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REVIEW ARTICLE

Unmet emotional, interpersonal, and treatment needs in patients with borderline personality disorder

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Abstract

OBJECTIVE: Needs of psychiatric patients may be to a various degree frustrated. A sole focus on treatment effectiveness can lead to the omission of other patient's needs. Patients with borderline personality disorder present high demands on health and social services that often remain unmet. The review aims to identify common unmet needs of patients with BPD, map the areas in which they appear, and identify ways to manage them.
METHOD: The PubMed database was used by applying the following key terms: “borderline personality disorder“ and “needs“ supplemented by a combination of “borderline personality disorder“ and “unmet needs“; “treatment”; “therapy”; "management", "quality of life", "pharmacotherapy", "psychotherapy". the Papers were selected from a period between Jan 1, 1990, and Nov 30 2020. Primary keyword search yielded a total of 502 articles, of which 225 articles met the inclusion criteria and were subjected to a complete inspection. Secondary contributions from reference lists of the primary sources were examined, evaluated for suitability, and added to the primary document list (n = 182). After an evaluation of the relevance, a total of 197 papers were included in the review process.
RESULTS: Recognizing patients' unmet needs with borderline personality disorder emphasises the importance of a comprehensive patient assessment. The diagnosis of comorbidities is also essential, especially with bipolar disorder and posttraumatic stress disorder, as comorbid conditions may require different therapeutic approaches. Traditional treatments of BPD tend to be demanding both in time and funding. However, alternatives are being developed to overcome these shortcomings by introducing methods focused on specific goals.

Furthermore, supporting the patient's responsibility in the treatment choice can lead to better improvements.
CONCLUSIONS: There is a need for further studies that will focus on the needs of this patient group and the possibilities of their treatment in psychotherapy, using psychotropic drugs, or social interventions. The development of step-by-step treatment models, adjunctive treatments, and technology-based interventions can bring greater access to care and reduce costs, especially for newly diagnosed patients or patients waiting for comprehensive treatment.

INTRODUCTION

Borderline personality disorder (BPD) manifests as a persistent pattern of instability in affect regulation, impulse management, interpersonal relationships, self-concept, and an increased risk of suicide (Leichsenring *et al.* 2019, APA 2013). The lifetime prevalence of BPD is 1–3% in the general population (Lenzenweger *et al.* 2007, Trull *et al.* 2010). One of the main features of people with BPD is affective dysregulation - the inability to postpone action based on an emotional impulse to bring relief (Chapman 2019). Individuals with BPD often act impulsively without considering the consequences. Patients also suffer from chronic feelings of emptiness, alternating with drastic changes in affectivity and self-esteem (Johnson & Levy 2020). Intense, unstable interpersonal relationships cause repeated emotional crises or episodes of behavioural disorders (Lazarus *et al.* 2019; Hepp *et al.* 2020). Apart from an identified genetic vulnerability (Skodol *et al.* 2002; Gunderson & Lyons-Ruth 2008; Duque-Alarcón *et al.* 2019), BPD has been connected with environmental influences, like insufficient parental care (Luyten & Fonagy 2015; Kernberg 2016; Kurdziel *et al.* 2018; Kors *et al.* 2020), emotional, physical or mental abuse or childhood trauma (Bandelow *et al.* 2005; Fassino *et al.* 2009; Temes *et al.* 2020).

Humanistic approaches to medical treatment have emphasized the necessity of including patients' needs in the treatment process (Kogstad *et al.* 2011; Seeman 2018; Ng *et al.* 2019), which is especially crucial in medical disciplines in which patients suffer from stigma and self-stigma (Pompili *et al.* 2017; Fortuna *et al.* 2019; Brouwers 2020). These needs can be assessed from various viewpoints, from healthcare professionals, patients, or relatives (Lawn & McMahon 2015; Riddle *et al.* 2016; Foyston *et al.* 2019; Roininen *et al.* 2019). A sole focus on treatment effectiveness can lead to the omission of other patients' needs. This is especially important in disorders in which complete remission is often not achievable, and recovery becomes a more reachable goal (Nesnidal *et al.* 2020).

Perhaps the most widely used international tool for assessing needs is the Camberwell Assessment of Need (CAN; Phelan *et al.* 1995; Evans *et al.* 2000; McCrone *et al.* 2001; Hansson *et al.* 2003; Ochoa *et al.* 2003; Ruggeri *et al.* 2004). Studies using CAN show that a policy of actively assessing and addressing unmet needs assessed by patients can improve their quality of life (Slade *et al.* 2004). Standardized assessment surveys have found a high level of unmet need in a population of people with mental disorders (Murray *et al.* 1996; Slade *et al.* 1998; Hayward *et al.* 2006; Joska & Flisher, 2007). Needs are sometimes overlooked due to less rigorous assessments or the absence of their use (Marshall *et al.* 2004).

The review aims to identify common unmet needs of patients with BPD, map the areas in which they appear, and identify ways to manage them. Several research questions related to these aims were postulated:

(1) Are there basic needs that have not been sufficiently met in patients with BPD in childhood and adolescence?
(2) Are there basic needs not met in patients with BPD in adulthood?
(3) In which areas do the unmet needs of BPD patients occur?
(4) How do these unmet needs relate to mental health problems and symptoms?
(5) How do these unmet needs relate to the quality of life, family and partnerships, and patients' lifestyle with BPD?
(6) How do the unmet needs of patients with BPD relate to treatment?
(7) What are the options for meeting these needs?

METHOD

A narrative review was performed using the PubMed database to search for articles published over the period from Jan 1, 1990, and Nov 30 2020, using the following key terms: "borderline personality disorder" and "needs" supplemented by a combination of "unmet needs" and "treatment"; "therapy"; "management", "quality of life", "pharmacotherapy", "psychotherapy". Additional filters were set: English language, human studies, age over 18 years. Titles and abstracts were screened; the full-texts were read if the title/summary met the inclusion criteria. Abstracts from conferences, diploma or dissertation theses, textbooks, popular articles, editorial comments, case reports, and animal model studies were excluded. Subsequently, additional sources were obtained by reviewing the primary sources' literature lists itemized in the articles. The texts were collected, systematized according to their importance.

