeley Q (2011) Differences between psychopathy and other personality disorders: Evidence from neuroimaging. *Advances in Psychiatric Treatment* 17: 191-200.
  18. Warren JI, Burnette ML, South SC, Chauhan P, Bale R, et al. (2003) Psychopathy in women: Structural modeling and comorbidity. *Int J Law Psychiatry* 26: 223-242.
  19. Blonigen D, Sullivan E, Hicks B, Patrick C (2012) Facets of psychopathy in relation to potentially traumatic events and posttraumatic stress disorder among female prisoners: The mediating role of borderline personality disorder traits. *Personal Disord* 3: 406-414.
  20. Hunt E, Bornovalova M, Patrick C (2015) Genetic and environmental overlap between borderline personality disorder traits and psychopathy: Evidence for promotive effects of factor 2 and protective effects of factor 1. *Psychological Medicine* 45: 1471-1481.
  21. Sprague J, Javdani S, Sadeh N, Newman J, Verona E (2012) Borderline personality disorder as a female phenotypic expression of psychopathy? *Personal Disord* 3: 127-139.
  22. Khan R, Brewer G, Kim S, Centifanti L (2017) Students, sex, and psychopathy: Borderline and psychopathy personality traits are differently related to women and men's use of sexual coercion, partner poaching, and promiscuity. *Personality and Individual Differences* 107: 72-77.
  23. Viljoen S, Cook A, Lim Y, Layden B, Bousfield N, et al. (2015) Are psychopathic and borderline personality disorder distinct, or differently gendered expressions of the same disorder? An Exploration Using Concept Maps. *International Journal of Forensic Mental Health* 14: 267-279.
  24. Cooke DJ, Hart SD, Logan C, Michie C (2012) Explicating the construct of psychopathy: Development and validation of a conceptual model, the comprehensive assessment of psychopathic personality (CAPP). *International Journal of Forensic Mental Health* 11: 242-252.
  25. Cook AN, Layden BK, Viljoen S, Murray AA, McGinnis CR, et al. (2013) The comprehensive assessment of Borderline Personality Disorder (CABP). Burnaby, Canada: Simon Fraser University.
  26. Chabrol H, Leichsenring F (2017) Borderline personality organization and psychopathic traits in non clinical adolescents: Relationships of identity diffusion, primitive defense mechanisms and reality testing with callousness and impulsivity traits. *Bulletin of the Menninger Clinic*.
  27. Centifanti L, Thomson N, Kwok A (2016) Identifying the Manipulative Mating Methods Associated with Psychopathic traits and BPD Features. *J Pers Disord* 30: 721-741.
  28. Newhill C, Vaughn M, DeLisi M (2010) Psychopathy scores reveal heterogeneity among patients with borderline personality disorder. *Journal of Forensic Psychiatry & Psychology* 21: 202-220.
  29. Chakhssi F, Kersten T, de Ruiter C, Bernstein D (2014) Treating the untreatable: A single case study of a psychopathic inpatient treated with schema therapy. *Psychotherapy* 51: 447-461.
  30. Murphy C, Vess J (2003) Subtypes of psychopathy: Proposed differences between narcissistic, borderline, sadistic, and antisocial psychopaths. *Psychiatr Q* 74: 11-29.
  31. Herpertz S, Werth U, Lukas G, Qunaibi M, Schuerkens A, et al. (2001) Emotion in criminal offenders with psychopathy and borderline personality disorder. *Arch Gen Psychiatry* 58: 737-745.
  32. Vossen T, Coolidge F, Segal D, Muehlenkamp J (2017) Exploring the dark side: Relationships between the dark triad traits and cluster B personality disorder features. *Journal of Psychiatry and Psychiatric Disorders* 1.
  33. Kahlbaum K (2002) On Heboidophrenia. *History of Psychiatry* 13: 197-208.