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Alternatywny model zaburzeń osobowości czy wczesne nieadaptacyjne schematy? Użyteczność dla rozumienia cech osobowości borderline w populacji nieklinicznej osób dorosłych

The alternative model of personality disorders or early maladaptive schemas? Usefulness for understanding borderline features in a non-clinical adult sample

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Streszczenie

Wprowadzenie i cel: Alternatywny model zaburzeń osobowości (*alternative model of personality disorders*, AMPD) DSM-5 jest obecnie weryfikowany empirycznie pod kątem jego przydatności i trafności diagnostycznej dla zaburzeń osobowości. Jednocześnie prowadzone są liczne badania oparte na koncepcji nieadaptacyjnych schematów Younga. Prezentowane badania mają na celu porównanie możliwości wyjaśniania nasilenia cech borderline (*borderline personality disorder*, BPD) za pomocą obu modeli. **Materiał i metody:** Analizie poddano wyniki uzyskane od 565 zdrowych osób dorosłych w wieku 18–81 lat (M = 37 lat), wśród których kobiety stanowiły nieco ponad 52%. Zastosowano trzy metody pomiarowe: Ustrukturalizowany Wywiad Kliniczny do Badania Zaburzeń Osobowości z Osi II według DSM-IV – Kwestionariusz Osobowości – do pomiaru nasilenia cech osobowości nieprawidłowej (tylko itemy dla BPD), Kwestionariusz Schematów Younga (YSQ-S3) do pomiaru nieadaptacyjnych schematów (w modelu czterech domen) oraz Inwentarz Osobowości PID-5, wersja skrócona dla pomiaru DSM-5. **Wyniki:** Analiza regresji wykazała, że schematy wyjaśniają około 39%, a cechy osobowości – 53% zmienności cech borderline, zaś ich łączne zastosowanie zwiększa ten odsetek do 55%. Modelowanie strukturalne z kolei wykazało, że tylko trzy domeny schematów są istotne (wyłącznie pośrednio) dla wyjaśnienia cech borderline. Bezpośredni jest natomiast związek schematów z wymiarami osobowości z modelu AMPD (tylko Ograniczona Autonomia ma znaczący bezpośredni związek z borderline). W przeciwieństwie do założeń modelu AMPD, Negatywny Afekt ma najmniejsze znaczenie dla nasilenia cech borderline, podczas gdy największa siła efektu charakteryzuje Psychotyzm. **Wnioski:** Wymiary alternatywnego modelu osobowości mają bezpośredni związek z cechami BPD. Schematy wyjaśniają cechy osobowości (AMPD), ale nie nasilenie samego zaburzenia.

Słowa kluczowe: wczesne nieadaptacyjne schematy, alternatywny model zaburzeń osobowości, cechy osobowości borderline, modelowanie strukturalne

Abstract

Introduction and objective: The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) alternative model of personality disorders (AMPD) is currently under empirical verification for its usefulness and diagnostic accuracy. At the same time, numerous studies based on Young's concept of maladaptive schemas are underway. The aim of the research was to compare the possibilities of explaining the severity of borderline features using both models. **Materials and methods:** The results obtained from 565 healthy adults, with women accounting for slightly more than 52%, aged 18–81 years (M = 37 years) were analysed. The Structured Clinical Interview for DSM-IV Axis II Personality Disorders – Personality Questionnaire (items for borderline personality disorder) (SCID-II, BPD part), Young Schema Questionnaire – Short Form (YSQ-S3) and Personality Inventory for DSM-5 (PID-5), Brief Form were used. **Results:** Regression analysis demonstrated that schemas account for about 39%, and personality traits for 53% of borderline trait variability, and their combined use increases this percentage to 55%. Structural modelling, in turn, indicated that only three schema domains are relevant for explaining borderline traits, but only indirectly. The direct effect schemas have on the personality dimensions from the AMPD model (only Impaired Autonomy has a significant direct effect on borderline). Contrary to the assumptions of the AMPD model, Negative Affectivity holds the slightest importance for the severity of borderline, while the greatest effect strength characterises Psychoticism. **Conclusions:** The dimensions of an alternative personality model have a direct relationship with BPD traits. The schemas explain personality traits (AMPD) but not the severity of the disorder itself.