RESULTS

Characteristic of the study

Figure 1 describes the flowchart of the source literature selected for the review. Primary keyword search yielded a total of 502 articles, of which 225 articles encountered the inclusion criteria and were subjected

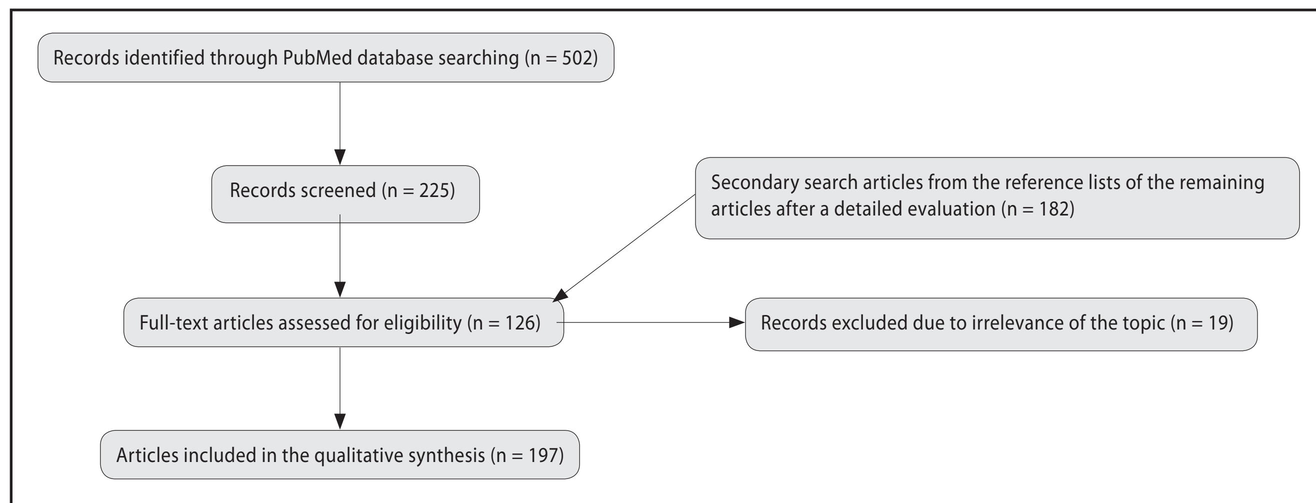

Fig. 1. Flow diagram of the literature selection process

to a complete examination. Secondary contributions from the reference lists of primarily selected articles were examined, evaluated for suitability, and added to the primary document list (n = 182). A total of 197 contributions (Figure 1).

In which areas can the unmet needs arise?

The needs of patients with a borderline personality disorder can generally arise in several areas (Figure 2):
(1) Basic childhood needs
(2)Needs associating with psychopathology and symptom control
(3) Needs associating with the treatment
(4) Relationship needs

(1) Basic childhood needs

In patients with BPD, the child's fundamental emotional needs were often unmet or threatened (Gunderson & Lyons-Ruth 2008; Kors *et al.* 2020). Understanding the basic emotional needs is key to understanding maladaptive behavioural strategies in patients with BPD (Young *et al.* 2003):

(a) Lack of safety

Safety is one of the basic needs developing since childhood (Bosmans *et al.* 2020). If a child grows up without protectors, such as parents or other adults, or if the protectors fail to meet the need for safety or even endanger the child, the basic feeling does not arise or is fragile (Vaughn *et al.* 2016). In adulthood, such individuals can expect their partners to fulfil this need by accepting the protector's role, but at the same time, they often choose partners who are unable to provide it. They can control the partner and display uncertainty about the relationship (Minzenberg *et al.* 2006; Lazarus *et al.* 2018). Another strategy is to test their partner not to leave them, even if they (individuals with BPD) show distance and rejection (Navarro-Gómez *et al.* 2017; Miano *et al.* 2018).

(b) Lack of control

There are several reasons why adults have an excessive need for control. Some stem from traumatic childhood events during which they could not control the situation (Lazarus *et al.* 2018; Badoud *et al.* 2018; Videler *et al.* 2019). For example, victims of child abuse, especially sexual abuse, may overly control themselves and their surroundings because they fear feeling helpless again (Minzenberg *et al.* 2006). Witnessing a traumatic event during childhood, such as the severe abuse of a mother, can have long-term effects on individuals, including complex posttraumatic stress disorder (C-PTSD) and a constant need to control the environment, sometimes with violence against a partner (Lawson & Brossart 2013). An individual who struggles with the need to control specific situations with others may seek to criticize, micro-manage other people around them, or suffer from constant agitation or irritability (Martino *et al.* 2015; Scott *et al.* 2017). They can also develop compulsive behaviours, such as binge eating or substance abuse attacks (Hiebler-Ragger *et al.* 2016).

(c) Lack of acceptance and love

The basic unmet need for love is associated with a lack of interest from caregivers of the child, a lack of expression of love, or, conversely, it can develop by threatening the feeling of acceptance by physical, emotional, or sexual abuse, or imposing demands that go beyond the child's possibilities (Morrill *et al.* 2019). Neglect, abandonment, critique, or abuse implant the children to feel that they are not good enough to be loved or deserve love (Lobbestael *et al.* 2005; Laporte *et al.* 2012; Paris *et al.* 2014).

Actual or perceived lack of love in childhood can manifest in adulthood as a tendency to form unhealthy relationships or mental health problems such as depressive disorder, decreased self-esteem or substance abuse problems, dependence on others, and excessive

