Archives of Psychiatry and Psychotherapy, 2016; 2: 22–28

DOI: 10.12740/APP/63535

Schema modes in cluster B personality disorders

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Summary

Aim: The present study aimed to investigate the role of schema modes in cluster B personality disorders.

Materials and methods: The participants were 220 individuals – 38 men and 137 women – selected from psychiatric and psychological clinics in Tabriz, Iran. Among the participants, 153 individuals were diagnosed with cluster B personality disorder (44 with borderline disorder, 16 with antisocial disorder, 56 with histrionic disorder and 37 with narcissistic personality disorder). The remaining 67 participants had no personality disorder. The diagnosis was based on the Structured Clinical Interview for DSM-IV Axis II disorders (SCID-II). All participants (with or without personality disorder) were assessed with Millon Clinical Multiaxial Inventory-III (MCMI-III) and Schema Mode Inventory (SMI).

Results: Vulnerable, angry and impulsive child modes are predictors of borderline personality disorder, and angry child, self-soother and healthy adult modes are predictors of antisocial personality disorder. The impulsive and happy child, the attack-bully and healthy adult schema modes predict histrionic personality disorder. Finally, the angry child, happy child, self-soother and self-aggrandizer schema modes could predict narcissistic personality disorder.

Conclusions: Special schema modes have a role in explaining cluster B personality disorders, and yet these disorders may overlap with regard to some dimensions, especially in terms of cognitions and beliefs. This can be interpreted as a lack of specificity in categorical classification systems such as the DSM.

personality disorder/cluster B/schema modes/cognitive theory of personality disorder

INTRODUCTION

According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM–5), the main characteristics of personality disorders are the maladaptive and permanent patterns of behavioural experiences that deviate from cultural expectations in terms of cognition, affect, interpersonal functions and impulse control [1]. The overarching approach presented in part II of DSM–5 considers personality disorders in separate categories as gold standards, but some alternative dimensional models of personality disorders have been suggested recently [2–4]. These models have provided important insights into the pathology of personality disorder; some of them are known as cognitive conceptualizations of personality disorders [5, 6].

In the cognitive approach, beliefs and schemas are important and influencing elements in personality disorders because they underlie maladaptive behaviours and emotions of patients [6,

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7]. In some cognitive models [7–10] it is assumed that dysfunctional or maladaptive schemas are the main causes of personality disorders. These primary maladaptive schemas are pervasive patterns regarding the self and the other, and are usually dysfunctional [11]. It is suggested that severe personality disorders cannot be explained by just one maladaptive schema, but rather various sets of schemas contribute intermittently to the development of personality disorder [12]. The schema mode is a cluster of active schemas related to cognitive, affective and coping responses that a patient experiences simultaneously. When a sudden shift occurs in activated schemas, then associated behaviours and emotions arise. Schema modes thus explain the instability and inflexibility clinically observed in these patients [13].

To better understand the clinical features of personality disorders, various sets of schema modes are suggested [14, 15] and it is presumed that different schema modes play specific roles. Each personality disorder corresponds to a specific schema mode that is introduced into the realm of that personality disorder. Young believes that four schema modes are involved in borderline personality disorder (BPD) including the angry, impulsive and abandoned child, the detached protector and the punitive parent [12]. Findings by Arntz et al. [16] support those schemas roles in BPD. The researchers compared those schemas among borderline personality disorder and antisocial personality disorder (APD) patients and showed that patients with BPD score higher on four of the schemas than patients with APD. With regard to histrionic personality disorder (HPD), Young suggested that the approval-seeking, impulsive, undisciplined and abandoned child schema modes are involved [17] and Bamelis et al. [13] confirmed the association of HPD with the attention and approval-seeking modes, whereas child schema modes – as suggested by Young – did not correlate with HPD.

The similarity and overlapping of cluster B personality disorders (such as emotional instability and inappropriate or severe expression of emotions, poor control and impulsivity) make it possible that cognitive levels underlie the behavioural similarities between these disorders. Based on findings by Lobbestael et al. [15], the relationship between schema modes and personality disorders is yet to be established, since previous studies have examined only a few of the schemas in comprehensive detail [12, 16]. Moreover, these studies have been conducted on a rather confined spectrum of personality disorders. Therefore, the present study aimed to investigate the role of schema modes in cluster B personality disorders.

