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Original article

The selected psychosocial risk factors in the development of personality disorders in a group of Polish young adults

Danuta Ochojska, Jacek Pasternak

Department of Psychology, University of Rzeszów, Poland

SUMMARY

Objectives

In literature, several groups of risk factors for psychiatric disorders are usually found, among them individual experiences, cultural influences, social relationships and social resources. Our considerations focus on a number of selected family conditions relevant to the process of formation of personality disorders.

Methods

A group 387 students revealing the traits of personality disorders participated in our study. The researchers took advantage of the following research techniques: self-constructed questionnaire, Retrospective Evaluation of Parental Attitudes Questionnaire [1] and a Structured Clinical Interview for investigating personality disorders SCID-II [2].

Results

Four types of family relations were distinguished which may either have an impact on the development of healthy personality (tolerant parents) or imply the appearance of personality disorders (intolerant, passive, uninvolved and incoherent parents). People with abnormalities in their personality development significantly more frequently assessed the atmosphere in their families of origin as abnormal. Three types of disorders were significantly more common in men than in women. These were the histrionic ($p < 0.038$), narcissistic ($p < 0.004$) and antisocial personality ($p < 0.001$) disorders.

Conclusions

Our research confirmed a vital significance of the specificity of parental influence on the development of personality disorders.

Key words: personality disorders, parental attitudes, young adults, personality development

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Correspondence
Danuta Ochojska
University of Rzeszów, ul. Ks. Jałowego 24,
35-110 Rzeszów, Poland
E-mail: dochojska@wp.pl

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Introduction

Early adulthood is a very demanding period in most people's life. This is when young adults try to become materially and emotionally independent from their families of origin and take full responsibility for their own lives. As individuals choose their own ways of self-realization they encounter many different psychological, social and physical challenges. The main developmental tasks of young adults usually involve establishing a family, and is linked with choosing a partner, bringing up children, meeting one's obligations associated to household duties, and also taking on new professional roles.

The intense cultural and civilizational transformations of our times result in a growing number of tasks which young people must be equipped to perform. This makes them evade adulthood as expressed in avoiding marriage or postponing the decision to have children, even though taking responsibility for another person still remains an indicator of individual's maturity. Unfortunately, more and more people suffer from various mental problems, which is why it has become necessary to take action aimed at preventing mental

health disorders and looking for effective forms of therapy if only because personality disorders are at the very source of mental illness and psychiatric disorders.

The determinants of personality disorders

Personality disorders are associated with certain fixed, rigid patterns of behaviour that deviate from the behaviour typical for a given culture. People with personality disorders reveal difficulties in psychosocial functioning and adapting to various situations. Adaptive problems, inability to meet certain needs and inadequate response patterns lead to aggravating disorders, difficulties in daily functioning or establishing proper relationships with other people.

The current classification of mental disorders DSM-5 [3] distinguishes ten types of personality disorders. The DSM-5 classification provides the results of studies that indicate that the prevalence of personality disorders in the population varies between 0.2 and 7.9%.

A higher proportion of individuals with personality disorders has been demonstrated in some other studies. In the well-known research conducted by Hasin et al. [4], 14.79% of adults in America were diagnosed with at least one personality disorder. Research by Xu, Liu, Yuan and Feng [5] identified 28.31% of individuals with personality disorders, including people with some traits of personality disorders (17.07%) and personality disorders (11.24%).

Both biological and psychosocial factors are at the source of personality disorders. Research confirms that in case of borderline personality disorder the significance of genetic component is considerable, particularly when it comes to the temperamental characteristics (dysregulation, hypersensitivity and impulsiveness). Similarly, research on anxiety and personality disorders that are characterized by high level anxiety demonstrates that there is a higher risk of its occurrence in people whose immediate relatives suffer from these disorders [6]. The symptoms occurred even more frequently in children of mothers who suffered from anxiety disorder [7]. An essential role of neurotransmitters, i.e. dopamine, serotonin as well as the opioid system was also emphasized in the development of personality disorders [8]. In the analysis of psychosocial determinants, particular emphasis was placed on family factors, mainly parental influences [9]. The strength of the association between personality disorders and the occurrence of abnormalities in parental influences is difficult to measure as many factors that are usually involved are juxtaposed in the system. In fact, the functioning of a family as a system is particularly significant here. In psychodynamic mechanisms, such as identification with a parent, but also through continuous patterns of interactions resulting from the overlapping of various factors, positive and negative events (such as work problems, achieving success, illness of a family member, divorce) a child takes over some moods, styles of coping with difficulties, acquiring specific roles, which overlaps with individual characteristics also determined by genetic factors, which altogether create a system of specific attitudes and behaviours in various situations. There are, however, difficulties in establishing unequivocally what type of traumatic events, their duration or severity might cause personality changes. Case studies are certainly useful in this context as are qualitative analysis taking into consideration the frequency and severity of specific behaviours in a group or community.