Keywords: early maladaptive schemas, borderline personality, structural equation modelling, alternative model of personality disorders

INTRODUCTION

Personality disorders in DSM-5

According to the Diagnostic and Statistical Manual of Mental Disorders – Fifth Edition, DSM-5 (American Psychiatric Association, 2013), personality disorders are persistent, inflexible patterns of behaviour and emotional experience, manifested in perception, emotions, relationships and/or impulse control. Diagnosis has a categorical character and requires meeting a certain minimum number of diagnostic criteria. However, personality disorders still pose a diagnostic challenge. Researchers and practitioners pointed out the ambiguity of the criteria and the lack of distinctiveness related to the diversity of people's functioning within one diagnostic category, or multiple diagnoses if criteria are unclear (Trull and Durrett, 2005). Also, the arbitrariness of diagnosis and sharp boundaries between the presence or absence of the disorder, which is inconsistent with symptom distribution in the general population, were discussed (Trull and Durrett, 2005). These problems have led to the criticism of the current diagnostic system and, consequently, to searching for a new proposal for a dimensional approach. It was assumed that a specific arrangement and intensity of personality traits may determine a personality disorder and its severity. Among the various dimensional models, the five-factor personality model (FFM) has received the most attention (Widiger and Costa, 2013; Widiger et al., 2013). Although it has proved to help describe and differentiate disorders, it did not fully meet the expectations associated with it (Miller, 2012), especially those related to prediction accuracy.

The model proposed in the DSM-5 classification, section III (American Psychiatric Association, 2013) is an attempt at a more effective solution to the problem of diagnosing personality disorders (PD). It includes two diagnostic criteria. Criterion A refers to abnormalities in two functioning spheres: intrapsychic (consisting of identity and self-direction) and interpersonal (consisting of empathy and intimacy). Criterion B includes a new alternative model of personality disorders (AMPD), complementary to the FFM model and consisting of five domains: Negative Affectivity, Isolation, Detachment, Psychoticism, and Disinhibition. Each domain consists of several additional trait facets, creating a hierarchical model (American Psychiatric Association, 2013). This model is currently undergoing verification (Krueger et al., 2012; Strus et al., 2017; Wright et al., 2012). It is worth noting that a similar model of five personality domains was implemented into the International Classification of Diseases – 11th Revision (ICD-11) (World Health Organization, 2019).

In the proposed solution, a borderline personality disorder (BPD) is characterised primarily by traits from two domains: Disinhibition (required for diagnosing the facets: impulsivity and risk tasking) and Negative Affectivity (required: emotional lability, anxiousness, separation insecurity, hostility and depressivity) (American Psychiatric Association, 2013). The research confirms their differentiating nature (Calvo et al., 2016; Fossati et al., 2016; Fowler et al., 2019). However, some studies indicate that other aspects of AMPD are also relevant to this disorder. The meta-analysis conducted by Watters et al. (2019) suggests that six out of seven characteristic trait facets significantly correlate with BPD. However, some of the trait facets which had not been included achieved significant indicators (especially perceptual dysregulation) (Watters et al., 2019). Researchers point to cognitive and perceptual dysregulation as a feature that should be included in the proposed set, among others, as a representation of the ninth traditional diagnostic criterion (Bach and Sellbom, 2016; Bach et al., 2016a). These studies also highlight that other characteristics (or entire domains) are essential for BPD (Bach and Sellbom, 2016; Bach et al., 2015; Huczewska et al., 2019). The coexistence of other disorders is an additional problem. Patients with borderline personality disorder are also often co-diagnosed with depression, anxiety disorders, eating disorders, and traits of other personality disorders (Lieb et al., 2004). Such unclarity may contribute to many different trait facets appearing relevant for research, compromising the unambiguous AMPD diagnosis.

