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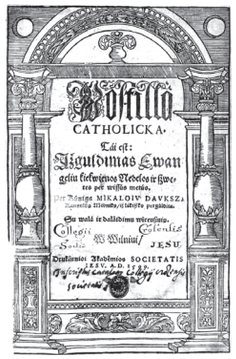

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Gabrielė Skabeikytė-Norkienė | Adolescents at risk for personality pathology: characteristics and risk factors in the changing approach to personality disorder

Vilnius University

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Gabrielė Skabeikytė-Norkienė

DOCTORAL DISSERTATION
2023

Social Sciences
Psychology S 006

https://doi.org/10.15388/vu.thesis.440
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VILNIUS UNIVERSITY

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DOCTORAL DISSERTATION

Social Sciences,
Psychology (S 006)

VILNIUS 2023

The dissertation was prepared between 2018 and 2022 at Vilnius University, Lithuania.

Academic supervisor – Prof. Dr. Rasa Barkauskienė (Vilnius University, Social Sciences, Psychology – S 006).

This doctoral dissertation will be defended in a public meeting of the Dissertation Defence Panel:

Chairman – Prof. Dr. Evaldas Kazlauskas (Vilnius University, Social Sciences, Psychology – S 006).
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The text of this dissertation can be accessed at the libraries of Vilnius University, as well as on the website of Vilnius University:
www.vu.lt/lt/naujienos/ivykiu-kalendorius

https://doi.org/10.15388/vu.thesis.440
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VILNIAUS UNIVERSITETAS

Gabrielė Skabeikytė-Norkienė

Asmenybės sutrikimo rizika paauglystėje: charakteristikos ir rizikos veiksniai besikeičiančioje asmenybės sutrikimo apibrėžtyje

DAKTARO DISERTACIJA

Socialiniai mokslai,
Psichologija (S 006)

VILNIUS 2023

Disertacija rengta 2018–2022 metais Vilniaus universitete.

Mokslinė vadovė – prof. dr. Rasa Barkauskienė (Vilniaus universitetas, socialiniai mokslai, psichologija – S 006).

Gynimo taryba:
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Disertacija ginama viešame Gynimo tarybos posėdyje 2023 m. vasario mėn. 24 d. 13 val. Filosofijos fakulteto 201 auditorijoje. Adresas: Universiteto g. 9, 201 a., Vilnius, Lietuva, tel. +37052687000; el. paštas infor@cr.vu.lt

Disertaciją galima peržiūrėti VU bibliotekose ir VU interneto svetainėje adresu:
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ABBREVIATIONS

AMPD – Alternative Model for Personality Disorders
BPD – Borderline personality disorder
BPFSC-11 – Borderline Features Scale for Children
BPQ – Borderline Personality Questionnaire
DSM-5 – Diagnostic and Statistical Manual for Mental Disorders, 5th edition
ICD-10 – 10th edition of the International Classification of Diseases and Related Disorders
ICD-11 – 11th edition of the International Classification of Diseases and Related Disorders
LoPF-Q 12-18 – Level of Personality Functioning Questionnaire
LPF – Level of Personality Functioning
NRI-RQV – Network of Relationships Inventory-Relationships Qualities version
PD – Personality disorder
PID-5-BF – Personality inventory for DSM-5-brief version
RQ – Relationship quality
SWLS – Satisfaction with Life Scale
YSR 11/18 – Youth Self-Report Form
WHO – World Health Organization

CONTENTS

LIST OF PUBLISHED PAPERS

This doctoral dissertation is based on the following papers:

1. Barkauskienė, R., **Skabeikytė, G.** & Gervinskaitė-Paulaitienė, L. (2020). The Role of Borderline Personality Symptoms for Psychosocial and Health Related Functioning among Adolescents in a Community Sample. *Child & Youth Care Forum*, 50, 437-452. https://doi.org/10.1007/s10566-020-09581-2
2. **Skabeikyte, G.** & Barkauskiene, R. (2021). A systematic review of the factors associated with the course of borderline personality disorder symptoms in adolescence. *Borderline Personality Disorder and Emotion Dysregulation*, 8(*12)*, 1-11. https://doi.org/10.1186/s40479-021-00151-z
3. Barkauskienė, R., Gaudiešiūtė, E., Adler, A., Gervinskaitė-Paulaitienė, L., Laurinavičius, A. & **Skabeikytė-Norkienė, G.** (2022). Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents. *Frontiers in Psychiatry*, 13, 1-9. https://doi.org/10.3389/fpsyt.2022.828301
4. **Skabeikyte-Norkiene, G.**, Sharp, C., Kulesz, P. A., & Barkauskiene, R. (2022). Personality pathology in adolescence: relationship quality with parents and peers as predictors of the level of personality functioning. *Borderline Personality Disorder and Emotion Dysregulation*, 9*(31)*, 1-11. https://doi.org/10.1186/s40479-022-00202-z

PREFACE

The last decade was marked by significant changes in the conceptualization of personality pathology. First, in response to criticism of the categorical model of personality disorders, the dimensional model was introduced in two main diagnostic systems – DSM-5 and ICD-11. The dimensional approach to a personality disorder is focused on the continuum between the healthy and impaired level of personality functioning or the severity of the disorder (American Psychiatric Association, 2013; World Health Organization, 2018). The model addresses different aspects of personality pathology than have been explored before and is considered a more developmentally sensitive approach. Consequently, the research has been directed toward understanding the structure and relations between categorical and dimensional models.

Second, in the context of this change, research questions have increasingly focused on the developmental period when personality pathology emerges and reaches its peak – adolescence – with a focus on borderline personality disorder. Research has shown that adolescents can indeed have personality disorders, which can be detrimental to adolescents' developmental achievements. In 2017 Global Alliance for the Prevention and Early Intervention of Borderline Personality Disorder shared the concern that delayed diagnosis and intervention greatly burden the individual and the community (Chanen et al., 2017). In parallel, a developing line of research is addressing questions about what constitutes the risk for a personality disorder during this developmental period with a particular focus on understanding the developmental trajectory of personality pathology.

The conceptual change and previous empirical research have strong implications for clinical practice since personality disorder in adolescence is a controversial theme among researchers and clinicians. Despite the strong empirical basis from the longitudinal research on the necessity of accurate and early diagnostics and intervention for personality disorders, clinicians hesitate to follow these guidelines.

Thus, personality disorder in adolescence is a new and relevant theme in the research and clinical contexts. In this thesis, I will discuss the importance of recognizing a personality disorder in adolescence in the light of ongoing change in the conceptualization of personality pathology. Next, I will aim to characterize adolescents with elevated levels of personality disorder symptoms and tap into the complex issue of exploring risk factors for personality pathology in adolescence.

1. INTRODUCTION

1.1. The changing conceptualization of personality disorders

Decades of clinical practice and research on personality pathology have been based on the categorical conceptualization of personality disorders (PD). As described in the latest version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychiatric Association, 2013) and International Classification of Diseases and Related Disorders (ICD-10) (World Health Organization, 1993), the definition of a personality disorder implies that personality disorder is a pattern of inner experience and behavior that is deviant from the cultural norm, is pervasive and inflexible, and leads to personal distress or impairment (American Psychiatric Association, 2013; World Health Organization, 1993). As the previous definition of a personality disorder suggests, personality pathology was viewed as being distinct from normative personality and this view allowed the categorization of qualitatively distinct syndromes of personality disorders.

Even though 10 distinct categories of personality disorders are identified and used in clinical practice, empirical investigations on personality pathology were mostly focused on borderline personality disorder (BPD), which is characterized by turbulent interpersonal relationships, emotional instability, impulsivity, and an unstable, incoherent sense of self (American Psychiatric Association, 2013). Borderline personality disorder is considered to be one of the most invalidating mental health problems across the lifespan and is among the leading causes of disability in young people, which is a burden for both individual and the community (Chanen et al., 2017; Lim et al., 2016; Stepp, 2012). However, research that has accumulated on BPD has now to be reconsidered in the context of the changing field of personality pathology.

The last decade was marked by intense discussions and considerations about the necessary changes in the long-lasting categorical conceptualization of PDs. This process was led by criticism of the existing categorical model (a summarized history of change is presented in (Barkauskienė, Gaudiešiūtė, & Skabeikytė, 2021)). Having in mind the large knowledge base on categorical PDs, it is important to understand and integrate the existing knowledge into the recently emerged dimensional conceptualization of a personality disorder.

1.1.1. Theoretical background for the dimensional model of personality pathology

The outcome of long debates is the dimensional model of a personality disorder, which is presented in the DSM-5 Section III as an Alternative Model for Personality Disorders (AMPD) and as a main diagnostic model of personality disorder in ICD-11 (World Health Organization, 2018). World health organization (2018) redefined the personality disorder as follows:

„Personality disorder is a marked disturbance in personality functioning, which is nearly always associated with considerable personal and social disruption. <...> Impairments in self-functioning and/or interpersonal functioning are manifested in maladaptive (e.g., inflexible or poorly regulated) patterns of cognition, emotional experience, emotional expression, and behavior".

The main difference between the dimensional and categorical definitions is that the dimensional model refers to a severity continuum of personality-related difficulties rather than discrete categories. Thus, the conceptualization is less stigmatizing and fosters to transfer the focus from the symptom-based checklists to the inner experience of an individual. The two essential components that are being addressed are personality functioning in self and interpersonal domains, and the pathological or prominent personality traits (American Psychiatric Association, 2013; World Health Organization, 2018).

From a theoretical standpoint, even though it was intended to be theoretically agnostic, it has a strong psychodynamic basis with the fragments and concepts from object relations theory, narrative identity theory, and contemporary integrative interpersonal theory (Clarkin & Sowislo, 2020; Natoli, 2019; Pincus, 2018; Sharp et al., 2022). The model is closely related to Otto Kernberg's concept of the level of personality organization, which is almost directly incorporated into the AMPD model (Clarkin & Sowislo, 2020). According to Kernberg's theory, the important criteria for the assessment of the level of personality organization (from neurotic to psychotic) are identity, psychological defense mechanisms, and reality testing. This theory postulates that personality pathology is associated with poorly integrated and distorted representations of self and others (Clarkin & Sowislo, 2020). Next, Dan P. McAdam's narrative identity theory also has some parallels with the AMPD model. The theory defines three layers of personality development, which are temperament characteristics and personality traits, motivational and social-cognitive aspects such as values and goals, and finally, autobiographical comprehension. The latter enables a person to attain

the coherence of the identity and integrate a consistent sense of self (Habermas & Reese, 2015; McAdams, 2013; McAdams & Pals, 2006). Thus, McAdam's ideas on personality development go in line with the AMPD-defined domains of identity and self-direction as part of personality structure. Last, the contemporary integrative interpersonal theory (CIIT) is also closely related to the dimensional model of a PD. The theory defines two main aspects of interpersonal functioning: agency and communion (Pincus et al., 2020). Agency is closely associated with the self-domain of personality functioning (identity and self-direction), while communion is related to the interpersonal domain (empathy and intimacy). In general, this theory implies that the evaluation of interpersonal processes is essential in evaluating personality pathology (Pincus et al., 2020). Thus, the dimensional model of a personality disorder has parallels with several theoretical paradigms, which put the self and interpersonal functioning as the main criterion for the assessment of personality pathology and this forms the theoretical basis for the structure of the dimensional model (Waugh et al., 2017). Having in mind the theoretical background, I will further look into the structure and the main concepts of the dimensional model of a personality disorder.

1.1.2. The structure of the dimensional model of a personality disorder

The first and the main diagnostic criterion of both classifications is the level of personality functioning (LPF), also referred to as Criterion A in DSM-5, and the general severity criterion in ICD-11. The level of personality functioning is conceptualized as a (dys)function in self (identity and self-direction) and interpersonal (empathy and intimacy) functioning (Table 1). The second diagnostic step in both classifications is the evaluation of pathological[1] (Criterion B in DSM-5) or prominent (trait qualifier in ICD-11) personality traits. The pathological personality traits in DSM-5 are organized into five broad domains: negative affectivity, detachment, antagonism, disinhibition, and psychoticism. The trait domains are evaluated only after determining the level of personality functioning and, if necessary, allow the categorization into DSM-5 categorical personality disorders (American Psychiatric Association, 2013), which reveals why the AMPD is a hybrid model. In contrast, trait domains in ICD-11 are continuous with normal

[1] Terms *pathological* and *maladaptive* will be used interchangeably when reffering to DSM-5 Criterion B. In the literature on diagnostic models of personality disorders, personality traits are reffered to as *pathological*. The use of term *maladaptive* is more common in the developmental psychopathology literature.

personality characteristics and may be applied to describe the characteristics that are most prominent and contribute to personality disturbance. The domains closely correspond to those proposed in DSM-5 and are as follows: negative affectivity, detachment, dissociality, disinhibition, and anankastia. Along with prominent personality traits, borderline qualifier, which represents the categorical borderline personality disorder symptoms, is left as a diagnostic option. However, the second step is only optional in ICD-11 meaning that the adapted model is fully dimensional and the general severity criterion becomes the main diagnostic criterion (World Health Organization, 2018).

Current studies are being directed at investigating the role and interrelations among Criterion A (or the severity criterion) and B (or prominent personality traits) in the assessment of a PD and their incremental utility (Nysaeter et al., 2022). Emerging evidence has shown that the LPF explains the general personality dysfunction in adult samples, while pathological personality traits add up additional value in explaining specific DSM-5 categorical PDs (Nysaeter et al., 2022). However, there are practically no studies on this association in the adolescent population.

Table 1. The structure of DSM-5 level of personality functioning and ICD-11 severity criterion.

	DSM-5	ICD-11
The definition of personality pathology	Disturbances in self and interpersonal functioning constitute the core of personality psychopathology and in this alternative diagnostic model, they are evaluated on a continuum. Self-functioning involves identity and self-direction; interpersonal functioning involves empathy and intimacy.	Personality disorder is characterized by problems in functioning of aspects of the self (e.g., identity, self-worth, the accuracy of self-view, self-direction), and/or interpersonal dysfunction (e.g., ability to develop and maintain close and mutually satisfying relationships, ability to understand others' perspectives and to manage conflict in relationships).
Self-functioning	**Identity:** experience of oneself as unique, with clear boundaries between self and others; stability of self-esteem and accuracy of self-appraisal; capacity for, and	Degree and pervasiveness of disturbances in functioning of aspects of the self: Stability and coherence of one's sense of identity (e.g., extent to which identity or sense of self is

	ability to regulate, a range of emotional experiences. **Self-direction:** the pursuit of coherent and meaningful short-term and life goals; utilization of constructive and prosocial internal standards of behavior; ability to self-reflect productively.	variable and inconsistent or overly rigid and fixed). Ability to maintain an overall positive and stable sense of self-worth. Accuracy of one's view of one's characteristics, strengths, limitations. Capacity for self-direction (ability to plan, choose, and implement appropriate goals).
Interpersonal functioning	**Empathy:** comprehension and appreciation of others' experiences and motivations; tolerance of differing perspectives; understanding the effects of one's own behavior on others. **Intimacy:** depth and duration of connection with others; desire and capacity for closeness; mutuality of regard reflected in interpersonal behavior.	Degree and pervasiveness of interpersonal dysfunction across various contexts and relationships (e.g., romantic relationships, school/work, parent-child, family, friendships, peer contexts): Interest in engaging in relationships with others. Ability to understand and appreciate others' perspectives. Ability to develop and maintain close and mutually satisfying relationships. Ability to manage conflict in relationships.

Note. Prepared according to DSM-5 section III (American Psychiatric Association, 2013) and ICD-11 clinical description and guidelines for personality disorder diagnostic (World Health Organization, 2018).

Thus, the conceptualization of a PD adopted a dimensional view toward the assessment and understanding of personality pathology. The two-step diagnostic procedure allows the evaluation of the level of personality functioning in DSM-5 and the general severity criterion in ICD-11. The second step requires the evaluation of pathological or prominent personality traits, which is necessary only in DSM-5 (American Psychiatric Association, 2013; World Health Organization, 2018). The assessment of personality pathology through the evaluation of personality functioning and personality traits has a strong theoretical basis from the psychodynamic developmental model and refocuses personality impairments on continuity between healthy and impaired personality.

1.1.3. The link between categorical borderline personality disorder and the dimensional approach to personality pathology

Historically the debate on the validity of the distinct categories of personality disorders began with efforts to empirically prove 10 categories of PDs. However, types of personality disorders were not validated using factor analysis methods (Sharp & Wall, 2021). Even more, conducted analyses revealed that types of PDs have more commonalities than differences among each other and were strongly related to the global dimension of personality pathology (Morey et al., 2011). Nevertheless, given the existing knowledge base on BPD, the research that has been conducted, and the efforts made to develop specific interventions (Bach & Simonsen, 2021), working groups of the personality disorder sections of the DSM-5 and ICD-11 have begun to discuss the place of BPD in the new conceptualization of personality pathology. Several research studies were launched to understand the structure and relations between BPD and the LPF or general severity criterion.

Research on the structure of personality pathology provided some evidence that the AMPD constructs account for a large amount of variance in the categorical BPD (Vanwoerden & Stepp, 2022). This led to a consideration that BPD might represent the general factor („g“) of personality pathology and cannot be classified as a specific, second-order factor of personality pathology. It was hypothesized that the general PD factor represents the general severity of the disorder and captures the lack of self-other integration (Jahng et al., 2011; Sharp et al., 2015). Investigations on BPD structure revealed that the most of BPD criteria were loaded onto the general factor, which suggested that BPD diagnostic criteria represent core features of general PD severity and map onto the g-factor of personality pathology more than other types of PDs (Sharp et al., 2015). The authors further offered the conceptualization of BPD as fundamentally a disorder of self and interpersonal dysfunction, which represents personality pathology in general. Thus, recent evidence suggested that borderline pathology might represent the core or shared features of personality pathology more generally. It is noteworthy that conclusions from the research on BPD may be applied to a more general view of personality pathology (Sharp et al., 2015; Wright, Hopwood, et al., 2016). As a result of these discussions and the clinical value of the specific interventions for BPD, the borderline qualifier is left as a trait option in ICD-11 and as a categorical PD in section II of DSM-5 (American Psychiatric Association, 2013; Bach & Simonsen, 2021; World Health Organization, 2018).

To summarize, despite the emergence of the AMPD, DSM-5 leaves an option to identify six PDs (including BPD) that correspond to the categorical model. The only joint factor among the categorical ICD-10 and dimensional ICD-11 models is the borderline qualifier, which fully represents the traditional symptomatology of BPD and is left as an option as a trait domain in ICD-11. These decisions leave an option for further research and connection of categorical borderline personality disorder and the dimensional level of personality functioning or severity of personality pathology. Finally, an in-depth understanding of the past and current conceptualization of personality pathology is essential for raising further research questions. Even though research is emerging, it is suggested that there is only a limited number of studies that have evaluated the AMPD and BPD relations while examining both Criteria A and B, and virtually none of them included adolescent samples (Vanwoerden & Stepp, 2022).

1.2. Adolescence as a peak period for the development of personality pathology

The dimensional view to personality pathology opens up the possibility to think about personality disorder from a developmental lifespan perspective. Thus, I will further analyse the internal psychological processes that adolescents go through in this developmental period, which create the prerequisites for the possibility of the development of personality pathology.

Adolescence is the period when rapidly advancing cognitive and emotional skills enable adolescents to integrate different perspectives and concepts into a coherent whole. The ongoing shift from concrete to formal operational stage enables the development of abstract reasoning and perspective-taking (Warneken & Tomasello, 2006). Given these cognitive and emotional preconditions, one of the main developmental tasks in adolescence becomes the development of the sense of self or identity formation (Erikson, 1968). Also, adolescence stands out as a period with developmental cascades in social cognition, which includes not only self and other perceptions but also the perception of the interpersonal processes that become more mature and capture the extended social network of close friendships and romantic relationships (Pfeifer & Allen, 2021). Moreover, the development of mentalization (Fonagy et al., 2002), and empathy (Allemand et al., 2015) reach their peak, which is important for the development of self as well as for creating and maintaining relationships.

Research from developmental psychopathology suggests that during normative development, maladaptive personality traits (e.g. neuroticism, emotional instability, etc.) decline with age (De Clercq et al., 2009; Wright et al., 2010). However, adolescents, whose maladaptive personality traits are highly expressed, diverge from this norm and demonstrate persisting or increasing levels of problems related to personality development even into young adulthood (Sharp et al., 2018). Thus, while the process of personality development may go smoothly for most adolescents, for some this process will be marked by confusion, incoherence, inconsistency, and distress (Sharp, 2020).

Research on the trajectories of personality pathology, conceptualized through the categorical model, suggests that BPD onsets in early adolescence, peaks into middle adolescence, and continues into adulthood (Johnson et al., 2000; Videler et al., 2019). It is a valid, reliable construct (Chanen & Kaess, 2012; Sharp & Fonagy, 2015) with similar rates of prevalence and stability in adolescence as in adulthood (Bornovalova et al., 2010; Carlson et al., 2009; Chanen et al., 2004). The estimated prevalence of BPD among young people is 1-3% in the community, 11-22% in outpatients, and even up to 33-49% in inpatients (Chanen et al., 2017). Thus, adolescence is the period when a PD is emerging and can be diagnosed in its early stage, but BPD symptoms are still flexible, which makes this developmental period an advantageous stage to intervene (Chanen et al., 2017).

Unrecognized personality pathology during this developmental period has the potential to derail developmental achievements and disrupt the transition to adulthood (Chanen et al., 2020; Thompson et al., 2019; Winograd et al., 2008; Wright, Zalewski, et al., 2016). Existing research reveals that high levels of early BPD symptoms cannot be associated with temporal developmental changes since it has long-term negative consequences (Winograd et al., 2008) and may preclude the consolidation of adaptive personality traits (Wright et al., 2010). Furthermore, personality pathology has a long-lasting negative impact on adolescents‘ *psychosocial functioning*, which refers to a person‘s ability to carry out roles and perform activities in daily life, including in social or interpersonal, school, leisure, and basic (self-care, mobility, etc.) functional domains (Skodol, 2018). Adolescents with BPD report lower quality of life, lower academic achievements, lower social skills, and poorer physical health, such as sleep disturbances, chronic physical illness, or pain-related conditions (Dixon-Gordon et al., 2018; Kramer et al., 2017; Thompson et al., 2019; Wright, Zalewski, et al., 2016; Zelkowitz et al., 2007). Thus, even though symptoms

of a PD may wax and wane during adolescence, problems in social functioning are relatively stable and have long-term consequences (Hessels et al., 2022), including ripening the possibility of continued mental health problems (Wright, Zalewski, et al., 2016).

To conclude, empirical data reveal that personality disturbance does not simply manifest in adulthood. Psychological capacities for self and interpersonal functioning develop over the lifespan (Weekers et al., 2020). Even though different aspects of personality functioning might be apparent already in childhood, binding into a unidimensional pathology continuum takes place in adolescence (Sharp, 2020). This makes adolescence a sensitive period for the development of a PD (Sharp & Wall, 2018). Neglected or untreated personality dysfunction results in long-term negative psychosocial consequences and poor health-related outcomes. This leads to the importance of the exploration of the different developmental trajectories of personality pathology in young people. The focus on adolescents with elevated personality difficulties may open up the possibility to understand the vulnerabilities for the risk of the emergence of a clinical disorder (Cicchetti & Crick, 2009; Lenzenweger & Cicchetti, 2005; Nelson et al., 2014).

1.3. Risk factors for personality pathology in adolescence

Research on personality disorders in adolescence accumulated during the last decade with a strong focus on the analysis of the aetiology of borderline personality disorder. In this thesis, the term *risk factor* will be conceptualized as a variable that precedes a negative outcome of interest and increases the chances that the outcome will occur (Mash & Wolfe, 2008). Previous efforts to identify the risk profile of PDs offered some directions to think about the potential risk factors with the recognition that genetic, neurobiological, and psychosocial factors all contribute to the development of a PD (Crowell et al., 2009).

1.3.1. Aetiological risk factors for the onset of borderline personality disorder

Studies on the aetiology of categorically conceptualized BPD included a broad age span (from childhood to middle adulthood) and showed a wide spectrum of risk factors that predicted the severity of BPD symptoms later in life. Winsper et al. (2016) provided support for the validity of BPD in adolescence through the notion that adolescents and adults share a similar set of risk factors for BPD. Authors offered the conceptualization of risk factors

for BPD as aetiological (that predict the onset of the disorder) or psychopathological (severity of symptoms and comorbidity) (Winsper et al., 2016). Thus, data from existing systematic reviews and empirical studies will further be categorized based on these definitions. Studies have revealed a variety of individual aetiological factors that were reported as significant for predicting BPD symptoms. Among those were psychosocial stressors in childhood, biological child dispositions, insecure or disorganized attachment, difficult temperament, maladaptive personality traits (high neuroticism and low agreeableness), and poor cognitive functioning (Carlson et al., 2009; Stepp et al., 2016). From a family perspective, socioeconomic status was associated with higher levels of adolescent BPD symptoms (Stepp et al., 2016). Moreover, an important group of aetiological risk factors was related to parental health and behavior. Maternal psychopathology (internalizing, externalizing, and BPD) and parental substance use were associated with symptoms of BPD several years later. Next, various maladaptive parenting behaviors, including rejection, hostility, mother-child discord, harsh discipline, adverse childhood experiences (sexual and physical abuse, emotional neglect), and family adversity in general were predictive of BPD symptoms years later (Carlson et al., 2009; Stepp et al., 2016; Zanarini et al., 1997). The results reveal a broad range of individual and environmental aetiological risk factors for the development of BPD from adolescence to adulthood.

Research on psychopathological risk factors also showed significant associations between comorbid mental disorders and concurrent BPD symptoms. These factors included higher severity of the current personality disorder, comorbid symptoms (e.g., self-injurious behavior, suicidal ideation, dissociative symptoms, drug use) as well as fully developed comorbid mental disorders (internalizing and externalizing psychopathology, psychotic disorders, substance use disorders, etc.) (Carlson et al., 2009; Hutsebaut & Aleva, 2021; Stepp et al., 2016). These results go in line with studies on adult BPD (Carlson et al., 2009) and show the important role of comorbidities for the poor prognosis of BPD.

Thus, aetiological and psychopathological risk factors for BPD include several broad domains of child and family characteristics, as well as parental psychopathology or parenting behavior. Existing research provides insight into factors that might explain the onset of personality pathology. However, the mentioned factors are not unique, nor specific and this leads to a conclusion that the aetiology of categorically conceptualized BPD might be similar in both adolescence and adulthood.

1.3.2. Challenges in the study of specific risk factors for the trajectory of personality pathology in adolescence

Current research efforts are directed at identifying the risk factors for the course of PD during adolescence as a developmentally sensitive window for personality pathology (Chanen et al., 2017; Sharp & Wall, 2018). Previously mentioned studies on aetiological and psychopathological risk factors have raised three significant points that might be addressed in future research.

First, conducted studies have made a significant advance in understanding borderline pathology. However, the investigated factors explain only the general and early risk for the onset of borderline pathology or higher concurrent severity of it, but not the change in the trajectory of symptoms over time. Even more, Stepp et al. (2016) highlighted the problem that previous efforts to identify risk factors for BPD have revealed a shared set of risk factors that predict poor mental health outcomes in general. These factors might be viewed as operating similarly across different psychiatric disorders, which refers to the concept of multifinality (Cicchetti & Rogosch, 1996; Stepp et al., 2016). This leads to the conclusion that previously investigated factors are not disorder-specific.

Second, Stepp et al. (2016) raised a concern that studies directed at the prediction of the onset of BPD mostly do not take into account the developmental timing of the disorder, meaning that the onset could have occurred earlier in the development, leading to the false negative association among the risk factor and psychopathology as an outcome. Thus, it is important to differentiate at which stage we are addressing further research – onset, maintenance, remission, etc. This would allow avoiding the fallacy of equating all BPD outcomes as similar, regardless of the stage of the disorder (Stepp et al., 2016).

Third, investigated risk factors were general and non-specific to adolescence as a developmental period, which refers to the problem of developmental timing of risk. The risk profiles that have been presented above were conducted regardless of the developmental stage at which risk factors were assessed (Stepp et al., 2016). Thus, the risk for false negative or positive associations increases, since risks might change in the life course, and those factors that are significant in early childhood might not be as important in adolescence as it was in earlier developmental periods (Stepp et al., 2016). All of these drawbacks might be addressed with prospective studies during the sensitive developmental windows (e.g. adolescence), which would capture the early onset of BPD and associated current risk factors.

The shift towards the dimensional approach to personality pathology opens up the possibility to address specifically the last limitation and to search for more specific and different risk factors than were addressed before. First in-depth investigations of the adolescent LPF (Criterion A) proved this construct to be a more developmentally sensitive approach to capturing personality pathology in adolescence (Weekers et al., 2020), which could have the potential to integrate different aspects that would correspond to the normative developmental tasks in adolescence.