MATERIALS AND METHOD

Participants and procedure

The study was conducted on individuals with cluster B personality disorders who visited the psychological and psychiatric clinics in Tabriz, Iran. Overall, 220 individuals (38 men, mean age 29.89 ± 6.76 years and 137 women, mean age 29.40 ± 6.28 years) were involved in this study. Out of the total number, 153 had personality disorder (PD) (44 individuals with BPD, 16 with APD, 56 with HPD and 37 with NPD) and 67 did not have a diagnosis of personality disorder. Individuals with PDs visited the clinics to receive therapeutic interventions: 82 presented with an Axis I disorder (23 with drug dependence, 17 with anxiety disorder, 39 with mood disorder and 3 with sexual functional disorder) and 71 had family, marital and/or interpersonal problems. In order to achieve the aim of this study, when a patient was diagnosed with cluster B personality disorder by a psychiatrist or psychologist, they were asked to complete an informed consent form, the MCMI-III and SMI.

MEASURES

Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II).

SCID-II is an efficient and user-friendly instrument for researchers and clinicians that can help produce a standardized, reliable and accurate diagnosis of ten DSM-IV-TR Axis II personality disorders as well as depressive personality disorder, passive–aggressive personality disorder, and personality disorder not otherwise specified. SCID-II begins with a brief overview that

characterizes the person's typical behaviour and relationships. It elicits information about their capacity for self-reflection and then considers each of the personality disorders in detail [18]. Lobbestael et al. [19] evaluated the psychometric properties of SCID-II and reported its reliability at 0.62 to 0.94 on a relevant scale. They also reported Kappa agreement for personality disorders in cluster B including histrionic, narcissistic, borderline and antisocial disorders at 0.75, 0.67, 0.91 and 0.78, respectively. Several studies have reported the appropriate sensitivity and specificity of SCID-II [19].

Millon Clinical Multiaxial Inventory-III (MCMI-III).

This is a self-report scale with 175 items that measures 14 clinical patterns of personality and 10 clinical syndromes [20]. The present study used the Persian version of the instrument. Psychometric properties of MCMI-III have been validated in studies on large samples [21] and there are 5 sets of data that reported moderate (0.58) to strong (0.93) reliability (average 0.78) [21].

Schema Mode Inventory (SMI).

This instrument was developed by Young et al. [22], adapted from the schema modes questionnaire by Arntz et al. [16], the modes questionnaire of Young–Atkinson [23] and relevant clinical observations. The SMI consists of 124 items and assesses 14 schema modes. It was initially designed to assess 16 modes, but there were insufficient items for an accurate evaluation of the abandoned and controller child schema modes. Therefore, the abandoned child mode was combined with the lonely child mode which formed the vulnerable child mode, and the controller schema mode was removed [15]. Studies revealed that the SMI is a valid and reliable instrument to assess cognitions [12, 15, 16]. In the present study, its test-retest reliability over a 2-week interval was between 0.53 and 0.86 for different schema modes. Additionally, its face validity for this study was confirmed by four clinical psychologists.

RESULTS

The correlations of cluster B personality disorders with schema modes are shown in Table 1.

Table1. Correlations between cluster **B** personality disorders and schema modes

Schema modes	Personality disorders			
	Borderline	Antisocial	Narcissistic	Histrionic
Vulnerable child	0.62**	0.11	–0.11	–0.12
Angry child	0.56**	0.35**	0.14*	–0.11
Enraged child	0.45**	0.36**	0.03	–0.14*
Impulsive child	0.50**	0.13*	0.08	0.25**
Undisciplined child	0.27**	0.19**	–0.02	–0.01
Happy child	0.07	0.07	0.53**	0.55**
Compliant surrender	0.15*	0.04	0.01	0.03
Detached protector	0.45**	0.20**	–0.11	–0.24**
Detached self-soother	0.07	0.19**	0.36**	0.09
Self-aggrandizer	0.08	0.22**	0.50**	0.07
Bully and attack	0.09	0.39**	0.20**	–0.16*
Punitive parent	0.34**	0.11	–0.17**	–0.11
Demanding parent	0.07	0.01	0.08	0.03
Healthy adult	–0.23**	–0.36**	0.37**	0.22**

*p<0.05, **p<0.01

As shown in Table 1, BPD is correlated with the vulnerable, angry, impulsive, undisciplined and enraged child schema modes, as well as the detached-protector, punitive parent and healthy adult schema modes; all correlations are positive except for the healthy adult one. APD was correlated with the angry, impulsive, enraged, undisciplined, detached-protector, self-aggrandizer, detached self-soother, bully and attack, and healthy adult schema modes. All correlations were positive except for the last one. Further, HPD is associated positively with the happy child, impulsive child and healthy adult modes, and negatively with the detached-protector, bully and attack and enraged child schema modes. Finally, NPD is positively correlated with the detached self-soother, healthy adult, self-aggrandizer, bully and attack, happy and angry child schema modes, and negatively correlated with the punitive parent mode. To further assess the roles of schema modes in cluster B personality disorders, a multiple regression analysis was performed (Table 2).

