Impulsivity in the diagnosis of borderline personality disorder

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Introduction

Borderline personality disorder (BPD) is a psychiatric disorder characterized by “a pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts” (American Psychiatric Association, 2000). Over the last few decades, the original ‘stepchild’ with strongly negative connotations and a putatively poor prognosis has grown up and become an ‘adult’ mental disorder. Identifying the disorder is important in treatment planning (Paris, 2005a), the natural course is “more benign than formerly believed,” and “clinicians should be optimistic about improvement and long-term outcomes” (Fonagy & Bateman, 2006). BPD is the most frequently researched personality disorder, and among the most frequently researched mental disorders such as panic disorder and alcohol dependence.

Since BPD is generally considered to be a complex multidimensional construct, its validity is inevitably problematic, but no more so than most other psychiatric diagnoses (Paris, 2005b). As to yet, research has not succeeded to differentially relate DSM-IV categories to specific etiologies (Paris, 1996). Many authors have argued that the taxometric findings with respect to BPD support a dimensional interpretation (e.g., Rothschild, Cleland, Haslam & Zimmerman, 2003; Widiger & Frances, 2002), and many are convinced that purely dimensional systems will prove to show more specific relationships with genetic, neurobiological and perhaps even developmental correlates than categorical systems (e.g., Livesley et al., 1998; Cloninger, 1998). But this is true for many, if not all, mental disorders. The challenge for the future is to elaborate on these findings, and to elucidate and differentiate between the dimensions that are most essential to linking developmental antecedents, pathogenesis, prognosis, and treatment planning. Against this background, this brief position paper will focus on recent thinking about one of the core features of BPD, i.e., impulsivity.

Impulsivity as a core feature of BPD

Impulsivity is an important psychological construct. It appears, in one form or another, in every major system of personality, and plays a prominent role in the understanding and diagnosis of various forms of psychopathology (Whiteside & Lynam, 2001). In fact, after subjective distress, impulsivity may be the most common diagnostic criteria in the fourth version of the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000). In addition to an entire section devoted to impulse control disorders, impulsivity appears in the diagnostic criteria for BPD (i.e., impulsivity in at least two areas that are potentially self-damaging), antisocial personality disorder (i.e., impulsivity or failure to plan ahead), attention-deficit/hyperactivity disorder (i.e., blurts out answers, difficulty waiting turn, and interrupts or intrudes), mania (e.g., excessive involvement in pleasurable activities that have a high potential for painful consequences), dementia (i.e., disturbance in executive functioning), bulimia nervosa (e.g., feeling as though one cannot control how much one is eating), substance use disorders, and the paraphilias.

There is still no consensus of whether or not BPD should be viewed as an one-dimensional or a multidimensional construct. Many authors have identified three or four clusters of borderline characteristics, such as affective dysregulation and cognitive problems. Most models do also distinguish a factor that is named either behavioral dysregulation (Sanislow et al., 2002), impulsivity (Zanarini et al., 1989; Clarkin et al., 1990), or self-damaging behavior (Morey, 1991; Livesley & Schroeder, 1991; Clarkin et al., 1993). However, others have claimed that, compared to an all factor model, reduction to three or four factors leads to considerable information loss (Giesen-Bloo, 2006; Arntz, 1999; Sanislow et al., 2002; Fossati et al., 1999). These findings seriously question the 'traditional' trend towards subsumption of various aspects of behavioral dysregulation under one factor.

Impulsivity as a multi-dimensional construct

Given the importance of impulsivity in psychology, it is somewhat surprising to note the variety of current conceptualizations of impulsivity and the inconsistencies among them (Whiteside & Lynam, 2001). As Depue and Collins (1999) note, "impulsivity comprises a heterogeneous cluster of lower-order traits that includes terms such as impulsivity, sensation seeking, risk-taking, novelty seeking, boldness, adventuresomeness, boredom susceptibility, unreliability, and unorderliness" (p. 495). Unfortunately, impulsivity suffers from both the "jingle" and "jangle" fallacies (Block, 1995). The jingle fallacy refers to situations in which two constructs with similar labels are in reality quite different; for example, measures labeled impulsivity may reflect constructs as diverse as a short attention span and a tendency to participate in risky behavior. On the other hand, the jangle fallacy refers to situations in which two constructs with different labels are actually the same; for example, Tellegen's control (Tellegen, 1982) and Zuckerman's Disinhibition (Zuckerman, 1994) scales seem to measure similar constructs despite bearing different labels. Clearly, the jingle and jangle fallacies are more likely to inhibit than to advance the understanding of impulsivity; these fallacies "waste scientific time" and "work to prevent the recognition of correspondences that could help build cumulative knowledge" (Block, 1995, p. 210).