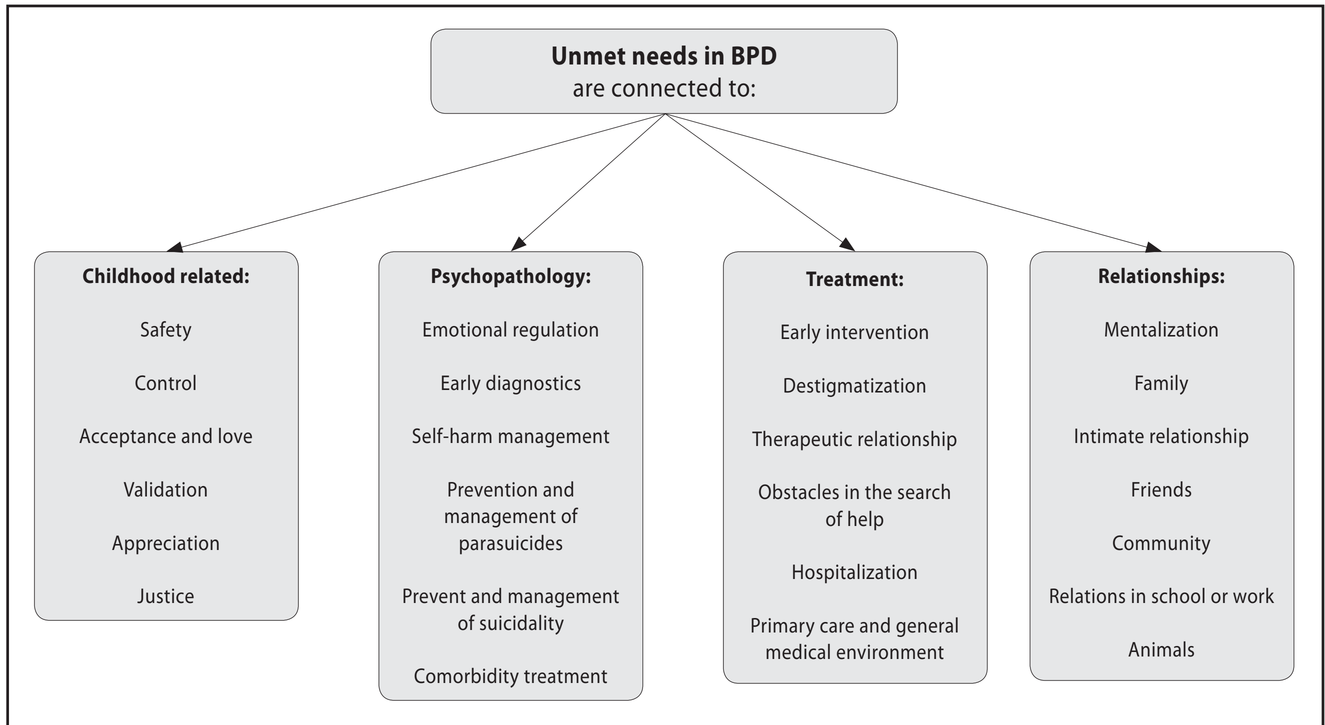

Fig. 2. Types of unmet needs in BPD patients

attachment to animals plush toys (Bornstein *et al.* 2010; Hooley & Wilson-Murphy 2012; Hiebler-Ragger *et al.* 2016). This may be due to the individual trying to fill the emotional emptiness. As a result, they become dependent on the partner and sensitive to any sign of discord (Bornstein *et al.* 2010; Miller *et al.* 2018).

(d) Lack of validation
Devaluation of a child's needs and emotions by caregivers is typical for borderline patients' childhood (Keng & Soh 2018; Musser *et al.* 2018). The need for validation causes low self-esteem and results in efforts to suppress one's emotions. Moreover, a patient seeks approval and acceptance from others and urges to make others feel well (Drapeau *et al.* 2012; Keng & Soh 2018). However, a person looking for confirmation often wants more than just approval. They feel a strong desire to gain praise, attention, recognition, and admiration (Frías *et al.* 2018). As the need grows, it can manifest in an individual's desire to be envied by others. Such individuals tend to be hypersensitive to criticism or even neutral feedback (Bortolla *et al.* 2019).

(e) Lack of appreciation
Children whose parents or carers have been withdrawn, overly critical, or unable to adequately express feelings may grow up with an unsatisfied and growing need for approval and appreciation from others in personal, professional, and social relationships (Jahangard *et al.* 2012; Musser *et al.* 2018). However, they often reject awards and praise because they are inconsistent with their own beliefs (Doell *et al.* 2020). To compensate, they need to please others, and they hope that others will return it to them with kind words or abundant appreciation. They feel abandoned, underappreciated, and angry when they do not receive an award for their efforts (Kalpakci *et al.* 2014; Crowell 2016).

(f) Lack of justice
Hypersensitivity to injustice also contributes to interpersonal dysfunction in BPD patients (Sandage *et al.* 2015; Lis *et al.* 2018). Children who have often experienced injustice, sibling preference, or school ridicule may develop an excessive need for justice in adulthood. Sensitivity to the role of the victim of injustice is partly related to the frequency of aggressive behaviour (Lis *et al.* 2018; Jeung *et al.* 2020).

(g) Lack of healthy boundaries
In chaotic families/families that tend to act chaotically and inconsistently, children do not develop a sense of clear and safe boundaries (Young *et al.* 2003). Individuals with more borderline traits report lower parental care or excessive parental protection (Nickell *et al.* 2002; Helgeland & Torgersen 2004).

Symptoms are often related to the unmet emotional needs described above, including the need for safety, acceptance, appreciation, autonomy, justice, and reasonable boundaries. Conflicts with others, mood swings, tendencies to isolate themselves, hurtful social interactions, self-harm, suicidality, and identity problems are frequent responses to insufficiently fulfilled basic needs (Nesnidal *et al.* 2020).

(2) Needs associated with psychopathology and symptom control

The needs associated with BPD symptoms are diverse, but they are related to the need not to suffer, not experience intense tension or emptiness, outbursts of anger and helplessness, and suffering in relationships (Grambal *et al.* 2017). There are several subcategories of the needs associated with psychopathology and symptom control. These include the need for emotion regulation, early diagnosis, self-harm and parasuicide prevention, suicide attempts prevention, and the need for comorbidity recognition and treatment (Grambal *et al.* 2017).

(a) Need for emotion regulation

Emotion dysregulation is one of the core mechanisms of developing BPD symptomatology (Linehan 1993). The inability to control one's emotions has been linked to a history of prolonged and severe trauma, mainly if it occurs early in life (van der Kolk *et al.* 1994; Terzi *et al.* 2017). The lack of safety can also stem from other experiences, such as lacking protection, accompanied by a threatening environment with a low level of predictability, when a child cannot predict the parent`s reaction to their behaviour. A similar issue arises when the parents respond to their emotional needs with strong emotions (Lobbestael and Arntz 2010). This then leads to maladaptive behaviour, manifesting both in relationship with others and in self-directed activities. The latter can range from self-mutilation, eating disorders or substance abuse to suicidal behaviour (Gratz & Tull 2011; Hawthon *et al.* 2016; Holm & Severinsson 2008). Episodes of dissociation are expected when the patient experiences strong emotions during BPD treatment (van der Kolk *et al.* 1994).

(b) Need for early diagnostics

The diagnosis and successive treatment can be delayed several years after BPD development (Chanen, 2015; Desrosiers *et al.* 2015). Sansone & Sansone claim that patients with BPD are more likely to present with pain sensitivity or somatic preoccupation than typical symptomatology in a primary care setting (Sansone & Sansone 2015). A late diagnosis of BPD can hinder the treatment of comorbid disorders. Subsequently, lack of specific BPD treatment and sole management of the comorbid disorders can lead to the development of treatment resistance and early relapse of comorbid disorders (Fabrega *et al.* 1993; Zimmerman 2016).