Personality disorders in the concept of early maladaptive schemas

On the other hand, a practical disorder diagnosis trend has developed, aimed primarily at improving therapeutic protocols. Since such protocols are step-by-step guides for the psychotherapeutic process, they need to be strictly connected both with the diagnosis and with the mechanisms that underlay the symptoms. Therefore, the purpose of any psychotherapeutic diagnosis is to identify the mechanisms that determine a person's intra- and interpsychological functioning, assuming that these mechanisms are characteristic and unique for a specific disorder. It is the central assumption of schema-focused therapy (SFT) (Young et al., 2003). At the same time, research points to the effectiveness of personality disorder therapy conducted in such modality (Hilden et al., 2021; Sempértegui et al., 2013).

According to the assumptions of schema therapy, personality disorders, borderline personality disorders in particular, arise as a result of the interaction between unfavourable environmental factors (e.g. a hurtful, abusive parent) and the sensitive, emotional temperament of a developing child, leading to permanent, negative and maladaptive patterns of thinking, behaviour and emotional responses, which were termed by Young as early maladaptive schemas (EMS) (Lieb et al., 2004; Young et al., 2003). In the case of BPD, these schemas exhibit intensified severity and require more extreme ways of tackling them (Young et al., 2003). As Young claims, schemas constitute the core of personality disorders, whereas the ways of coping with schemas form different behavioural patterns, which in turn meet the DSM criteria

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for categorial personality disorders diagnosis (Young, 1990; Young and Gluhoski, 1996).

BPD is primarily associated with intensified schemas from Disconnection/Rejection domain characterised by a belief that a person cannot expect acceptance, support, and safety from others, simultaneously expecting others to hurt and abuse. Such a person needs intimacy from others but does not think they can obtain it because of their low self-esteem and inferiority complex (Arntz and van Genderen, 2016; Young et al., 2003). The schemas from this domain are predictors of symptoms such as suicidal ideation, aggressiveness and psychotic-like symptoms (Frías et al., 2018). They are also the best (among the various traits examined) predictors of BPD features (Sajadi et al., 2015). Schemas also explain specific BPD features according to traditional diagnostic criteria (Bach and Lobbestael, 2018; Esmaeilian et al., 2019). However, some studies do not confirm these relationships. Lawrence et al. (2011) found no convergence between the diagnostic criteria for BPD and the schema profiles. Similarly, Carr and Francis (2010) obtained results indicating that schemas are significant predictors for nearly all symptoms of personality disorders, except for borderline and antisocial ones.

The current research on diagnosing personality disorders focuses on the trends mentioned above. On the one hand, researchers attempt to empirically verify the AMPD assumptions in the new approach proposed by DSM-5 dominate. On the other hand, they focus on detailing the role of maladaptive schemas, which appear to be relevant in therapeutic practice. Personality traits, understood as descriptors of attitudes or behaviours, are an external manifestation of internal processes (Krueger and Tackett, 2006). It is close to the approach proposed by Bach and Bernstein (2019), for whom schema modes have internal characteristics, and the methods of dealing with negative emotions have external characteristics. Their overview of research indicates that EMSs are associated with personality disorders and personality traits in a conceptually consistent manner and that the AMPD model is compatible with the schema model (Bach and Bernstein, 2019). Thus, a question arises whether one of these approaches is more effective in assessing the severity of BPD traits and the effect of combining both approaches in diagnosis. It was assumed that the schemas would explain less of BPD traits variance, while personality traits (as more external, observable behaviours) would account for more of BPD traits variance (measured categorically). It was also assumed, in line with Young's understanding (Young et al., 2003), that personality traits would be mediators between the schemas and BPD traits.