Having these points in mind, I will further discuss the potential risk factors, which are significant specifically in adolescence as a developmental period and might be associated with both – the normative and the maladaptive developmental trajectory of personality pathology. I would hypothesize these factors to be more congruent and sensitive to current adolescent developmental tasks and relate them to the dimensional aspects of a PD – self and interpersonal functioning.

Theory on adolescent development denotes the growing importance and qualitative changes in adolescent relationships. Social factors emerge as a broad and important domain in studies on personality development and psychopathology (Boele et al., 2019; Pfeifer & Allen, 2021; Platt et al., 2013; Schwartz et al., 2017). Personality pathology has significant associations with impaired social functioning (Winograd et al., 2008), and vice versa, poor social functioning ripens the possibility of a PD in adolescence (Vanwoerden et al., 2021). Research suggests that adolescent relationships with family and peers as well as the ability to maintain and self-disclose in relationships indeed have an impact on identity development (Cierpka, 2014; Pasupathi & Hoyt, 2009; Vijayakumar & Pfeifer, 2020). Moreover, relationship quality with parents and friends (Boele et al., 2019; Stern et al., 2021), self-disclosure (Davis, 2012; Vijayakumar & Pfeifer, 2020), and attachment security (Bauminger et al., 2008; Benson et al., 2006) were found to be important for the development of empathy and reciprocity, as well as general social competence. On the other hand, in several studies, current interpersonal context, such as the absence of interpersonal support, adverse interpersonal events, or peer victimization were associated with a poorer prognosis of BPD in youth (Hutsebaut & Aleva, 2021). Also, poor social functioning, peer rejection, victimization, and negative interactions with peers and mothers were associated with the development of borderline personality disorder in adolescence (Hessels et al., 2022; McDougall & Vaillancourt, 2015; Platt et al., 2013; Schwartz et al., 2017; Vanwoerden et al., 2019) as well as increases in the level of symptoms (Haltigan & Vaillancourt, 2016; Hatkevich et al., 2017; Reuter et al., 2015). Thus, current experiences in interpersonal

relationships play a prominent role in the development of personality pathology. Having in mind the interpersonal nature of personality disorders, it is noteworthy that social problems may be seen as an outcome of personality pathology as well as a risk factor that continues to predict further impairments in personality development.

To conclude, research on the risk factors for PD in adolescence have to address several limitations of previous studies, among them is the issue of developmental timing of risk and the congruency of risk factors to the investigated developmental period (Stepp et al., 2016). The change in the definition of a PD allows to look for different factors that might correspond to normative adolescent developmental tasks and also relate to the development of a PD.

1.4. Knowledge gap in the field of personality disorders in adolescence

In the introduction part, I have presented the theoretical context and recent empirical findings on personality pathology and here I will briefly summarize this data, explore the existing knowledge gap in previous research and underline the scientific novelty of this thesis.

First, the research provided strong evidence about the validity of the PD diagnosis in adolescence as a sensitive developmental window for the development of personality pathology (Sharp & Wall, 2018), which has psychosocial consequences (Thompson et al., 2019; Winograd et al., 2008). However, researchers mostly overpass the fact that psychosocial disability itself might be expressed differently in adolescents than in adults and there can be developmental effects on how personality function and psychosocial impairments relate to each other (Sharp et al., 2022). This leads to an open question about the role of psychosocial outcomes, which would mirror adolescents‘ everyday functioning. The conducted studies focus on community samples with several studies on clinically-referred adolescents, but for the understanding of the potentially deteriorating developmental trajectory, it is necessary to identify a group at risk among community-based adolescents. In this thesis, I will explore how levels of BPD symptoms are associated with developmentally important aspects of psychosocial functioning among community-dwelling adolescents.

Second, the vast majority of the previously conducted studies were based on the categorical approach to personality pathology, mostly, BPD. The change in the definition of a PD uncovers the necessity to compare and retest the previous research findings and to direct future research by taking into account the current context of change. The association between BPD as part

of the categorical model and the level of personality functioning as the main criterion of the dimensional approach to a PD is yet to be studied. Even though there are insights about BPD as a general factor of PD and its severity (Sharp et al., 2015), research on the role and interrelations among both BPD and AMPD or ICD-11 constructs is lacking (Vanwoerden & Stepp, 2022). Research efforts were mostly directed toward the investigation of these constructs in adult samples with virtually no evidence yet on these relations in adolescence. Thus, this dissertation will be one of the first attempts to analyse the link between BPD and LPF in adolescence.

The context of the changing paradigm leads to the use of different terminology when referring to personality pathology. Based on the methodology and instruments of the studies on the categorical approach to PDs, borderline personality disorder *symptoms* or *features* will be used interchangeably in this thesis. The term *level of personality functioning* will be used when referring to part of the dimensional conceptualization of a personality disorder. In this thesis, I will attempt to explore and discuss the joint and differing aspects of both approaches to PDs in terms of research on BPD and LPF in adolescence.

Third, the existing knowledge on the long-term negative psychosocial outcomes of BPD draws attention to the importance of understanding the potential risk factors for the course personality pathology (Chanen et al., 2017; Winograd et al., 2008; Wright, Zalewski, et al., 2016). Even though efforts were put into the analyses of potential risk factors for BPD in general, we do not yet know how this risk operates in adolescence as a peak period for PD development. The conducted studies mostly cover aetiological and psychopathological risk factors (Winsper et al., 2016). Authors denote the importance of studying the factors associated with a change in the developmental trajectory of personality pathology (Chanen et al., 2017; Winsper et al., 2016) and therefore, it is not yet known what constitutes a risk for the deteriorating trajectory of BPD in adolescence.

Fourth, previous research efforts did not address the problem of developmental timing of risk, leading to the investigation of non-specific factors that are not congruent to adolescent developmental tasks (Stepp et al., 2016). The dimensional model conceptualized through the level of personality functioning has proved to be a more developmentally sensitive approach to investigating personality pathology in adolescence than categorical PDs and draws attention to different and less investigated potential risk factors (Weekers et al., 2020). Having in mind the developmental milestones in adolescence, the interpersonal nature of personality pathology, and existing relations between social functioning and personality functioning (Pfeifer &

Allen, 2021; Sharp, 2020; Vanwoerden et al., 2021), I will explore current interpersonal factors as a significant and developmentally congruent set of risk factors for PDs, which is yet lacking empirical support.

The scientific novelty of this dissertation is multifaceted. First, this research is one of the first systematic attempts in Lithuania to study and analyse the risk for a PD in adolescence. Second, the dissertation is written in the context of the ongoing change in the conceptualization of a PD and aims to review and juxtapose aspects reflecting two approaches to PDs – categorical and dimensional. In the context of international research, there is a particular lack of data on the interplay between these constructs in adolescent samples. Third, this thesis discusses the complexity of research on risk factors in adolescence, attempting to address two important research gaps: understanding risk factors associated with the developmental trajectory of a PD and exploring factors that are congruent to the normative developmental tasks in adolescence.

1.5. Aims of the thesis

The aim of this doctoral dissertation is to explore the distinguishing characteristics of adolescents at risk for personality pathology and to identify risk factors for personality pathology in adolescence while addressing the context of the current conceptual change from a categorical to a dimensional approach to a personality disorder. Three empirical studies and one systematic literature review form the basis of this thesis.

The research questions

Four research questions were raised to achieve this aim:

I. What characteristics distinguish adolescents who report high levels of borderline personality disorder symptoms?
II. What are the risk factors that are associated with the change or stability in the trajectory of adolescent borderline personality disorder symptoms?
III. What is the relationship between borderline personality disorder features and the level of personality functioning in adolescence given the change in the conceptualization of personality pathology?
IV. What is the role of the current interpersonal context – relationship quality with peers and parents – in explaining the level of personality functioning? Does this relationship change with age?

2. METHOD

2.1. Participants

The dissertation is based on three samples of Lithuanian adolescents, which are described in Table 2. The published papers that form the basis of this thesis will further be referred to as Study I-IV.

Table 2. *Demographic characteristics of study samples.*

Variable	Sample I (*N* = 379)		Sample II (*N* = 568)		Sample III (*N* = 855)	
	n	%	*n*	%	*n*	%
Age						
Mean (*SD*)	14.69 (1.74)		14.38 (1.57)		14.44 (1.60)	
Range	11–17		11–17		11–18	
Gender						
Female	212	55.9	327	57.6	534	62.5
Male	167	44.1	240	42.4	321	37.5
Place of living						
Urban	302	79.7	351	61.8	669	78.2
Rural	73	19.3	190	33.5	187	21.9
Parental status						
Married/live together	262	69.1	341	60	569	66.5
Divorced	68	17.9	119	21	158	18.5
Other	32	8.5	108	19	93	10.9

Sample I

The first sample consisted of adolescents aged 11–17 years (*N* = 379; *M* = 14.69; *SD* = 1.74; 55.9% female) who were recruited from six urban (79.7%) and rural (19.3%) public schools in Lithuania. Sixty-nine point-one percent of the whole sample lived in families with either biological or stepparents, 17.9% in divorced families, 7.2% in single-parent families, and 1.3% were in foster care. This study was conducted in January-April of 2018.

Data from this sample was analysed in the first paper of this thesis (Study I).

Sample II

The sample is a part of the ongoing longitudinal study on personality pathology in adolescence. Participants were 568 adolescents aged 11–17 (*M* = 14.38; *SD* = 1.57; 57.6% female) who were recruited from public schools (*n*

= 502; 59.4% female), a psychiatry inpatient unit (*n* = 41; 70.7% female), and a forensic unit for delinquent youth (*n* = 25; 100% male). Most adolescents were from urban areas (61.8%) and 33.5% lived in rural areas. Sixty percent of participants reported that their parents were married, 21% – were divorced, and 19% indicated that the status of the family relationship was "other". This study was implemented from November 2020 to May 2021.

Data from this sample was analysed in the third paper of this thesis (Study III).

Sample III

This is a cumulative sample, which complements Sample 2 and includes data from the full initial assessment of the ongoing longitudinal study on personality pathology in adolescence with two follow-ups still being conducted. The full sample consists of 855 adolescents aged 11–18 (*M* = 14.44, *SD* = 1.60; 62.5% female) who were enrolled through public schools covering several cities (37.2%), towns (40.9%), and rural areas (21.9%) in different regions of Lithuania. The sample is well balanced by age groups with different age cohorts forming from 11.4% to 23.7% of the full sample. Participants reported that their parents were married (66.5%), divorced (18.5%) or that the status of the family relationship was "other" (10.90%). The study was conducted from November 2020 until December 2021.

The author of this thesis has made a significant contribution to the development of this longitudinal study protocol, and data collection and has organized training for students on conducting research.

Data from this sample was analysed in the fourth paper of this thesis (Study IV).

2.2. Procedures and research ethics

The studies were conducted in accordance with the Declaration of Helsinki and the study protocols were approved by the Psychological Research Ethics Committee at Vilnius University (No. 14, 7 December 2017; No. 34, 27 February 2020; No. 53, 15 November 2020).

The organization of the research was similar across the studies and several aspects of research ethics were considered. Non-probabilistic sampling method was used to choose the participating schools in different regions in Lithuania. Each school or organization delegated a contact person who communicated with the research team. To ensure the clarity of information about the study, the study was presented to adolescents directly by the research team during school hours or in the clinical setting. Then, written parent (or

legal guardian) consent forms with detailed information about the study were distributed to adolescents through schools, psychiatric, and forensic adolescent care units. Only adolescents whose at least one parent gave written consent participated in the study. Participation in this study was voluntary and oral informed consent was obtained from adolescents before the study. All participants were informed about their right to withdraw from the study at any time. Participants were assured that all given information would be treated confidentially, processed anonymously, and accessed only by the researchers of the project.

The competence of the research team was ensured by conducting research training at the university. Thus, the study was conducted by trained research assistants (master's or Ph.D. students trained in clinical psychology) during school hours in small groups of adolescents or individually in clinical and forensic samples. During the study, the researchers presented the aim and procedure of the study and distributed questionnaires with preassigned IDs to all the participants. The researchers were available to answer adolescents' questions during the whole study. It was ensured that no staff or other adolescents were in the room during the data collection process.

The psychological well-being of participants was considered and after the study adolescents were provided with leaflets with information about the available mental health services and emotional support hotlines. The school specialists were informed about the ongoing study and were available for adolescents after the study.

2.3. Measures

The set of measures used in the described empirical studies is summarized in Table 3. A more detailed description of measures is provided in the original papers that form the basis of this dissertation.

Table 3. *Measures used in conducted studies.*

	Measure	*Study I*	*Study III*	*Study IV*
1.	Levels of Personality Functioning Questionnaire (LoPF-Q 12-18) (97 items)		+	+
2.	Personality Inventory for DSM-5 (PID-5-BF) (25 items)		+	
3.	Borderline Personality Features Scale for Children-11 (BPFSC-11) (11 items)		+	
4.	Borderline Personality Questionnaire (BPQ) (80 items)	+		

5.	Youth Self-Report Form (YSR 11/18) (112 items) + social problems scale (1 item)	+	+	+
6.	Network of Relationships Questionnaire-Relationship Qualities Version (NRI-RQV) (30 items)			+
7.	Academic Motivation Scale (6 items)	+		
8.	Academic Achievement (1 item)	+		
9.	Satisfaction with Life Scale (SWLS) (5 items)	+		

Note. Measures used in three empirical studies that form the basis of this thesis are presented.

Personality pathology (Study I, III, and IV)

The first set of measures was directed at assessing adolescent difficulties related to personality pathology. The measures used were based on the dimensional and categorical approaches to personality disorders.

Levels of Personality Functioning Questionnaire (LoPF-Q 12-18) (Goth et al., 2018) was used as the measure of personality pathology in this study. To the best of our knowledge, it is the only instrument designed to assess adolescent personality dysfunction through Criterion A of the DSM-5 AMPD. It is a DSM-5 based 97 items self-report instrument with a 5-step response format (0=no to 4=yes) with higher scores indicating a more severe level of impairment in personality functioning and a higher risk for a current personality disorder. The questionnaire allows to assess dimensionally the total score of personality dysfunction as well as adaptive function or disturbances in the self and interpersonal domains. The culturally adapted Lithuanian version of the LoPF-Q 12-18 was prepared at Vilnius University in 2020 by Rasa Barkauskienė and Gabrielė Skabeikytė (Barkauskiene & Skabeikyte, 2020).

The brief version of the *Personality Inventory for DSM-5* for children aged 11–17 (PID-5–BF) (American Psychiatric Association, 2013) was used to measure pathological personality traits (Criterion B). It comprises the 25 items rated on a 4-point scale (0=very false to 3=very true) and is categorized into 5 domains of pathological personality traits: negative affectivity, detachment, antagonism, disinhibition, and psychoticism. A higher score indicates a higher expression of pathological traits.

Borderline Personality Questionnaire (BPQ) (Poreh et al., 2006) was used to assess borderline personality symptoms. The BPQ is a true/false self-report scale composed of 80 items comprising 9 subscales corresponding to the nine DSM-4 BPD criteria. These are Impulsivity (9 items), Affective instability (10

items), Abandonment (10 items), Unstable relationships (8 items), Self-image (9 items), Suicide/Self-mutilation behavior (7 items), Emptiness (10 items), Intense anger (10 items), and Quasi-Psychotic states (7 items).

Borderline Personality Features Scale for Children-11 (BPFSC-11) (Sharp, Steinberg, Temple, & Newlin, 2014) is an 11-item self-report questionnaire that was used to assess borderline personality features in adolescents. Participants' responses were rated on a 5-point Likert-type scale from "not true at all" to "always true" where higher scores indicated a higher expression of the total level of borderline features. The questionnaire captures the difficulties associated with emotional instability and interpersonal problems as core aspects of BPD.

General psychopathology (Study I, III, and IV)

Youth Self-Report Form (YSR 11–18) (Achenbach & Rescorla, 2001) was used to measure the level of psychopathological symptoms in adolescents. The questionnaire contains 112 items that assess emotional and behavioral problems over the previous 6 months using 3-point scale responses (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). The total score is constituted of the items (n = 98) covering both the externalizing and internalizing spectrum difficulties, attention, social, thought, and other difficulties. The questionnaire has been fully adapted and standardized for use in the Lithuanian population (Žukauskienė et al., 2012).

Risk factors for personality pathology (Study IV)

Network of Relationships Questionnaire-Relationship Qualities Version (NRI-RQV) (Furman & Buhrmester, 1985) was used to assess the subjective quality of adolescent relationships. It is a self-report instrument with 30 items and a 5-step response format (1=never or hardly at all to 5=always or extremely much). Items are then divided into subscales in which a higher mean on a subscale level indicates a higher expression of the specific quality. In this study, only the two broad scales of positive (closeness) and negative (discord) qualities of the relationships were evaluated to capture the different valence of adolescents' interactions. The positive qualities scale was constructed of several aspects of relationships, including companionship, disclosure, satisfaction, emotional support, and approval. Similarly, negative qualities were defined through subjective pressure, conflict, criticism, dominance, and exclusion in the specific relationship.

Psychosocial functioning (Study I)

The next set of questionnaires included the assessment of adolescents' health-related functioning, academic functioning, and general life satisfaction, which were described in the introduction as the psychosocial outcomes of personality impairments.

Academic Functioning. The assessment of academic functioning included two measures. The first one was the *Academic Motivation Scale* (6 items) describing the perceived importance of academic achievements and academic motivation (e.g., 'It is important for me to be thought of as a good student by the other students", etc.). Items were rated on a 4-point Likert-type scale (1 = definitely not true; 2 = Mostly not true; 3 = Mostly true; 4 = Definitely True). Greater scores corresponded to higher levels of perceived motivation. The second measure of *academic achievement* was reduced to 1 item 'What grades do you usually receive?' on a scale from 1 to 8. With possible answers forming 8 categories including options from "1–2″ to "9–10".

Social functioning. Two measures were used to assess functioning in the social domain: 1) *Social problems scale* (as a part of the YSR 11/18 (Achenbach & Rescorla, 2001), which reflects problems and experiences in relationships with peers; 2) *adolescents answered one question about the number of close friends they have* ("How many close friends do you have?") by choosing one of the possible answers 'None', '1′, '2 or 3′, and '4 or more'.

Health-Related Functioning. Health-related functioning was evaluated by using two measures from *YSR 11/18* (Achenbach & Rescorla, 2001). The health concerns subscale was constructed by selecting eight items from YSR 11/18 about health concerns (e.g., eating, sleep, fatigue). Somatic complaints were assessed by the DSM-oriented Somatic Problems subscale which includes a set of somatization-related items.

Life Satisfaction. The *Satisfaction with Life Scale* (SWLS) (Diener et al., 1985) was used to index life satisfaction among adolescents. It is a self-report instrument of 5 items answered on a 5-point Likert-type scale to assess global life satisfaction (e.g. "*I am satisfied with my life"*). In this study, we utilized a Lithuanian version of the SWLS already used in previous studies in Lithuania (Šilinskas & Žukauskienė, 2004).

2.4. Data analyses

Statistical analyses for empirical studies were performed with Statistical Package for Social Sciences (SPSS) v.23-v.27.

Study I. Spearman and Pearson correlation coefficients were calculated to evaluate the links between BPD features and related psychosocial outcomes. The groups of adolescents with similar BPD symptom constellations were identified with a 2-Step Cluster Analysis (TCA). A one-way univariate analysis of variance (ANOVA) and Bonferroni or Tamhane posthoc tests were conducted to examine differences across the clusters on tested psychosocial outcomes. Hierarchical linear regression models were tested to examine the explanatory value of BPD symptoms on domains of psychosocial functioning.

Study II. The systematic literature review was conducted following Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) guidelines. The quality of the analysed articles was assessed using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Health Institute, 2014).

Study III. Group means differences (community, clinical and forensic samples) were tested via one-way Analysis of Variance (ANOVA) and post-hoc tests. Pearson correlation coefficients were calculated to test the associations between BPD features, LPF (Criterion A), and maladaptive personality traits (Criterion B). Hierarchical linear regression models were used to test whether the LPF had a unique incremental value for the prediction of variance in borderline personality features when controlled for Criterion B.

Study IV. Bivariate associations among study variables were estimated using Pearson correlation coefficients. The False Discovery Rate (Benjamini & Hochberg, 1995) was used as a correction for multiple computed correlations. Two linear regression models with fixed predictors were computed with age as a moderating variable. Interaction of age and positive relationship qualities with peers was depicted using a line plot.

3. RESULTS

3.1. Findings from study I

BPD symptoms were associated at the bivariate level with all the outcome measures and the strongest correlation was with social problems (r = .72; p < .01) and health concerns scores (r = .66; p < .01). Symptoms of BPD were distributed on a severity continuum with 19.71% of adolescents (N = 68; 79% female) endorsing *high levels of BPD symptoms*. 93 adolescents (64% female) were in the *average BPD symptoms group*, and 184 adolescents (46% female) were in the *low BPD symptoms group*. Cluster groups significantly differed in the scores of all psychosocial outcomes (p < .05) with higher levels of BPD symptoms being associated with poorer outcomes. Adolescents endorsing the highest levels of BPD symptoms expressed the most health concerns, somatic complaints, and social problems, had a smaller number of close friends, lower academic motivation and achievement, and lower life satisfaction.

Hierarchical linear regression models were tested to investigate the association between BPD symptoms and psychosocial outcomes. After controlling for the effects of sex, internalizing, and externalizing problems, BPD symptoms had a unique contribution to higher levels of social problems (B = .05; p < .01; 95% *CI* [0.02, 0.08]), lower academic achievement (B = -0.02; p < .05; 95% *CI* [-0.04, 0.00]), more severe health concerns (e.g. sleeping, eating problems, lack of energy) (B = .04; p < .01; 95% *CI* [0.02, 0.07]), and lower life satisfaction (B = -.08; p < .01; 95% *CI* [-0.13, -0.03]).

3.2. Findings from study II

After the qualitative analyses, the extracted risk factors were categorized into four groups.

1) *Child characteristics.* Childhood externalizing psychopathology, childhood temperament, poor self-control, and adolescent comorbid psychopathology (substance use disorders, major depressive disorder, ADHD symptoms, somatization), were associated with changes in BPD symptoms over time.

2) *Interpersonal factors.* Results from several longitudinal studies showed that being exposed to peer-related violence (relational, psychological, sexual victimization, antagonistic behaviors) in friendships and romantic relationships was associated with increases in BPD symptoms across time. Moreover, excessive reliance on romantic partners for interpersonal support was also associated with increases in BPD symptoms for girls.

3) *Parental psychopathology.* Studies failed to detect a significant relation between parental psychopathology (e.g. parental depression, mothers‘ BPD symptoms) and the trajectory of personality pathology.

4) *Parenting factors.* The only parenting-related factor associated with the course of BPD symptoms was exposure to intimate partner violence. Other parenting factors were not significantly associated with the course of BPD symptoms in adolescence.

3.3. Findings from study III

BPD scores strongly correlated with the level of personality functioning (r = .75; p < .01) and maladaptive personality traits (r = .80; p < .01) scores at the bivariate level indicating that these constructs were strongly interrelated. More severe levels of personality functioning or more maladaptive personality traits were both related to higher levels of BPD features. Group comparisons revealed that psychiatric inpatients were characterized by the most severe disruptions in personality functioning as well as the highest levels of maladaptive traits and BPD features when compared to forensic and community samples (p < .05). Hierarchical linear regression model showed that when controlling for age, sex and general psychopathology, maladaptive personality traits (negative affectivity (β = .32; p < .01), disinhibition (β = .20; p < .01), and psychoticism (β = .27; p < .01)) explained 25.6% of additional variance in BPD features (R^2 = .70; F = 75.80; p < .05). At the last step, domains of LPF reflecting the self-function (identity (β = .10; p < .05) and self-direction (β = .33; p < .01)) incrementally contributed an additional 4.2% of the variance (R^2 = .74; F = 18.08; p < .05). Thus, results showed that LPF had its unique contribution in predicting BPD features beyond the context of underlying psychopathology and maladaptive personality traits.

3.4. Findings from study IV

Associations at the bivariate level revealed that higher levels of discord and lower levels of closeness in relationships with parents (r = .41; p < .01 and r = -.51; p < .01) and peers (r = .19; p < .01 and r = -.14; p < .01) were associated with higher LPF scores. Two separate regression models were computed for negative and positive relationship qualities. Results from the first model revealed that after controlling for age (as well as moderating effects of age), gender, internalizing, and externalizing difficulties, only discord in relationship with parents (β = .191, p < .001) accounted for higher impairments in personality functioning. The second model showed that lower

levels of closeness in the relationship with parents were related to a more impaired level of personality functioning (β = -.198, p < .001), regardless of adolescents‘ age. Last, very low or very high levels of closeness in relationships with peers were related to higher impairments in personality functioning and this interaction was more significant for older participants (β = .052, p = .44).

4. DISCUSSION

This thesis is an attempt to integrate and discuss the data based on two different approaches to personality pathology: 1) categorical, which in this work was defined through borderline personality disorder symptoms or features, and 2) dimensional model, which was investigated through the level of personality functioning. This thesis was based on a systematic literature review and three empirical studies in Lithuania. A systematic literature review was conducted according to strictly defined methodological procedures and provided some insight into the previously conducted research on BPD in adolescence. The three conducted empirical studies included large adolescent samples from different regions in Lithuania and covered a broad age span.

The first part of the discussion will be focused on the relevance of our findings on BPD in adolescence as part of the categorical approach to PDs. In the second part, I will aim to discuss and explore the interrelations among aspects of both theoretical approaches with a stronger focus on the dimensionally conceptualized personality pathology.

4.1. Exploration of borderline personality disorder as part of a categorical approach to personality pathology

4.1.1. Characteristics of adolescents with high levels of borderline personality disorder symptoms

Previous studies have shown that PD is a valid and reliable diagnosis in adolescence with the prevalence rates of clinically diagnosed BPD being 1-3% in the community sample (Chanen et al., 2017). Our methodology did not allow making a diagnosis of BPD but aimed at observing the community sample, which is essential for identifying a group of adolescents at the highest risk for personality pathology. The results (Study I) suggested that in the community sample symptoms of BPD were distributed along the severity continuum and clustered into three groups. There was a part – 19.71% – of adolescents who reported significantly high levels of BPD symptoms. This means that 1 in 5 adolescents in our sample experienced subjective severe difficulties in the personality domain.

Furthermore, results suggested (Study I) that adolescents with the most severe levels of BPD symptoms reported the highest rates of social problems, poorest academic achievement, most health concerns, and lowest life satisfaction after taking into account internalizing and externalizing difficulties. Our results based on the community sample are comparable to

previous research, which revealed a range of psychosocial functioning domains (e.g. life satisfaction, social functioning, quality of life, etc.) that were negatively affected in adolescent patients with BPD (Kramer et al., 2017; Thompson et al., 2019). Another issue to consider is that psychosocial disability might be expressed and related differently to personality pathology in adolescents when compared to adults (Sharp et al., 2022). Thus, our study extends previous findings and identifies the psychosocial characteristics that are relevant and apparent already in adolescence. Since psychosocial impairments of personality pathology are long-term and associated with further mental health problems (Hessels et al., 2022; Winograd et al., 2008; Wright, Zalewski, et al., 2016), our findings draw attention to a part of the Lithuanian community adolescents who experience high levels of BPD symptoms and can be differentiated from their peers by significantly lower psychosocial functioning.

4.1.2. Risk factors for the deteriorating trajectory of adolescent borderline personality disorder symptoms

The understanding of the complex negative outcomes of high levels of BPD symptoms and previous research indicating the long-lasting nature of these outcomes are closely related to the importance of recognition of risk factors for the trajectory of personality pathology in adolescence.

Results (Study II) revealed that part of the risk factors for the worsening course of BPD was related to individual adolescent characteristics. Difficult childhood temperament (Stepp, Keenan, et al., 2014; Stepp, Whalen, et al., 2014) and child or adolescent psychopathology (e.g. substance use, depression, anxiety, etc.) prevented the normative decline of pathological personality traits during adolescence and predicted increases in BPD features over time (Bornovalova et al., 2018; Dixon-Gordon et al., 2016; Haltigan & Vaillancourt, 2016; Stepp & Lazarus, 2017). Personality disorders have high comorbidity rates (American Psychiatric Association, 2013) and results suggest that changes in these comorbid states may further disrupt the maturational processes and alter the course of personality pathology, or vice versa. There is evidence that internalizing or externalizing difficulties precede personality pathology (Sharp et al., 2018) and comorbid mood disorders are important in the transition from the subthreshold symptom stage to the onset of the disorder (Chanen et al., 2016). Our review extends these findings and suggests that comorbid difficulties not only predict the onset of BPD but may continue to shape its developmental trajectory in adolescence.

Findings can be compared to studies on aetiological and psychopathological risk factors (Winsper et al., 2016). A similar set of factors was previously found to account for the onset of personality pathology in adulthood (Stepp et al., 2016; Winsper et al., 2017) or higher concurrent levels of symptoms (Hutsebaut & Aleva, 2021; Stepp et al., 2016). Our results lead to the conclusion that adolescents and adults share a similar set of individual risk factors and for adolescents they not only predict the onset of personality pathology, but also the course of BPD.