(c) Need for self-harm management

Management of patients with intentional self-harm is one of the most challenging healthcare professionals' problems working in clinical practice (Gunderson 2011; Venta *et al.* 2012). Self-harm is common, often recurrent, and can be seen as a robust predictor of suicidal thoughts and attempts (Calhoun *et al.* 2017). Self-injury is often laically seen as a way to draw other peoples' attention. However, unbearable tension, feelings of abandonment, and the need to punish oneself are much more common motivations of self-harming behaviour (Hawton *et al.* 2016, Gratz and Tull 2011).

Despite the clinical significance and related negative consequences of intentional self-harm, there are limited empirically supported therapies in individuals with BPD. Furthermore, those that do exist are difficult to implement in many clinical settings (Gratz & Tull 2011). Gratz & Gunderson (2006) investigated the effectiveness of 14 weeks of complementary emotional regulation therapy for intentional self-harm in women with BPD to address this limitation. Although this study's results were promising (showing improved self-injurious behaviour and emotion regulation), replication is needed.

Patients who exhibit self-harming behaviour need behavioural, pharmacological, and psychotherapeutic strategies to meet their complex needs (Loughrey *et al.* 1997).

(d) Need for prevention and management of parasuicidality

A para-suicidal behaviour typically manifests in repetitive suicidal proclamations and attempts without the motivation to die (APA 2001; Giesen-Bloo 2006). This kind of behaviour could reflect a symbiotic connection between people with existential needs and the medical organizations that serve them (Ellenhorn 2005). Parasuicidality in BPD patients was connected with the schemas from the disconnection/rejection domain (Young 1999, Arntz *et al.* 1999, Farrell & Shaw 2012). Therefore, targeting these schemas early in the therapy could be beneficial (Young 1999).

(e) Need to prevent and manage suicidality

Suicidal behaviour is typical among BPD patients, as 1 in 10 patients die by suicide, making the suicide rate 50 times higher than in the general population, and 80 % attempt suicide at least once in life (Soloff *et al.* 2005, Lieb *et al.* 2004). Findings from clinical practice and psychotherapeutic sessions with BPD patients suggest that self-harming and suicidal behaviour are usually most strongly associated with self-criticism and dissociation (Farrell & Shaw 2012). Approaches should be introduced to extend suicide prevention to people with BPD. A multidisciplinary approach to integrating healthcare and social services is essential to reduce suicidality.

(f) Need for comorbidity treatment

The symptoms of comorbid disorders often overlap with borderline personality disorder symptoms, so it may be challenging to diagnose comorbid disorders and accurately indicate appropriate therapy (Zimmerman & Mattia 1999). The comorbidity between BPD and other mental disorders has significantly increased care needs (Kay *et al.* 2002; Feske *et al.* 2004; Berger *et al.*

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2004; Sedlackova *et al.* 2015). Specifically, BPD in patients with major depressive disorder has been linked to a longer time to recover and chronic mood disorder (Monahan *et al.* 2001). It has also been shown that comorbidity of BPD predicts future violent and suicidal behaviour in samples of people with other mental disorders (Monahan *et al.* 2001; Moran *et al.* 2003a; Moran *et al.* 2003b). Individuals with a comorbid personality disorder also report that they feel increasingly risky for others and themselves, emphasizing the importance of a thorough assessment of personality disorder in all adult psychiatric patients' general risk assessment (Aguglia *et al.* 2018). The most common comorbid diseases are bipolar disorder, depressive disorder, substance use disorder and PTSD (Zanarini 2004).

(3) Needs associated with adequate and affordable treatment

Treatment of BPD may be sufficient if a specific therapy type is applied, such as dialectical behavioural therapy (Herschell *et al.* 2009; Quinn & Shera 2009; Bohus & Kröger 2011; Burroughs & Somerville 2013), transference focused therapy (Hawton *et al.* 2016), mentalization therapy (Bateman & Fonagy 2010), or schema-therapy (Nadort *et al.* 2009). However, such therapy may not be available everywhere where there is a need. Furthermore, even specific programs may not be successful in every patient. Many patients with BPD leave the treatment prematurely or respond insufficiently (Goodman *et al.* 2010; Dimaggio *et al.* 2013). Therefore, research is needed to determine which factors can make the therapy more suitable for most BPD individuals (Akhtar 1998; Goodman *et al.* 2015). Several categories of treatment-related needs can be identified: (a) early intervention; (b) destigmatization; (c) therapeutic relationship; (d) obstacles to seeking assistance; (e) hospitalization; (f) primary care and physical health (Grambal *et al.* 2017).

(a) Need for early intervention

Controlled trials have indicated that early treatment can lead to clinically significant improvement in adolescent patients if the potential diagnosis of BPD is suspected (Santisteban *et al.* 2015). To achieve early intervention in BPD, evidence-based management approaches must be developed, the range of available treatments must be increased, therapy must be tailored to the specific needs of this patient group, taking into consideration the development and course of the personality disorders (Spence *et al.* 2008).

(b) Need for destigmatization

Clinicians are more likely to report feelings of frustration, inadequacy, anger, and confrontation with BPD patients (Deans *et al.* 2006; Commons Treloar 2009; Ociskova *et al.* 2017). BPD tends to be perceived more negatively than other psychiatric conditions subjected to stigmatization like psychotic disorders and bipolar affective disorder (Fraser & Gallop 1993; Markham & Trower 2003; Forsyth 2007). Furthermore, compared to mental disorders generally, the stigmatization of individuals with BPD was remarkably worse Knaak *et al.* 2015).

The stigmatising behaviour can be especially pronounced among nurses (Ociskova *et al.* 2017), and counter-therapeutic effect can arise from the healthcare staff (Dickens *et al.* 2016). It has been suggested that education can help prevent this problem and increase healthcare quality. However, Dickens *et al.* (2016) stated that despite the implementation efforts, this solution has not been successful enough, and an alternative broader approach should be considered that would implement team-wide strategies, encourage nurses to be equal partners in the team, and let them take part in the creating of design and framework of the therapy.

Self-stigma also tends to be high among patients with BPD. Grambal *et al.* (2016) studied self-stigma among different patient groups. They reported a significant difference between patients with BPD and patients with anxiety disorder. However, they did not find a significant difference between the BPD and patients with schizophrenia, bipolar disorder, or major depressive disorder.

Psychoeducation can be an effective strategy in both patients with BPD and their family members (Banerjee *et al.* 2006; Murray-Swank & Dixon 2006; Zanarini & Frankenburg 2008; Long *et al.* 2015). Psychoeducation can improve clinicians' attitudes (Krawitz 2004; Commons Treloar 2009; Shanks *et al.* 2011; Ociskova *et al.* 2017). The study results by Knaak *et al.* (2015) suggest that targeted intervention can help improve healthcare providers' attitudes toward individuals with BPD.