In response to these concerns, Whiteside and Lynam (2001) conducted a thorough investigation of impulsivity by analyzing, within the framework of the Five-Factor Model (FFM), a variety of commonly used impulsivity measures. Using the FFM as a starting point, Whiteside and Lynam developed the UPPS Impulsive Behavior scale, which assesses the four personality traits of urgency, sensation seeking, perseverance, and premeditation. These four facets are not considered variations of impulsivity, but rather discrete psychological processes that lead to impulsive-like behaviors:

- urgency, associated with the impulsiveness facet of the NEO-PI-R, refers to the tendency to experience strong impulses, frequently under conditions of negative affect. High scorers on urgency are likely to engage in impulsive behaviors in order to alleviate negative emotions despite the long-term harmful consequences of these actions;
- lack of premeditation, negatively associated with the deliberation facet of the NEO-PI-R, refers to the tendency to think and reflect on the consequences of an act before engaging in that act. Low scorers are thoughtful and deliberative, whereas high scorers act on the spur of the moment and without regard to the consequences;
- lack of perseverance, negatively associated with the self-discipline facet of the NEO-PI-R, refers to an individual's ability to remain focused on a task that may be boring or difficult. Low scorers are able to complete projects and to work under conditions that require resistance to distracting stimuli, whereas high scorers cannot force themselves to do what they want themselves to do;
- sensation seeking, associated with the NEO-PI-R facet of excitement seeking, incorporates two aspects: 1) a tendency to enjoy and pursue activities that are exciting and 2) an openness to trying new experiences that may or may not be dangerous. High scorers enjoy taking risks and engaging in dangerous activities, whereas low scorers avoid risk and danger.

In one study, UPPS scales accounted for 64% of the variance in the borderline scale of Morey's (1991) Personality Assessment Inventory (Whiteside, Lynam, Miller, & Reynolds, 2005). Urgency appeared to be the most important predictor, followed by lack of perseverance and sensation seeking, respectively. In

another study, urgency was also found to be the strongest predictor of eating problems (Miller et al., 2005). These findings are consistent with the usual characterization of these types of psychopathology as including intense negative affect, as well as impulsive behaviors (e.g., self-mutilation, binging, purging) that attempt to alleviate some of the individual's distress. Urgency, more so than the other UPPS scales, represents the intersection of impulsivity and negative affect, in that it involves difficulty in controlling or coping with urge to act in response to unpleasant emotions. These results replicate previous research on BPD (Kruedelbach, McCormick, Schulz, & Grueneich, 1990) and supports Linehan's (1993) theory that the erratic behavior commonly displayed by individuals with BPD (e.g., self-harm behavior) may be a misguided effort to cope with intense negative affect that has been intermittently reinforced or to soothe a hypersensitive emotional system.

The measurement of impulsivity

Table 1 compares several assessment strategies in terms of their coverage of the UPPS factors of impulsivity, in particular those that seem to be relevant to BPD (i.e., urgency, lack of perseverance and sensation seeking). The table shows that several instruments have included several constructs that converge to some extent with the UPPS 4-factor model. The NEO-PI-R fits the model best, probably due to the fact that the developers of the model used the FFM as a starting point. The DAPP-BQ also fits the model to some extent, but some of the factors are defined in terms of some relatively specific, but nevertheless typical behavioral outcomes instead of the underlying personality traits (i.e., self-harm instead of urgency, and conduct problems instead of lack of premeditation). The SNAP and TCI cover three of the four UPPS factors, although the SNAP includes the trait 'impulsivity' that could theoretically be linked to any of the four UPPS factors. The same is true for the DSM-IV: it includes specific behavioral manifestations of both urgency (i.e., recurrent suicidal or self-mutilating behavior), and lack of premeditation (i.e., inappropriate, intense anger or difficulty controlling anger), as well as a broad trait 'impulsivity' that could theoretically be linked to any of the four UPPS factors.