The second group of risk factors for the course of BPD was interpersonal factors, which accommodated all the current negative experiences in relationships. In our first empirical study (Study I), BPD symptoms had the strongest unique association with social problems in the general population, revealing that higher levels of symptoms were related to higher impairments in social functioning. Results from our systematic analysis (Study II) indicated that social experiences that interfere with normative development, such as peer-related violence, dating victimization, or excessive early reliance on a romantic partner were also associated with further increases in BPD symptoms in adolescence (Haltigan & Vaillancourt, 2016; 2021; Vanwoerden et al., 2019) revealing a bidirectional association. Our findings are similar to those of previous studies, which also suggest that adolescents‘ social experiences are important for the poorer prognosis of BPD (Hutsebaut & Aleva, 2021). Thus, current negative experiences with peers are significant for the trajectory of BPD in adolescence.

Lastly, previous research provided evidence about the importance of parenting factors or parental psychopathology for the development of personality pathology, however, our systematic literature analysis (Study II) indicated that parent-related factors remained significant for the onset, but not the trajectory of BPD in adolescence.

At this point, our studies on BPD, as part of the categorical approach to PDs, have addressed two important aspects of personality pathology in adolescence. First, one-fifth of adolescents in our sample reported significantly high rates of BPD symptoms. Adolescents at the highest risk for BPD could be differentiated from their peers by more negative psychosocial outcomes that further interfere with the normative developmental tasks. Second, previously conducted longitudinal research on developmental trajectories of BPD suggested two groups of risk factors that are important for the worsening trajectory of BPD: 1) individual (child characteristics and comorbidity) and 2) interpersonal (peer-relationships) factors. The uneven number of previous studies on these groups suggests that the results of our

systematic review shed light on a previously understudied group of risk factors – the current interpersonal context, which becomes increasingly important in adolescence.

4.2. Exploration of the results on the dimensional model of personality pathology

4.2.1. The association between borderline personality disorder features and the level of personality functioning

Given the changing paradigm of personality pathology, the question about the place of the results on BPD in the dimensional model of a PD must be taken into consideration. One possible direction in research is led by the question of whether BPD can be seen as distinct psychopathology (Wright, Hopwood, et al., 2016) or more as a representation of the general PD factor that reflects self and interpersonal dysfunction (Jahng et al., 2011; Sharp et al., 2015).

To the best of our knowledge, our study (Study III) is one of the first that tested the interrelations between the aspects of both approaches to PDs in adolescence. In addition to BPD features, for the analysis, we have included the full dimensional model of a PD – the level of personality functioning (Criterion A in AMPD) and pathological personality traits (Criterion B in AMPD). Our findings suggested a unique contribution of the LPF in explaining BPD features in adolescence, beyond the context of pathological personality traits, and underlying internalizing or externalizing psychopathology. Scarce data exist indicating that adolescence is marked by increased levels of identity impairments that were associated with increases in borderline features (Sharp et al., 2021), but our results extend these findings revealing the unique exploratory value of LPF on BPD features, regardless of pathological personality traits and other psychopathological symptoms.

Pathological personality traits (negative affectivity, disinhibition, and psychoticism) also remained important in explaining adolescent BPD features. There is an open question about the role of both criteria in explaining categorical PDs. Some researchers argue Criterion B to have stronger incremental value (Sleep et al., 2019), while others suggest a strong overlap between both constructs and imply that the LPF in combination with pathological personality traits can best predict specific PDs, including BPD (Nysaeter et al., 2022; Sleep et al., 2019). From a developmental perspective, pathological personality traits are already evident in childhood, while the level of personality functioning develops during adolescence (Sharp, 2020). Thus,

some authors argue that Criterion A is more sensitive to capture developmental processes in adolescence and should have a distinctive function in capturing the features of adolescent personality pathology (Sharp, 2020; Sharp et al., 2018; Weekers et al., 2020). A strong correlation in our study (Study III) between BPD features and both aspects of AMPD also indicates the overlap of these constructs, but the unique additional contribution of LPF in explaining BPD features suggests the importance of the latter in understanding BPD in adolescence. Based on these results, I would hypothesize that BPD in adolescence could be seen as a matter of personality functioning rather than being distinct psychopathology. Since evidence on the connection between BPD and aspects of the AMPD model in adolescents is virtually absent, these results provide some empirically based insights on this association.

Thus, these findings pave the way to integrate the results of the previous studies on BPD into the dimensional model of a PD. The distribution of BPD symptoms in our sample and previously delineated risk factors could be associated with self and interpersonal dysfunction or the level of personality functioning. Even though both models have some joint features, dimensional constructs extend the understanding of personality pathology beyond the behavioral symptom levels. Therefore, the differences between the two approaches offer a new direction for the investigation of risk factors.

4.2.2. The problem of the specificity of risk factors for the level of personality functioning

Stepp et al. (2016) raised a concern that most of the previously identified risk profiles for BPD were non-congruent with the developmental context in adolescence, which might prevent the identification of significant risk factors (Stepp et al., 2016). From a theoretical standpoint, the dimensional model of a PD opens up the possibility to study factors that are more representative of adolescent developmental tasks along the continuum between normative and deviant experiences. Given adolescent developmental tasks, the increasing importance of peer relationships, changing relations with parents (Pfeifer & Allen, 2021), and the results highlighted in our systematic review (Study II), I will further explore the role of social relationships for the level of personality functioning.

4.2.2.1. The role of relationship quality with peers for the level of personality functioning

To start with, in our large cross-sectional study (Study IV) negative aspects in relationships with peers, conceptualized as discord, were not associated with a more severe level of personality functioning independently from an adolescent age. This finding challenges the previous data on the importance of negative social experiences for adolescent personality pathology. One of the ways to understand this discrepancy might be associated with different methodologies across studies. Some researchers conceptualized negative experiences as direct victimization, while in our study negative experiences were reflective of more normative aspects of conflicts in close relationships. Also, we might have encountered what Stepp et al. (2016) have termed as the effect of the developmental timing of the disorder (Stepp et al., 2016). This would lead to a consideration that the compared risk factors are important for different stages of the disorder with negative peer experiences being essential for the course of BPD, but not the concurrent level of personality functioning. And finally, the discrepancy in results can be attributed to different conceptualizations of personality pathology. Studies on categorically defined BPD follow the course of strictly defined pathological characteristics while the dimensional model captures a wider scope of personality development from the normative to the pathological level of personality functioning.

The role of positive aspects in peer relationships is more complex. Results showed (Study IV) that lower levels of closeness in peer relationships accounted for the variance in LPF revealing the strongest association with impaired PF among the oldest adolescents. This is supported by theory indicating that one of the developmental tasks in adolescence is learning to create trustworthy and reliable relationships with peers, which become more important with age (Bauminger et al., 2008; Villalobos Solís et al., 2015). Surprisingly, excessively high levels of closeness with peers were also associated with higher impairments in personality functioning, especially among older adolescents. A similar pattern of findings was described in our systematic analysis (Study II), where excessive reliance and support in early romantic relationships predicted increases in BPD symptoms (Lazarus et al., 2019). Hence, not only the lack of closeness might contribute to higher impairments in personality functioning or the course of a PD, but also the excessively high level of closeness or experiences incompatible with the developmental stage. It might also be that adolescents with higher impairments in personality functioning experience closeness in peer

relationships at a more extreme level, which provides ground for both supportive and negative experiences in relationships (Hessels et al., 2022).

Developmental implications on the relationship between closeness in peer relationships and LPF might be drawn from our cross-sectional study, where we addressed different age cohorts of adolescents. The results clearly showed that overly low and high levels of closeness in relationships with peers had the strongest relation with impairments in PF among the oldest adolescents when compared to younger ones. At this point, we might discuss not the trajectory of PD symptoms themselves, but the increasing strength of the association between the risk factor and the outcome of PD as adolescents grow older. Thus, we can assume that closeness in peer relationships can be both a risk and a protective factor for the development of PF.

4.2.2.2. The role of relationship quality with parents for the level of personality functioning

The current relationship quality with parents was important in explaining higher impairments in personality functioning. In our study (Study IV), discord in the relationship with parents was associated with higher levels of impairments in personality functioning. Additionally, lower levels of closeness in them were also important in explaining the level of personality functioning. This goes in line with previous research that revealed an association between parental control, negative interactions, coercive parenting, and BPD (Carlson et al., 2009; Hessels et al., 2022; Meeus, 2011). Thus, our studies suggest that experiences with parents are more important for the current level of personality dysfunction (Study IV) rather than the course of personality pathology (Study II). However, it is of interest that discord in the parent, but not peer relationships were important in this association. It might be related to the fact that one of the important tasks in adolescence is the strive for autonomy, which is often marked by an increased level of conflicts with parents (de Moor et al., 2021; Hill et al., 2007). Thus, it might be that conflicts with parents are simply more common than conflicts with peers to whom adolescents strive to relate.

The results reveal that both peer and parent relationships remain important for the development of personality pathology in adolescence, providing unique and significant contexts with different implications in the process of personality development (McLean & Jennings, 2012; Stern et al., 2021).

Even though our risk profile is not a unique one, nor the final, our results (Study II and Study IV) might suggest that an adolescent who would

demonstrate a risk of deviating from the normative trajectory of personality development would be: 1) one with a difficult temperament, 2) having comorbid states, 3) experiencing peer victimization, 4) endorsing low or overly high levels of closeness with peers, 5) and engaging in relationships with parents that are high in discord and low in closeness.

To conclude, the analysis of the factors that are significant for the development of a PD reveals that a large number of related factors are not specific, nor unique. This highlights the concept of multifinality, which reveals that the same risk factors might be associated with different outcomes in the development (Cicchetti & Rogosch, 1996). However, our results at least partly tap into the problem of the developmental timing of the risk factors (Stepp et al., 2016). In our studies (Study II and IV), the risk factors were assessed at the same developmental stage as the outcome, providing insights into which factors are more specific and increase the risk of personality pathology in adolescence. Moreover, this thesis provided empirical evidence on the link between BPD and LPF and discussed the issue of risk factors by considering aspects of both theoretical approaches to PDs. Therefore, the use of the dimensional constructs of personality pathology in our studies allowed us to identify factors that pose a higher risk for impairments in the development of self and interpersonal functioning, rather than a behavioral manifestation of PD symptoms. The results suggest a broader understanding of the risk factors for personality pathology, including factors that represent a continuum from normative to pathological experiences. Last, for future directions of analyses, I, therefore, think that the identification of the positive aspects or protective factors for PDs might help to form the full view of the development of PD since from a developmental perspective, disturbed behavior is constructed through the cumulative interaction of risk and protective factors operating over time (Carlson et al., 2009), not only the identification of risk factors for psychopathology.

4.3. Methodological considerations and limitations

Several methodological questions must be taken into account while considering the generalizability of our results. We included different samples ranging from 379 to 855 adolescents from different areas in Lithuania covering the whole adolescent age span. However, non-probabilistic sampling methods were used in forming the study samples with the majority of participants living in urban areas in Lithuania (61.8% – 79.7%). The percentage of parents that responded to our invitation and returned the written

consent was higher in rural areas and small cities (60 – 90%) than in big towns (around 50%). This limits the representativeness of our findings. Research ethics did not allow us to gather information about the families who rejected to participate in our study and there is a risk that the most vulnerable adolescents were not included in our studies. In all studies, females formed a bigger part of our samples (55.9% – 62.5%), which also might have an impact on the generalizability of the results.

The results in this thesis are based on self-report measures, which were used to evaluate the main constructs. Most of the previous relevant research on personality pathology was conducted outside Europe and thus, existing reliable self-report instruments are mostly based on DSM classification. To date, there are no measures designed for use in adolescent samples based on the ICD-11 conceptualization of a PD. However, the conceptualizations of a PD in DSM-5 AMPD and ICD-11 share more similarities than differences and current evidence suggests that the measures originally developed for DSM-5 Criterion A can validly be used to classify the severity of a personality disorder in the ICD-11 (Gamache et al., 2021). This implies that for this study validated and standardized measure *Levels of Personality Functioning Questionnaire* (Goth et al., 2018) can be used in investigating personality pathology in adolescence and results can be discussed from a standpoint of both diagnostic systems.

Another consideration associated with using self-report measures is the sensitivity to capture difficulties in the personality domain. Questionnaires capture the subjective experience of adolescents, which is strongly dependent on the participant‘s cognitive, emotional capabilities, and attitudes toward the research. The used measures were designed for use in the adolescent samples, which helped to ensure that the questions were developmentally appropriate and understandable for most of the participants. This limitation could also be addressed by gathering data from multiple sources of information (e.g. parents, friends) or obtaining data through qualitative methods (e.g. semi-structured clinical interviews), which would provide additional valuable information.

The empirical studies were cross-sectional, which did not allow us to make causal inferences. The developmental implications were done by comparing different age groups, which limits the possibility to understand the mechanisms of change in the constructs of interest. The currently ongoing longitudinal study on personality functioning with a large adolescent sample will open up the possibility to explore the changes in personality functioning throughout adolescence.

Another issue to consider is that part of the second and third studies was conducted during the quarantine and the lockdown due to the Covid-19 pandemic. According to the World Health Organization (2022), increased levels of psychological problems might be seen during and after the pandemic, which might have increased the subjective ratings of adolescents‘ difficulties when compared to our first empirical study.

4.4. Future research directions and practical implications

Finally, general avenues for further research should be considered. Future research directions should be allocated to continuous efforts to assess adolescent personality problems and related factors throughout this developmental period. This could be attained by forming longitudinal adolescent samples, which would allow making more determined inferences about the precursors and consequences of personality pathology as well as the identification of potential protective factors. This would as well open up the possibility to assess the developmental trajectory of a personality disorder during adolescence.

Having in mind the lack of research on personality functioning in adolescence, the primary objective could be to describe the course and trajectories of personality functioning in adolescence. Also, it would be important to understand the risk factors that predict the dynamics in personality functioning over time (Barkauskiene et al., 2021). This knowledge could help to frame a more certain picture of adolescents at risk for personality pathology. The results should be compared in different populations and settings, including the clinical setting to better understand the common and distinctive features of personality pathology in adolescence.

Another research direction that is currently being followed internationally is associated with the methodology and instruments of the studies. An empirical investigation of the structure of the Lithuanian version of LoPF-Q 12-18 is needed, which would allow a better understanding of the structure of personality pathology in adolescence. Also, the exploration of overlap and distinctions of both criteria in the dimensional model – personality functioning and pathological personality traits – would be significant.

In the Lithuanian research context, studies on personality pathology in adolescence is a novel and previously understudied theme. This thesis is based on the research conducted at the Developmental Psychopathology Research Centre at Vilnius University. Studies presented in this dissertation can be considered the first systematic and comprehensive research in the field of risk

for adolescent personality disorder in Lithuania. The conducted research provides empirically based knowledge that can help address the needs of adolescent healthcare services in Lithuania and is in line with the contemporary discourse on personality disorders worldwide.

From a clinical standpoint, in several years, the ICD-11 classification will be adapted for use in Lithuania. This adaptation will force both researchers and clinicians to switch to the new concept of personality disorder and will uncover the necessity for valid instruments for personality assessment. As stated previously, *The Levels of Personality Functioning Questionnaire* (Goth et al., 2018) can be offered for use in clinical practice in Lithuania as a first step or as a screening measure in assessing the severity of personality pathology. Further steps should be taken to formulate the full algorithm for the assessment of personality disorder in Lithuania and the main research direction would be to adapt the interview-based method as a second step of the psychological assessment. One of the instruments currently available for application in the adolescent population is the *Semi-structured Interview for Personality Functioning DSM-5* (STiP 5.1) (Hutsebaut et al., 2014). Having a full diagnostic algorithm for assessing a personality disorder in adolescence would bring the Lithuanian clinical practice closer to the scientifically-based evidence and measures and, hopefully, would be useful in improving the accuracy of early recognition of impairments in personality functioning in adolescence.

CONCLUSIONS

1. One in five adolescents in the community sample reported significantly high levels of borderline personality disorder symptoms. These adolescents differed from their peers by higher psychosocial impairments, namely social problems, lower academic achievement, health concerns, and lower life satisfaction.
2. Systematic literature analysis revealed a set of risk factors for the course of borderline personality disorder symptoms in adolescence. The deteriorating trajectory was associated with adolescent temperament, comorbid psychopathology, and negative experiences in peer relationships. Peer relationships emerged as an important and previously understudied risk factor that taps into the problem of developmental timing of risk.
3. Borderline personality disorder features and the level of personality functioning were strongly interrelated. The level of personality functioning added additional value in explaining adolescent borderline personality disorder features, beyond maladaptive personality traits and general psychopathology.
4. Exposure to interpersonal risk factors – discord and low levels of closeness in current peer and parent relationships – was related to impairments in personality functioning. Excessively high levels of closeness with peers had the strongest association with a lower level of personality functioning among the oldest adolescents. The risk for adolescent personality disorder should be considered in the context of factors that correspond to the developmental milestones of adolescence.

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SUMMARY IN LITHUANIAN

ASMENYBĖS SUTRIKIMO RIZIKA PAAUGLYSTĖJE: CHARAKTERISTIKOS IR RIZIKOS VEIKSNIAI BESIKEIČIANČIOJE ASMENYBĖS SUTRIKIMO APIBRĖŽTYJE

ĮVADAS

Pastarąjį dešimtmetį vyko esminiai asmenybės sutrikimo (AS) sampratos pokyčiai ir šiai dienai tarptautinėse klasifikacijose egzistuoja du diagnostiniai AS modeliai – kategorinis ir dimensinis. Kategorinė AS samprata, grindžiama į elgesio simptomus orientuotu AS įvertinimu, susilaukė mokslininkų kritikos ir ilgų mokslinių diskusijų rezultatu tapo DSM-5 pristatytas, o vėliau ir TLK-11 integruotas dimensinis asmenybės sutrikimo modelis (American Psychiatric Association, 2013; World Health Organization, 2018). Dimensiniame AS modelyje svarbiausiais tampa du aspektai: pirmajame žingsnyje vertinamas *asmenybės funkcionavimo lygis* (DSM-5) arba *sutrikimo sunkumas* (TLK-11) savasties (tapatumas ir apsisprendimas) ir tarpasmeniniame (empatija ir artimumas) matmenyse, o antrajame – *neadaptyvūs* arba *patologiniai asmenybės bruožai*. Remiantis šiuo modeliu, pirmuoju ir pagrindiniu AS kriterijumi tampa *asmenybės funkcionavimo lygio* arba *sutrikimo sunkumo* įvertinimas, kur dėmesys skiriamas intrapsichiniam asmens patyrimui (American Psychiatric Association, 2013; World Health Organization, 2018). Visgi, DSM-5 išlieka galimybė svarstyti apie atskirus AS tipus, tuo tarpu TLK-11 paliekamas tik ribinis tipas. Dauguma atliktų empirinių tyrimų paremti kategorine AS samprata, tačiau naujausiose diagnostinėse klasifikacijose pristatytas dimensinis AS modelis sukuria poreikį tyrimams, kuriuose siekiama palyginti ir integruoti duomenis atspindinčius abu požiūrius bei suprasti šių konstruktų sąsajas.

Dimensinis AS modelis atkreipia dėmesį į kontinuumą nuo sveikos iki sutrikusios asmenybės raidos ir glaudžiai siejasi su raidos psichopatologijos požiūriu, jog patologija – tai nuokrypis nuo normatyvinės raidos viso gyvenimo perspektyvoje (Cicchetti, 2006). Naujausi empiriniai tyrimai atskleidžia, jog paauglystė yra laikotarpis, kuomet asmenybės sutrikimas gali būti validžiai įvertintas (Chanen & Kaess, 2012; Sharp & Fonagy, 2015) ir turi ilgalaikes neigiamas pasekmes paauglio raidai (Hessels et al., 2022; Thompson et al., 2019; Wright et al., 2015). Šie tyrimų rezultatai skatina svarstyti apie potencialius rizikos veiksnius, susijusius su AS raida paauglystėje. Dauguma atliktų tyrimų, nagrinėjančių AS problematiką paauglystėje, skirti *ribinio asmenybės sutrikimo* (RAS) analizei. Moksliniuose

tyrimuose analizuojami etiologiniai RAS veiksniai apima platų individualių ir aplinkos veiksnių spektrą: temperamentas, asmenybės bruožai, neigiamos vaikystės patirtys, tėvystės praktikos, tėvų psichopatologija ir kt. (Carlson et al., 2009; Stepp et al., 2016; Zanarini et al., 1997). Šie rezultatai atskleidžia panašią RAS etiologiją paauglių ir suaugusiųjų imtyse (Carlson et al., 2009). Stepp et al. (2016) iškėlė problemą, jog rizikos veiksnių tyrinėjimai dažnai neapima paauglio raidos konteksto, o anksčiau identifikuoti rizikos veiksniai gali būti nespecifiniai paauglystės raidos etapui. Mokslininkai taip pat diskutuoja apie veiksnių, susijusių su AS raidos trajektorijomis, supratimo svarbą siekiant geriau suprasti, kaip AS rizika formuojasi paauglystėje (Chanen et al., 2017). Naujasis dimensinis AS modelis suteikia galimybę pažvelgti į rizikos veiksnius, kurie jautriau atliepia paauglystės raidos uždavinius. Atsižvelgiant į paauglio raidos kontekstą, vienas iš mažai tyrinėtų ir empiriškai nepakankamai pagrįstų potencialių AS rizikos veiksnių – tai santykiai su bendraamžiais.

Disertacijos mokslinis naujumas

Daktaro disertacijoje pristatomi dviejų Lietuvoje 2018–2022 metais vykdytų tyrimų rezultatai, kurie atlikti Vilniaus universiteto Psichologijos instituto Raidos psichopatologijos tyrimų centre. Šios disertacijos mokslinis naujumas yra daugialypis. Pirma, atlikti tyrimai yra vienas pirmųjų sistemingų bandymų Lietuvoje tyrinėti ir analizuoti AS problematiką paauglystėje. Antra, disertacija parengta tebevykstančių AS sampratos pokyčių kontekste ir joje apžvelgiami ir gretinami aspektai, atspindintys du požiūrius į AS – kategorinį ir dimensinį. Tarptautinių mokslinių tyrimų kontekste ypač trūksta duomenų apie šių požiūrių sąsajas paauglių imtyse. Trečia, šiame darbe diskutuojama apie rizikos veiksnių paauglystėje tyrinėjimo kompleksiškumą, mėginant atliepti du svarbius ir mažiau analizuotus tyrimų aspektus – rizikos veiksnių, susijusių su AS raidos trajektorija identifikavimą bei paauglystės raidos uždavinius atliepiančių rizikos veiksnių supratimą.

Disertacijos pagrindą sudaro trys empiriniai tyrimai ir viena sisteminė literatūros apžvalga.

Mokslinės publikacijos, kurių pagrindu parengta disertacija

1. Barkauskienė, R., **Skabeikytė, G.** & Gervinskaitė-Paulaitienė, L. (2020). The Role of Borderline Personality Symptoms for Psychosocial and Health Related Functioning among Adolescents in a Community Sample. *Child & Youth Care Forum*, 50, 437-452. https://doi.org/10.1007/s10566-020-09581-2

2. **Skabeikyte, G.** & Barkauskiene, R. (2021). A systematic review of the factors associated with the course of borderline personality disorder symptoms in adolescence. *Borderline Personality Disorder and Emotion Dysregulation*, 8*(12)*, 1-11. https://doi.org/10.1186/s40479-021-00151-z
3. Barkauskienė, R., Gaudiešiūtė, E., Adler, A., Gervinskaitė-Paulaitienė, L., Laurinavičius, A. & **Skabeikytė-Norkienė, G.** (2022). Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents. *Frontiers in Psychiatry*, 13, 1-9. https://doi.org/10.3389/fpsyt.2022.828301
4. **Skabeikyte-Norkiene, G.**, Sharp, C., Kulesz, P. A., & Barkauskiene, R. (2022). Personality pathology in adolescence: relationship quality with parents and peers as predictors of the level of personality functioning. *Borderline Personality Disorder and Emotion Dysregulation*, 9*(31)*, 1-11. https://doi.org/10.1186/s40479-022-00202-z

Disertacijos tikslai ir tyrimo klausimai

Šios daktaro disertacijos tikslas – tyrinėti paauglių, turinčių asmenybės sutrikimo riziką, ypatumus ir identifikuoti asmenybės patologijos rizikos veiksnius paauglystėje, atsižvelgiant į asmenybės sutrikimo sampratos kaitos (nuo kategorinio link dimensinio asmenybės sutrikimo modelio) kontekstą.

Siekiant šio tikslo iškelti keturi tyrimo klausimai:

1. Kokiomis ypatybėmis pasižymi paaugliai, kurie nurodo patiriantys aukštus ribinio asmenybės sutrikimo simptomų lygius?
2. Kokie rizikos veiksniai yra susiję su paauglių ribinio asmenybės sutrikimo simptomų raidos trajektorijos kaita ar stabilumu?
3. Koks yra ryšys tarp ribinio asmenybės sutrikimo bruožų ir asmenybės funkcionavimo lygio paauglystėje, atsižvelgiant į asmenybės patologijos apibrėžties pokyčius?
4. Koks yra dabartinio paauglių tarpasmeninio konteksto – santykių kokybės su bendraamžiais ir tėvais – vaidmuo aiškinant asmenybės funkcionavimo lygį? Ar šis ryšys kinta su amžiumi?

METODIKA

Daktaro disertacijoje analizuotiems empiriniams tyrimams atlikti buvo gauti Vilniaus universiteto Psichologinių tyrimų etikos komiteto leidimai. Disertacijos autorė reikšmingai prisidėjo planuojant ir įgyvendinant tyrimus.

Tyrimo dalyviai ir procedūra

Disertacijoje analizuotus tyrimus sudarė trys paauglių imtys. 1) Pirmąją imtį sudarė 11–17 m. paaugliai (N = 379; M = 14,69; SD = 1,74; 55,9% merginos), besimokantys šešiose miesto (79,7%) ir kaimo (19,3%) mokyklose Lietuvoje. Šios imties duomenys analizuojami pirmoje publikacijoje (Publikacija I). 2) Antroji imtis yra dalis šiuo metu vykstančio longitudinio tyrimo apie asmenybės patologiją paauglystėje. Dalyviai buvo 568 paaugliai nuo 11 iki 17 m. amžiaus (M = 14,38; SD = 1,57; 57,6% merginos). Tyrimo imtis sudaryta iš bendrosios populiacijos paauglių (N = 502; 59,4% merginos), psichiatrijos paslaugas gaunančių paauglių (N = 41; 70,7% merginos) bei paauglių, patekusių į teisėsaugos sistemą dėl delinkventiško elgesio (N = 25; 100% vaikinai). Imties duomenys analizuojami trečioje publikacijoje (Publikacija III). 3) Trečioji tyrimo imtis yra antrosios imties tęsinys ir sudaro pirmąjį tebevykstančio longitudinio tyrimo etapą. Pilną imtį sudaro 855 bendrosios populiacijos paaugliai nuo 11 iki 18 metų (M = 14,44; SD = 1,60; 62,5% merginos), besimokantys skirtingų Lietuvos regionų didmiesčiuose (37,2%), miestuose (40,9%) ir kaimuose (21,9%). Imties duomenys analizuojami ketvirtoje publikacijoje (Publikacija IV).

Tyrimų procedūra organizuota vadovaujantis tyrimų etikos principais. Tyrimuose dalyvavo tik tie paaugliai, kurių bent vienas iš tėvų pasirašė informuotą sutikimą dėl vaiko dalyvavimo tyrime. Dalyvavimas tyrime buvo savanoriškas ir mokiniai buvo informuoti apie galimybę pasitraukti iš tyrimo bet kuriame jo etape. Tyrimas vykdytas popieriaus-pieštuko metodu mažose grupelėse mokyklose arba individualiai klinikinėje grupėje. Tyrėjų komandą sudarė patyrę tyrimo vykdytojai ir tyrimo administravimo mokymuose sudalyvavę tyrimų grupės studentai. Tyrimo dalyvių konfidencialumas buvo užtikrintas iš anksto tiriamiesiems priskiriant identifikacinius kodus. Sudalyvavę tyrime paaugliai gavo informacines skrajutes apie psichologinės pagalbos galimybes.

Tyrimo instrumentai ir duomenų analizė

Empiriniuose tyrimuose naudoti instrumentai apima keturias paauglių funkcionavimo sritis.