(c) Need for a good therapeutic relationship

The therapeutic relationship in BPD patients' therapy is highly influenced by these individuals' paradoxical inclination to seek after the objects that ultimately traumatise them. This results in a specific problem: managing their tendencies towards self-harmful and self-sabotaging behaviour (Ruggiero 2012). Successful handling of transference problems is inevitably crucial in maintaining a fruitful therapeutic relationship. Ruggiero (2012) emphasizes the importance of therapists' countertransference and self-reflection analysis in treating BPD patients.

The psychoanalysts proposed a "holding environment" to characterize severely regressive patients' treatment needs and later apply it to BPD treatment (Winnicott 1963b). Holding environment is seen as an analogy to meeting the unfulfilled childhood needs between their mother and them within the therapeutic relationship (Slochower 1991). Patients with BPD need such environmental support despite occasional irritability or anger that produces severe countertransference (Slochower 1991).

In cognitive behavioural therapy (CBT), the concept of the therapeutic relationship varies among the contemporary ("third-wave") strategies (Kohler 2016). In DBT, the therapist takes a role in expressing acceptance of the patient as they are and validates the patient's emotions, thoughts, and behaviours, while at the same time acknowledging the need for change in the behaviour (Fassbinder 2016; Linehan & Wilks 2015). In schema-therapy, the therapeutic relationship is conceptualised as „limited reparenting" and is seen as one of the strategies to fulfil childhood emotional needs and improve adult patients' emotion regulation (Young *et al.* 2003).

(d) Need to overcome obstacles in the search for help

Several factors connected to treatment dropout have been described in adolescents and their caregivers: psychological factors, perceptions of psychiatric disorders and psychiatric care, and the circumstances of seeking help (Desrosiers *et al.* 2015). Premature discontinuation of treatment is associated with excessive patient vulnerability at the beginning of the treatment, leading to a loss of confidence in future treatment. If the care settings reflect on these vulnerabilities in the treatment plans, the discontinuation could be prevented. Concerns and adverse reactions to treatment can be alleviated if the reasons for the therapeutic orientation are explained and the patient understands how the treatment will affect their condition.

Individuals with BPD face significant challenges, both concerning symptoms and function, and in seeking professional help. Kealy & Ogrodniczuk (2010) examined exclusion from adequate mental health care and recovery options for BPD using the social construct of marginalization. Patients with BPD can be considered not suffering from a "real" disorder and overconsuming healthcare, and therefore the motivation to provide adequate treatment for them may be minor.

(e) Need related to hospitalization

Five main topics related to hospitalization problems were identified among the patients with BPD: practicalities of the ward life; option to express themselves; the rate of patients' early return; the power of sectioning and the labelling (Rogers & Dunne 2011). BPD patients tend to be perceived by the nursing staff as one of the most challenging clinical practice patients. Therefore, it has been argued that these healthcare workers need clinical supervision to improve their understanding and therapeutic steps in BPD (Bland & Rossen 2005). A specialized psychiatric nurse can be responsible for individual and group supervision of nursing staff and individual skills and team cooperation training. Specialized clinicians can also be responsible for the nursing team's emotional support, enhancing job satisfaction while keeping up the good practice (Bland & Rossen 2005). Clients with BPD have unique family needs in treatment, and hospital staff must know these needs (Hartman & Boerger 1990). It is essential to establish and continue therapeutic relationships with family members. Confrontation and setting limits are considered particularly important, as is the role of teaching and support (Hartman & Boerger 1990, Rosenbluth 1991).

In short, the most significant unmet needs associated with barriers to seeking help are affordable health and social services, overcoming countertransference of health care staff and more appropriate information for families.

(f) Needs related to primary care and the general medical environment

Individuals with BPD sometimes exhibit medically unexplainable somatic symptoms. BPD and its influence on the medical environment still evolve (Sansone & Sansone 2015). During the treatment, some disruptive behaviours may be related to BPD, such as refusal to talk to the healthcare professionals, threats, shouting, screaming, or disrespectful talk about healthcare professionals with family and friends (Sansone *et al.* 2010). Intentional sabotage, such as preventing wound healing, may also occur because such behavior can function as the equivalent of self-harm (Sansone *et al.* 2012).

The economic aspects should also be considered, as both expenses and time consumption are essential healthcare management factors. The care for individuals with BPD appears to influence this matter as well (Sansone *et al.* 2012), because patients with features of BPD have more hospital visits and documented prescriptions (Sansone *et al.* 1996; Sansone *et al.* 1998), contacts the healthcare facilities more frequently (e.g., telephone calls) (Sansone *et al.* 1996), and also get recommended to specialists more often (Sansone *et al.* 1996a), i.e. they have higher use of health care resources.

(4) Relationship needs

Patients with BPD need to understand themselves and others more to predict behaviour better and respond to interpersonal exchanges.

(a) Need to better mentalization

Mentalization is the ability to make sense of one's own and others' actions based on the interpretation of subjective mental processes (Bateman & Fonagy 2008; Bateman & Fonagy 2010). BPD patients often have the process of mentalization impaired, and therefore do not understand the intentions of others. People with BPD stabilize themselves by mentalizing rigid relationships within pre-mentalistic ways of functioning. However, the lack of flexibility in confronting the schematic picture threatens the individual with unexpected behaviour (Bateman & Fonagy 2010). These reveal a sense of humiliation that can only be prevented by manipulating, aggression, or controlling another individual. A typical path to violence is the temporary inhibition of mentalization. Treatment aims to help patients

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maintain self-reflective mentalization even under conditions when their integrity is threatened (Bateman & Fonagy 2008).

(b) Family needs

Parents diagnosed with BPD often recognize that parenting's emotional aspects are demanding (Newman *et al.* 2007). Mothers with BPD are less gentle and less organized in communication with their children, and their children communicate with mothers less frequently and are less interested and enthusiastic about it than mothers from the general population and their children. Besides, these mothers describe themselves as lacking satisfaction, competence, and a higher level of anxiety (Newman *et al.* 2007).

Therapy for young individuals with BPD is likely to be effective only in an environment that responds adequately to developmental needs with qualified psychological and social intervention (Miller 1995). This should include work with the family, which assesses the parents' psychopathology, marital relationships, and the family system's strengths and weaknesses.