Table2. Results of regression analysis on the role of schema modes in cluster **B** personality disorders

Criterion variable	Regression summary	Predictors	B	T
Borderline personality disorder	R^2=0.53, F (9, 210)=26.65, p<0.01	Vulnerable child	0.33	4.77**
		Angry child	0.30	4.27**
		Impulsive child	0.29	5.39**
Antisocial personality disorder	R^2=0.30, F (8, 211)=11.37, p<0.01	Angry child	0.17	2.05*
		Detached self-soother	0.18	2.92**
		Healthy adult	–0.37	5.28**
Narcissistic personality disorder	R^2=0.46, F (7, 212)=25.78, p<0.01	Angry child	0.14	2.33**
		Happy child	0.41	6.44**
		Detached self-soother	0.16	2.94**
		Self-aggrandizer	0.21	3.10**
Histrionic personality disorder	R^2=0.39; F (6, 213)=23.22, p<0.01	Impulsive child	0.26	4.43**
		Happy child	0.58	8.76**
		Bully and attack	–0.20	3.33**
		Healthy adult	0.19	2.92**

As shown in Table 2, three schema modes are significant predictors of BPD (F (9, 210) = 26.65, p<0.01) and they account for a large portion of variance in BPD (R^2 = 0.53): vulnerable child (β=0.33, p<0.01), angry child (β=0.30, p<0.01) and impulsive child (β=0.29, p<0.01). Three schema modes also significantly accounted for 30% of the APD variance (R^2=0.30, F (8, 211) =11.37, p<0.01) and are predictors of APD: angry child (β=0.17, p<0.01), self-soother (β=0.18, p<0.01) and healthy adult (β=–0.37, p<0.01).

The regression analysis showed that four schema modes are significant predictors of NPD (F (7, 212) =25.78, p<0.01) and explain 46% of variance (R^2=0.46). They are: the angry child (β=0.14, p<0.01), happy child (β=0.41, p<0.01), self-soother (β=0.16, p<0.01) and self-aggrandizer (β=0.21, p<0.01). Finally, four schema modes can account for 39% of variance in HPD (R^2=0.39, F (6, 213) =23.22, p<0.01) and are its significant predictors: impulsive child (β=0.26, p<0.01), happy child (β=0.58, p<0.01), bully and attack (β=–0.20, p<0.01) and healthy adult (β=0.19, p<0.01).

DISCUSSION

The aim of the present study was to examine the role of basic cognitions such as schema modes in cluster B personality disorders. The findings showed that the vulnerable child, angry chaild, enraged child, impulsive child and

detached protector are strongly associated with BPD, whereas the undisciplined child, punitive parent, healthy adult and compliant-surrender showed a weak or medium correlation with BPD. Also, findings revealed that the vulnerable, angry and impulsive child modes can affect BPD. These findings are consistent with some previous studies [15–17]. Lobbestael et al. [15] showed that BPD is associated with the vulnerable, angry, enraged, impulsive, compliant surrender and detached self-soother child schema modes, and the punitive parent and healthy adult modes. Johnston et al. [17] and Lobbestael et al. [15] showed that the vulnerable, impulsive and angry child modes can be significant predictors of BPD. Also, our findings on the role of the angry and impulsive child modes in BPD are consistent with Arntz & et al.'s [16] that showed among the modes proposed by Young, the angry and impulsive child modes have significant roles in BPD. Likewise, neither the present study, nor Arntz & Young et al. showed the punitive parent and detached self-soother modes as having a role in BPD. Regarding the role of the vulnerable mode in BPD (which Young conceptualized as the abandoned child mode), the findings of this study are in line with those by Lobbestael et al. [15]. In some previous studies [16], however, and contrary to the present study, the instruments used for the schema modes had no subscales for the vulnerable mode. But in the SMI, the abandoned child and lonely child modes are combined to form the vulnerable child mode. So it can be interpreted that the findings of this study on the role of the vulnerable child mode in BPD are parallel to the findings of Arntz et al. [16] and Lobbestael et al. [15]. Both indicated that the vulnerable child is not just any mode involved in borderline personality, but in fact it is the strongest mode.