1) *Asmenybės patologija.* Paauglių asmenybės funkcionavimo įvertinimui naudota Asmenybės funkcionavimo lygių klausimyno (LoPF-Q 12-18, *angl.* Levels of Personality Functioning Questionnaire) (Goth et al., 2018) lietuviškoji versija, parengta Raidos psichopatologijos tyrimų centre (Barkauskiene & Skabeikyte, 2020). Neadaptyvių asmenybės bruožų vertinimui naudota DSM-5 Asmenybės inventoriaus trumpoji versija (PID-5-BF, *angl.* Personality Inventory for DSM-5-brief form) (American Psychiatric Association, 2013). Ribinės asmenybės klausimynas (BPQ, *angl.* Borderline Personality Questionnaire) (Poreh et al., 2006) ir Ribinių bruožų skalė vaikams (BPFSC-11, *angl.* Borderline Personality Features Scale for Children-11) (Sharp et al., 2014) buvo naudoti siekiant įvertinti ribinio asmenybės sutrikimo *simptomus* arba *bruožus*. 2) *Bendroji psichopatologija* vertinta naudojant Jaunuolio savęs vertinimo lapo (YSR 11/18, *angl.* Youth Self-Report) (Achenbach & Rescorla, 2001) lietuviškąją versiją (Žukauskienė et al., 2012). 3) Santykių kokybė, kaip *rizikos veiksnys*, vertinta naudojant Santykių tinklo klausimyną-Santykių kokybės versiją (NRI-RQV, *angl.* Network of Relationships Questionnaire-Relationship Qualities Version) (Furman & Buhrmester, 1985). 4) *Psichosocialinis funkcionavimas.* Akademinis funkcionavimas vertintas tyrėjų sudarytais klausimynais: *motyvacija* vertinta Akademinės motyvacijos skale, o *pasiekimai* – užduodant klausimą „Kokius pažymius tu dažniausiai gauni?“. Socialinis ir su sveikata susijęs funkcionavimas vertintas naudojant anksčiau minėtą Jaunuolio savęs vertinimo lapą. Vertinant socialines problemas išskyrėme *socialinių problemų* skalę bei vertinome atsakymus į klausimą „Kiek artimų draugų tu turi?“. Su sveikata susijęs funkcionavimas vertintas *susirūpinimo sveikata* skale bei DSM orientuota *somatinių skundų* skale. Pasitenkinimas gyvenimu vertintas naudojant Pasitenkinimo gyvenimu skalę (SWLS, *angl.* Satisfaction with Life Scale) (Diener et al., 1985).

Tyrimo duomenų analizei naudota aprašomoji statistika, koreliacijos, ANOVA, hierarchinė regresija, tiesinė regresija su fiksuotais prediktoriais, klasterinė analizė, moderacinė analizė.

Sisteminė literatūros apžvalga atlikta remiantis PRISMA rekomendacijomis.

REZULTATAI

Ribinio asmenybės sutrikimo simptomų sąsajos su paauglių psichosocialiniu funkcionavimu (Publikacija I)

Klasterinės analizės rezultatai atskleidė, jog bendrojoje populiacijoje paauglių ribinio asmenybės sutrikimo simptomų išreikštumas pasiskirsto kontinuume nuo žemo iki aukšto simptomų lygio. Paaugliai pagal nurodomus simptomus pasiskirstė į tris klasterius: patiriantys *aukštą* simptomų lygį (n = 68; 79% merginos), *vidutinį* simptomų lygį (n = 93; 64% merginos) ir *žemą* simptomų lygį (n = 184; 46% merginos). Duomenys parodo, jog 19,71% paauglių subjektyviai patiria ženkliai išreikštą RAS simptomų lygį.

Siekiant suprasti, kaip patiriamų RAS simptomų lygis siejosi su skirtingais paaugliams aktualiais psichosocialinio funkcionavimo aspektais, vertinti keli hierarchinės regresijos modeliai. Rezultatai atskleidė, kad kontroliuojant lyties ir bendrosios psichopatologijos efektus, RAS simptomai siejosi su didesniais psichosocialinio funkcionavimo sutrikdymais paauglystėje. Paaugliai, turintys aukščiausius RAS simptomų lygius, išsiskyrė iš kitų bendraamžių didesniu kiekiu *socialinių problemų, prastesniais akademiniais pasiekimais*, turėjo daugiau *su sveikata susijusių problemų* (miego, valgymo problemos, energijos stoka) bei pasižymėjo *mažesniu pasitenkinimu gyvenimu*.

Ribinio asmenybės sutrikimo simptomų raidos trajektoriją prognozuojantys rizikos veiksniai (Publikacija II)

Atlikus kokybinę straipsnių analizę buvo išskirtos keturios rizikos veiksnių grupės, kurios siejosi su RAS simptomų trajektorija paauglystėje.

1) *Vaiko charakteristikos.* Eksternalūs sunkumai vaikystėje, vaikystės temperamentas, prasta savikontrolė, ir komorbidiškumas paauglystėje (psichoaktyvių medžiagų vartojimas, depresija, aktyvumo ir dėmesio sutrikimo simptomai, somatizacija) buvo susiję su RAS simptomų pokyčiais paauglystėje. Keičiantis komorbidinėms būklėms, pastebėti pokyčiai ir RAS simptomų trajektorijoje.
2) *Tarpasmeniniai veiksniai.* Bendraamžių viktimizacijos patyrimas (santykių, psichologinis, seksualinis smurtas, priešiškas elgesys) draugystėse ir romantiniuose santykiuose siejosi su RAS simptomų didėjančia trajektorija. Pernelyg didelis pasikliovimas romantiniu partneriu siekiant paramos buvo susijęs su RAS simptomų didėjimu merginoms.

3) *Tėvų psichopatologija.* Tyrimai nepatvirtino reikšmingo ryšio tarp tėvų psichopatologijos (tėvų depresijos ir motinos RAS simptomų) bei RAS simptomų raidos trajektorijų paauglystėje.
4) *Tėvystės veiksniai.* Vienintelis RAS simptomų raidos trajektorijai reikšmingas veiksnys buvo vaiko susidūrimas su tėvų tarpusavio smurtu artimuose romantiniuose santykiuose. Kiti su tėvyste susiję veiksniai (šiluma santykiuose, bausmės, patirčių validacija ir kt.) analizuotuose tyrimuose nebuvo reikšmingi rizikos veiksniai.

Ribinio asmenybės sutrikimo bruožų ir asmenybės funkcionavimo lygio sąsajos (Publikacija III)

Tyrimo rezultatai atskleidė stiprią sąsają tarp RAS bruožų bei asmenybės funkcionavimo lygio ir neadaptyvių asmenybės bruožų įverčių. Aukštesni asmenybės funkcionavimo lygio sutrikdymai bei didesnis neadaptyvių asmenybės bruožų išreikštumas reikšmingai siejosi su aukštesniais RAS bruožų lygiais.

Hierarchinės regresijos modeliai buvo testuojami siekiant įvertinti, ar asmenybės funkcionavimas turi unikalią sąsają su RAS bruožais, nepriklausomai nuo lyties, bendrosios psichopatologijos ir neadaptyvių asmenybės bruožų. Rezultatai parodė, jog *neadaptyvūs asmenybės bruožai* papildomai paaiškino 25,6% RAS bruožų sklaidos. Galutinis regresijos modelis atskleidė, jog *asmenybės funkcionavimo lygis* papildomai pridėjo dar 4,2% aiškinamosios vertės RAS bruožų sklaidoje. Rezultatai nurodo, jog asmenybės funkcionavimo lygis *turi unikalios pridėtinės vertės* paaiškinant paauglių RAS bruožus, nepriklausomai nuo bendrosios psichopatologijos ir neadaptyvių asmenybės bruožų.

Santykių kokybės su bendraamžiais ir tėvais sąsajos su asmenybės funkcionavimo lygiu paauglystėje (Publikacija IV)

Tyrime analizuoti neigiami (*nesutarimai*) ir teigiami (*artumas*) santykių su bendraamžiais ir tėvais aspektai. Atliekant regresines analizes buvo kontroliuotas amžiaus (ir amžiaus moderacinio efekto), lyties ir bendrosios psichopatologijos efektai. Vertinant neigiamų santykių aspektų svarbą nustatyta, jog *nesutarimai santykiuose su tėvais*, bet ne bendraamžiais buvo reikšmingas veiksnys, susijęs su prastesniu asmenybės funkcionavimu.

Vertinant teigiamus santykių aspektus nustatyta, jog *artumo stoka santykiuose su tėvais* buvo susijusi su prastesniu asmenybės funkcionavimu, nepriklausomai nuo paauglio amžiaus. Santykiuose su bendraamžiais tiek labai *žemas*, tiek pernelyg *aukštas suvoktas artumo lygis* buvo susijęs su

prastesniu asmenybės funkcionavimu. Duomenys atskleidžia, jog šioje sąveikoje *amžius* buvo statistiškai reikšmingas moderatorius ir stipriausias ryšys tarp artumo su bendraamžiais ir asmenybės funkcionavimo lygio stebėtas vyriausių paauglių grupėje.

IŠVADOS

1. Vienas iš penkių populiacijos imties paauglių nurodė patiriantis labai aukštą ribinio asmenybės sutrikimo simptomų lygį. Šie paaugliai nuo savo bendraamžių skyrėsi didesniais psichosocialiniais sunkumais, t.y. socialinėmis problemomis, prastesniais akademiniais pasiekimais, sveikatos problemomis ir mažesniu pasitenkinimu gyvenimu.
2. Sisteminėje literatūros apžvalgoje identifikuotos grupės rizikos veiksnių, susijusių su ribinio asmenybės sutrikimo simptomų raidos trajektorija paauglystėje. Prastėjanti raidos trajektorija buvo susijusi su paauglių temperamentu, gretutine psichopatologija ir neigiamomis patirtimis santykiuose su bendraamžiais. Santykiai su bendraamžiais atsiskleidė kaip svarbus ir iki šiol nepakankamai tyrinėtas rizikos veiksnys, atliepiantis paauglio raidos kontekstą.
3. Ribinio asmenybės sutrikimo bruožai ir asmenybės funkcionavimo lygis buvo glaudžiai tarpusavyje susiję. Asmenybės funkcionavimo lygis įnešė papildomos aiškinamosios vertės suprantant paauglių ribinio asmenybės sutrikimo bruožus, nepriklausomai nuo neadaptyvių asmenybės bruožų ir bendrosios psichopatologijos.
4. Tarpasmeniniai rizikos veiksniai – nesutarimai ir žemas artumo lygis santykiuose su bendraamžiais ir tėvais – buvo susiję su prastesniu asmenybės funkcionavimo lygiu. Pernelyg aukštas artumo su bendraamžiais lygis stipriausiai siejosi su prastesniu asmenybės funkcionavimu vyriausių paauglių grupėje. Asmenybės sutrikimo rizika turėtų būti vertinama atsižvelgiant į veiksnius, atliepiančius paauglystės raidos uždavinius.

PUBLISHED PAPERS

I.

The Role of Borderline Personality Symptoms for Psychosocial and Health Related Functioning among Adolescents in a Community Sample

Barkauskienė, R., Skabeikytė, G. & Gervinskaitė-Paulaitienė, L. (2020). The Role of Borderline Personality Symptoms for Psychosocial and Health Related Functioning among Adolescents in a Community Sample. *Child & Youth Care Forum*, 50, 437-452. https://doi.org/10.1007/s10566-020-09581-2

Child & Youth Care Forum
https://doi.org/10.1007/s10566-020-09581-2

ORIGINAL PAPER

The Role of Borderline Personality Symptoms for Psychosocial and Health Related Functioning among Adolescents in a Community Sample

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Accepted: 6 October 2020

Abstract

Background Borderline personality symptoms include emotional dysregulation, high levels of impulsivity leading to self-harm and suicidality, an unstable sense of self, fears of abandonment, extremely turbulent relationships, and psychic pain. They are considered to disrupt normative adolescent development however their unique contribution to different domains of functioning is important to understand among community adolescents.

Objective This study aimed to analyze the specificity of the relationship between borderline personality symptoms and psychosocial and health-related functioning during adolescence in a community sample.

Method A community sample consisted of 379 adolescents aged 11–18. Borderline personality questionnaire, Youth self-report, Satisfaction with life scale, questions addressing academic performance, and social relationships were used to assess the different domains of functioning.

Results Data from the present study revealed that there is a substantial part of adolescents from a community sample (19.71%) who endorse significant levels of borderline personality symptoms. Adolescents from this group as compared to peers face more difficulties in all spheres of functioning. Furthermore, borderline personality symptoms uniquely predicted social problems, academic achievement, health concerns, and life satisfaction of adolescents above and beyond internalizing and externalizing difficulties.

Conclusion Higher levels of borderline personality symptoms were associated with poorer psychosocial and health-related functioning among adolescents at the community level. Considering that adolescence is a sensitive period for the development of personality disorder, findings of this study add up to the empirical evidence that borderline personality pathology should be integrated as a target for prevention and early intervention.

Keywords Borderline personality symptoms · Adolescence · Psychosocial functioning · Health related functioning

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Published online: 15 October 2020

Introduction

The role of borderline personality symptoms for psychosocial and health related functioning among adolescents in a community sample Adolescence is the stage in which a multitude of changes and challenges in different domains, including self and identity, cognitive maturity, and interpersonal functioning, takes place, and together with the accompanying stressors affects adjustment (Shulman and Scharf 2018). Besides, earlier psychological problems continue (Whelan et al. 2013), and new problems such as personality disorders appear for the first time during adolescence (Chanen and Thompson 2019). Adolescence is considered to be a sensitive developmental period for the onset of personality pathology (Sharp et al. 2018). Sharp (2020) argues that "personality disorder ensues when an integrated and coherent sense of self fails to develop, resulting in non-fulfillment of adult role function" (p. 5). Although the majority of adolescents are emotionally, socially, and cognitively prepared for the developmental task of integrating knowledge and experience about themselves and others into a coherent whole (Chanen and Thompson 2019), for the part of them this process is characterized by incoherence, inconsistency, confusion, and distress, finally leading to the disturbing self-other function, impaired identity the dimensions central to borderline personality disorder (BPD) (Bogaerts et al. 2020; Schmeck et al. 2013).

Borderline personality disorder is considered to be one of the most debilitating mental health problems over the life course (Stepp 2012) which may emerge as early as the beginning of adolescence and manifest itself through symptoms like emotional dysregulation, high levels of impulsivity leading to self-harm and suicidality, an unstable sense of self, fears of abandonment, extremely turbulent relationships with the pervasiveness of psychic pain and desperation (American Psychiatric Association 2013). This constitutes a serious public health concern and BPD, when compared with other mental disorders, is among the leading causes of disability-adjusted life years (DALYs) in young people (Chanen et al. 2017; Lim et al 2016).

During the past 2 decades the array of studies convincingly showed that BPD symptoms emerge in early adolescence, peak in mid-adolescence, and continue into adulthood (Johnson et al. 2000; Videler et al. 2019). Empirical evidence confirms that BPD is a valid and reliable diagnosis in adolescence as it is in adulthood and is common among young people: the estimated prevalence is 1–3% in the community, rising to 11–22% in outpatients, and 33–49% in inpatients (Chanen et al. 2017). In population, borderline personality symptoms are assumed to be dimensionally distributed along a psychopathological severity continuum (Haltigan and Vaillancourt 2016; Johnson and Levy 2020; Koster et al. 2018). The development of BPD symptoms, their severity and stability are strongly predicted by and associated with other psychopathology throughout adolescence, namely, internalizing (i.e. anxiety, depression) and externalizing (i.e. oppositional defiance, aggression) problems (Fonagy et al. 2015; Hutsebaut and Aleva 2020). Regardless of shared risk factors such as child abuse and neglect, maladaptive parenting, and high comorbidity with other psychopathological problems (Winsper et al. 2016), BPD cannot be explained by these difficulties and represents an independent mental health problem (Eaton et al. 2011).

During adolescence, BPD symptoms not only preclude the consolidation of adaptive personality traits (Wright et al. 2010) but may interfere with developmental tasks as well as have effects on psychosocial functioning. For example, the study of high-risk urban girls suggested specific developmental associations of BPD with lower social skills, self-perception, and engaging in sexual activity thus indicating the threat of borderline symptoms for the key developmental tasks in peer relationships and identity (Wright et al. 2016).

Psychosocial functioning, according to Skodol (2018), refers to a person's ability to carry out roles and perform activities in daily life, including in social or interpersonal, school or work, recreational or leisure, and basic (i.e., self-care, communication, mobility) functional realms. Though psychosocial functioning is not fully understood concerning to personality disturbance (Wright et al. 2016), empirical studies with the samples of in(out)patients and high-risk adolescents revealed that such domains of psychosocial functioning as interpersonal functioning as well as academic achievements and overall quality of life were related to BPD symptoms both concurrently and prospectively (Kramer et al. 2017; Thompson et al. 2019; Zelkowitz et al. 2007). Also, health-related quality of life was recently reported to indicate a great burden in outpatient adolescents even with sub threshold levels of BPD symptoms (Kaess et al. 2017). However, the association between borderline personality symptoms and psychosocial functioning during adolescence is far less understood in general population samples. Given that mental disorders do not present fully formed in young people (Chanen et al. 2016), it is the community sample where the varied manifestations of evolving symptoms as well as their association with functioning can be detected. Most of the existing research in community samples analyzed distinct aspects of psychosocial functioning, e.g., life satisfaction (Koster et al. 2018), victimization (Vanwoerden et al. 2019), and physical health (Chen et al. 2009) as affected by borderline personality problems. The fact that adolescents' borderline symptoms predict an adverse functioning in several interrelated life domains 20 years later at the community level (Winograd et al. 2008) calls for analyzing a more comprehensive profile of current psychosocial functioning in adolescence. This would afford an important opportunity to better understand the specific vulnerabilities of adolescents with different severity of BPD symptoms for the current functioning in different domains during adolescence. Given the significant BPD co-variation with other mental health problems, such as externalizing and internalizing difficulties (Fonagy et al. 2015), delineation of the unique effects of borderline pathology is of utmost importance to understand which areas of functioning are specifically associated with borderline symptoms during this developmental period at the community level.

Against this background, the current study aims to examine how BPD symptoms constellate among community adolescents and to determine their association with a range of domains of psychosocial functioning across the entire adolescence period. Next, we investigate whether and how adolescents BPD symptoms, independently from internalizing and externalizing problems, predict difficulties in the different domains of functioning. Given the prior findings (Winograd et al. 2008; Wright et al. 2016), we hypothesized that BP symptoms would add a unique contribution to the psychosocial functioning beyond and above internalizing and externalizing difficulties.

Method

Participants

Participants were recruited from urban and rural schools (79.7 and 19.3% of the whole sample, respectively) in Lithuania. A total of 379 adolescents aged 11–18 years old (M = 14.69; SD = 1.74) participated in this study. The sample was 44.1% male (n = 167) and 55.9% female (n = 212). Sixty-nine point-one percent of participants of the whole sample were living in families with either biological or stepparents, 17.9% in divorced families, 7.2% were living in single-parent families and 1.3% were in foster care.

Procedure

The study was conducted in accordance with the Declaration of Helsinki. The study's protocol was approved by the Psychological Research Ethics Committee at Vilnius University (No. 14; date 7 December 2017). Invitations to participate in the study were distributed to adolescents and their parents via schools. Written informed consent was obtained from adolescents parents or legal guardians and oral informed assent was obtained from adolescents before the study. All respondents' participation was voluntary. Before the questionnaires were filled, all participants were assured that all given information will be treated confidentially, processed anonymously, and accessed only by the researchers of the project. The sample was recruited from different Lithuanian public schools (N = 6).

Measures

Borderline Personality Symptoms

Borderline personality symptoms were assessed using the Borderline Personality Questionnaire (BPQ) (Poreh et al. 2006). The BPQ is a true/false self-report scale composed of 80 items comprising 9 subscales corresponding to the nine DSM-IV BPD criteria. These are Impulsivity (9 items), Affective instability (10 items), Abandonment (10 items), Unstable relationships (8 items), Self-image (9 items), Suicide/Self-mutilation behavior (7 items), Emptiness (10 items), Intense anger (10 items), and Quasi-Psychotic states (7 items). The questionnaire was translated into Lithuanian by two independent translators, then the translated versions were compared and items were corrected to build the final version which was back-translated to English. The reliability of the Lithuanian translation of the BPQ was excellent for the total scale (Kuder-Richardson coefficient = 0.90). Internal consistency coefficients for the subscales ranged from 0.51 (Impulsivity) to 0.82 (Affective instability).

Internalizing and Externalizing Problems

Youth Self-Report (YSR/11–18) (Achenbach and Rescorla 2001) was used to measure internalizing and externalizing difficulties in adolescents. It contains 112 items that assess emotional and behavioral problems over the previous 6 months using 3-point scale responses (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true). The externalizing difficulties scale comprises the Rule-breaking and Aggressive behavior subscales. Internal consistency of this scale of the standardized Lithuanian version of the YSR/11–18 (Žukauskienė et al. 2012) is high (Cronbach alpha = 0.90. The composite of 2 subscales—Anxious/Depressed and Withdrawn/Depressed was used to measure Internalizing problems (Cronbach alpha of the composite = 0.92 in the current study).

Social Functioning

Two measures were used to assess functioning in the social domain: 1) Social problems scale (as a part of the YSR/11–18 (Achenbach and Rescorla 2001); with Cronbach alpha = 0.76) whose items describe problems and experiences in relationships with peers; 2) adolescents answered one question about the number of close friends they have ("How many close friends do you have?") by choosing one of the possible answers 'None', '1′, '2 or 3′, and '4 or more'.

Academic Functioning

Academic functioning included 2 measures. The first one was the Academic Motivation Scale (6 items) describing the perceived importance of academic achievements and academic motivation (e.g., 'It is important for me to be thought of as a good student by the other students"; 'Education is so important that it is worth it to put up with things I don't like', etc.). This measure is a part of the Social and Health Assessment (SAHA) (Ruchkin et al. 2004), developed by Weissberg et al. 1991 and modified by the SAHA Research Evaluation Team (Ruchkin, V., Vermeiren, R., Jones, S.M., Schwab-Stone, M.). The scale was translated into Lithuanian and its back-translation to English was discussed with the SAHA team. Items are rated on a 4-point Likert-type scale (1 = definitely not true; 2 = Mostly not true; 3 = Mostly true; 4 = Definitely True). Greater scores correspond to higher levels of perceived motivation. Cronbach's alpha for this measure in the present study was 0.71. The second measure achievement was reduced to 1 item 'What grades do you usually receive?' on a scale from 1 to 8. With possible answers forming 8 categories including options from "1–2″ to "9–10".

Health-Related Functioning

Health-related functioning was evaluated by using two measures from YSR/11–18 (Achenbach and Rescorla 2001). Eight items from this scale asking about health concerns (e.g., eating, sleep, fatigue) were selected and used to construct the Health concerns subscale. The internal consistency of this measure was satisfactory with Cronbach alpha in the current study = 0.69. Somatic complaints were assessed by the DSM-oriented Somatic Problems subscale which includes a set of somatization items. Internal consistency of this scale of the standardized Lithuanian version of the YSR/11–18 is considered to be a good Cronbach's alpha = 0.76.

Life Satisfaction

To index life satisfaction among adolescents, the Satisfaction with Life Scale (SWLS) (Diener et al. 1985) was used. It is a self-report instrument of 5 items answered on a 5-point Likert-type scale to assess global life satisfaction (e.g. "*I am satisfied with my life"*). In this study, we utilized a Lithuanian version of the SWLS already used in previous studies in Lithuania (Šilinskas and Žukauskienė 2004). Cronbach alpha for this measure in the present study was 0.78.

Statistical Analysis

Statistical Package for Social Sciences (SPSS) version 25 was used for statistical analyses. First, data were checked for normality. It was found that only BPD symptoms score, achievement, academic motivation, health concerns, and life satisfaction indices were distributed normally (with skewness and kurtosis between − 1 and 1) and the rest of the variables were not. Before testing study questions, we first examined associations between sex and age and key study variables intending of include as covariates these demographic variables significantly associated with dependent and independent variables at the

bivariate level. According to data distribution, to evaluate associations among variables Pearson or Spearman correlations were calculated when appropriate. Herewith, Student t or Mann–Whitney *U* tests were applied for group comparisons based on data distribution.

Second, a 2-Step Cluster Analysis (TCA) was used to identify groups of adolescents with similar BPD symptoms constellations. All BPQ subscales' scores were z-transformed and were used as input variables in the TCA. A one-way univariate analysis of variance (ANOVA) and Bonferroni or Tamhane post hoc tests were conducted to examine differences across the clusters on outcomes in psychosocial and health-related functioning.

Next, we conducted a hierarchical linear regression analysis to examine the predictive value of borderline personality symptoms on functioning by running separate models with dependent variables indicating different aspects of functioning. We applied hierarchical linear regression models entering predictors in 2 steps: at the first step, we controlled for the potential confounding effects of sex as well as externalizing and internalizing problems. In the second step, we added the overall score of borderline personality symptoms. The change of R^2 expresses the proportion of the variance in the dependent variable that is predictable from the independent variables at each step. As the internalizing and externalizing scores and some dependent variables had skewed distribution, regression parameters, and the respective 95% confidence intervals (CIs) were computed by bootstrapping.

All statistical tests were 2-sided; a p-value < 0.05 was considered significant.

Results

Table 1 shows descriptive data (means and standard deviations) for the variables of the study. Intergroup comparisons showed that girls reported a significantly higher level of BPD symptoms. They also had significantly more internalizing difficulties, social problems, health concerns, and somatic complaints. Boys reported significantly lower

Table 1 Descriptive statistics in whole sample and comparisons by sex

Variable	Range	Whole sample M (SD)	Boys M (SD)	Girls M (SD)	*t* or *U*	Cohen d
BP symptoms	0–63	24.35 (14.13)	19.72 (11.68)	27.75 (14.82)	−5.43***[a]	.59
Externalizing problems	0–45	13.44 (8.92)	12.82 (8.78)	13.91 (9.02)	19,101.50[b]	.31
Internalizing problems	0–40	10.91 (8.55)	8.72 (7.46)	12.58 (8.95)	20,898.00***[b]	.51
Health concerns	0–14	4.61 (3.21)	3.73 (2.78)	5.27 (3.35)	−4.62***[a]	.64
Somatic complaints	0–13	2.28 (2.61)	1.56 (2.35)	2.82 (2.67)	21,734.00***[b]	.62
Social problems	0–20	4.80 (4.10)	3.96 (3.68)	5.44 (4.29)	19,880.00***[b]	.37
Number of close friends	0–3	2.43 (0.72)	2.46 (0.72)	2.40 (0.72)	16,682.50[b]	.08
Academic motivation	10–24	18.25 (3.08)	17.96 (3.27)	18.48 (2.90)	−1.62[a]	.55
Achievement	2–8	5.97 (1.40)	5.76 (1.60)	6.13 (1.31)	−2.56*[a]	.57
Life satisfaction	2–20	12.46 (3.77)	13.22 (3.78)	11.88 (3.66)	3.40[a]	.60

Eta squared η^2 for Mann–Whitney U was transformed to Cohen d

*$p < .05$; ** $p < .01$; ***$p < .001$

[a]Student's *t*-test

[b]Mann–Whitney *U*

achievement and higher life satisfaction. There were no statistically significant differences associated with the attended school area (urban or rural).

Correlations among variables are presented in Table 2. Results showed that a higher level of BPD symptoms (as determined by BPQ) was significantly correlated with all measures of psychosocial and health-related functioning, except academic motivation. No statistically significant correlations were detected between age and borderline personality symptoms, externalizing, and internalizing problems. Based on this, age was not included as a covariate in further analyses.

To examine the patterns of BPD symptoms among adolescents, a TCA was carried out with BPQ scales as the criterion variables. The number of clusters was determined based on three criteria: (a) Schwarz's Bayesian information criterion (BIC) statistics—lower BIC is preferred for the better fit; (b) silhouette coefficient S, and (c) the number of cases in each cluster. The BIC indices showed that the fit of the 3-cluster solution (BIC = 1677.49) was better than those of the 2-cluster (BIC = 1694.29), and the four-cluster (BIC = 1688.01) solution. The 3-cluster solution had a silhouette coefficient S = 0.40 indicating a fair amount of separation and cohesion between data points. In the final cluster solution model, the first cluster was characterized by low (below average) symptoms on all BPQ subscales. It was labeled 'low borderline symptoms' (n = 184; 46% girls). The second cluster included higher levels of BPQ scores, and it was labeled as 'average borderline symptoms' (n = 93; 64% girls). The third cluster was characterized by high scores on all subscales of borderline personality symptoms and was labeled 'high borderline symptoms' (n = 68; 79% girls). Clusters' profiles on the criterion variables are presented in Fig. 1. Further BPQ scores' profiles were examined to determine whether clusters varied on psychosocial and health related functioning using ANOVA (see Table 3). The results of the ANOVA and subsequent post hoc tests determined that profiles significantly differed for all outcome variables.

Given that borderline personality pathology shares features of both externalizing and internalizing disturbances (Fonagy et al. 2015), hierarchical linear regressions were used to test the hypothesis that borderline personality symptoms would independently predict psychosocial and health-related functioning among adolescents. Therefore, externalizing and internalizing problems reported by participants were entered as covariates in the first step along with sex (sex was coded 1 = boys, 2 = girls). BPQ total score as an index of borderline personality symptoms was entered in the second step in the models with separate measures of functioning. The results are displayed in Table 4.