(c) Intimate relationship needs

Personality traits influence both the individual's marital satisfaction and the couple's satisfaction (Kasalova *et al.* 2018). (Kasalova *et al.* 2018) On the other hand, partnership conflicts are among the most common triggers of decompensation of mental disorders, including personality disorders (Robins *et al.* 2000, South *et al.* 2008). More than one-third of patients with BPD live in long-term romantic relationships (APA 2013). While the personality disorder can cause trouble to the relationship, a stable relationship can positively affect the BPD symptomatology and general outcome (Links & Heslegrave 2000).

BPD patients' romantic partners often experience frustration arising from the insufficient understanding of the partner's behaviour (Kasalova *et al.* 2018). They can take on several roles in the relationship, acting as co-therapists or parents apart from being just romantic partners, which brings further stress. The partners are also in need of support, and if provided with adequate help, they could favourably influence the treatment outcome in BPD patients. This can be achieved, for example, by training emotion-regulation skills in the couple therapy and providing information about available community support (Greer & Cohen 2018).

(5) How do the needs of BPD patients relate to the treatment?

In recent years, several empirically supported procedures have been developed for adult patients with BPD (Holm & Severinsson 2008; Herschell *et al.* 2009; Nadort *et al.* 2009; Burroughs & Somerville 2013; Cristea *et al.* 2017; Temes & Zanarini 2019). Recently there are efforts to modify and adapt these therapeutic approaches to target the subgroups of patients that suffer from comorbid disorders (e.g., comorbid bipolar disorder (Sauer-Zavala *et al.* 2016), depressive disorder (Prasko *et al.* 2016), posttraumatic stress disorder (Bohus *et al.* 2013; Harned *et al.* 2014; Harned *et al.* 2018), or antisocial personality disorder (Blum *et al.* 2008; Bateman *et al.* 2016; Black *et al.* 2016), or adolescent patients (Quinn & Shera 2009; MacPherson *et al.* 2013). The research has focused on addressing specific treatment needs and possibilities of delivering efficient treatments to BPD patients (Temes & Zanarini 2019).

(a) Availability of adequate treatment

Recent development has focused on improving approaches to BPD patients, including searching for ways to reduce long waiting times for treatment. A "stepped care" model has been developed and evaluated (Laporte *et al.* 2018; Paris 2013). This approach suggests that there tend to be different treatment outcomes for different patients in disorders such as BPD. Therefore, brief intervention might be sufficient for some patients, whereas more intensive care is necessary for others. Laporte *et al.* (2018) already proved that time-limited evidence-based approaches are sufficient for certain patients (Stanley *et al.* 2007; Soler *et al.* 2009; Temes & Zanarini 2019).

Furthermore, a treatment concept of general psychiatric management has been proposed, integrating psychotherapeutic guidance, case management and pharmacotherapy of concurrent symptoms. This set of evidence-based principles aims to be simple enough to be adapted by community-level facilities without much extra effort (Links *et al.* 2015). A randomised controlled trial has been performed to compare general psychiatric management to dialectical behavioural therapy (McMain *et al.* 2009). The participants of the trial underwent either of the treatments for one year. The effect on symptoms, self-injury, and suicidality was comparable across the groups. Besides, these improvements were largely maintained during the two-year follow-up (McMain *et al.* 2012).

(b) Psychotherapy

In the last few decades, several integrative therapeutic approaches are helpful for BPD patients: dialectical behaviour therapy (DBT), schematherapy (ST), mentalization-based therapy (MBT), and transference focused psychotherapy (TFP) (Cristea *et al.* 2017; Temes & Zanarini 2019).

There have been efforts to target the therapy to BPD patients suffering from comorbidities. Transdiagnostic approaches could address concurrent mood and anxiety disorders to therapy (Bohus *et al.* 2013; Harned *et al.* 2014). Moreover, treatments used in BPD, namely mindfulness-based therapy and System training for emotional predictability and problem-solving (STEPPS), were also tested in patients with comorbid BPD antisocial personality disorder (ASPD) (Bateman *et al.* 2016; Black *et al.* 2016). Two adapted forms

of DBT have emerged to treat patients with comorbid BPD and PTSD (Sauer-Zavala *et al.* 2016; Prasko *et al.* 2016).

Bohus *et al.* (2013) adapted DBT to treat a patient group with PTSD and emotion dysregulation following childhood abuse, including common comorbidity of BPD and overlapping with the diagnostic term "complex PTSD", newly introduced in ICD-11 (Bohus *et al.* 2013; Harned *et al.* 2014). This treatment was named DBT-PTSD and combined dialectical behaviour therapy and techniques of cognitive behaviour therapy, compassion-focused therapy, and acceptance and commitment therapy. Compared to treatment as usual, it has shown both effectiveness for PTSD symptomatology and good tolerability.

Another approach is combining prolonged exposure, a well-established strategy used in PTSD (Foa *et al.* 2007), with the principles of DBT (DBT-PE) (Harned *et al.* 2014; Harned *et al.* 2018). This combined treatment is more effective than standard DBT in achieving remission in a group of BPD patients who have comorbid PTSD and manifesting acute suicidality or self-harm (Harned *et al.* 2014). Besides, DBT-PE seems to be more successful in affecting the overall severity of symptoms and specific domains, like dissociation, depression, anxiety, guilt and shame (Harned *et al.* 2018).

Considering the treatment of patients with comorbid personality disorders, especially ASPD, an approach based on an adaptation of mentalization-based therapy (MBT) was suggested. MBT aims to improve the patient's ability to reflect on others' mental states and intentions and their own. Hypothetically, the amelioration of other people's behaviour will help the patients reduce impulsive behaviour and prevent aggression and other socially inappropriate behaviours. A study that compared additional MBT treatment to standard outpatient treatment in this patient group showed a positive effect of MBT therapy on multiple symptoms, including anger, hostility, interpersonal functioning, paranoia, suicide attempts, self-harm, mood and general psychiatric symptoms theoretical background.

Furthermore, STEPPS, an evidence-based complementary treatment that includes psychoeducation, cognitive behaviour therapy and skills training, has been adapted as group therapy for BPD patients with comorbid ASPD (Bateman *et al.* 2016; Black *et al.* 2016). Two studies targeted this specific patient subpopulation, showing more significant improvement in patients with comorbid ASPD than the BPD-only group, supporting the use of the STEPPS program in such conditions.

Comorbid mood disorders in BPD patients have been addressed by adopting a transdiagnostic approach based on Barlow's Unified Protocol for the Transdiagnostic Treatment of Emotional Disorders (Barlow *et al.* 2011; Sauer-Zavala *et al.* 2016). It focuses on the negative emotional processes underlying both mood disorders and BPD.