Table 1

Coverage of the UPPS factors Urgency, Lack of premeditation, Lack of perseverance, and Sensation seeking: comparison between various assessment and classification strategies

Instrument	**Dimensions of 'impulsivity'**			
UPPS[1]	**Urgency**	**Lack of premeditation**	**Lack of perseverance**	**Sensation seeking**
NEO-PI-R[2]	Impulsivity	Deliberation	Self-discipline	Excitement seeking
DAPP-BQ[3]	Self-harm	Conduct problems	Compulsivity (-)	Stimulus seeking
SNAP[4]	Self-harm	Aggression	Workaholism (-)	-
	Impulsivity			
TCI[5]	-	Impulsivity versus reflection	Persistence versus irresoluteness (-)	Exploratory excitement versus stoic rigidity
DSM-IV-TR[6]	Recurrent suicidal or self-mutilating behavior	Intense anger or difficulty controlling anger	-	-
	Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating)			

[1]Whiteside & Lynam, 2001; [2]Costa & McCrae, 1992; [3]Livesley & Jackson, 1992; [4]Clark, 1993; [5]Cloninger et al., 1993; [6]American Psychiatric Association, 2000

The choice for any of those measures depends on whether one is interested is measuring the normal trait range (NEO-PI-R or TCI) or the maladaptive trait range (DAPP-BQ or SNAP). If one is

interested in the frequency of various DSM-IV based impulsive behaviors in the recent past, the Borderline Personality Disorder Severity Index (BPDSI; Arntz et al., 2003) might be the best choice. If one is interested in the underlying psychological processes or traits, the UPPS might be the best choice.

Implications for future research

In future research, it is recommendable to consider deleting the relatively meaningless term 'impulsivity' and including various discrete psychological processes (such as 'urgency') that lead to impulsive-like behaviors. It is likely that that these discrete psychological processes are differentially associated with different etiologic and prognostic variables.

The replacement of impulsive-like behaviors by their underlying psychological processes (or traits) would possibly also introduce more temporal stability to this spectrum of personality symptoms. Two large studies on the natural course of personality disorders, i.e., the McLean Study of Adult Development (MSAD; Zanarini, Frankenburg, Hennen, Reich & Silk, 2005), and the Collaborative Longitudinal Personality Disorders Study (CLPS; Skodol, Gunderson, Shea, McGlashan, Morey, et al., 2005), found that impulsive symptoms resolve the most rapidly, whereas affective symptoms of borderline personality disorder are the most stable, and cognitive and interpersonal symptoms occupy an intermediate position. These findings are consistent with long-term prospective studies showing that older patients with BPD have less impulsivity than younger patients, but no differences in terms of affect disturbance, identity disturbance, and interpersonal problems (Stevenson, Maeres & Comerford, 2003). One way to interpret these findings would be to suggest that one could meaningfully distinguish between two elements of personality disorder: 1) stable *personality traits* that may have normal variants, but that in personality disorders are pathologically skewed or exaggerated, and 2) *symptomatic behaviors* that are attempts at adapting to, defending against, coping with, or compensating for these pathological traits (Skodol et al., 2005). Similarly, the MSAD authors distinguish between *temperamental symptoms* and *acute symptoms*, respectively (Zanarini et al., 2005). From this point of view, impulsivity can be considered symptomatic manifestations or behaviors rather than a stable personality trait. It can be expected that 'urgency' as a trait would show more temporal stability (cf., Verheul et al., 1998).

The conception of impulsivity as a relatively transient symptom cluster could possibly also account for favorable responses to certain pharmacotherapies. For example, Hollander et al. (2005) found that both pretreatment impulsivity symptoms and state aggression predicted a favorable response to divalproex relative to placebo for impulsive aggression in patients with BPD. It is possible that these patients were relieved from their symptoms without any change to the core personality traits. In addition, many psychotherapy trials have shown the impulsive behaviors such as suicide attempts and self-mutilation to be the first borderline manifestations to (gradually) diminish, whereas other borderline manifestations take substantially longer to respond to treatment.

The ultimate goal of classification is clinical utility (Verheul, 2005). An important topic for further study is therefore to investigate whether the discrete psychological processes underlying impulsive-like behaviors are clinically useful constructs. An interesting and testable hypothesis would for instance be whether changes in the underlying psychological processes (e.g., urgency) are better predictors of long-term outcome than their symptomatic manifestations (e.g., self-harm). In addition, given that various treatment approaches have shown to be efficacious (e.g., Linehan et al., 1993; Verheul et al., 2003; Bosch et al., 2004; Bateman & Fonagy, 1999, 2001; Giesen-Bloo et al., 2006), future research should focus on change mechanisms. One interesting issue would be to investigate the temporal relationships between changes in, for example, mentalization, emotion regulation, and the psychological processes underlying impulsive-like behaviors.

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