The results of these analyses indicated that after controlling for the effects of sex, externalizing and internalizing problems, BPQ total scores were associated with higher levels of social problems ($B = 0.05$, $p < 0.01$; 95% CI = 0.02, 0.08) and explained an additional 1.1% of the variance in severity of social problems. In the academic domain, when controlling for covariates, borderline personality symptoms independently predicted lower achievement ($B = -0.02$, $p < 0.05$; 95% CI = −0.04, 0.00). For health-related functioning, results demonstrated that after controlling for the effect of the above-mentioned variables, BPQ total score remained a significant predictor for the severity of health concerns ($B = 0.04$, $p < 0.01$; 95% CI = 0.02, 0.07). Finally, after the BPQ total score in the 2nd step of the model with life satisfaction as a dependent variable, the model explained 35.1% of the variance in life satisfaction. Here BPD symptoms explained an additional 2.8% of the variance in worsening of life satisfaction ($B = -0.08$, $p < 0.01$; 95% CI = −0.13, −0.03).

Table 2 Correlations among study variables in whole sample

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Age	–	−.00[a]	.08[b]	−.01 [b]	.06 [a]	−.02[a]	−.08[b]	−.13*,[b]	−.07 [a]	−.16**,[a]	−.14**,[a]
2. BP symptoms		–	.65**,[b]	.73**,[b]	.66**,[a]	.52**,[b]	.72**,[b]	−.19**,[b]	−.12*,[a]	−.22**,[a]	−.55**,[a]
3. Externalizing problems			–	.56**,[b]	.59**,[b]	.47**,[b]	.64**,[b]	−.13*,[b]	−.16*,[b]	−.29**,[b]	−.37**,[b]
4. Internalizing problems				–	.65**,[b]	.58**,[b]	.77**,[b]	−.14*,[b]	−.07**,[b]	−.17**,[b]	−.52**,[b]
5. Health concerns					–	.59**,[b]	.64**,[b]	−.04[b]	−.07[a]	−.12*,[a]	−.39**,[a]
6. Somatic complaints						–	.51**,[b]	−.08[b]	−.09[b]	−.08[b]	−.29**,[b]
7. Social problems							–	−.12*,[b]	−.14**,[b]	−.17**,[b]	−.42**,[b]
8. Number of close friends								–	.01,[b]	.18**,[b]	.23**,[b]
9. Achievement									–	.47**,[a]	.13*,[a]
10. Academic motivation										–	.36**,[a]
11. Life satisfaction											–

**Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed)

[a]Pearson correlation

[b]Spearman correlation

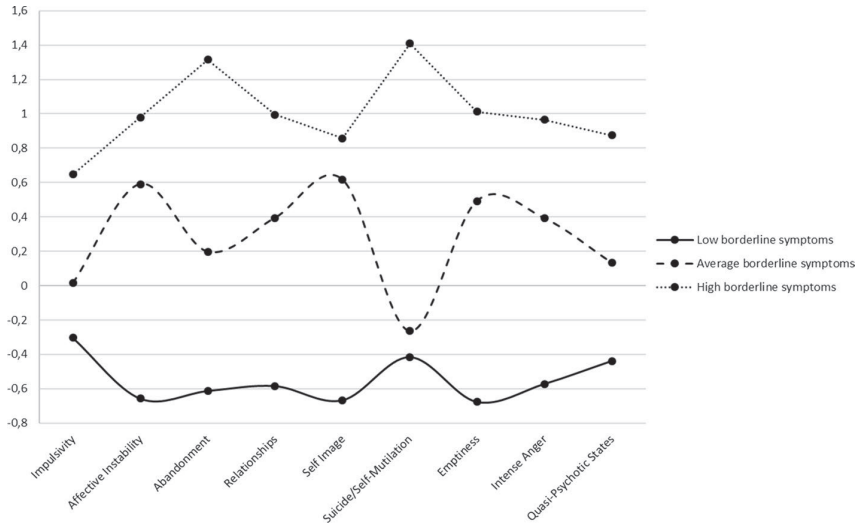

Fig. 1 Profiles of borderline personality symptoms based on cluster analysis. Profile plots based on the final solution obtained from the two step cluster analysis. Profile 1: low borderline symptoms. Profile 2: average borderline symptoms. Profile 3: high borderline symptoms

Table 3 Psychosocial and health-related functioning outcomes means (SD) for BP symptoms clusters

Variable	Low borderline symptoms[a] (n = 184)	Average borderline symptoms[b] (n = 93)	High borderline symptoms[c] (n = 68)	F	*Partial* η^2
Health concerns	3.10 (2.23)[bc]	5.20 (2.85)[ac]	8.01 (3.20)[ab]	84.20***	.34
Somatic complaints	1.21 (1.56)[bc]	2.60 (2.39)[ac]	4.74 (3.27)[ab]	61.21***	.27
Social problems	2.49 (2.18)[bc]	5.72 (3.40)[ac]	9.52 (4.50)[ab]	129.62***	.44
Number of close friends	2.53 (0.64)[c]	2.35 (0.78)	2.21 (0.82)[a]	5.55**	.03
Academic motivation	17.39 (2.90)[c]	16.92 (3.11)[c]	15.58 (3.65)[ac]	8.22**	.05
Achievement	6.17 (1.36)[c]	5.89 (1.51)	5.69 (1.33)[a]	3.32*	.02
Life satisfaction	13.98 (3.17)[bc]	11.74 (3.00)[ac]	9.41 (4.20)[ab]	47.34***	.22

[a,b,c] Significant outcome difference between cluster profiles

*$p < 0.05$; **$p < .01$; ***$p < .001$

Discussion

This study aimed to analyze the specificity of the relationship between borderline personality symptoms and academic, social, and health-related functioning among adolescents. We used a large community-based sample of adolescents from rural and urban areas covering a broad adolescence age span. Several important findings emerge from this study. First of all, the present study found that the symptoms of borderline personality disorder are distributed

Table 4 Hierarchical linear regression models

	Number of close friends				Social problems			
	R	R^2	*B (95% CI)*	*p*	*R*	R^2	*B (95% CI)*	*p*
Step 1	.21	.046		.001	.84	.708		.000
Sex			.04 (−.12, .21)	.577			.23 (−.25, .72)	.354
Externalizing problems			−.01 (−.02, .01)	.376			.16 (.12, .20)	.001
Internalizing problems			−.02 (−.03, −.00)	.017			.29 (.24, .33)	.001
Step 2	.22	.050		.002	.85	.719		.000
Borderline personality symptoms			−.01 (−.02, .00)	.223			.05 (.02, .08)	.006
	Academic motivation				Achievement			
	R	R^2	*B (95% CI)*	*p*	*R*	R^2	*B (95% CI)*	*p*
Step 1	.38	.146		.000	.22	.047		.001
Sex			1.22 (.54, 1.84)	.001			.40 (.10, .73)	.013
Externalizing problems			−.13 (−.17,−.07)	.001			−.03 (−.05,−.01)	.006
Internalizing problems			.00 (-.05, .05)	.924			.00 (−.02, .02)	.730
Step 2	.40	.157		.000	.24	.059		.000
Borderline personality symptoms			−.04 (−.09, .00)	.064			−.02 (−.04, .00)	.034
	Health concerns				Somatic complaints			
	R	R^2	*B (95% CI)*	*p*	*R*	R^2	*B (95% CI)*	*p*
Step 1	.75	.556		.000	.68	.455		.000
Sex			.57 (.91, 1.06)	.015			.64 (.22, 1.08)	.004
Externalizing problems			.13 (.09, .17)	.001			.07 (.04, .11)	.001
Internalizing problems			.19 (.15, .23)	.001			.14 (.11, .18)	.001
Step 2	.75	.567		.000	.68	.455		.000
Borderline personality symptoms			.04 (.02, .07)	.003			−.00 (−.03, .02)	.849
	Life satisfaction							
	R	R^2	*B (95% CI)*	*p*				
Step 1	.57	.323		.000				
Sex			−.41 (−1.14, .35)	.260				
Externalizing problems			−.02 (−.09, .04)	.473				
Internalizing problems			−.23 (−.28, −.18)	.027				
Step 2	.59	.351		.000				
Borderline personality symptoms			−.08 (−.13, −.03)	.003				

CI confidence interval

along the severity continuum and there is a significant part (19.71%) of adolescents who endorse the symptoms of borderline personality. This echoed earlier findings (Bernstein et al. 1993; Haltigan and Vaillancourt 2016). Although our methodology does not allow us to qualify these data as indicating personality disorder, yet they signal about the severe difficulties these adolescents, mainly girls, experienced in the personality domain. The preponderance of girls in the subgroup of elevated borderline personality features is consistent

with prior works (Arens et al. 2013; Haltigan and Vaillancourt 2016). This result can be interpreted as the tendency of girls, relative to boys, to show an increase in psychopathological symptoms during adolescence (Arens et al. 2013).

Second, significant associations of borderline personality symptoms and all studied domains were detected at the bivariate level. This finding is in line with the previous studies revealing that a range of psychosocial functioning domains was negatively affected in adolescent patients with BPD (Kramer et al. 2017; Thompson et al. 2019). Our study extends these findings further by pointing out that borderline pathology leaves its footprints on the broad spectrum of functioning at the community level. Besides, our study revealed that the unique contribution of BPD symptoms was statistically significant for social problems, academic achievement, health concerns, and life satisfaction of adolescents. Borderline personality symptoms in our sample had the strongest correlation with social problems. This result directs attention to the interpersonal nature of borderline personality as its central feature concerning social dysfunctions not only for adolescents at risk (Wright et al. 2016) but also for adolescents in the community. Although complex social interactions are a hallmark of BPD, they cannot be equated to social functioning (Wright et al. 2016). The latter encompasses the problems in real-life reflected as difficulties in carrying out social roles (Skodol 2018) and may be the result of the variety of interpersonal problems associated with having considerable conflict and distress with friends, parents, and other people, lack of support, and peer-group acceptance (McCloskey et al. 2020). Other mechanisms can be also involved, e.g. difficulties in emotion regulation in explaining the relationship between borderline personality symptoms and social dysfunctions (Herr et al. 2012). In the academic domain, the low achievement but not academic motivation was uniquely linked with borderline personality symptoms. These results show that the difficulties associated with borderline personality symptoms roughly interfere with the everyday activities of adolescents. Other studies also found that adolescents with more BPD symptoms tend to get lower grades at school (Kramer et al. 2017).

Third, health-related functioning is worth mentioning separately as empirical data on its connection to personality problems among adolescents just have started to emerge (Kaess et al. 2017). According to the existing literature personality disorders have a widespread effect on and predict later health problems such as sleep disturbance, obesity, pain-related conditions, and chronic physical illness (Dixon-Gordon et al. 2018). Although we have found strong positive correlations between borderline features and both aspects of health-related functioning, only health concerns (such as sleeping, eating problems, lack of energy) were uniquely predicted by BPD symptoms. It is known that, for example, poor sleep quality in early adolescence predicts deficient emotion information processing (Soffer-Dudek et al. 2011) which is necessary for self-understanding and satisfying relationships with others. These are very important results since lower functioning in health-related domains may cause even worse impairments in the social sphere and overtime may distort developmental trajectory.

Fourth, the endorsement of borderline personality symptoms was predictive of lower life satisfaction. This is in a consensus with other studies of clinical or risk samples (Kaess et al. 2017; Thompson et al. 2019) and general population (Koster et al. 2018). This is an expected finding since borderline personality symptoms affect several major domains which definitely contribute to general life satisfaction. Moreover, it was found that when compared with externalizing and internalizing problems, adolescents' personality disturbances may have a more adverse impact on the quality of life (Chen et al. 2006). Our data reveal lower life satisfaction among older adolescents possibly indicating a cumulative burden of borderline personality symptoms over adolescence. Life satisfaction is regarded as

a key indicator sensitive to the entire spectrum of functioning and mental health and is fundamentally important to adolescents' ability to cope with developmental tasks and challenges (Moksnes et al. 2016).

Overall, the results of the present study underscore the mutilating nature of borderline personality symptoms as psychosocial and health functioning disruptions were detected in community-dwelling adolescents. Longitudinal studies prove that higher levels of early-onset borderline personality symptoms cannot be associated with temporal developmental changes as they tend to have negative long-term outcomes even till middle age (Winograd et al. 2008). Moreover, it has been suggested that psychosocial outcomes can be additionally problematic because they ripen the possibility of continued or exacerbated mental health problems in the future (Wright et al. 2016). This idea is supported by the data showing that somatization symptoms uniquely predicted elevated and rising trajectories of borderline personality features in adolescents (Haltigan and Vaillancourt 2016). These provide insights into the practical applications of the results of our study to identify ports of entry for prevention and intervention strategies aimed at preventing the prevent deteriorating developmental trajectory BPD symptoms in adolescence. First, the results of the current study highlight the necessity to acknowledge the existence of and screening for possible personality disturbances when providing mental health services for adolescents in educational, social, and mental health institutions. Second, based on previous research, it is thought that prevention and intervention should aim at attenuating or averting adverse outcomes and promoting healthy developmental pathways while paying more attention to community samples (Chanen and McCutcheon 2013). Indicated prevention has been suggested as the 'best bet' for those with emerging signs of disorder (Chanen et al. 2016). Our study assuredly revealed that within the community sample adolescents with elevated levels of borderline personality problems can be detected and characterized by concomitant difficulties in everyday social, academic, and health-related functioning. At this stage of early BPD symptoms manifestation, indicated prevention and early intervention programs should focus on the treatment of specific problems (e.g. impulsivity, emotion dysregulation, self-harm), addressing needed support in psychosocial functioning to maintain developmental tasks, empowerment and fostering strong areas in functioning (Hutsebaut et al. 2019). Third, considering that adolescence is a sensitive period for the development of personality disorder (Sharp et al. 2018), general prevention and school-based curriculum could include psycho-education to promote healthy personality functioning, training school professionals to recognize early signs of deviations in personality development and functioning, especially interpersonal domain but also health-related problems and life satisfaction.

Some limitations of the study warrant comment. First of all, the study design was cross-sectional so we were unable to evaluate the change of BPD and their consequent influence on psychosocial outcomes during a period of time. Secondly, the methodology of the present study was based on self-report measures so we have only subjective data about the difficulties endorsed by adolescents. Information from other sources, e.g., parents or application of other methods, e.g., interviews would provide a more robust evaluation of existing problems. Also, although the present study used seven indicators as measures of functioning in relation to personality disturbances, these do not cover all functioning as a broad and multifaceted construct.

Acknowledgements We would like to thank all the participants in this study and the students (Greta Blažauskaitė, Gintalija Budraitytė, Dovilė Mikučionytė, Jonė Piekuraitė, Milda Tumėnienė and Rūta Urbaitytė) for their assistance in data collection.

Funding The authors have no financial relationships relevant to this article to disclose.

Data Availability The authors take responsibility for the integrity of the data and accuracy of data analysis.

Compliance with Ethical Standards

Conflict of interest The authors declare that there are no conflicts of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional research committee (Vilnius University Psychological Research Ethics Committee, No. 14, date 7 December 2017) and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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II.

A systematic review of the factors associated with the course of borderline personality disorder symptoms in adolescence

Skabeikyte, G. & Barkauskiene, R. (2021). A systematic review of the factors associated with the course of borderline personality disorder symptoms in adolescence. *Borderline Personality Disorder and Emotion Dysregulation*, 8(*12)*, 1-11. https://doi.org/10.1186/s40479-021-00151-z

Skabeikyte and Barkauskiene *Borderline Personality Disorder and Emotion Dysregulation* (2021) 8:12
https://doi.org/10.1186/s40479-021-00151-z

Borderline Personality Disorder and Emotion Dysregulation

REVIEW Open Access

A systematic review of the factors associated with the course of borderline personality disorder symptoms in adolescence

Gabriele Skabeikyte* and Rasa Barkauskiene

Abstract

Background: Research on personality pathology in adolescence has accelerated during the last decade. Among all of the personality disorders, there is strong support for the validity of borderline personality disorder (BPD) diagnosis in adolescence with comparable stability as seen in adulthood. Researchers have put much effort in the analysis of the developmental pathways and etiology of the disorder and currently are relocating their attention to the identification of the possible risk factors associated with the course of BPD symptoms during adolescence. The risk profile provided in previous systematic reviews did not address the possible development and course of BPD features across time. Having this in mind, the purpose of this systematic review is to identify the factors that are associated with the course of BPD symptoms during adolescence.

Methods: Electronic databases were systematically searched for prospective longitudinal studies with at least two assessments of BPD as an outcome of the examined risk factors. A total number of 14 articles from the period of almost 40 years were identified as fitting the eligibility criteria.

Conclusions: Factors associated with the course of BPD symptoms include childhood temperament, comorbid psychopathology, and current interpersonal experiences. The current review adds up to the knowledge base about factors that are associated with the persistence or worsening of BPD symptoms in adolescence, describing the factors congruent to different developmental periods.

Keywords: Borderline personality disorder, Adolescence, Developmental trajectories

Background

Adolescence is a sensitive period for various psychological disturbances, including personality pathology [1]. During normative development, children's maladaptive personality traits (such as emotional instability, neuroticism) tend to decline with age [2, 3]. However, there is a part of adolescents who diverge from the norm and whose personality problems tend to persist or even increase as adolescents enter young adulthood [1]. During the last decades researchers interested in adolescent personality pathology have mostly explored borderline personality disorder (BPD) which is characterized by turbulent interpersonal relationships, emotional instability, and an unstable sense of self [4]. Rejecting the hypothesis about adolescents' difficulties only as a "storm and stress" period, there is strong support for the validity of a personality disorder (PD) diagnosis in adolescence with similar rank order stability in adolescents when compared with these features dynamics in adulthood [5, 6].

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Personality disturbance does not simply manifest in adulthood, thus, research exploring the developmental precursors in young people with elevated personality disturbance create an opportunity to understand specific vulnerabilities and prodromal features, which may later turn into the emergence of a clinical disorder [7–9]. This notion is especially significant in adolescence when personality disorder is emerging and can be diagnosed in its early stage, but borderline symptoms are still flexible, making this developmental period an advantageous stage to intervene [10]. Furthermore, unrecognized borderline pathology during this developmental period has the potential to derail developmental achievements and disrupt the transition to adulthood [11–14].

Research on personality disorders in adolescence have started to accelerate during the last decade. While much effort has been put into the analysis of the etiology of BPD, scientists offer two important research directions: firstly, research must include repeated assessment of BPD during developmentally sensitive windows that may capture the course of the disorder in periods of peak prevalence [15]. Secondly, Chanen et al. (2017) offered that public health research priorities should be allocated in a way that the data would build up a knowledge base which would help to understand the risk factors for the persistence or worsening of problems, rather than the onset of the disorder itself [10].

Existing systematic reviews mainly focus on the examination of risk factors associated with the emergence or current mean levels of BPD symptoms and identify factors crossing multiple domains (e.g. social, family, maltreatment, child characteristics) [15–18]. However, they are lacking data about the course of already existing symptoms and factors that might contribute to the increases or decreases in BPD symptoms during adolescence. Moreover, most of the studies include adolescent as well as adult samples in their analysis which does not allow to capture risk factors specifically relevant to adolescence [15–17]. Based on the shortcomings arising from previous reviews, the purpose of the current systematic review is to identify the factors that are associated with the course of borderline personality disorder symptoms during adolescence.

Methods

This systematic review was conducted using Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines. The protocol was registered with PROSPERO in April of 2019 (registration no. CRD42019130158).

Inclusion and exclusion criteria

To identify studies for inclusion, the following electronic databases were systematically searched: MEDline, PubMed, PsycINFO, PsycARTICLES, socINDEX, Proquest and Scopus. Search terms from which all possible variations were searched are listed in Table 1. Studies were limited to peer-reviewed articles written in English language and published from January of 1980 until March of 2020.

Research methodology was based on the lacking theoretical aspects and limitations from the previous reviews: 1) Only prospective based longitudinal studies with a minimum of two time point intervals were included since previous reviews mostly evaluated the predictors of the mean levels of BPD, but failed to capture the actual change of BPD symptoms across time. 2) Research studies that describe only aspects of borderline personality disorder (e.g. self-harm, identity), but do not cover the entity of symptoms characterizing the clinical disorder were excluded as well as intervention studies. Studies that longitudinally assessed borderline personality symptoms as a dependent variable without the analysis of associated factors were excluded. Studies were included if they examined borderline personality symptoms or features as an outcome of the study. 3) In accordance with recent data indicating the importance of the extended developmental period from puberty to emerging adulthood for the early recognition of BPD [11], the study participants were adolescents aged 10 to 18 years old or adolescents as part of a 'youth' sample (e.g. 15–25 years old). Children under age 10 and adults older than 18 years of age, except for those who were part of the youth sample described previously, were excluded.

Selection of articles

Search results were transferred to a web-based tool "Covidence" which is designed for primary screening and data extraction (Cochrane, 2015). A total of 618 articles were identified through a database search. First of all, 375 duplicates were found and removed, leaving 243 articles for screening by title and abstract. Out of all studies, 189 did not meet the eligibility criteria for the analysis. After a full-text analysis by two reviewers, 40 studies were excluded on the basis of inappropriate study design, outcomes, measurement methods, or population. At each step, disagreements were resolved through a discussion and if necessary, a third reviewer helped to find a solution. A total of 14 studies, which provided longitudinal data about BPD symptoms and related features across adolescence, were included in the final analysis. Search results were summarized in a PRISMA chart (Fig. 1).

At the next step, the quality of the selected studies was assessed using the Quality Assessment Tool for Observational Cohort and Cross-Sectional Studies (National Health Institute, 2014). Two reviewers conducted independent assessments and overall quality ratings were

Table 1 Search terms used in the electronic database search

Key word	Search terms
Borderline personality disorder	Borderline personality disorder OR Borderline states OR Borderline personality symptoms OR Borderline personality features OR Borderline personality features OR BPD OR Borderline
Prospective	Longitudinal OR trajectory* OR prospective OR course OR "time point*" OR follow-up OR "Follow up"
Risk factors	"Risk factor "OR mechan* OR predict* OR precursor OR prodrom OR antecedent OR pathway OR interact* OR "protective factor" OR protective OR moderat* OR mediat*
Adolescence	Adolescence OR adolescents OR adolescent development OR adolescent psychopathology OR teens OR youth

categorized through a discussion as 'good', 'fair' "or 'poor' (*see* Table 2). Out of all studies, nine of them were rated as 'good' and five – 'fair'. No studies were rated as poor, indicating an overall sufficient quality of the selected articles.

Description of studies

A total of 14 studies were identified as appropriate for inclusion in further analysis. Key ideas from the articles were extracted and categorized by two reviewers. The following categories were described: study details (authors, year, country), study design, population (clinical or community), sample characteristics (sex, age range, sample size), sociodemographic data and outcome assessment methods. The main characteristics of the included studies are presented in Table 3.

Out of all studies, ten of them were conducted in the U.S., two in Canada, one in Finland, and one in Germany. Six studies were based on the same study population, however, they analysed different aspects of the topic. Duration of the studies ranged from one to ten years, and population in the studies ranged from 113 to 2344 participants at baseline assessment. In seven studies females formed a full sample, two study samples were formed of 70–80% females, while in five other studies participants were more equally distributed by gender, with girls constituting 52–58% of the sample. Participants' age ranged from 10 to 24 years of age. Twelve studies were based on community samples and two on (in) outpatient samples. Outcomes of the studies mostly were measured by self-rating scales of borderline personality disorder symptoms, except three studies that included structured clinical interviews for the assessment of BPD symptoms. All of the methods used in the studies were based on the DSM-IV or ICD-10 symptom-oriented approach towards personality disorders.

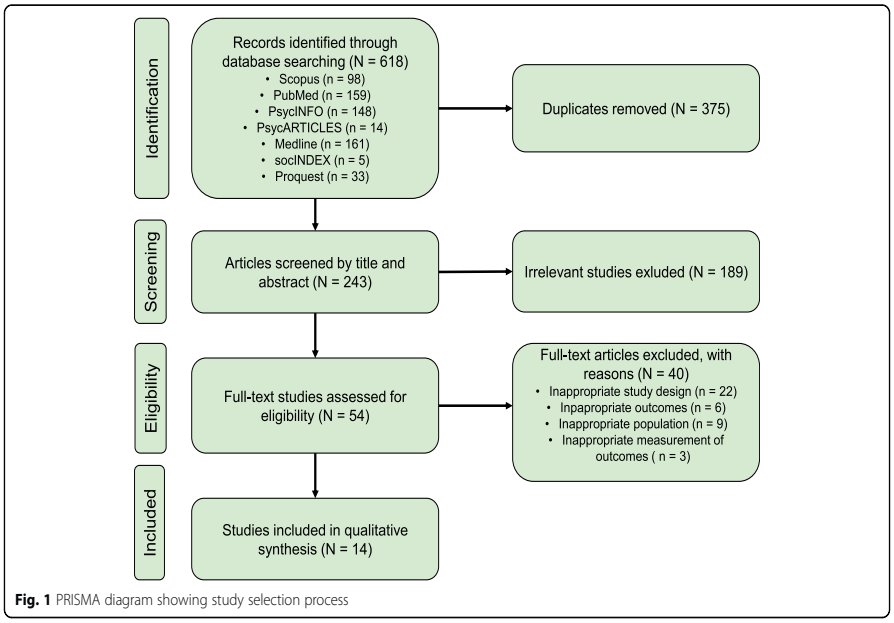

Fig. 1 PRISMA diagram showing study selection process

Table 2 Summary of risk of bias within studies

Author (date)	Research Question	Population	Participation rate	Recruitment	Sample size justification	Exposure prior outcome	Time-frame	Exposure Levels	Exposure Measure	Repeated Exposure Assessment	Outcome Measures	Blinding	Follow up loss < 20%	Statistical Analysis	Quality rating
Barnow et al. (2013) [19]	Y	Y	Y	Y	NR	Y	Y	Y	Y	N	Y	NA	Y	Y	FAIR
Bornovalova et al. (2018) [20]	Y	Y	Y	N	NR	Y	Y	Y	Y	Y	Y	NA	Y	Y	GOOD
Dixon-Gordon. et al. (2016) [21]	Y	Y	Y	Y	NR	Y	Y	Y	Y	N	Y	NA	Y	Y	GOOD
Ehrenreich et al. (2016) [22]	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	N	NA	N	Y	FAIR
Greenfield et al. (2015) [23]	Y	Y	Y	Y	NR	Y	Y	Y	CD	Y	Y	NA	N	N	FAIR
Hallquist et al. (2015) [24]	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	NA	NR	Y	GOOD
Haltigan & Vaillancourt, (2016) [25]	Y	Y	CD	Y	NR	Y	Y	Y	Y	Y	Y	NA	N	Y	GOOD
Lazarus et al. (2019) [26]	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	NA	Y	Y	GOOD
Sharp et al. (2020) [27]	Y	Y	Y	Y	NR	Y	Y	Y	Y	N	Y	NA	N	Y	GOOD
Stepp, Keenan, Hipwell & Krueger (2014) [28]	Y	Y	Y	Y	NR	Y	Y	Y	Y	Y	Y	NA	CD	Y	GOOD
Stepp et al. (2014) [6]	Y	Y	Y	Y	NR	Y	N	Y	N	N	Y	NA	CD	Y	FAIR
Stepp & Lazarus (2017) [29]	Y	Y	Y	Y	NR	Y	N	Y	Y	N	Y	NA	Y	Y	GOOD
Strandholm et al. (2017) [30]	Y	Y	Y	Y	NR	Y	Y	Y	N	Y	N	NA	Y	Y	FAIR
Vanwoerden et al. (2019) [31]	Y	Y	Y	Y	NR	Y	Y	Y	N	Y	Y	NA	N	Y	GOOD