With regard to APD, the findings showed correlations with the angry, enraged, impulsive, undisciplined child, and the detached protector, bully-attack, self-aggrandizer and healthy adult, and the strength of correlations ranged from weak to moderate. Moreover, the angry child, detached self-soother and healthy adult modes have a role in APD. These findings are partly consistent with Lobbestael et al. [12] in that they, too, reported that individuals with APD can get higher scores in different schema modes than those without APD. They examined only 6 modes (the detached protector, angry child, abandoned child, punitive parent, bully-attack and healthy adult); however, the limited number of modes analysed in their study warrants further discussion of the role of other modes in this disorder. The present study showed that the healthy adult, attack-bully, angry and impulsive child and detached protector schema modes are associated with APD, confirming Young et al.'s [10] conclusions.

Happy child and self-aggrandizer are strongly correlated with NPD, whereas other modes (e.g. detached self-soother, bully-attack, punitive parent and healthy adult) showed a weak correlation. Moreover, the happy child, self-aggrandizer and self-soother modes had a significant role in predicting NPD. Similarly, Bamelis et al. [13] reported that the attention-approval seeking, self-aggrandizer, self-soother and undisciplined child schema modes could be involved in NPD. As noted earlier, their instrument for assessing schema modes included the attention-approval seeking instead of the happy child modes, but these two modes are very similar. The role of attack-bully and self-aggrandizer modes in NPD observed in this study is consistent with the results of Lobbestael et al.'s [15]. According to Young et al.'s [10] model of conceptualizations, special modes are involved in NPD (e.g. angry, enraged and abandoned child modes). However, the present study as well as Balmis et al. [13] did not support the role of the modes proposed by Young. Other studies [24] examining the relationship between schemas (through the Young Schema Questionnaire) and NPD reported no association between them. The involvement of the happy child mode in NPD implies that these individuals use communicational and interpersonal strategies of attention-approval seeking, whereas the self-aggrandizer mode may be the result of arrogant behaviour and competitiveness, but it is also associated with a struggle to overcome the feeling of failure and emotional abandonment [13].

With regard to HPD, our study showed that it is positively associated with the happy child, impulsive child and healthy adult modes, but it is negatively associated with the attack-bully and angry child. Moreover, the happy child, impulsive child, healthy adult and attack-bully have

a role in HPD, and the strongest mode that influences this disorder is the happy child mode. These findings are similar to those of Bamelis et al. [13], who reported that most of the modes (e.g. the impulsive, undisciplined, abandoned and neglected child modes) proposed by Young et al. [10] do not have a role in HPD.

Bamelis et al. have utilized a version of the schema mode questionnaire that contains the approval-attention seeking mode, whose content is very similar to the happy child mode. They reported that individuals with HPD scored highly on this subscale. Young et al. [10] and Lobbestael et al. [15] also reported that the impulsive child mode is involved in HPD. These two modes (the happy child and the impulsive child) characterize behavioural and cognitive contents of HPD and imply that the interpersonal strategy may originate from approval-attention seeking. Nevertheless, the role of the healthy adult mode may result from the fact that these individuals can control interpersonal communications and that their function in this realm remains normal.

These findings imply that in each of the cluster B personality disorders, beliefs and certain cognitions play an important role. Therefore, they partly reflect Beck's cognitive theory [9] and also the findings by Young et al. [10] in the domain of personality disorders. In each cluster B personality disorder, some common modes are involved representing the overlap between cognitive levels (cognitive overlapping). For instance, Nelson-Gray et al. [24] showed that the thoughts and beliefs of individuals with NPD are highly similar to the thoughts and beliefs of individuals with HPD. This similarity shows an overlap between the two disorders, which could mean that they are not independent from each other. The reason for their overlapping can be explained by the DSM-IV criteria for the diagnosis of cluster B personality disorders, such as mood instability, anger expression and impulsivity, and also the inappropriate, extreme and uncontrolled compulsivity that can potentially be harmful [25]. The high comorbidity of these disorders in epidemiological investigations [26, 27] provides further evidence that they are not independent. Studies suggest the existence of similar aetiological factors in cluster B disorders. For example, Lobbestael et al. [12] showed that both individuals with BPD and APD are more or less likely to report emotional, physical and sexual abuse. Despite the role of specific cognitions and beliefs in personality disorders, cognitive overlapping among these disorders should be considered since it might imply that the categorical classification lacks specificity [5, 28–30]. The alternative, dimensional model of personality disorders in section three of DSM–5 is therefore a reasonable proposal. Whether on the diagnostic or the intervention level, it would appear that the dimensional model should be considered in the investigation of personality disorders.

ACKNOWLEDGEMENTS

This research was supported by a fund from the Tabriz University of Medical sciences. We would like to thank Mohsen Hamedpour-Darabi for his assistance with the English language version of this paper.

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