MATERIALS AND METHODS

A non-clinical sample was assessed due to a broader range of personality functioning than clinical samples, which allows for reducing the influence of variables resulting from the coexistence of other disorders alongside BPD. Trained psychology students invited (via social media announcements, personal contacts) and assessed 600 volunteers using questionnaires in a paper version. The sample did not include persons declaring present or past mental problems, receiving psychotherapy or psychiatric help and/or currently experiencing difficult life events (such as serious illness, loss of job, change in marital status, etc.). After rejecting the questionnaires which were incomplete or left doubts as to their reliability, 565 respondents aged 18–81 years (M = 37; standard deviation, SD = 13) including 52.5% of women, were accepted for further analyses.

Three questionnaires were used in the study:

- Young Schema Questionnaire – Short Form (YSQ-S3) for measuring schemas (explanatory variable). YSQ consists of 90 statements describing the way of thinking about oneself, with the respondent assessing their accuracy concerning themselves on a scale from 1 (*completely untrue about me*) to 6 (*describes me perfectly*). The scale measures 18 schemas grouped into four domains: Disconnection/Rejection, Impaired Limits, Impaired Autonomy, Excessive Responsibility) (Bach et al., 2018).

		Min–max	*M*	*SD*	Skewness	Kurtosis	α	ω
Schema domains	**Disconnection (30–180)**	30–164	66.66	24.23	0.952	0.720	0.889	0.890
	Impaired Autonomy (30–180)	30–151	64.64	22.72	0.854	0.492	0.889	0.892
	Excessive Responsibility (15–90)	18–80	44.07	11.04	0.156	−0.078	0.647	0.681
	Impaired Limits (15–90)	15–83	43.40	12.18	0.247	−0.220	0.769	0.776
AMPD domains	**Negative Affectivity (0–15)**	0–15	4.95	3.22	0.278	−0.656	0.725	0.729
	Detachment (0–15)	0–13	4.01	3.10	0.601	−0.437	0.703	0.715
	Psychoticism (0–15)	0–15	3.49	3.04	0.787	−0.040	0.779	0.785
	Disinhibition (0–15)	0–15	3.54	3.10	0.761	−0.136	0.802	0.809
	Antagonism (0–15)	0–15	2.73	3.15	1.286	0.995	0.824	0.828
	Borderline (SCID-II) (15–75)	15–68	27.29	10.00	0.990	0.461	0.881	0.887

In the parentheses, a theoretical range of results for each variable is presented.
α – Cronbach's α; **ω** – McDonald's ω.

Tab. 1. Descriptive statistics and reliability of the analysed variables

		1	2	3	4	5	6	7	8	9
AMDP domains	**Negative Affectivity (1)**									
	Detachment (2)	0.493**								
	Psychoticism (3)	0.573**	0.510**							
	Disinhibition (4)	0.499**	0.400**	0.640**						
	Antagonism (5)	0.382**	0.413**	0.583**	0.529**					
Schema domains	**Disconnection (6)**	0.513**	0.510**	0.485**	0.355**	0.315**				
	Impaired Autonomy (7)	0.606**	0.436**	0.474**	0.454**	0.305**	0.824**			
	Excessive Responsibility (8)	0.351**	0.224**	0.250**	0.104*	0.157**	0.555**	0.546**		
	Impaired Limits (9)	0.421**	0.213**	0.406**	0.418**	0.393**	0.592**	0.640**	0.493**	
	Borderline (10)	0.565**	0.459**	0.627**	0.585**	0.573**	0.558**	0.588**	0.274**	0.482**
* $p < 0.05$; ** $p < 0.01$.										