Y yes, *N* no, *CD* cannot determine, *NR* not reported, *NA* not applicable

Table 3 Characteristics of included studies

Author (year)	Country	Study design, BPD assessments	Population	Sample characteristics	Sociodemographic data	Outcome assessment
Barnow et al. (2013) [19]	Germany	Longitudinal, 2 assessments	Community, Greifswald family study	*N* = 381; range 11–18; 55.1% female	NR	Structured Clinical Interview for DSM-III-R (SCID-II)1 and SCIDII-for DSM-IV1,2
Bornovalova et al. (2018) [20]	U.S.	Longitudinal cohort study, 3 assessments	Community, Minnesota twin family study	*N* = 1.080; range 14–24; 100% female	95.3% white	Minnesota Borderline Personality Disorder Scale (MBPD)1
Dixon-Gordon et al. (2016) [21]	U.S.	Longitudinal, 4 assessments	Community, Pittsburgh girls study	*N* = 113; range 16–18; 100% female	Low-income neighborhoods; 65% African American, 35% White; 55% of familes receive public assisstance	Structured Clinical Interview for DSM-IV Personality Disorders (SIDP-IV)2
Ehrenreich, Beron & Underwood (2016) [22]	U.S.	Longitudinal, 2 assessments	Community	*N* = 287; range 14–19; 52% female	23.1% African American, 1.6% Asian, 61.6% Caucasian, 18.3% Hispanic, 5.4% other	The Mclean Screening Instrument for BPD (MSI)1
Greenfield et al. (2015) [23]	Canada	Longitudinal, 2 assessments	(In)Outpatient	*N* = 286; range 12–18; 72% female	69.5% Caucasian, 7.5.% African American, 2.2.% Hispanic, 3.1% Aboriginal, 5.3.% Asian, 12.4% other	Abbreviated Diagnostic Interview for Borderlines (Ab-DIB)1
Hallquist, Hipwell & Stepp (2015) [24]	U.S.	Longitudinal, 4 assessments	Community, Pittsburgh girls study	*N* = 2.228; range 14–17; 100% female	Low-income neighborhoods	International Personality Disorder Examination-Screen (IPDE-S)1
Haltigan & Vaillancourt (2016) [25]	Canada	Longitudinal, 4 assessments	Community, McMaster teen study	*N* = 566; range 13–16; 55.5% female	NR	Borderline Personality Features Scale for Children (BPFS-C)1
Lazarus et al. (2019) [26]	U.S.	Longitudinal, 5 assessments	Community, Pittsburgh girls study	*N* = 2.310; range 15–19, 100% female	Low-income neighborhoods; 59.8% Black, 40.2% White; 33.2% of families receive public ssisstance	International Personality Disorder Examination (IPDE-BOR)1
Sharp et al. (2020) [27]	U.S.	Longitudinal, 5 assessments	Community	*N* = 1.042; range 13–18; 56% female	31.4% Hispanic, 29.4% White, 27.9% African Americans, 3.6% Asian, 7.7% other; 19.4% reveived mental health treatment	Borderline Personality Features Scale for Children (BPFS-C)1
Stepp, Keenan, Hipwell & Krueger (2014) [28]	U.S.	Longitudinal, 6 assessments	Community, Pittsburgh girls study	*N* = 2.282; range 14–19; 100% female	Low-income neighborhoods; 53% African American, 41.2% European American, 5.8% other;	International Personality Disorders Examination (IPDEBOR)1
Stepp et al. (2014) [6]	U.S.	Longitudinal, 4 assessments	Community, Pittsburgh girls study	*N* = 2.212; range 14–17; 100% female	38.9% of families receive public assisstance	International Personality Disorders Examination (IPDEBOR)1
Stepp & Lazarus (2017) [29]	U.S.	Longitudinal, 9 assessments	Community, Pittsburgh girls study	*N* = 2.344; range 14–22; 100% female	Low-income neighborhoods; 53% African American, 41.2% Caucasian, 5.8% other	International Personality Disorders Examination (IPDEBOR)1
Strandholm et al. (2017) [30]	Finland	Longitudinal, 2 assessments	Outpatient, Adolescent depression study	*N* = 218; range 13–19; 81.5% female	Low-income neighborhoods; 58.7% minority race; 38.9% of families receive public assisstance	Structured Clinical Interview and Screen (Personality Questionnaire) for DSM-IV PDs1,2
Vanwoerden, Leavitt, Gallagher & Temple (2019) [31]	U.S.	Longitudinal, 5 assessments	Community	*N* = 818; range 16–21; 58% female	32% Hispanic, 31.3% White, 27.1% African American, 1.8% Asian, 7.7.% other	Borderline Personality Features Scale for Children (BPFS-C)1

1 self-report instrument; 2 clinical interview; *NR* not reported

Main results of the current review

The results revealed a large heterogeneity of the studies in terms of the reported analyses of BPD symptoms, course, domains of the associated factors, and their timing as predictors. First, in line with the previous research on normative personality development [2, 5], authors of the majority of the studies (10 of 14) report data about the general decreasing trajectory of BPD symptoms during adolescence which was seen both in the community and in the clinical samples. However, there is a part of youth who deviate from the normative developmental trajectory and fall into the persisting BPD symptoms group in the clinical sample (76% of adolescents) [23] and into the elevated/rising (24% of adolescents; 74% girls) or intermediate/stable BPD symptoms groups (42% of adolescents; 54% girls) in the community sample [25]. Second, as the purpose of this review suggests, only factors that were longitudinally associated with increases or decreases in the mean levels of BPD symptoms as an outcome, will be included. Presented studies will further be categorized based on the domain of the associated factors that were examined. The detailed classification of the analysed factors is presented in Table 4.

Child characteristics

The most examined domain of the factors associated with the course of BPD symptoms during adolescence was child characteristics. To start with, temperament dimensions, such as high levels of emotionality, activity and low levels of sociability and shyness in middle childhood were predictive of higher elevations as well as increases in average levels of BPD features through adolescence [28]. In contrast, negative affectivity assessed in early and middle adolescence was only predictive of higher mean levels of BPD [6], but not anymore of the change in these features over time [21]. Moreover, the data further suggest that the link between negative affectivity in early adolescence and increases in the mean levels of BPD features from middle adolescence is not a direct one, but rather mediated by decreases in self-control skills [24].

Among other child-related factors, the authors also have evaluated the role of stressful life events (suspension from school, death of a parent, changes in peer acceptance, etc.) at ages 12–17 in the clinical sample, but did not found statistically significant associations [23]. In the community sample, general academic functioning measured by the standardized assessment procedure at age 8 was not statistically predictive of changes in BPD features during adolescence [25].

Adolescent psychopathology as a predictor of BPD symptom changes was analysed in eight of the fourteen studies. Within the community samples, it was found that childhood psychopathology, such as inattention, oppositional behaviour, and hyperactivity/impulsivity predicted the change to the new onset status of BPD in adolescence [29]. In line with previous findings, impulsivity and oppositional defiant disorder severity assessed in adolescence were also associated with higher average levels of BPD symptoms throughout adolescence [21]. Furthermore, it was identified that alcohol use disorder (AUD), drug use disorder (DUD), major depressive disorder (MDD) symptoms [20], anxiety symptoms, attention deficit hyperactivity disorder (ADHD) symptoms and somatization [25] statistically significantly predicted the changes in BPD features during adolescence. Specifically, higher average levels and increases in AUD, DUD, and MDD symptoms were associated with a slower decline of BPD symptoms through adolescence [20]. Adolescent-reported symptoms of ADHD and somatization also predicted the elevated or rising symptom trajectory, while parent-reported anxiety levels predicted stable intermediate levels of BPD features [25]. Moreover, individual social and physical aggression trajectories from childhood through adolescence were not significantly related to the BPD symptoms change from age 14 to 18 [22].

Results from two clinical samples mostly capture child-related psychopathology factors. Firstly, in line with the findings from the community sample, decreases in depression severity and comorbidity were associated with faster declines in average levels of BPD symptoms [30]. Secondly, lower levels of a child's general psychosocial functioning was statistically predictive of BPD clinical diagnosis at follow-up 4 years later [23].

Interpersonal factors

Interpersonal factors in relation to BPD symptom dynamics were examined in six of the fourteen studies. Several important relationship-based factors were found to be significant as predictors of changes in BPD features in adolescence. First of all, studies show that the experience of relational aggression in the context of friendship is predictive of the elevated or rising BPD symptoms trajectory [25]. In addition, psychological and sexual violence [31] as well as perceived support and antagonism [26] in romantic relationships are predictive of increases in the mean levels of BPD features over time. Physical and verbal aggression experienced within romantic relationships were not predictive of BPD feature change or average levels [26]. Moreover, relationship quality with the father predicted slower declines in BPD features through adolescence [27]. In the analysed clinical samples, family relations, social support from friends and family were not statistically significantly associated with changes in BPD symptoms [23, 30].

Table 4 The classification of the analysed factors based on the factor domain and study sample

Author (year)	Study sample	Child characteristics	Interpersonal factors	Parental psychopathology	Parenting factors	Covariates
Barnow et al. (2013) [19]	Greifswald family study[a]	–	–	Maternal BPD symptoms, maternal depression	–	Sex, age, BPD features in offsprings at T_0
Bornovalova et al. (2018) [20]	Minnesota twin family study[a]	Alcohol use disorder, drug use disorder, major depressive disorder	–	–	–	NR
Ehrenreich, Beron & Underwood (2016) [22]	Community[a]	Social and physical aggression	–	–	–	Baseline ratings of rule-breaking, internalizing symptoms; borderline features and narcissism at Grade 7
Haltigan & Vaillancourt (2016) [25]	McMaster teen study[a]	Temperament, somatization, ADHD symptoms, anxiety, depression, general academic functioning	Peer victimization, relational aggression	–	–	Sex, mental health, peer relations, intra-individual risks
Sharp et al. (2020) [27]	Adolescent dating violence study[a]	Lifetime mental health treatment	Parent-child relationship quality	–	Exposure to intimate partner violence	Sex, minority status, family composition/living situation, mental health treatment history, parent education, relationship quality with each parent
Vanwoerden, Leavitt, Gallagher & Temple (2019) [31]	Adolescent dating violence study[a]	–	Psychological violence, sexual violence, physical violence, relational violence	–	–	Sex, SES, relationship quality with each parent
Dixon-Gordon et al. (2016) [21]	Pittsburgh girls study[a]	Negative affect	–	–	Maternal problem solving, maternal support/validation	Minority race, family poverty
Hallquist, Hipwell & Stepp (2015) [24]	Pittsburgh girls study[a]	Negative emotionality, harsh punishment, self-control	–	–	–	Previous ratings of harsh punishment, self-control, negative emotionality
Lazarus et al. (2019) [26]	Pittsburgh girls study[a]	–	Perceived support, antagonism, physical aggression, verbal aggression	–	–	Minority race, family poverty, pubertal development
Stepp, Keenan, Hipwell & Krueger (2014) [28]	Pittsburgh girls study[a]	Negative emotionality, high activity, low sociability, low shyness	–	–	–	Minority race, family poverty
Stepp et al. (2014) [6]	Pittsburgh girls study[a]	Impulsivity, negative affectivity, ODD/CD severity	–	Parental depression severity	Harsh punishment, low warmth	Minority race, family poverty
Stepp & Lazarus (2017) [29]	Pittsburgh girls study[a]	Emotionality, inattention, hyperactivity/impulsivity, depression	–	–	–	Minority race, family poverty
Greenfield et al. (2015) [23]	(In) Outpatient, previously suicidal adolescents[b]	Age of suicidal behavior, depression, conduct disorder, alcohol use, drug use, overall severity of disturbance, stressful life events, emergency room visits, hospitalizations	–	–	–	Sex, age
Strandholm et al. (2017) [30]	Outpatient with depressive mood disorders, Adolescent depression study[b]	Depression severity, comorbidity	Social support from family and friends	–	–	Sex, age, SSRI medication, number of clinical appointments during the follow-up

[a] community sample; [b] clinical sample;
NR not reported

Parental psychopathology

Two studies provide data about several important parental psychopathology factors assessed in adolescence: maternal BPD symptoms, maternal depression [19], and parental depression severity [6]. Studies failed to detect statistically significant BPD symptom associations with parental psychopathology, except maternal BPD symptoms. It was found that only maternal BPD characterized by six or more symptoms constitutes a risk for higher average BPD levels in the offspring at follow-up 5 years later [19]. In these studies, parental depression severity was not associated with changes in BPD symptoms [6, 19].

Parenting factors

Analyses of parenting practices have revealed that in adolescence, parental low warmth [6], maternal support/validation, and maternal problem solving [21], average levels or changes in parental harsh punishment [6, 24] were not significant predictors of changes in BPD features. Among parenting factors, exposure to intimate partner violence among parents was the only factor associated with BPD symptom changes and predicted slower declines in BPD symptoms throughout adolescence [27].

Discussion and limitations

The purpose of this systematic review was to identify the factors that are associated with the course of BPD symptoms during adolescence. Fourteen studies were identified as corresponding to the inclusion criteria and have provided significant data about the associated factors which might contribute to the course of adolescent BPD symptoms.

First of all, although the declining BPD features trajectory was seen in the majority of the analysed studies, researchers have identified a group of adolescents whose BPD symptoms or features were persisting or even increasing during adolescence [23, 25]. These results go in line with Sharp et al. (2018) notion about normative declines in maladaptive personality traits and increases in the groups where these features are significantly prominent [1]. Stability of symptoms or increases were seen both in the clinical and in the community samples, which reveals that there is a part of youth with difficulties in personality development not only in the clinical setting, but also in the community sample.

In context of the analysed studies, findings suggest that individual and interpersonal domains of functioning stand out as accommodating the majority of factors significantly associated with changes in BPD symptoms through adolescence. From the individual perspective, several childhood and adolescent psychopathology conditions which prevent the normative decline of maladaptive personality traits during adolescence and predict changes in BPD features were identified. To start with, externalizing psychopathology in childhood statistically significantly predicted the change of BPD features in adolescent girls [29]. In addition, difficult childhood temperament [28, 29] and poor self-control [24] were associated with the increasing BPD features trajectory. Alongside childhood maladjustment, adolescence-related psychopathology that was associated with changes in BPD symptoms was marked by a variety of difficulties and included substance use disorders, major depressive disorder [20], ADHD symptoms, somatization [29] as well as comorbidities in general [30]. Since BPD has high comorbidity rates [1, 4], it is not surprising that changes in the comorbid states affect the trajectory of BPD features. Bornovalova et al. (2018) explain these results using a pathoplasty model which reveals that symptoms of comorbid states disrupt maturational processes and contribute to the persistence or worsening of BPD [20]. Sharp, Vanwoerden & Wall (2018) have concluded that personality disorders are preceded by childhood internalizing and externalizing disorders [1], however, results of the current review reveal that they might continue to shape the developmental trajectory of BPD symptoms in adolescence. From a clinical standpoint, these findings denote the importance of the on-time recognition of externalizing and internalizing problems and intervention as early as possible to block the way for a full-blown BPD and its further development during adolescence.

Another important domain was interpersonal factors which reflect current relational experiences. It was found that being exposed to peer-related violence in friendships and in romantic relationships is associated with increases in BPD symptoms across time. These experiences include relational, psychological, and sexual violence as well as antagonism as a bidirectional behaviour [25, 26, 31]. Adolescence is an important period in the context of learning to create and maintain relationships [32] and in this way damaging interpersonal behaviours may disrupt the process of normal personality development. Moreover, it is worth to mention that not only disruptive interpersonal behaviour, but also experiences incompatible with normative development, such as excessive reliance on or perceived support from a romantic partner in intense early romantic relationships, also were associated with increases in girls BPD symptoms [26]. When considering the importance of family relations, it was found that poorer relationship quality with the father prevents the normative decline in BPD features over time [27]. Overall, the results reveal the great significance of negative experiences in current relationships on the course of BPD symptoms during adolescence. They also indicate the need for more comprehensive assessments of the factors analysing adolescents' social relations in future studies on adolescents' personality pathology.

Furthermore, much effort has been put in the analysis of parenting and parental psychopathology factors since parental neglect, emotional under involvement, or invalidation appear to contribute to the development of BPD [15, 33]. However, the only parenting-related factor that was associated with changes in BPD symptoms was the exposure to interparental intimate partner violence, conceptualized as physical aggression [27]. This reflects the greater importance of the family environment and social interactions being observed, but not the parenting behaviours themselves. Other parenting factors that were previously presented were not significant in predicting changes in BPD features [6, 21, 24]. Authors consider that parenting factors perhaps are more important in the earlier developmental stages or in their capacity to predict the onset of the disorder, not changes in symptoms across time [24]. Moreover, there is strong evidence for the greater role of peer relationships in adolescence compared with familial ones. According to Harmelen et al. (2017), when controlled for the effects of family support, only friendship support may predict later resilient psychosocial functioning and may serve as a strong protective factor in adolescence [34].

Comparing the results from the clinical and community-based samples, we may see that factors associated with changes in personality pathology are partially overlapping in both groups. However, studies with clinical samples were focused on the role of comorbid psychopathology [23, 30] and stressful life events [23] rather than interpersonal factors that have been found to be significant predictors in high risk and community samples [25, 26, 31]. Based on the existing results so far, we can conclude that only comorbid psychopathology was found as a joint predictor of change in BPD features both in the clinical and in the community samples of adolescents. However, the study quality ratings have revealed some methodological drawbacks in two clinical studies, which means that the results must be considered carefully. To sum up, more longitudinal studies with clinical samples are needed in order to better understand the distinction or similarities between the community and the clinical risk profiles. Reflecting on the implications for the further research we want to note that the risk profile from each study is more representative of a specific domain of functioning (e.g. psychopathology) without taking into account other possible factors. None of the analysed studies included several domains of factors which could potentially address the complex nature of the processes related to the course of personality pathology during adolescence.

From a clinical perspective, developmental staging model suggests that identifying a group of adolescents with specific risk factors or subthreshold symptoms is necessary for the on-time intervention [35]. Our review suggests that an adolescent who would demonstrate a risk of getting on the increasing BPD trajectory would be one with difficult temperament dimensions brought from childhood, having comorbid states, and currently experiencing victimization from peers or exposure to violence at home. Chanen et al. (2016) also elaborates on the importance of comorbid mood disorders in the transition from the mild or subthreshold symptom stage to the onset of the disorder [35]. This risk profile corresponds to the recent review by Hutsebaut & Aleva (2020) where they have also proved the importance of the associated mental disorders and current interpersonal context in predicting the severity of BPD in both adolescents and adults. Extending our results, adverse childhood experiences, BPD symptom severity, and personality traits were also reported as significant factors for poor BPD prognosis [16], however, they have not been investigated in longitudinal studies as predictors of changes. In fact, factors that were delineated by Hutsebaut and Aleva (2020) and associated with the poor BPD prognosis [16], could possibly also affect changes in BPD symptoms throughout adolescence. In general, previous systematic reviews [15–18] represent the data about the risk factors associated with the mean levels of BPD features through a lifespan and mostly include individual and parental factors. This review extends the scope about the importance of factors associated with peer-relationships. Therefore, the results of the current review add up to the knowledge base about factors that are specifically associated with the persistence or worsening of BPD features which can already be seen in adolescence and cover the factors congruent to the current developmental period as well as those from middle childhood.

The conclusions based on the results from this systematic review should be interpreted in the light of the number of limitations. First of all, six of the analysed studies were drawn from the same sample which was formed only of urban girls, and have provided the results about childhood psychopathology and temperament. Hence, there is a potential risk for bias in our interpretation and the significance of effects. Moreover, studies lacked consistency in the measurement of BPD symptoms, since a variety of BPD measurement methods (including different self-report scales and interviews) were used. However, during the quality assessment of each study, 12 out of 14 studies were rated as providing clearly defined and valid outcome measures with decent psychometric properties. In addition, multiple informants (adolescents, parents, teachers) provided information about associated risk factors. In line with different methodologies, several studies provided different conceptualizations of the same terms, e.g., drug use was conceptualized as a clinical syndrome [20] or as a delinquent behaviour [23] which could explain the contradictory results. In addition, despite

that we have excluded intervention studies, participants in the clinical samples might have been provided with intervention between the assessments. Future research directions could be allocated to analyse the course of BPD symptoms in a more diverse and gender-balanced sample and would include factors that could capture different domains of functioning.

Conclusions

Clinicians and researchers agree that BPD should become a novel public health priority since it has high personal and community costs [10]. This systematic review has revealed that comorbidity may play an important role in the course of borderline personality disorder development as well as current interpersonal experiences. However, the risk profile suggested by this review is not a unique one, nor the final. Future research should accumulate data on other potentially important factors and their interactions in predicting the course of BPD in adolescence, which would help to create a more precise profile of adolescents at risk [15, 16].

Acknowledgments
We would like to thank Dr. Asta Adler for assisting in the data collection and participating in the primary discussions regarding the concept of this work.

Authors' contributions
All authors contributed to the study conception and design. Conceptualization: Gabriele Skabeikyte and Rasa Barkauskiene; Literature search and data analysis: Gabriele Skabeikyte and Rasa Barkauskiene; Writing the first draft of the manuscript: Gabriele Skabeikyte; Review and editing: Gabriele Skabeikyte and Rasa Barkauskiene. The authors read and approved the final manuscript.

Funding
The authors have no financial relationships relevant to this article to disclose.

Availability of data and materials
Not applicable.

Declarations

Ethics approval and consent to participate
Not applicable.

Consent for publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

Received: 19 January 2021 Accepted: 23 March 2021
Published online: 19 April 2021

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Publisher's Note

III.

Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents

Barkauskienė, R., Gaudiešiūtė, E., Adler, A., Gervinskaitė-Paulaitienė, L., Laurinavičius, A. & Skabeikytė-Norkienė, G. (2022). Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents. *Frontiers in Psychiatry*, 13, 1-9. https://doi.org/10.1186/s40479-021-00151-z

frontiers | Frontiers in Psychiatry

BRIEF RESEARCH REPORT
published: 11 April 2022
doi: 10.3389/fpsyt.2022.828301

Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents

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OPEN ACCESS

Edited by:
Hojka Gregoric Kumperscak, Maribor University Medical Centre, Slovenia

Reviewed by:
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Bo Bach, Psychiatry Region Zealand, Denmark
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Specialty section:
This article was submitted to Child and Adolescent Psychiatry, a section of the journal Frontiers in Psychiatry

Received: *03 December 2021*
Accepted: *23 February 2022*
Published: *11 April 2022*

Citation:
Barkauskienė R, Gaudiešiūtė E, Adler A, Gervinskaitė-Paulaitienė L, Laurinavičius A and Skabeikytė-Norkienė G (2022) Criteria A and B of the Alternative DSM-5 Model for Personality Disorders (AMPD) Capture Borderline Personality Features Among Adolescents. Front. Psychiatry 13:828301. doi: 10.3389/fpsyt.2022.828301

The recent development of a dimensional view toward personality disorder opens up the field of personality research based on the constructs of personality functioning (Criterion A) and maladaptive personality traits (Criterion B) as core components of personality pathology. However, little is known about the roles of these aspects in relation to borderline personality features during adolescence. The current study aimed at exploring the associations of Criterion A and B and their contribution in predicting borderline personality features in adolescence. A sample of 568 adolescents aged 11–17 ($M = 14.38$, $SD = 1.57$; 42.4% males) from different backgrounds (community-based, psychiatric inpatients, and youth forensic care) completed a set of questionnaires among which were measures of personality functioning, maladaptive personality traits, and borderline personality features. The findings reveal that Criterion A and B are strongly interrelated and both are significant in predicting borderline personality features in adolescents. Further, the results showed the incremental value of Criterion A beyond the level of underlying psychopathology and maladaptive personality traits suggesting the distinctive function of Criterion A to capture the features of borderline personality. These findings extend the knowledge about the dimensional aspects of personality pathology in adolescence. The implications in relation to the new personality disorder model in the ICD-11 are highlighted.

Keywords: level of personality functioning, maladaptive personality traits, Alternative Model for Personality Disorders (AMPD), LoPF-Q 12–18, borderline personality features, adolescence, ICD-11

INTRODUCTION

During the last decade, the field of personality disorder (PD) research and practice has been moving to adopt a dimensional approach. The major classification systems—the publication of the Alternative Model for Personality Disorders (AMPD) in the 5th revision of the Diagnostic and Statistical Manual of Mental Disorders [DSM-5; (1)] and the 11th edition of the International Classification of Diseases [ICD-11; (2)] introduce a two-step dimensional conceptualization of personality pathology which emphasizes two different aspects that contribute to the maladaptive personality: the level of impairment in personality functioning and maladaptive personality traits.

In the AMPD model, the first component—Criterion A referred to as the Level of Personality Functioning (LPF)—defines deficits in self-functioning and interpersonal relatedness as a core and unidimensional severity mark of personality pathology. LPF includes disturbances of self-function in identity and self-direction domains and dysfunctions of empathy and intimacy as indicators of impaired interpersonal function. The second component of the dimensional model—Criterion B or maladaptive personality traits—is intended to represent a stylistic manifestation of PD by assessing five major domains of traits—namely, negative affectivity, detachment, antagonism, disinhibition, and psychoticism (3). These two constructs, required in operationalizing and determining PD, are separate facets of personality pathology (4). Whilst the diagnostic criteria A and B stem from distinct scholarly traditions (5, 6) and are intended to serve different functions in the dimensional model, a number of studies have demonstrated a considerable overlap between severity (Criterion A) and trait (Criterion B) ratings with traits accounting for considerable and incremental variance in personality impairments (7, 8). In a search for the unique role of both components in diagnosing PD, some research also revealed the added value of Criterion A over B in support of LPF as a severity measure of personality pathology and a unique predictor of specific PDs in adult samples (9).

Although adolescence is acknowledged to be a sensitive period for the development of personality disorder and the validity of the latter has been supported by numerous studies (10–12), empirical investigations evaluating Criterion A and B simultaneously, especially their interconnection during this period, lag behind those with adults (13). We think that research findings regarding the specificity of Criterion A and B for adult personality pathology cannot be directly transferred to the adolescent population when personality pathology is emerging (14). According to the theoretical integrated developmental view of personality pathology, Criterion A has been suggested to account for the onset of PD in adolescence, while Criterion B is observable before adolescence and reflects continuous aspects of maladaptive personality traits (15, 16). Thus, during adolescence, the manifestation and function of Criterion A are proposed to emerge (14). To date, the roles of Criterion A and B for personality pathology in adolescents have been examined separately (3, 17, 18). Namely, Goth et al. (17) developed a specifically AMPD tailored instrument—the Level of Personality Functioning Questionnaire [LoPF-Q 12–18]—to study Criterion A in adolescence and showed substantial differences between adolescents with and without PDs. Similarly, Weekers et al. (19) using the Semi-Structured Interview for Personality Functioning according to DSM-5 found that personality functioning impairment (Criterion A) is a sensitive indicator of personality pathology, especially borderline PD (BPD), which is the earliest to emerge in adolescence. Furthermore, empirical findings revealed disturbances in identity and self-direction (self-dysfunction) as well as intimacy (interpersonal dysfunction) to be the most prominent in adolescents with borderline personality pathology (17). As it comes to the second component, the developmental view of PD posits Criterion B as being already evident in childhood personality traits that continue into adolescence (16). Existing longitudinal evidence supports early maladaptive personality traits as an overall vulnerability factor for later PDs (20). For example, De Clercq et al. (21) findings suggested that children with a severe onset level of oddity-related characteristics were more at risk for developing personality pathology as described in the AMPD (based on compound scores of PID-5 maladaptive personality traits facets), especially schizotypal and borderline PDs. Another study showed that BPD can be predicted from childhood personality difficulties, with irritable-aggressive traits and affective lability being the core components (22). This briefly mentioned empirical evidence maps a trajectory of maladaptive traits (Criterion B) starting in childhood and continuing into adolescence (20). Taken together, while the studies of Criterion A and B suggest both being evident in adolescent personality pathology, their unique role is yet to be singled out, especially that of Criterion A. Beside this, a context of mental disorders should be considered as psychopathological symptoms have been established to be a risk factor for personality pathology (23), its severity (24), and course over adolescence (25).

Although Criterion A has been considered a core aspect for PDs, its interplay with maladaptive traits when investigating personality dysfunctions during adolescence has been scarcely studied so far (26, 27). Moreover, to our knowledge, no study to date has linked these two components in relation to adolescent personality pathology in general and to borderline personality features in particular. The change in the conceptualization of PD in both DSM-5 AMPD, as well as ICD-11, motivates understanding its link with categorically established BPD among adolescents which has been supported by extant research to date (11, 12, 20). So, a notable feature of the current study is that it is the first to examine the link between Criterion A and B and how they account for borderline features in a large sample of adolescents. We build our main hypothesis within the developmental framework of personality pathology (15, 16) by focusing on Criterion A to expect that it would be potent in predicting BP features among adolescents above and beyond the level of maladaptive personality traits and underlying (comorbid) psychopathological symptoms. Given a paucity of empirical findings related to the specificity of self and interpersonal dysfunctions, we had no specific hypothesis regarding their separate roles in predicting borderline features in adolescence. Further exploratory goals of the study were to shed more light on the interrelations of Criteria A and B as well as the association of Criterion B with borderline features among adolescents.

METHOD

Participants and Procedure

Participants were 568 adolescents aged 11–17 ($M = 14.38$, $SD = 1.57$; 42.4% males) recruited from public schools ($n = 502$; 40.6% males), a psychiatry inpatient unit ($n = 41$; 29.3% males), and a forensic unit for delinquent youth ($n = 25$; 100% males). Most adolescents were from urban areas (61.8%) and 33.5% were living in rural areas. Sixty percent of participants reported that their parents were married, 21%—divorced, and 19% indicated other family status.

Invitations to participate in the study along with informed written parent consent forms were distributed via schools, psychiatric and forensic adolescent care units. Adolescents who voluntarily agreed to participate in the study and whose parents gave written informed consent were asked to fill out the questionnaires. The study was administered by researchers or trained research assistants in small groups during school hours in the school sample and individually in both clinical and forensic samples. The study protocol was approved by the Psychological Research Ethics Committee at Vilnius University.

