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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

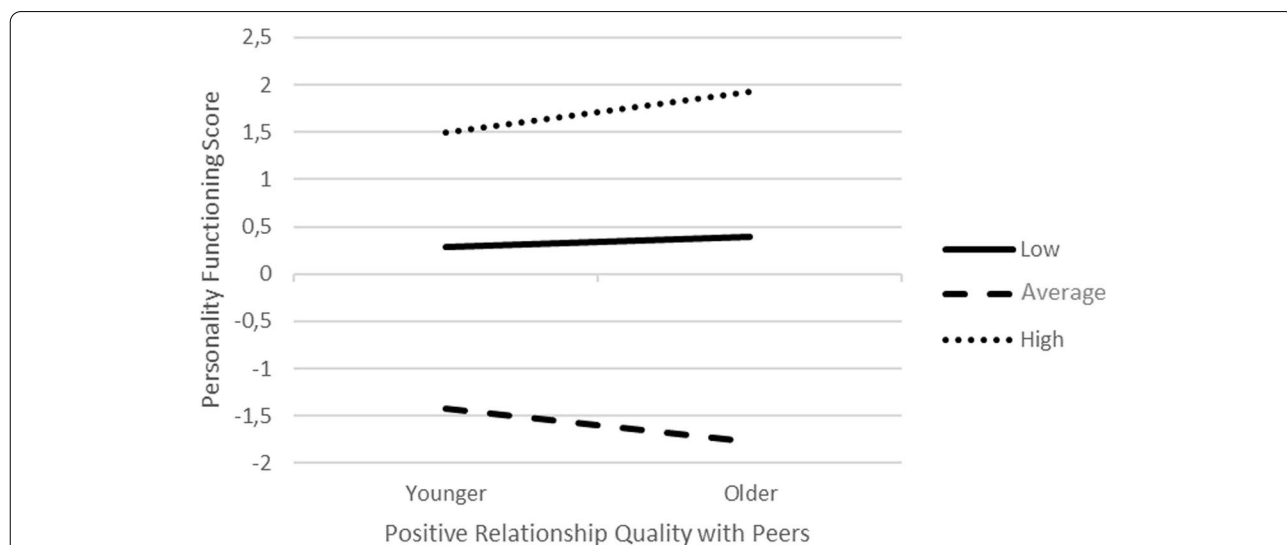


Fig. 1 A line plot demonstrating the personality functioning score for low (solid line), average (dashed line), and high (dotted line) positive relationship qualities with peers for older and younger participants. Younger=younger participants; Older=older participants

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

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Additional file 1.

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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.

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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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