Tab. 2. Correlation matrix between the variables

- Personality Inventory for DSM-5 (PID-5), Brief Form for measuring pathological personality traits in AMPD. It consists of 25 statements describing various behaviours and perceptions about oneself, with the respondent assessing their attitude towards them on a scale from 0 (very false or often false) to 3 (very true or often true). It measures five domains of pathological personality: Negativity Affect, Detachment, Psychoticism, Antagonism, and Disinhibition (Krueger et al., 2012).
- Structured Clinical Interview for DSM-IV Axis II Personality Disorders – Personality Questionnaire – for measuring borderline personality traits. Fifteen statements describing the BPD diagnostic criteria were used. An experimental modification of the measurement scale was used to assess the non-clinical population. The dichotomous (YES/NO) scale was changed into a 5-point scale, in which the value of 1 was assigned to the answer *NO, never*, and four options defining the frequency of behaviours were added to the answer *YES*: 2 – it has happened a few times, 3 – it happens from time to time, 4 – it often happens and 5 – it is almost always like that. In this way, subclinical features of BPD could be detected among healthy individuals.

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Statistical analyses were conducted using IBM SPSS Statistics v. 26 and AMOS v. 26 software. Descriptive statistics and measurement reliability are presented in Tab. 1, while the correlation matrix – in Tab. 2.

Predictors of BPD features (SCID-II)		**Model 1 (AMPD)**			**Model 2 (Schemas)**			**Model 3 (AMPD + Schemas)**		
		β	***t***	***p***	**β**	***t***	***p***	**β**	***t***	***p***
Schema domains	(Constant)					6.564	0.000		8.402	0.000
	Impaired Autonomy				0.350	5.599	0.000	0.123	1.954	0.051
	Impaired Limits				0.188	4.229	0.000	0.090	2.212	0.027
	Disconnection				0.236	3.916	0.000	0.125	2.117	0.035
	Excessive Responsibility			−0.141		−3.415	0.001	−0.066	−1.793	0.074
AMPD domains	(Constant)		15.213	0.000					8.402	0.000
	Psychoticism	0.257	6.046	0.000				0.241	5.672	0.000
	Antagonism	0.222	6.462	0.000				0.046	0.895	0.371
	Disinhibition	0.239	6.185	0.000				0.201	4.925	0.000
	Negative Affectivity	0.148	3.746	0.000				0.122	2.995	0.003
	Detachment	0.075	2.119	0.034				0.057	1.521	0.129
	$R^2/R^2_{adj.}$	$R^2 = 0.534$; $R^2_{adj.} = 0.530$; $F_{(5;555)} = 127.25$; $p < 0.001$			$R^2 = 0.390$; $R^2_{adj.} = 0.385$; $F_{(4;566)} = 88.75$; $p < 0.001$			$R^2 = 0.554$; $R^2_{adj.} = 0.547$; $\Delta R^2 = 0.165$; $F_{(4;551)} = 40.70$; $p < 0.001$		

Tab. 3. Results of regression analysis for three models

	Fit indices				
	χ^2/df	CFI	TLI	SRMR	RMSEA (90% CI)
Threshold for good fitting	≤2	≥0.95	≥0.95	≤0.05	≤0.05
Threshold for acceptable fitting	≤3	≥0.90	≥0.90	≤0.08	≤0.08
Model 2	4.040	0.992	0.972	0.0169	0.073 (0.044–0.105)
Model 1	7.274	0.980	0.939	0.0326	0.105 (0.082–0.130)

Model 1 – schemas as mediators; **Model 2** – AMPD domains as mediators; **χ^2/df** – relative chi-square; **CFI** – comparative fit index; **TLI** – Tucker–Lewis index; **RMSEA (90% CI)** – root mean square error of approximation (90% confidence interval); **SRMR** – standardised root mean squared residual.

Tab. 4. Indices of the measures of fit in the tested models

Most of the obtained correlations reached values indicating moderate interrelationships of the variables (>0.4), but at the same time, they still measure separate constructs.