Measures

The level of personality functioning (Criterion A) was assessed with the culturally adapted Lithuanian version of the Levels of Personality Functioning Questionnaire [LoPF-Q 12–18; (17, 28)]. It is a 97 item self-report instrument with a 5-step response format (0 = no to 4 = yes) with higher scores indicating a more severe level of impairment in personality functioning and a higher risk for a current personality disorder. The questionnaire allows to dimensionally assess the total score of personality dysfunction as well as adaptive function or disturbances in the self and interpersonal domains. The original questionnaire was developed by a research group in Basel University clinics, Switzerland. The adaptation procedure for the Lithuanian version of the LoPF-Q 12–18 (28) included the translation and back-translation of the items, the pilot, and main empirical studies to ensure the necessary psychometric qualities of the questionnaire. The main empirical study for the development of the Lithuanian version involved 362 adolescents (83% school-based sample; 17% clinical sample). The total score of the LoPF-Q 12–18 differentiated the subgroup of clinical adolescents (those with 5 or more BPD symptoms) from the school-based sample (Cohen's $d = 1.2$). The effect sizes on the subscale level were similar: identity (Cohen's $d = 1.1$), self-direction (Cohen's $d = 1.1$), empathy (Cohen's $d = 0.5$), and intimacy (Cohen's $d = 1.0$). The effect sizes of medium to large proved clinical validity of the LoPF-Q 12–18. In the current study, the internal consistency score was excellent for the total scale ($\alpha = 0.90$). Cronbach's α on the subscale level was also high, accordingly identity ($\alpha = 0.90$), self-direction ($\alpha = 0.94$), empathy ($\alpha = 0.84$), and intimacy ($\alpha = 0.87$).

The short version of the Personality Inventory for DSM-5 for children aged 11–17 [PID-5-BF; (1)] was used to measure maladaptive personality traits (Criterion B). It comprises the 25 items rated on a 4-point scale (0 = very false to 3 = very true) and is categorized into 5 domains of maladaptive personality traits. A higher score indicates higher expression in the personality trait domain. To prepare the Lithuanian version of the PID-5-BF, two independent translations from English to Lithuanian were compared and the items were corrected to build the final version which was back-translated to English. The internal consistency was high for the total score ($\alpha = 0.91$) and moderate for the following subscales: negative affectivity ($\alpha = 0.80$), detachment ($\alpha = 0.70$), antagonism ($\alpha = 0.68$), disinhibition ($\alpha = 0.79$), and psychoticism ($\alpha = 0.82$).

The Borderline Personality Features Scale for Children [BPFSC-11; (29)] is an 11-item self-report questionnaire that was used to assess borderline personality features in adolescence. Participants' responses are rated on a 5-point Likert-type scale from "not true at all" to "always true" where higher scores indicate the higher expression of borderline features. The questionnaire captures the difficulties associated with emotional instability and interpersonal problems as core aspects of borderline personality disorder. In the inpatient sample of adolescents, BPFSC-11 performed well in identifying those who met the criteria for BPD according to the categorical approach to PD (29). To prepare the Lithuanian version of the BPFSC-11, two independent translations from English to Lithuanian were compared and the items were corrected to build the final version which was back-translated to English and approved by its authors (C. Sharp). In the current sample, Cronbach's α for the total scale was 0.88.

Youth Self-Report Form [YSR 11–18; (30)] was used to measure the level of psychopathological symptoms in adolescents. The total score is constituted of the items ($n = 98$) covering both the externalizing and internalizing spectrum difficulties, attention, social, thought, and other problems. The questionnaire has been fully adapted and standardized for use in the Lithuanian population (31). In this study, Cronbach's α for the total score of psychopathological symptoms was very high ($\alpha = 0.97$).

Statistical Analyses

Statistical Package for Social Sciences (SPSS) version 27 was used for statistical analyses (32). Testing the normality of the analyzed data demonstrated the sufficient normal distribution of all the questionnaires' scores on the total and subscale levels, with skewness and kurtosis values being in the range of −1 to 1 (except for antagonism which did not exceed 2). Thus, further analyses were conducted using parametric statistics. First, we computed descriptive statistics in the whole sample and its groups. Statistical significance of mean differences between groups was tested via one-way Analysis of Variance (ANOVA) and *post-hoc* tests. Next, we calculated the Pearson correlation coefficients to examine which dimensions of LoPF-Q 12–18 and PID-5-BF were related to the BPFSC-11 score. Finally, to examine the distinctive features of Criterion A, we explored a hierarchical linear regression model to test whether the level of personality functioning contributes to the prediction of borderline features when controlling for demographic variables (age and gender), psychopathological symptoms, and maladaptive personality traits.

RESULTS

Means and standard deviations for each subgroup (school, inpatient, and forensic) and the full sample are presented in **Table 1**. One-way ANOVA revealed significant differences between groups regarding the values of LoPF-Q 12–18 [$F_{(2,531)} = 10.66$, $p < 0.01$], PID-5-BF [$F_{(2,508)} = 5.99$, $p < 0.01$], and BPFSC-11 [$F_{(2,529)} = 5.83$, $p < 0.01$]. *Post-hoc* analyses (Bonferroni or Games-Howell) were conducted depending on the estimated equality of the variance in each subscale. Psychiatric inpatients were characterized by the most severe disruptions in personality

functioning as well as the highest levels of maladaptive and borderline personality traits when compared to the forensic and school-based groups. Next, bivariate associations analysis using Pearson correlation coefficients (**Table 2**) showed that gender in the total sample significantly correlated with LoPF-Q 12–18 ($r = -0.20$, $p < 0.01$), PID-5-BF ($r = -0.22$, $p < 0.01$), and BPFSC-11 ($r = -0.27$, $p < 0.01$) scores such that girls had more disrupted personality functioning and presented more maladaptive personality traits and borderline features than boys. Also, older age was positively related to higher scores on PID-5-BF ($r = 0.14$, $p < 0.01$) and BPFSC-11 ($r = 0.14$, $p < 0.01$). Further correlational analysis revealed strong associations of BPFSC-11 with total scores of LoPF-Q 12–18 ($r = 0.75$, $p < 0.01$) and PID-5-BF ($r = 0.80$, $p < 0.01$) indicating that higher levels of disruptions in personality functioning or more prominent maladaptive personality traits were associated with higher levels of borderline features. Bivariate relations between Criterion A (LoPF-Q 12–18 total score and subscales) and Criterion B (PID-5-BF total score and subscales) had a robust pattern, with moderate to large in magnitude (see **Table 2**).

At the final step, a hierarchical linear regression model was tested to analyze the variance accounted by Criteria A and B on borderline personality features in the studied sample. The examination of multicollinearity revealed that variance inflation factor (VIF) for all variables was not larger than 5.37 (LoPF-Q 12–18 self-direction subscale) and tolerance values were not smaller than 0.19 (LoPF-Q 12–18 self-direction subscale). It is suggested that VIF values not larger than 10 (33) and tolerance values not smaller than 0.10 (34) are not indicative of problematic multicollinearity, so we proceeded with further analysis. In this model BPFSC-11 score was regressed on age, gender (Step 1), total problems score of YSR 11–18 (Step 2), following PID-5-BF five trait domains (Step 3), and LoPF-Q 12–18 four functioning dimensions (Step 4).

The results of regression analysis are presented in **Table 3**. It was found that PID-5-BF domains captured a significant amount of unique variance (25.6%) in the prediction of the BPFSC-11 scores when controlling for age, gender, and total score of psychopathological symptoms (Step 3). At this step, negative affectivity ($\beta = 0.32$, $p < 0.01$), disinhibition ($\beta = 0.20$, $p < 0.01$), and psychoticism ($\beta = 0.27$, $p < 0.01$) along with total score of YSR ($\beta = 0.19$, $p < 0.01$) were significant predictors. A few interesting findings emerged in Step 4. First, the LoPF-Q 12–18 domains incrementally contributed an additional 4.2% of the variance. In detail, identity ($\beta = 0.10$, $p < 0.05$), self-direction ($\beta = 0.33$, $p < 0.01$), and intimacy ($\beta = -0.10$, $p < 0.05$) were statistically significantly associated with borderline personality features. Second, an unexpected finding here has been the change in the direction of association between LoPF-Q 12–18 intimacy domain (LoPF-Q 12–18) and borderline personality features from positive zero-order correlation into negative beta weight. This indicates a manifestation of negative statistical suppression in which the relationship between a predictor and the outcome variable reverses after adjusting for additional predictors (35). The suppression has likely appeared because of strong correlations of the intimacy domain with other predictors and the dependent variable (BPFSC-11). When entered into the regression equation Intimacy subscale increased the predictive power of other predictors by removing irrelevant variance from them and gaining negative weight. Third, the association between borderline features and psychopathological symptoms was no longer significant at this step (Step 4) when controlling for Criterion A domains. However, negative affectivity ($\beta = 0.22$, $p < 0.01$), disinhibition ($\beta = 0.13$, $p < 0.01$), and psychoticism ($\beta = 0.21$, $p < 0.01$) continued to be statistically significant predictors.

DISCUSSION

The current study aimed to analyze the associations of Criterion A and B—the components of the contemporary dimensional model of personality disorder—with borderline personality features among adolescents. In line with the described developmental trajectory of personality pathology in adolescence (16), we were particularly interested in the unique role of Criterion A to account for borderline personality features after adjusting for the maladaptive personality traits (as defined in Criterion B) and underlying psychopathological symptoms. To examine this, we used a large sample covering a spectrum from typical to problematic development (school-based sample, psychiatric inpatients, and delinquent youth) and a broad adolescence age span along with the measure of LPF—LoPF-Q 12–18—specifically developed for adolescents under the frame of the AMPD in DSM-5 and entry criterion for PDs diagnostic model in ICD-11 (17).

Several findings emerge from this study. First, consistent with our main hypothesis, the findings of the present study suggest the importance of Criterion A for borderline personality features in adolescents. Specifically, the results of our regression model showed the statistically significant unique association between Criterion A and borderline features beyond the context of underlying psychopathology and maladaptive personality traits. This allows us to maintain and strengthen the arguments that Criterion A should have its distinctive function in capturing the features of adolescent personality pathology (15, 36). Research with adults has already shown that personality dysfunction taps a core of personality disorder (37), its specific aspects (7, 38), or outcomes (39). The results of our study extend at least some of these findings into the period of adolescence by pointing to the necessity to consider the level of personality functioning in understanding early borderline personality features. This is particularly important with regard to the new ICD-11 approach which bases assessments of PD on a patient's personality functioning. Accordingly, such dysfunction should also explain the borderline pattern qualifier traditionally called BPD (2). Our findings confirm that this approach is essential in evaluating personality pathology in adolescence too. Furthermore, results from the present study support that the self-functions—identity and self-direction—contribute significantly to the variance of borderline features among adolescents. However, the presence of statistical suppression found in our study doesn't allow us to interpret the role of intimacy in the understanding of borderline features when these are explained simultaneously using other variables of the study. Although the likelihood of suppressor

TABLE 1 | Descriptive statistics by group for observed variables.

	Score interval	School ($n = 467$)[a] *M* (*SD*)	Inpatient ($n = 40$)[b] *M* (*SD*)	Forensic ($n = 25$)[c] *M* (*SD*)	Whole group ($n = 568$) *M* (*SD*)	*F*
BPFSC-11	11–55	28.87 (9.30)[b]	34.00 (9.05)[a]	30.44 (9.00)	29.33 (9.35)	5.83**
LoPF-Q total score	0–388	140.07 (59.78)[b]	184.99 (64.93)[a,c]	143.32 (48.72)[b]	143.67 (60.80)	10.66***
LoPF-Q identity	0–92	34.27 (17.02)[b]	48.73 (18.84)[a,c]	34.35 (11.27)[b]	35.38 (17.35)	13.77***
LoPF-Q self-direction	0–100	39.10 (21.17)[b]	58.96 (23.50)[a,c]	37.32 (21.57)[b]	40.52 (21.98)	16.60***
LoPF-Q empathy	0–104	33.52 (14.22)	36.66 (15.06)	39.20 (12.79)	34.02 (14.27)	2.66
LoPF-Q intimacy	0–92	32.49 (14.98)[b]	40.63 (15.93)[a,c]	32.45 (10.03)[b]	33.10 (14.50)	5.69**
PID-5-BF total score	0–75	24.25 (13.92)[b]	32.20 (13.73)[a]	25.90 (15.75)	24.94 (14.11)	5.99**
PID-5-BF negative affectivity	0–15	6.10 (4.03)[b]	8.35 (4.33)[a,c]	5.04 (3.98)[b]	6.22 (4.09)	6.76**
PID-5-BF detachment	0–15	4.58 (3.28)	5.76 (3.56)	3.87 (3.25)	4.64 (3.31)	3.04*
PID-5-BF antagonism	0–15	2.89 (2.76)	3.17 (2.70)	3.92 (3.95)	2.96 (2.83)	1.69
PID-5-BF disinhibition	0–15	4.85 (3.52)[b,c]	7.22 (3.37)[a]	6.83 (3.69)[a]	5.12 (3.59)	11.41***
PID-5-BF psychoticism	0–15	5.83 (3.99)[b]	8.12 (4.37)[a,c]	5.24 (4.05)[b]	5.98 (4.06)	6.58**
YSR 11–18 total score	0–196	48.94 (31.77)[b,c]	81.02 (39.23)[a]	70.32 (33.72)[a]	52.63 (33.87)	22.12***

*$p < 0.001$, **$p < 0.01$, and ***$p < 0.001$. [a,b,c]*Significant differences between groups.*

TABLE 2 | Correlations among study variables.

	1	2	3	4	5	6	7	8	9	10	11	12
BPFSC-11	–											
LoPF-Q total score	0.75											
LoPF-Q identity	0.73	0.92										
LoPF-Q self-direction	0.79	0.93	0.85									
LoPF-Q empathy	0.56	0.81	0.61	0.64								
LoPF-Q intimacy	0.52	0.87	0.74	0.71	0.68							
PID-5-BF total score	0.81	0.80	0.74	0.77	0.67	0.62						
PID-5-BF negative affectivity	0.74	0.63	0.63	0.69	0.45	0.40	0.81					
PID-5-BF detachment	0.52	0.67	0.59	0.59	0.54	0.67	0.78	0.48				
PID-5-BF antagonism	0.42	0.42	0.33	0.34	0.55	0.30	0.61	0.37	0.40			
PID-5-BF disinhibition	0.67	0.67	0.64	0.64	0.55	0.50	0.83	0.60	0.59	0.40		
PID-5-BF psychoticism	0.72	0.69	0.63	0.68	0.55	0.56	0.86	0.63	0.60	0.41	0.63	
YSR 11–18 total score	0.64	0.71	0.66	0.70	0.56	0.52	0.67	0.56	0.47	0.40	0.57	0.58

All values are significant at $p < 0.001$.

effects can be attributed to a mere statistical artifact (35), it may also be a replicable phenomenon as has been the case in other research fields, e.g., personality traits (40), coping (41), or developmental links between anxiety and depression (42). Our results point at the need for further elaboration on the association of the LoPF-Q 12–18 with borderline personality features. In another sample of Lithuanian adolescents ($N = 362$, unpublished data available from the first author upon a request) the same type of statistical suppression appears. It is not clear yet it is a culture-specific or a general phenomenon, but it waits to be tested in other populations.

Next, the regression model revealed further that Criterion B domains retained their significance when predicting borderline personality features together with Criterion A dimensions. As of note, negative affectivity is postulated to be the most consistent correlate of borderline pathology, along with disinhibition and antagonism (43–45). Differently than explained, the results of the current study revealed a significant contribution of psychoticism which along with negative affectivity had the strongest correlations with, and in conjunction with disinhibition explained the variance of borderline personality features. Although the association of negative affectivity and disinhibition with borderline pathology is in line with the dimensional model of BPD, psychoticism is not among its diagnostic criteria in DSM-5 (1). Nevertheless, psychoticism has been found to map borderline pathology in adults in terms of cognitive and perceptual dysregulation, including proneness to dissociation (46, 47). Notable, the ICD-11 captures such reality testing features in terms of global severity thus aligning them with functioning (1, 48, 49). In other studies, psychoticism has been found to overlap with internalizing and externalizing components that mark a general tendency of dysfunction in young individuals (50).

TABLE 3 | Hierarchical linear regression analysis for predicting BPFSC-11 scores.

Predictor variables	*B*	SE	Beta	*t*	*p*	R^2	R^2 change	*F*
Step 1						0.10	0.10	23.92*
Age	0.92	0.27	0.16	3.44	0.00			
Gender	−5.38	0.85	−0.28	−6.30	0.00			
Step 2						0.44	0.35	282.34*
Age	−0.09	0.22	−0.02	−0.43	0.67			
Gender	−2.80	0.69	−0.15	−4.08	0.00			
YSR 11–18 total problems	0.17	0.01	0.63	16.80	0.00			
Step 3						0.70	0.26	75.80*
Age	−0.19	0.16	−0.03	−1.16	0.25			
Gender	−1.08	0.54	−0.06	−2.01	0.05			
YSR 11–18 total problems	0.05	0.01	0.19	5.25	0.00			
PID-5-BF negative affectivity	0.74	0.09	0.32	8.46	0.00			
PID-5-BF detachment	−0.07	0.10	−0.03	−0.73	0.47			
PID-5-BF antagonism	0.15	0.10	0.04	1.47	0.14			
PID-5-BF disinhibition	0.52	0.10	0.20	5.17	0.00			
PID-5-BF psychoticism	0.60	0.09	0.27	6.61	0.00			
Step 4						0.74	0.04	18.08*
Age	−0.03	0.15	0.00	−0.18	0.85			
Gender	−0.46	0.52	−0.02	−0.90	0.37			
YSR 11–18 total problems	0.01	0.01	0.05	1.34	0.18			
PID-5-BF negative affectivity	0.51	0.09	0.22	5.87	0.00			
PID-5-BF detachment	−0.14	0.10	−0.05	−1.33	0.18			
PID-5-BF antagonism	0.20	0.10	0.06	1.89	0.06			
PID-5-BF disinhibition	0.34	0.10	0.13	3.47	0.00			
PID-5-BF psychoticism	0.48	0.09	0.21	5.55	0.00			
LoPF-Q identity	0.06	0.03	0.10	2.01	0.04			
LoPF-Q self-direction	0.14	0.02	0.33	5.92	0.00			
LoPF-Q empathy	0.02	0.03	0.03	0.84	0.40			
LoPF-Q intimacy	−0.06	0.03	−0.10	−2.28	0.02			

*$p < 0.05$.

To the best of our knowledge, the present study is the first to shed light on the functions of Criteria A and B relative to personality disturbances among adolescents. Overall, it provides evidence that both criteria supplement in indicating borderline personality features in adolescence and might benefit from aspects of one another. These two aspects of the dimensional model—Criterion A, as measured by the LoPF-Q 12–18, and Criterion B, as measured by the PID-5-BF—were highly interrelated in the current study. The associations between Criterion A and B might be anchored and interpreted from a developmental perspective on personality pathology (20). The recent study evidenced a longitudinal prediction of personality traits on personality (self)functioning over the period of 10 years (51). Thus, the cross-sectional interconnection between Criterion A and B could also mark the potential contribution of maladaptive traits to personality dysfunction.

Overall, the findings of our study endorse the relevance of the dimensional model to capture (borderline) personality problems during adolescence. The level of personality functioning is a necessary entry criterion for PD diagnostics in both classification systems—DSM-5 (1) and ICD-11 (2). For the latter, it is the only one required. The present study can shed some light on the implications for ICD-11. First, it reaffirms that BPD in adolescence is a matter of personality functioning, just as studies with adults have shown: rather than being distinct psychopathology, BPD is the strongest marker of the general PD factor (52) and "disappears" into it (37). As such, understanding borderline PD once again brings us closer to the level of personality organization as defined by Kernberg (53) and suggests that BPD criteria reflect the core features of PD severity (37, 54). Secondly, the retention of the borderline qualifier in the ICD-11 raises the question of its possible redundancy with the PD severity criterion (54). The high correlations between personality functioning, maladaptive traits, and borderline features found in the current study suggest that it is a relevant question in adolescence too. Finally, the use of ICD-11 requires assessment tools. Some studies have shown that measures originally developed for Criterion A in the AMPD can be reliably used to classify the severity of PD in the ICD-11 (55). In light of these results, the operationalization of

personality functioning used in the current study, the Level of Personality Functioning Questionnaire for adolescents (LoPF-Q 12–18), uniquely captures adolescents' (borderline) personality difficulties (17, 18), and might be considered a proxy measure for PD severity in the ICD-11.

Despite these contributions, the current results are subject to several limitations. First, as the study included only self-report measures only, this could lead to method-inherent pitfalls in each sample. Empirical studies have shown that self-report scores on personality functioning should be interpreted cautiously in forensic settings (56). Secondly, it used a specific measure of BPFSC-11 which limits the results to the current measure of borderline personality. Third, although we used a large sample of adolescents inclusive of clinical and risk groups to maximize the variance in the assessed outcome, studies with larger clinical samples are needed. Fourth, other criterion variables, e.g., psychosocial functioning might help to shed light on the further delineation of the specificity and difference in functions of Criterion A and B as it has been shown in the studies with adults (38). Finally, the study employed the cross-sectional, not longitudinal design which as we note in the above text could specify better the value of Criterion A and B in relation to personality pathology during adolescence as a sensitive period (36).

In sum, the current research provides an important step in understanding how the main components of the dimensional model work together to indicate and describe borderline personality features that are the earliest maladaptive personality indicator to emerge in development (19).

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Vilnius University Psychological Research Ethics Committee. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

RB: conceptualization, data analysis, and writing the initial draft. EG: data collection, contribution to the introduction section of the paper, and writing. AA: data collection and writing. LG-P: contribution to the results section of the paper and writing. AL: data collection, contribution to the data analysis, results, discussion sections of the paper, and writing. GS-N: data collection and curation, contribution to the data analysis, methods, results sections of the paper, and writing. All authors contributed to the article and approved the submitted version.

FUNDING

This study was funded by a grant (No. S-MIP-21-20) from the Research Council of Lithuania. Open access publication fees were funded by Vilnius University.

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IV.

Personality pathology in adolescence: relationship quality with parents and peers as predictors of the level of personality functioning

Skabeikyte-Norkiene, G., Sharp, C., Kulesz, P. A., & Barkauskiene, R. (2022). Personality pathology in adolescence: relationship quality with parents and peers as predictors of the level of personality functioning. *Borderline Personality Disorder and Emotion Dysregulation.*

Skabeikyte-Norkiene *et al.*
Borderline Personality Disorder and Emotion Dysregulation (2022) 9:31
https://doi.org/10.1186/s40479-022-00202-z

Borderline Personality Disorder and Emotion Dysregulation

RESEARCH Open Access

Personality pathology in adolescence: relationship quality with parents and peers as predictors of the level of personality functioning

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Abstract

Background: The dimensional approach to personality pathology opens up the possibility to investigate adolescence as a significant period for the development of personality pathology. Recent evidence suggests that symptoms of personality pathology may change during adolescence, but the negative consequences such as impaired social functioning persist later on in life. Thus, we think that problems in social functioning may further predict personality impairments. The current study aimed at investigating the role of relationship quality with parents and peers for the prediction of the level of personality functioning across adolescence. We hypothesized that 1) relationship quality with both parents and peers will significantly account for the level of personality functioning in adolescence and 2) the importance of relationship quality with peers for the relation to impairments in personality functioning will increase with age.

Methods: A community sample consisting of 855 adolescents aged 11–18 (M = 14.44, SD = 1.60; 62.5% female) from different regions in Lithuania participated in this study. Self-report questionnaires included the *Levels of Personality Functioning Questionnaire* to investigate personality impairments and the *Network of Relationships Questionnaire* to assess the quality of dyadic relationships.

Results: Discord in the parent, but not peer relationships, was related to a more severe level of personality functioning across adolescence. Lower levels of closeness with parents accounted for higher impairments in personality functioning. The importance of closeness with peers for the explanation of the level of personality functioning increased with age.

Conclusions: During the sensitive period for the development of a personality disorder, relationship quality with the closest adults and peers both remain important for the explanation of impairments in personality functioning.

Keywords: Level of personality functioning, Alternative Model for Personality Disorders (AMPD), ICD-11, Adolescence, Relationship quality, Network of relationships

Background

The last decade was marked by changes in the conceptualization of personality pathology, which was accelerated by the criticism of the existing categorical model of personality disorders (PD). A categorical model is a symptom-based approach, which implies that personality

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pathology is distinct from normative personality and this allows the categorization of distinct syndromes [1]. However, long debates on the validity of widely used categories resulted in a proposal of a new approach [2, 3], namely the Alternative DSM-5 model for personality disorders (AMPD). In contrast to the categorical approach, the AMPD requires evaluation of a unidimensional severity criterion represented by maladaptive self and interpersonal functioning as the entry criterion (Criterion A; Level of Personality Functioning) for the diagnosis of personality disorder [1]. Similarly, the dimensional approach to personality disorder proposed in ICD-11 posits the severity of personality dysfunction as the entry criterion for the evaluation of personality disorder [4]. The construct of personality functioning and the severity continuum in AMPD and ICD-11 are both defined through impaired identity function and self-directedness as well as one's capacity for empathy and intimacy [1]. Thus, both diagnostic systems include similar features and allow one to identify the personality disorder through the evaluation of impairments in individual functioning, which range from healthy to severely impaired. Psychological capacities for self and interpersonal functioning develop over the lifespan [5], and at this point, both diagnostic classifications provide an option for the diagnosis of a personality disorder for adolescents. This opens up the possibility for empirical studies of personality (dys)function in adolescence, which is now considered as a period in which personality disorder usually has its onset and can be validly assessed [6]. Emerging data suggest that assessment of PD through the evaluation of personality functioning is a more developmentally sensitive approach than using a categorical symptom-based approach and may contribute to the early detection of the disorder in adolescence, when the PD may not be fully developed [5]. In that way, self and interpersonal functioning as the main criterion for a personality disorder is seen as emerging and developing in adolescence [7].

The development of the sense of self or identity formation is one of the main developmental tasks throughout adolescence [7, 8], and current knowledge suggests that adolescent relationships have an impact on identity development [9] in a way that the development of self builds on a strong foundation of prior and continuing attachment security with parents and high-quality relationships with peers [7, 10]. Adolescence also stands out as a period with developmental cascades in social cognition and competence which includes not only self and other perception, but also the perception of the interpersonal processes that become more mature and capture the extended social network of close friendships and romantic relationships [11]. Formulating one's worldview and creating identity is affected by the young person's relationships with family, friends, peers, and teachers, and the ability to maintain and self-disclose in a relationship is essential to forming a coherent sense of self or identity formation [12–14]. In this developmental period, there is a normative shift towards peers for intimacy and attachment, and peer relationships become more important. Striving for autonomy is an important task in adolescent identity development, often marked by increased conflicts with parents [15, 16]. Thus, past and present relationships with family and peers appear as important factors for the development of self-function in adolescence.

Existing data indicate the importance of interpersonal processes on the development of the capacity for interpersonal functioning. First, attachment as well as relationship quality with parents and friends are found to be important for the development of the capacity for empathy [17, 18]. Second, the maintenance of relationships through self-disclosure in a relationship helps to build the capacity for reciprocity [13, 19], while attachment security predicts higher levels of intimacy and general social competence in adolescence [20, 21]. On the other hand, conflictual and dominant relationships may impair the development of intimacy [20]. Thus, adolescent relationships play a prominent role as the source of support and provide the context for social learning experience [11], while poor social functioning may pose a risk for a more impaired level of interpersonal functioning.

Evidence from different studies suggests that poor social functioning in both parental and peer relationships, peer rejection, or victimization creates a powerful threat to mental health [22–25]. Poor relationships with parents, including coercive parenting, parent–child discord [26, 27], diminished attachment [28], impaired boundaries [29], and negative interactions with peers and mothers [30] are associated with the development of a borderline personality disorder (BPD) in adolescence. Data suggest that being exposed to relational, psychological, or sexual violence is associated with increases in borderline personality disorder symptoms throughout adolescence [31–33]. Researchers indicate that personality disorders are associated with poorer social and occupational functioning [34, 35], and while the symptoms of a personality disorder may wax and wane through adolescence, problems in social functioning are relatively stable and have long-term consequences [30]. Given that personality disorders are interpersonal in origin, it is reasonable to hypothesize that social problems may not only be seen as the consequence of a disorder but also as a risk factor for further impairments in the development of personality.

Vanwoerden, Franssens, Sharp & De Clercq (2021) recently provided evidence that pre-adolescent social

problems rated by parents predict lower levels of personality functioning (self-function) in early adulthood, which provides support for the idea that problems in social functioning have repercussions not only for other relationships, but may also have an impact on the development of personality dysfunction [36]. However, the study provides personality functioning scores in early adulthood, with social functioning scores attained at age 12. Therefore, little is known about whether social functioning also associates with personality functioning in adolescence itself.