(c) Additional early interventions

Apart from standard psychotherapeutic approaches to BPD, several additional interventions have been developed. These include online interventions and group therapies with goals to help BPD patients with specific problems (Gratz *et al.* 2014).

Adjuvant group therapy for patients with recurrent self-injury was developed and tested. This 14-week program showed effectiveness in reducing self-injurious behaviour in female BPD patients and improving emotion regulation and quality of life. These positive effects are hypothesised to be mediated by emotional self-regulation, and they were maintained even at nine months after the intervention (Gratz *et al.* 2015).

A follow-up program to support patients who achieved remission after completing the DBT treatment was developed differently. It aimed to reinforce the patients' skills by focusing on forgiveness. Completing this program has led to a reduction of psychiatric symptomatology and improved attachment, and improved forgiveness. The effect was maintained for six weeks.

Of web-based interventions, one was proved to be effective in a randomised controlled trial. This course consists of online assignments and regular evaluation. More significant improvement in impulsive behaviour and global functioning has been linked to completing the program within the first 12 weeks. A more remarkable improvement has been linked to online program participation (Zanarini *et al.* 2018). These results suggest that the internet is a suitable medium for delivering adjunctive treatment interventions (Temes & Zanarini 2019). Several other technology-based programs are now being tested, such as the REVISIT study, developed with the schema therapy principles. 184

(d) Pharmacotherapy

The role of pharmacotherapy in BPD is generally considered to be inferior to psychotherapy. There is no medication officially indicated for this disorder among the published guidelines, and different guidelines take different approaches to pharmacotherapy (Bozzatello *et al.* 2019). The American Psychiatric Association guidelines recommend using pharmacotherapy to treat specific symptom domains and consider it a part of the first and second line of treatment (APA 2001; Oldham *et al.* 2004). On the other hand, the National Institute of Clinical Excellence (NICE) does not recognise pharmacotherapy as a BPD treatment per se and recommends using medication only to treat comorbidities or acute crises case; it should be time-limited (NICE 2015; Bozzatello *et al.* 2017). The Australian National Health and Medical Research Council (NHRMC) see psychotherapy as the first line of treatment and acknowledges pharmacotherapy as the second line and adjunctive treatment (NHMRC 2017).

However, in contrast with the guidelines, most of the patients referred to the specialized treatment of BPD

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were taking numerous medications. Patients described this as a rather displeased experience, feeling that pharmacotherapy was a refuge from communication and psychotherapy (Rogers & Acton 2012). A recent review also emphasizes pharmacotherapy and psychotherapy and acknowledges the conflict between the clinical practice where medication is commonly prescribed to BPD patients and guidelines such as those published by NICE (Stoffers & Lieb 2015).

Despite the scarce evidence, a shift toward novel approaches in clinical practice has also been recorded. A study tracking changes of medication prescribed to BPD inpatients in the University Medical Center of Göttingen, Germany, over the course of 20 years showed a significant reduction in the use of older antidepressants, mood stabilisers and low-potency antipsychotics.

Another promising substance is oxytocin, playing an important role in the neurobiology of attachment security. It is hypothesised that oxytocin could work as a facilitator of psychotherapy, enhancing its effectiveness and might also have the ability to prevent the intergenerational non-genetic transmission of the BPD (Brüne 2016). It has shown a reduction in interpersonal sensitivity, stress-induced dysphoria, and regulation of behaviour in a social context in five randomised controlled studies (Simeon *et al.* 2011; Bertsch *et al.* 2013; Brüne *et al.* 2013, Brüne *et al.* 2015, Ebert *et al.* 2013), and one open-label study (Bartz *et al.* 2010).

Antidepressants

Antidepressants, especially selective serotonin reuptake inhibitors (SSRIs), are commonly prescribed to BPD patients. Prescription rates of other antidepressants like tricyclic antidepressants and inhibitors of monoamine oxidase are declining, primarily due to the side effects and thus lower tolerance and safety (Stoffers & Lieb 2015; Bozzatello *et al.* 2019).

However, the scientific evidence on the use of antidepressants in BPD treatment is scarce, and the methodology often insufficient. Bozzatello *et al.* (2019) draw attention to the fact that since 2010 there are have not been new data on the effectiveness of antidepressants in placebo-controlled studies. Their review included nine studies, of which five used fluoxetine as an intervention, one fluvoxamine, and one was comparing sertraline to olanzapine. Two studies were evaluating SNRIs, specifically venlafaxine and duloxetine. The review authors conclude that SSRIs show some effectivity on mood symptoms, but the evidence is too weak to support or exclude their BPD treatment use. Similarly, a review performed by Stoffers & Lieb (2015) concludes that the evidence substantiating the use of SSRIs is insufficient.

Considering other classes of antidepressants, two open studies on SNRIs were published. Venlafaxine was proven to reduce somatic symptoms in an open-label study effectively (Markovitz & Wagner 1995). Bellino *et al.* (2010) performed an open-label trial with duloxetine on 18 participants (four dropped-off), showing statistically significant improvement in impulsivity, anger and affective instability and good tolerability.

Mood stabilisers

Mood stabilizers are prescribed to BPD patients, usually with an intention to decrease irritability and impulsivity. Several randomised controlled trials were performed to prove this strategy's efficacy; however, many of them involved only a few participants. Valproate, topiramate and lamotrigine have been among the most studied mood stabilizers. Bozzatello *et al.* (2019) reviewed five studies researching valproate, five topiramate studies and four studies concerning lamotrigine. Based on the available data, they conclude that all three of these drugs can treat impulsive behaviour, anger, and unstable BPD. One randomised controlled trial was performed with carbamazepine, showing no effect (De la Fuente & Lotstra 1994).

Another limitation in the clinical practice is the safety and side effects. For example, even though lithium has shown some effectiveness for specific symptoms (Links *et al.* 1990), regular prescription of this drug is hardly imaginable in most BPD patients due to safety concerns. Similarly, even if valproate would prove effective, increased risk of polycystic ovarian syndrome and teratogenicity might limit its use in many young female patients (Verrotti *et al.* 2016).

Antipsychotics

Although less well known, auditory verbal hallucinations also occur in connection with BPD (Lindley *et al.* 2000; Larøi *et al.* 2012; Niemantsverdriet *et al.* 2017). However, there is no consensus on how to deal with them. Auditory verbal hallucinations, which occur in connection with BPD, require proper diagnosis and treatment. They usually respond to antipsychotic treatment. These are also effective in other psychotic symptoms in this personality disorder (Slotema *et al.* 2018). Trials that would assess the effectiveness of antipsychotics, cognitive-behavioural therapy and non-invasive brain stimulation methods in these conditions are necessary.