RESULTS

Regression analysis

Simple regressions were used to assess the possibility of predicting BPD features (Tab. 3). Three models were assessed. In the first one, AMPD dimensions were the only predictors. They explained a significant part of the variance of BPD traits, $F_{(5;555)} = 127.25$, $p < 0.001$, $R^2 = 0.534$, $R^2_{adj.} = 0.530$. All dimensions turned out to be significant for the model. In Model 2, schema domains were the only predictors of BPD. They accounted for an equally significant but smaller amount of BPD trait variance: $F_{(4;556)} = 88.75$, $p < 0.001$, $R^2 = 0.390$, $R^2_{adj.} = 0.385$; all domains turned out to be significant. Model 3 was assessed using hierarchical regression, in which the AMPD personality domains were entered into the analysis as the first step and the schema domains as the second step. This model also explained a significant part of the variance: $R^2 = 0.554$, $R^2_{adj.} = 0.547$. The change in R^2 compared to the first model was significant but low: $\Delta R^2 = 0.165$, $F_{(4;551)} = 40.70$, $p < 0.001$. The values of the β coefficients indicate that the use of schemas as a supplement to the diagnosis of BPD traits adds a specific eigenvalue, which, however, probably results from the replacement of some AMPD domains, and thus increases the amount of explained variability.

Structural modelling

In order to determine the direction of interdependencies between the variables, a structural model was also estimated using IBM SPSS AMOS, v. 26. Two models tested two directions of dependence. The first model, consistent with Young's assumption, assumed that personality domains mediate between the schemas and features of BPD (personality traits are the result of schemas (Fig. 1). This model achieved acceptable values within the measures of fit (Tab. 4). Three domains of schemas turned out to be significant, whereas only Impaired Autonomy was the direct predictor of BPD ($\beta = 0.28$, $p < 0.001$), although it also showed an indirect effect. The indirect (mediated) effect on BPD features characterises the other domains. All regression weights are significant at $p < 0.001$. Interestingly, the presented model explains 53% of the BPD variance, a reasonably considerable amount in the context of the diversity of BPD symptoms. The second model tested an inverse direction: the primary variables were personality traits, and schemas were mediators between traits and severity of BPD features. This model, however, did not achieve acceptable measures of fit and could not be adopted, cf. Tab. 4.

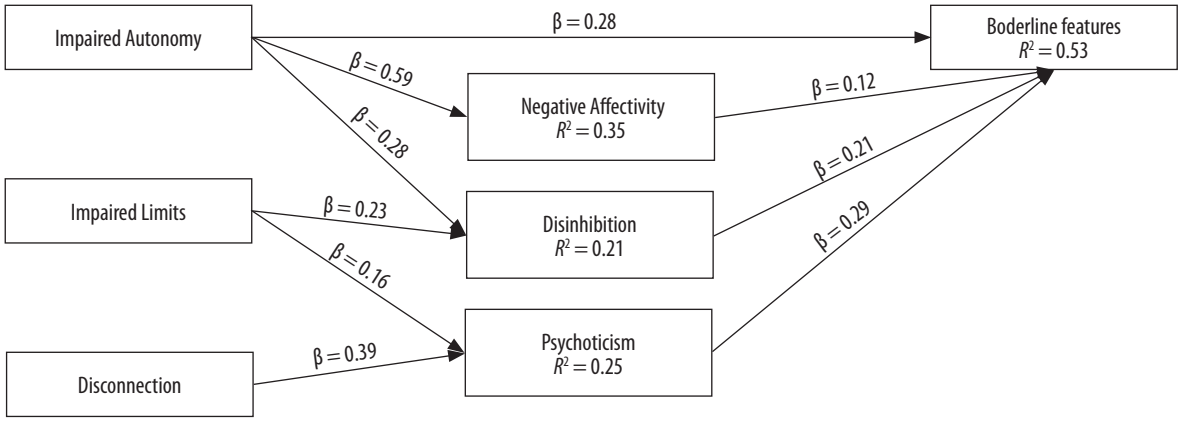

Fig. 1. The structural model with AMPD domains as mediators between schemas and BPD. All path coefficients p < *0.001*

DISCUSSION

The article aimed to assess the effectiveness of predicting the intensity of borderline personality traits based on two approaches, which are often considered compatible.