Additional limitations of previous work include that the vast majority of the conducted studies cover categorical concepts of personality disorders, mostly borderline personality disorder. Having in mind the recent switch from the categorical to dimensional approach towards personality pathology, research investigating the factors related to the level of personality functioning is necessary, and has, as yet, not been undertaken. Second, existing research on social functioning mostly includes only one type of relationship (mothers/siblings/peers, etc.), which does not capture the complexity of the adolescent's social world [37]. Currently, significant effort has been put toward the analysis of the parent–child relationship's role in the child's personality development [38], but the way in which peer relationships in adolescence interact with the maturation of personality is still unclear [11, 39]. Third, previous studies have not taken into account age cohort effects on outcomes.

Highlighting these limitations, the aim of this study was to explore the role of subjective positive and negative relationship quality with parents and peers for the prediction of the level of personality (dys)function in adolescence. Since personality disorders have high comorbidity rates with other psychopathology, including internalizing and externalizing difficulties [40, 41], we have decided to include general psychopathology as well, which will allow us to understand the association between relationship quality and personality functioning, independent from other forms of psychopathology. We expect that even though adolescence is marked by a shift from reliance on parents towards reliance on peers, increased levels of conflicts with parents are common in adolescence [15, 16], and the negative interactions with parents will remain significant in explaining a more severe level of personality functioning throughout adolescence. Second, since parents and peers might provide different and unique contexts for identity development [38], we hypothesize that lower levels of closeness with peers and parents will both emerge as important factors that account for more impaired personality functioning. Finally, time spent with peers and intimacy between peers increases during adolescence [17], so we expect that the role of the relationship quality with peers in relation to the level of personality functioning will become more important as adolescents grow older.

Methods

Participants and procedures

The sample consisted of 855 adolescents aged 11–18 (M = 14.44, SD = 1.60; 62.5% female and 37.5% male) who were enrolled through public schools covering several cities (37.2%), towns (40.9%) and rural areas (21.9%) in Lithuania. More than half of the participants (66.5%) reported that their parents were married. Participants also reported that their parents were divorced (18.5%) or that the status of the family relationship was "other" (10.90%).

We used the non-probability quota sampling method to form a sample of evenly distributed different age groups and areas in Lithuania. Invitations to participate in the study and written parent consent forms were distributed to pupils through the selected schools. Only adolescents whose parents gave written consent participated in the study. All participants were informed about their right to withdraw from the study at any time.

The study was conducted by trained research assistants during school hours in small groups of pupils who were asked to fill out the questionnaires. Part of the study was conducted during the lockdown due to Covid-19. According to the World Health Organization, increased levels of psychological problems might be seen during and after the pandemic, which might also have an impact on the participants' responses. The presented cross-sectional data is part of the large longitudinal study in Lithuania, that addresses different aspects of adolescent personality and psychosocial functioning. The full study protocol was approved by the Psychological Research Ethics Committee at Vilnius University.

Measures

Personality pathology

The level of personality functioning was assessed with the culturally adapted Lithuanian version of the DSM-5 based instrument *Levels of Personality Functioning Questionnaire* (LoPF-Q 12–18) [42]. It is a 97-item self-report instrument with a 5-step response format (0 = no to 4 = yes) with higher scores indicating a more severe level of impairment in personality functioning and a higher risk for a current personality disorder. The questionnaire allows assessing dimensionally the total score of personality dysfunction as well as adaptive function or disturbances in the self and interpersonal domains. The original questionnaire was developed by a research group in Basel University clinics, Switzerland. The adaptation procedure for the Lithuanian version of the LoPF-Q

12–18 [43] included the translation and back-translation of the items based on the discussion with the instrument authors. Subsequently, the pilot and main empirical studies were conducted to ensure the necessary psychometric qualities of the questionnaire. Adolescents ($N = 362$; 83% school-based sample; 17% clinical sample) participated in the main empirical study. The LoPF-Q 12–18 scores differentiate adolescents with 5 or more BPD symptoms from the school-based sample of adolescents with BPD (Cohen's $d = 1.2$), which proved the clinical validity of the LoPF-Q 12–18 (unpublished dataset). Based on the previous discussions about the LoPF-Q structure and existing attempts to identify the most valid structure of the instrument, we have decided to use a total LoPF-Q score as a unidimensional measure of personality functioning [44, 45]. In the current study, the internal consistency was excellent for the total scale ($\alpha = 0.97$).

Relationship quality

Network of Relationships Questionnaire-Relationship Qualities Version (NRI-RQV) [37] was used to assess the subjective quality of adolescent relationships. It is a self-report instrument with 30 items and a 5-step response format (1 = never or hardly at all to 5 = always or extremely much). Items are then divided into subscales in which a higher mean on a subscale level indicates a higher expression of the specific quality. The chosen version of the questionnaire employs a set of relationship qualities that describes the supportive and discordant qualities of relationships with parents and peers. The features assessed are more of a behavioral or observable nature and are rated on the scale "how often" do you experience particular features rather than reveal attitudes and insights. In our study adolescents evaluated their current relationships with their best friend and both parents separately. Parental scales were then transformed into one scale by extracting the mean of the relationship quality with both mother and father. In this study, only the two broad scales of positive (closeness) and negative (discord) qualities of the relationships were evaluated to capture the different valence of adolescents' interactions. The positive qualities scale was constructed of several aspects of relationships, including companionship, disclosure, satisfaction, emotional support, and approval. Similarly, negative qualities were defined through subjective pressure, conflict, criticism, dominance, and exclusion in the specific relationship. The original version of the measure showed good internal consistency with Cronbach α ranging from 0.89 to 0.93 for the closeness scale and 0.80-0.84 for the discord scale [46]. The questionnaire was translated into Lithuanian language by two independent experts at the Developmental Psychopathology Research Center at Vilnius university, and after a thorough discussion, the final version of the questionnaire was prepared for the study. The internal consistency was high both in closeness ($\alpha = 0.89$) and discord ($\alpha = 0.87$) in peer relationships as well as parent relationships (accordingly, $\alpha = 0.92$ and $\alpha = 0.91$).

General psychopathology

Youth Self-Report (YSR 11/18) [47] was used to measure internalizing and externalizing difficulties which will be further reported as general youth psychopathology. It is a 112-item self-report instrument with a 3-point answer scale (0 = not true, 1 = somewhat or sometimes true, 3 = very true or often true). The instrument is fully standardized for use in a Lithuanian sample [48]. Internal consistency of the used subscales in this study is high, with Cronbach α being equal to 0.94 for internalizing and 0.89 for externalizing difficulties.

Statistical analyses

Before addressing questions of interest, we computed descriptive statistics (means and standard deviations), and Pearson correlations to examine bivariate relations between variables used in subsequent analyses. The False Discovery Rate (Benjamini & Hochberg, 1995) at the level of 0.05 was used as a correction for multiple computed correlations. Multiple regression models with fixed predictors were computed to examine the effects of subjective positive and negative relationship qualities with parents and peers on the level of personality (dys) function in adolescence. The level of personality (dys) function was a continuous outcome. On the predictor side of the models, continuously distributed negative and positive relationship qualities, as well as internalizing and externalizing difficulties were grand mean centered at a mean value for 15-year-old participants. Gender, internalizing difficulties, and externalizing difficulties were treated as covariates in computed models. Age and relationship quality interaction with age were included to examine whether the level of personality (dys)function changes over time and whether relations between personality (dys)function and relationship quality are moderated by age, respectively. A statistically significant interaction of age and positive relationship qualities with peers was depicted using a line plot. In the plot, continuously distributed age and positive relationship qualities with peers were categorized into two or three categories (respectively) to simplify plotting. Specifically, we computed low (below 1 standard deviation), average (mean value), and high (above 1 standard deviation) values for positive relationship qualities with peers using mean and standard deviations. A similar process was repeated for the age variable. After obtaining the aforementioned values, we used these constants in regression equations to

obtain respective intercepts that were subsequently connected using lines on the plot. Regression models were separately computed for negative and positive relationship qualities. Regression diagnostics were examined to ensure that regression assumptions are met. All analyses were conducted using the *Statistical Package for Social Sciences* (SPSS) v. 23.

Results

Preliminary findings

The current sample covers a broad age span which ranges from 11 to 18 years old. Descriptive statistics of used measures across age span (grouped into 6 age groups) are presented in Table 1. The mean LoPF-Q total score was the highest in middle adolescents group (M = 150.40 at age 15) and slightly lower for younger (M = 141.36 at age 11–12, M = 148.45 at age 13 and M = 146.64 at age 14) and older adolescents (M = 147.10 at age 16 and M = 146.63 at age 17–18). Levels of closeness with parents were found to be the highest for early adolescents (M = 3.73) and lowest for older adolescents (M = 3.38). Levels of discord in relationship with parents were found to be the highest from early to middle adolescence (M = 2.05 at age 11–12 and M = 2.19 at age 14) and lower in late adolescence (M = 2.02 at age 17–18). The mean score of closeness in relationship with peers differed across each adolescents group (M = 3.64 at age 11–12; M = 3.83 at age 13; M = 3.82 at age 14; M = 3.68 at age 15; M = 3.91 at age 16; M = 3.69 at age 17–18). Discord in peer relationships was the highest among early and middle adolescents (M = 1.79 at age 11–12 and M = 1.89 at age 15) and lower for late adolescents (M = 1.57 at age 17–18). Scores of internalizing difficulties were the lowest in the youngest adolescent group (M = 15.12 at age 11–12) and highest for the oldest adolescents (M = 20.88 at age 17–18). Mean levels of externalizing difficulties were the lowest for early adolescents and late adolescents (M = 9.76 at age 11–12), and the highest for middle adolescents (M = 14.23 at age 16 and M = 13.69 at age 17–18).

Relations between personality (dys)function, relationship quality, internalizing and externalizing difficulties, and age are presented in Table 2. Older age was related to lower levels of closeness with parents (r = -0.22;

Table 1 Descriptive statistics by age groups

Measure	LoPF_Q total score	NRI parent closeness	NRI parent discord	NRI peer closeness	NRI peer discord	Internalizing difficulties	Externalizing difficulties
Age group	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
11–12 (n = 128)	141.36 (56.50)	3.73 (.88)	2.05 (.86)	3.64 (.90)	1.79 (.69)	15.12 (12.31)	9.76 (7.95)
13 (n = 141)	148.45 (58.28)	3.61 (.88)	2.11 (.75)	3.83 (.80)	1.82 (.75)	19.11 (12.27)	10.79 (7.72)
14 (n = 153)	146.64 (59.03)	3.39 (.98)	2.19 (.88)	3.82 (.91)	1.86 (.72)	18.76 (13.11)	11.52 (8.16)
15 (n = 166)	150.40 (58.56)	3.28 (1.01)	2.11 (.75)	3.68 (1.20)	1.89 (.74)	19.88 (12.93)	14.14 (8.95)
16 (n = 186)	147.10 (59.14)	3.14 (1.01)	2.11 (.75)	3.91 (.95)	1.79 (.66)	20.49 (12.24)	14.23 (8.57)
17–18 (n = 81)	146.63 (58.74)	3.38 (.99)	2.02 (.81)	3.69 (1.08)	1.57 (.69)	20.88 (13.12)	13.69 (9.84)

Although mean values for outcomes, predictors, and covariates are reported in the table by age, regression analyses included age as a continuous measure rather than categorical. We combined ages 17 and 18 into one group because there was only 1 participant who was 18 years old. Similarly, we combined ages 11 and 12 into one group because there were 11 participants who were 11 years old

LoPF-Q Levels of personality functioning questionnaire, *NRI* Network of relationships inventory, *closeness* Positive relationship qualities, *discord* Negative relationship qualities

Table 2 Pearson correlation coefficients after adjusting for multiple computed correlations using the Benjamini–Hochberg procedure with a false discovery rate of .05

Variable	1	2	3	4	5	6	7	8
1. Age	1	.01	.03	-.07	-.22[a]	-.01	.12[a]	.19[a]
2. LoPF-Q		1	-.14[a]	.19[a]	-.51[a]	.42[a]	.72[a]	.48[a]
3. NRI peer closeness			1	.21[a]	.29[a]	-.01	-.01	.01
4. NRI peer discord				1	.09[a]	.46[a]	.12[a]	.16[a]
5. NRI parent closeness					1	-.10[a]	-.49[a]	-.39[a]
6. NRI parent discord						1	.31[a]	.34[a]
7. Internalizing difficulties							1	.60[a]
8. Externalizing difficulties								1

[a] Statistically significant correlations after adjusting for multiple computed correlations

$p < 0.004$) and internalizing ($r = 0.12$; $p < 0.002$) and externalizing ($r = 0.19$; $p < 0.007$) difficulties. Domains of positive ($r = -0.51$, $p < 0.002$) and negative ($r = 0.42$, $p < 0.001$) relationship quality with parents were significantly and moderately correlated with the total score of personality functioning. Correlations between the positive ($r = -0.14$, $p < 0.002$) and negative ($r = 0.19$, $p < 0.002$) relationship quality with peers and the total score of personality functioning were of small magnitude, but statistically significant, demonstrating that lower levels of closeness and higher levels of discord in parent and peer relationships were related to a more impaired level of personality functioning. Positive relationship quality was correlated with negative relationship quality in peer relationships ($r = 0.21$, $p < 0.005$), which means that a higher level of closeness in a relationship with a best friend was also associated with a higher level of discord. Negative relationship quality was associated with both higher levels of closeness ($r = 0.09$, $p < 0.01$) and higher levels of discord ($r = 0.46$, $p < 0.004$) in relationship with parents. Last, there was a negative association of small magnitude between positive and negative qualities in parent relationships ($r = 0.10$, $p < 0.01$) indicating that higher levels of support are associated with lower levels of discord.

The effects of relationship quality on the level of personality (dys)function

Table 3 presents regression coefficients and model fit indices of the computed models. The model focusing on negative aspects of parent and peer relationships, controlling for internalizing and externalizing difficulties, and gender accounted for 58% of the variance in personality (dys)function (LoPF-Q). Findings suggested that only negative relationship quality in interactions with parents ($\beta = 0.191$, $p < 0.001$) was related to higher impairments in adolescents' personality functioning, when controlling for gender, internalizing, and externalizing difficulties. Age ($\beta = -0.070$, $p = 0.005$) and internalizing ($\beta = 0.64$, $p < 0.001$) difficulties were related to the LoPF-Q scores, such that older age and higher levels of internalizing problems accounted for higher impairments in personality functioning. Moreover, negative relationship quality with peers or interactions with age were non-significant in explaining LoPF-Q scores.

The model examining the role of positive relationship quality with parents and peers, controlling for internalizing and externalizing difficulties, and gender, accounted for 58% of the variance in personality (dys) function. Positive relationship quality with parents was related to LoPF-Q scores ($\beta = -0.198$, $p < 0.001$), controlling for other terms in the model. This finding implies that closeness with parents (regardless

Table 3 Linear regression models with fixed predictors for the explanation of LoPF-Q total score

	B	*β*	*SE*	t	R^2	F
Model 1: negative qualities					.58	125.84[c]
Age	-2.54	-.07	.89	-2.84[b]		
Gender	-1.79	-.02	3.26	-.55		
Internalizing difficulties	2.95	.64	.15	19.49[c]		
Externalizing difficulties	.27	.04	.21	1.27		
NRI parent discord	14.09	.19	2.28	6.17[c]		
NRI peer discord	3.48	.04	2.48	1.40		
Age x NRI parent discord	-.06	-.001	1.33	-.05		
Age x NRI peer discord	.35	.01	1.52	.23		
Model 2: positive qualities					.58	127.52[c]
Age	-4.04	-.11	.91	-4.44[c]		
Gender	-2.12	-.02	3.33	-.64		
Internalizing difficulties	2.77	.60	.16	17.58[c]		
Externalizing difficulties	.44	.06	.21	2.09		
NRI parent closeness	-11.91	-.20	1.79	-6.65[c]		
NRI peer closeness	-3.29	-.05	1.64	-2.01[a]		
Age x NRI parent closeness	-.40	-.01	.95	-.42		
Age x NRI peer closeness	1.93	.05	.96	2.02[a]		

[a] significant at the level less than .05

[b] significant at the level less than .01

[c] significant at the level less than .001

of an adolescent's age) is important in explaining the level of personality functioning. Closeness with parents can be regarded as a stable construct that impacts adolescents' personality functioning across the developmental span. The interaction between age and closeness in peer relationships was also statistically significant ($\beta = 0.052$, $p = 0.04$), over and above other terms in the model. As depicted in Fig. 1, the interaction effects were dominated by the main effects such that both younger and older participants with lower (defined as one standard deviation below the average) or higher (defined as one standard deviation above the average) positive relationship quality had higher LoPF-Q scores relative to younger or older participants with average positive relationship quality. Yet, the difference in relations between lower or higher positive relationship quality and LoPF-Q scores, versus relations between average positive relationship quality and LoPF-Q scores was more pronounced for older participants revealing an ordinal type of interaction. Together, these findings suggested that both parental and peer positive relationships are important for the level of personality functioning such that closeness with parents may be seen as a stable quality regardless of the adolescent's age, while closeness in peer relationships changes as a function of age. Finally, internalizing ($\beta = 0.602$, $p < 0.001$) and externalizing difficulties ($\beta = 0.064$, $p < 0.001$) also statistically significantly accounted for the LoPF-Q scores, indicating that higher levels of difficulties were associated with higher LoPF-Q scores.

Discussion

The current study aimed at exploring the role of relationship quality with parents and peers for the prediction of impairment in the level of personality functioning in adolescents. The analyzed data came from a large adolescent community sample covering different areas in Lithuania. This is one of the first studies to examine the dimensional concept of personality pathology in relation to adolescents' current subjective social functioning across a broad adolescence age span.

In this study, we conceptualized personality pathology through a dimensional model of personality disorders, which was proposed in DSM-5 and further adapted for use in ICD-11. Emerging data suggest that diagnostic information obtained using DSM-5 assessment tools can be used for making an ICD-11 dimensional personality disorder diagnosis [49], which makes the assessment of the level of personality functioning as a proxy indicator of severity. Thus, the unidimensional concept of severity in personality pathology was assessed using the Levels of Personality Functioning Questionnaire for adolescents (LoPF-Q 12–18) [42], which allows the attainment of a total score of severity in the level of personality functioning. The quality of relationships was seen as a subjective evaluation of behavioral aspects of relationships with a mother, father, and best friend using the Network of Relationships Questionnaire (NRI) [37]. The obtained scores were compiled into positive and negative relationships with parents and peers, reflecting the experienced closeness and discord in these close relationships.

Several findings are notable. First, there were no significant associations between the level of personality

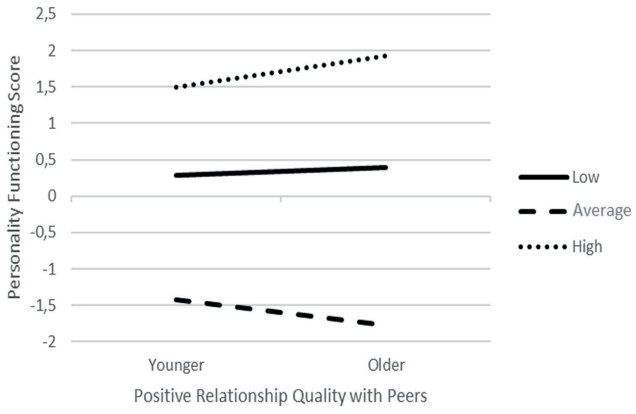

Fig. 1 A line plot demonstrating the personality functioning score for low (solid line), average (dashed line), and high (dotted line) positive relationship qualities with peers for older and younger participants. Younger = younger participants; Older = older participants

functioning and age, indicating that in a community sample, personality functioning was found as a relatively stable construct throughout adolescence. Previous evidence on maladaptive personality traits suggest that features of personality pathology emerge in early adolescence, reach their peak in middle adolescence, and then decrease as adolescents enter adulthood [50]. Similarly, recent research revealed the normative increase in maladaptive identity throughout adolescence, which was closely related to increases in borderline personality features, especially for older adolescents [51]. However, our data catches the wider scope of general severity in personality functioning rather than discrete personality features so it is possible that even though personality features might change, the general level of personality functioning follows a more complex pattern of change.

Next, as expected, we found that negative interactions with parents were related to the more severe level of personality functioning, independently from adolescents' age. This is comparable to previous research showing an association between negative experiences in relationships with parents such as parental control or coercive parenting and aspects of personality pathology [14, 26, 30]. Thus, discordant qualities of relationship with parents stand out as a potentially important factor for the prediction of higher levels of impairment in personality functioning. Of course, given the cross-sectional nature of our data, the direction of influence is not causal and directionality can only be determined by prospective follow-up studies.

Unexpected results were also found – specifically, that discord in peer relationships was not related to the level of personality functioning. Previous studies have provided much evidence supporting the opposite and showing that negative experiences with peers are very important for the development and course of a personality disorder [24, 31, 52, 53]. One of our explanations would be that the negative interactions that we were investigating were not at that extreme level, as victimization (studied in previous samples) would be. Negative interactions with peers that include conflict or criticism in relationships might be more closely related to the normative aspect of discord in relationships, but not direct victimization.

In addition, lower levels of closeness in parent relationships were found to account for higher levels of impairments in personality functioning. Data on categorical personality disorders have shown similar results demonstrating that low maternal emotional support was associated with higher severity of BPD symptoms [54]. It was found that BPD symptoms and parenting practices that are low in warmth might even maintain each other during adolescence [55]. On the other hand, higher maternal support was associated with lower subsequent BPD scores and was seen as a strong protective factor [36]. Higher quality of relationships with father and mother was in general associated with higher adolescent well-being and it seems that interpersonal support can offer some survival strategies that help to build relational capacities in the complicated process of personality maturation [56, 57]. Our findings reveal that lower levels of closeness with parents account for higher impairments in personality functioning, but, however, data suggest that sufficient levels of closeness can also be associated with higher adaptive level of personality functioning.

The most noteworthy finding that emerged in this study was that even though closeness with parents remained important independently from the adolescent's age, the importance of closeness with peers in explaining the variance in the level of personality functioning increased with age. This is supported by theory on adolescents' social development during childhood since one of the developmental milestones in the transition from parental reliance to autonomy in adolescence is learning to create trustworthy and reliable relationships with peers, which become more important with age [20, 58]. The increasing relevance of peers is important against the background of evidence suggesting that support from family and friends may decrease the risk for internalizing psychopathology, buffer the effects of earlier adverse and bullying experiences, and may even provide context for protection against victimization in the long-term [59, 60].

Another interesting finding was that very low or very high levels of closeness in peer relationships were associated with higher impairments in personality functioning when compared to average levels of closeness with peers. This reveals that not only the lack of closeness might contribute to the development of a personality disorder, but also the elevated levels of closeness which are deviant from the average levels that adolescents usually report. Lazarus (2019) provided similar evidence suggesting that higher levels of support in adolescent romantic relationships predict steeper increases in BPD symptoms across adolescence [61]. These findings report the potential negative influence of overreliance and early involvement in close romantic relationships and our data suggest that overly close relationships with a best friend might also be significant for the development of impairments in personality functioning. On the other hand, it is reported that adolescents who have personality disorders strive for intimacy in relationships and their view toward significant people and relations to them might be distorted or overly idealized [1].

Also, higher levels of closeness in peer interactions were related to higher levels of discord in those relationships. Similar results were obtained in a recent study by

Hessels (2022) in which they investigated a clinical sample of adolescents. Authors explain that adolescents at risk for a personality disorder might experience the interactions with a best friend at a more extreme level with friendships providing a ground for both supportive and negative interactions. Since personality disorders are marked by serious disturbances in interpersonal functioning, this was considered as a marker of BPD in the studied sample [30]. However, we investigated a community-based sample so we hypothesize that intense involvement in peer relationships might also be the marker of the normative shift from parent to peer influence that is common for this developmental stage [20, 58]. Also, in another study, the frequency of close contact was found to be associated with the level of conflict in relationships [62] so it is possible that a relationship with a best friend in adolescence is more intense and frequent, which might also lead to both closeness and discord.

To sum up, even though adolescents go through the change of developmental tasks with higher importance being placed on peer relationships, it seems that in the process of the development of personality pathology, not only peer relationships are significant, but relations to parents remain important throughout adolescence. Supporting our findings, McLean and Jennings (2012) state that parents and friends provide unique contexts with different implications in the process of identity development, and while parental relationships are indeed crucial for the construction of internal models of extended relationships, high-quality peer relationships are essential in a way that they may provide a safe place for identity explorations away from parents [18, 38]. We conclude that in our study parent and peer relationships both remain significant and depending on the valence of the relationship, create an important context for the development of a level of personality functioning.

The study has several limitations. First, self-report was used to evaluate the main constructs of the study which capture only the subjective experience of Lithuanian adolescents. Data from several sources of information (e.g. parents, friends) or obtained through qualitative methods would provide additional important information. Second, the conducted study is cross-sectional, which did not allow us to capture the interaction among constructs in time. While our study has developmental implications by comparing different age groups, future studies should include within-person longitudinal samples in order to better explain the possible mechanisms in which adolescent social experiences interact with the level of personality functioning. Third, the current study was launched during the quarantine and lockdown due to the Covid-19 pandemic, which might have an impact on our data, especially regarding evaluations of relationship quality.

Conclusions

In accordance with the recommendations proposed by Chanen (2017), research is moving towards the identification of the factors that may account for the development of a personality disorder [63]. In the context of a recently developed dimensional model of personality disorders, our data add up to the knowledge about the possible risk and protective factors for the level of personality functioning. Even though we see the shift towards peers for interpersonal support in adolescence and important positive relationships seem promising for a healthier level of personality functioning, discord in parent relationships appears as a stable and significant factor that accounts for higher levels of severity in the level of personality functioning throughout adolescence. Previous data have shown that impaired social functioning is one of the long-term consequences of categorical personality disorders, however, our research suggests that problems in social functioning might continue to predict further impairments in personality functioning across adolescence. Thus, managing the risk of personality pathology would not only include strengthening of the supportive network of the adolescent social world, but also continued efforts to reduce discordant relationships aspects with adults which prove to have a deteriorating effect on personality functioning independent of adolescent age.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40479-022-00202-z.

Additional file 1.

Acknowledgements
Not applicable.

Authors' contributions
GS-N: conceptualization, data collection, data analysis, and writing the initial draft. CS: contribution to the introduction, results, and discussion part of the paper. PK: data analysis, contribution to the results section of the paper, preparation of figures. RB: conceptualization, contribution to all parts of the paper, reviewing, and writing. All authors contributed to the article and approved the submitted version.

Funding
This study was funded by a grant (No. S-MIP-21–20) from the Research Council of Lithuania.

Availability of data and materials
The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate
The studies involving human participants were reviewed and approved by Vilnius University Psychological Research Ethics Committee. Written informed

consent to participate in this study was provided by the participant's legal guardian/next of kin.

Consent for publication
Not applicable.

Competing interests
The authors declare that they have no competing interests.

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Received: 13 May 2022 Accepted: 4 October 2022
Published online: 19 October 2022

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Publisher's Note

PRESENTATIONS AT CONFERENCES

1. **Skabeikyte-Norkiene, G.**, Gaudiesiute, E., & Barkauskiene R. (2022). *Adolescent general psychopathology as a mediator among maladaptive personality traits and the level of personality functioning in a one-year period*. Presented at the virtual 6th International Congress on Borderline Personality Disorder and Allied Disorders, 10-12th October 2022.
2. **Skabeikytė-Norkienė, G.**, & Barkauskienė, R. (2022). *Personality functioning in adolescence and parallels with ICD-11: the role of subjective peer and family relationship quality.* Presented at the 19th International Congress of ESCAP Maastricht – Networks in Child and Adolescent Psychiatry, Maastricht, Netherlands, 19-21st June 2022.
3. **Skabeikytė-Norkienė, G.**, & Barkauskienė, R. *Asmenybės sutrikimo rizika ir sąsajos su psichosocialiniais veiksniais psichikos sveikatos paslaugas gaunančių paauglių grupėje.* Presented at Lietuvos psichologų kongresas 2022: psichologija 360˚ +1, Kaunas, Lithuania, 29-30th April 2022.
4. **Skabeikyte, G.**, Gaudiesiute, E., & Barkauskiene, R. *The mediating role of reflective function in the relationship between psychological difficulties and personality functioning in adolescence.* The Presented at virtual ISSPD personality disorder congress 2021: kaleidoscope perspectives, Oslo, Norway, 11-13th October 2021.
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1. Barkauskienė, R., Gaudiešiūtė, E., ir **Skabeikytė, G.** (2021). Asmenybės sutrikimo sampratos kaita pereinant prie TLK-11: žvilgsnis iš klinikinės ir raidos perspektyvų, *Psichologija*, 65, 8-21. https://doi.org/10.15388/Psichol.2021.36
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NOTES

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