The effectivity of antipsychotic medication in BPD was subjected to multiple trials. Olanzapine is the most studied drug, with nine randomized control trials (RCT) and one open-label study. Multiple RCTs were also performed with quetiapine, aripiprazole, and a few other antipsychotics were studied on a level of RCT and made it a group with the most evidence (Bozzatello *et al.* 2019). Olanzapine has been proven effective in reducing anger, anxiety, paranoid ideations, and global functioning (Zanarini & Frankenburg 2001; Bogenschutz & Nurnberg 2004; Zanarini *et al.* 2011; Soler *et al.* 2005). Some of the studies did not show the superiority of olanzapine to placebo in improving

symptoms, only in the improvement rate (Schulz *et al.* 1998; Linehan *et al.* 2008).

Quetiapine has shown some effectiveness even in low to moderate doses (150-300 mg/day) (Black *et al.* 2014, Lee *et al.* 2016), and aripiprazole have been found helpful in improving specific symptoms and global functioning (Nickel *et al.* 2006; Nickel *et al.* 2007; Chanen *et al.* 2018), and also is relatively safe in long-term treatment (Nickel *et al.* 2007).

However, the results are still inconsistent, some studies lack methodological preciseness, and this field also requires further work. Furthermore, the side effects might be limiting the use of these medications, and some other substances have not been studied sufficiently, for example, risperidone with only one RCT and one open-label study (Szigety & Schultz 1998; Rocca *et al.* 2002).

On the other hand, novel antipsychotics, particularly asenapine, have shown superiority to olanzapine in reducing affective instability, while olanzapine effectively reduces dissociation paranoid ideation (Bozzatello *et al.* 2017, Reyad & Mishriky 2017). Asenapine also significantly improved global functioning and general psychopathology domain (Martin-Blanco *et al.* 2014). Asenapine and clozapine with a high affinity to D4 receptor (D4/D2>1) are also significantly more effective in the reduction of acute aggression, especially physical aggression in BPD patients (Amon *et al.* 2017).

(d) Patient responsibility and the responsibility of helping professionals

Hypothetically, the care for BPD patients could also be harmful, especially if it is disarranged and the treatment is managed in favour of short-term benefits over long term recovery. For example, frequent hospitalizations can avoid life issues that the patient needs to solve in the extramural environment. Excessive psychiatrization can help avoid work, relationships and serve as a rationalization of others' use. Furthermore, side effects of medications may impair quality of life. The effectiveness of hospitalization in chronically suicidal patients with BPD was questioned. (Paris 2004).

In the light of these facts, a question about responsibility for the treatment increases in importance. Some of the supposed adverse side effects of the treatment could be avoided if the patient would take more responsibility for the treatment choice. There has been a "palliative care" proposal for chronically suicidal BPD patients instead of curative treatment. For example, this would encompass education about first aid and safer ways of self-injury, as it would accept self-injury as a means of reducing tension and aversion of suicidal behaviour. The authors argue that such an approach could improve patients' motivation to participate in psychotherapy (Strand *et al.* 2020).

As a treatment that would encourage patients' responsibility for the treatment, a concept of temporary admission to the hospital by self-referral (BA) was proposed and tested. In a qualitative study, the participating patients reported encouragement to take responsibility for the treatment (Eckerström *et al.* 2020). A randomised controlled trial of 125 patients with suicidal thoughts and at least three BPD criteria has not shown BA's superiority to the treatment as usual regarding inpatient services. However, it indicates that BA could have decreased nonsuicidal self-injury and improvement in several daily functioning domains (Westling *et al.* 2019).

DISCUSSION

Some psychotherapeutic directions describe the possibilities of therapy for individuals with a BPD. In fact, according to controlled studies, only some approaches are practical. In terms of psychodynamics, it is transference focused therapy (Clarkin *et al.* 2004), and mentalization therapy (Bateman & Fonagy 2000), cognitive therapy (Davidson *et al.* 2006), and integrated approaches such as dialectical-behavioural therapy (Linehan *et al.* 2006), schematherapy (Giesen-Bloo *et al.* 2006), and cognitive analytical psychotherapy (Ryle & Golynkina, 2000), interpersonal psychotherapy is also beneficial (Bellino *et al.* 2010, Levenson *et al.* 2012) (Bellino *et al.* 2010, Levenson *et al.* 2012). (Bellino *et al.* 2010, Levenson *et al.* 2012). Other approaches can be useful or not, as they have not been sufficiently studied (Stoffers *et al.* 2012). When comparing different psychotherapeutic directions, transference focus therapy was more effective than dialectical-behavioural therapy (Clarkin *et al.* 2007), and in another study, schematherapy was more effective than transference focus therapy (Giesen-Bloo *et al.* 2006). The treatment of depressive disorder comorbid with a BPD disorder has not been extensively studied. Bellino *et al.* (2010) researched interpersonal therapy, which was more effective in combination with antidepressants than antidepressants alone. The pharmacotherapy of depression in BDP is addressed by a meta-analysis of Mercer *et al.* (2009). They found that valproic acid and carbamazepine have a moderate effect on treating comorbid depression in patients with BPD, while antidepressants only minor and antipsychotics none.

CONCLUSION

Recognizing the unmet needs of patients with BPD leads to an emphasis on the importance of a comprehensive patient assessment. It is an evaluation of his acute condition, in which it is necessary to recognize and reduce the acute threat to himself and others, but also the severity of the patient's suffering in a significant drop in mood, increased tension, feelings of unbearable life, suicidal decay or psychotic experiences (e.g., auditory verbal hallucinations). From the research point of view, there is a need for further studies that will focus

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on this group of patients' needs and the possibilities of their treatment in psychotherapy, using psychotropic drugs or social interventions.

The diagnosis of comorbidities is also essential, especially with bipolar disorder and posttraumatic stress disorder, as comorbid conditions may require different therapeutic approaches. Inadequate diagnosis can deprive the patient of potentially effective treatment or, conversely, lead to unnecessary and incorrect pharmacological guidance.

Many treatment approaches are time-consuming and costly, but patients may also benefit from alternative treatment or adjunctive therapy models with specific goals, as pointed out in the review. Thus, further development of step-by-step treatment models, adjunctive treatments, and technology-based interventions can bring greater access to care and reduce costs, especially for newly diagnosed patients or patients waiting for comprehensive treatment. Furthermore, it seems that supporting the patient's responsibility in the treatment choice could lead to better improvements and would be, in fact, more ethical.

Conflict of interest

All authors declare that the research was conducted without any commercial or financial relationships that could be construed as a potential conflict of interest.

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