The first one focuses on the promising diagnostic approach proposed by the DSM-5 and specific factors describing BPD: emotional lability, anxiousness, separation insecurity, hostility, and depressivity from the Negative Affectivity domain, as well as impulsivity and risk-taking from the Disinhibition domain (American Psychiatric Association, 2013). In most cases, the research conducted so far confirms that such an algorithm is well-suited for diagnosing BPD (Fossati et al., 2016; Fowler et al., 2018). However, other domains also achieved significant predictive values in some studies (Anderson et al., 2014). In the presented research, linear regression upholds the importance of domains whose sub-dimensions form the BPD profile. However, the other three domains also reached the level of statistical significance. Moreover, in the case of Negative Affectivity, the domain with the highest number of features forming the BPD profile, the regression coefficients are the lowest. These results are part of a series of studies which indicate that the proposed diagnostic scheme may not be optimal. The meta-analysis on the consistency of the BPD diagnosis using the AMPD and DSM-5 Section II criteria indicated that out of 25 PID-5 Facets, only eight were not significantly correlated (Watters et al., 2019), which implies a problem with the differential validity between disorders. Some authors clearly point out that the proposed pattern of characteristic BPD features should be expanded with features from the domain of Psychoticism (especially those related to the cognitive and perceptual dysregulation traits) (Bach and Sellbom, 2016; Sellbom et al., 2014). It seems that the observed significance of many AMPD features in the case of this disorder may, at least partly, result from its wide diversity in terms of clinical symptoms and its experience by individuals. It may be partially associated with relationships between personality traits and psychopathology, which are not fully confirmed (Al-Dajani et al., 2016). Low regression coefficients for Negative Affectivity may also result from the assessment of healthy people, who may not find exactly these features of functioning the most important; perhaps in a non-clinical population, BPD is associated in a subclinical form with other features, and emotionality is more secondary.

The second approach adopted here is based on Young's understanding of personality disorders. It assumes that symptoms (considered as diagnostic categories) result from a person's coping with internal patterns of thinking and feeling (Young and Gluhoski, 1996). In this case, schemas should be treated as, in a sense, the cause underlying the symptoms of disorders. In the presented study, regression analysis showed that all schema domains are important for defining the characteristics of BPD. Such a result is generally consistent with the current research on the relationship between schemas and personality disorders. An overview of this research indicates that all domains were significant, although several studies yielded diversified results (e.g. Frías et al., 2018; Lawrence et al., 2011). A study conducted by Esmaeilian et al. (2019) on a non-clinical sample (which is associated with a greater diversity of BPD traits) indicated numerous, unique relationships between particular schemas and BPD personality dimensions, but intriguingly, the schemas being the most relevant for explanation belong to different domains, depending on the feature category explained by them.

Interesting results were obtained after applying hierarchical regression, where both groups of variables were taken into account. Schema domains were the first to be introduced into the model, according to Young's assumption stating that they are of primary nature concerning the behaviours describing personality traits, which constituted the second stage of the model. In the cases of joint explanation of BPD severity, the Excessive Responsibility from the schema domains as well as the dimensions of Antagonism and Detachment from AMPD become irrelevant. At the same time, however, the percentage of jointly explained variance of BPD traits is not much higher than that of remaining within one of these variables. It seems, however, that they clarify the predictors in detail in some way – significance was achieved by those whose dimensions fall within the proposed disorder profile and have been suggested in other studies, as mentioned above. As it was assumed, BPD prediction is more effective when using an alternative model. Therefore, it also means that the schema model should not be used for disorder diagnosis.

The structural model, representing the best fit to the data, includes considerations for the same variables as the regression analysis in the pooled model, treating them as significant. Nevertheless, it clearly indicates that the schemas do not directly explain the symptoms of BPD, except for the Impaired Autonomy domain. Still, in this case, the mediating effect is also significant. The remaining schema domains clarify the severity of AMPD domains (the stronger the schemas, the more intensified the personality traits are) and explain the severity of borderline symptoms. This direction implicates reasonability in adopting Young's assumption, which states that schemas underlie the symptoms of abnormal personality (Young and Gluhoski, 1996; Young et al., 2003), whereas they are not directly related to them. Similar conclusions arise from the work of Lawrence et al. (2011), who indicated that the schemas are not correlated with the BPD diagnostic criteria and suggest that their presence clarifies the image of the disorder rather than confirms its presence. Furthermore, they noticed a significant variation in schema profiles in people diagnosed with BPD. Such a variety seems even more remarkable when the test subjects are healthy and only BPD traits are measured.

Impaired Autonomy is a direct predictor of BPD traits; however, it simultaneously explains two dimensions of personality – Negative Affectivity and Disinhibition. This domain of schemas incorporates the conviction whereby the

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ability to cope with one's weakness or unacceptability is fully dependent on other people (Bach et al., 2018). These convictions are similar to traits such as submissiveness or emotional lability from Negative Affectivity, which was also confirmed in the research conducted by Bach et al. (2016b). Also Rezaei et al. (2012) points out that people with increased Impaired Autonomy and Impaired Limits are more likely to develop cluster B personality disorders, borderline personality disorder in particular. In turn, the Disconnection domain turned out to be important for BPD, explaining its symptoms such as suicidal ideation, aggressiveness, and psychotic-like symptoms, such as paranoid ideation (Frías et al., 2018), which is similar to the Psychoticism domain of AMPD in the discussed model. This domain is also clarified, though to a lesser degree, by Impaired Limits – beliefs about one's rightness and uniqueness.

Many studies confirm the important role of the Disconnection domain in the severity of BPD traits, including a meta-analysis conducted by Barazandeh et al. (2016). They indicate that this domain is most often significant, regardless of the group under study being clinical or non-clinical, although the other domains also explain the variability of BPD traits (Barazandeh et al., 2016; see also: Cohen et al., 2016; Field et al., 2015; Shorey et al., 2014). The indirect effect indicators obtained in the model also indicate that domains are important, although not directly.

The obtained model is also consistent with the previous findings regarding diagnosis using the alternative personality model. However, unlike most studies (Watters et al., 2019), the Negative Affectivity dimension explains BPD to the lowest degree compared to other domains. The effect of Psychoticism, which researchers also pay attention to, is much stronger (Bach and Sellbom, 2016; Watters et al., 2019).

CONCLUSION

The research aimed to answer whether the simultaneous application of two models: Young's schemas and AMPD helps explain the BPD trait variability and the interrelationships between the schemas and the alternative personality model. Based on the results obtained, it can be assumed that both schemas and AMPD can be used to diagnose BPD personality. The schemas, however, underlie disorder symptoms observable in this way, as well as personality traits, the specific arrangement of which, according to the assumptions (Krueger et al., 2012), defines the intensity of disturbed personality. This indicates that the application of both diagnostic approaches is not appropriate. Although their combination increases the level of explained BPD variance, it is not a significant change (despite its significance). Estimating the interdependencies between these variables allows for making an informed choice of a diagnostic approach depending on the diagnostic purpose. For the diagnosis itself, it seems that the AMPD model will be a much more effective method (although, at the moment, it does not seem to consider essential dimensions). However, for understanding the mechanisms of functioning and shaping an abnormal personality (understood as a system of pathological personality traits), schemas may be a significant element of understanding the complexity and diversity of behaviours, also due to their semantic closeness to diagnostic criteria (Esmaeilian et al., 2019).

Conflict of interests

The author certifies that she has no affiliations with or involvement in any organisation or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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