There are many studies available with regards to the relationship between personality disorders and retrospectively evaluated parental attitudes. Strong influence of environmental factors (including parental influences) were noted in the aetiology of borderline personality disorder [10]. Adolescents whose mothers were diagnosed with borderline personality disorders saw their mothers' attitudes as rejecting. Such adolescents were most frequently diagnosed with avoidant personality disorder [11]. The mothers were also demanding and reversing roles in the mother-child relationship [12], excessively protective, rejecting [13], and inappropriate in all dimensions investigated [14]. Children of borderline mothers may develop borderline personality traits, such as emotional dysregulation, insecure attachment, depression, internalising and externalising problems and interpersonal problems [15-17].

An interesting study on the effects of early maladaptive patterns, temperament and parental attitudes on the development of borderline and avoidance personality traits was conducted by Mącik [18]. In the case of borderline features, the most appropriate model includes the following schemas: abandonment, defectiveness, self-sacrifice, pessimism and parental attitudes: overdemandingness, autonomy, overprotection on the father's part and autonomy and inconsistency of the mother. For avoidant traits temperament has been shown to be more important than parental attitudes; among the significant factors are social isolation, vulnerability to harm, subjugation, self-sacrifice, emotional inhibition, pessimism, and temperamental traits including emotional reactivity and activity.

Early childhood traumas as well as traumatic events and perceived attitudes of rejection and excessive protection [19] are often responsible for the development of the narcissistic personality disorder. Empirical studies demonstrate that personality disorders (antisocial, avoidant, borderline, depressive, paranoid, schizoid and schizotypal) mostly emerge in the situation of rejection and low protection [20]. The parental attitude retrospectively perceived as excessively demanding is linked with the emergence of avoidant personality disorder [21]. Also rejection and excessive demands are linked with this disorder [22]. A study involving Japanese students revealed that insecure attachment

style, along with the perception of parental attitudes as rejecting were a predictor of mental problems in men (including personality disorders) whereas in case of women it was rejection, excessive protection and anxiety that predicted the occurrence of these kinds of problems [23].

Method

Objectives

The aim of the study was to screen for psychosocial risk factors leading to personality disorders and also to analyze the perception of the impact the family of origin has had on students with certain features of personality disorders.

The following research questions were posed in the course of our research:

- what are the correlations between the specific features of personality disorders in the students' group and the retrospective evaluation of their mothers' parental attitudes?
- what are the correlations between the specific features of personality disorders in the students' group and the retrospective evaluation of their fathers' parental attitudes?
- is there a correlation between a specific nature of marital bond of the students' parents and the students's personality traits?

Participants

The study involved 387 students, including 274 women and 113 men. Our sample consisted of the students of Rzeszow University and Rzeszow University of Technology. The respondents were studying at various technical and humanities faculties. The selection of participants was random. The mean age of the sample was 22. 83 (SD = 1.93), ranging from 19-26 years. The researchers administersed the assessment tools to thestudents mainly before or after their lectures. The inclusion criteria to the group of people showing the features of personality disorders took place through categorized interview based on The Structured Clinical Interview for DSM-IV Personality Disorder Research SCID II. The students answered a number of questions which described their behaviours, beliefs and the way they experience emotions. The necessary condition to be included into the group of people of risk of development of personality disorders was to reveal a minimal number of behaviours or traits complied with DSM-IV personality disorders diagnostic criteria. The exclusion criteria referred to the participants who showed few or any symptoms of personality disorders. Some of the people in the sample displayed more than one characteristic of personality disorder. Table 3 presents the figures in relation to the number of persons revealing the traits of each personality disorder investigated.

Materials

The following techniques have been used to assess the risk factors:

1. The Structured Clinical Interview for DSM-IV Personality Disorder Research SCID II developed by First, Gibbon, Spitzer., Williams, Benjamin [2]. The questionnaire consists of questions relating to the criteria of all personality disorders and conduct disorder, whose occurrence in adolescence is a prerequisite for the diagnosis of antisocial personality disorder in adults, specified in DSM-5 The participants were asked to give their subjective responses to the statements of the scale. Several items relating to the assessment of the respondents' behaviour based on the interviewer's observations were omitted. The questionaire of written interview referring to the traits of personality disorders contains 94 main questions. The participants answer yes or no. The questions adress an enduring pattern of inner experience and behaviour that deviates markedly from the expectations of the individual's culture, is pervasive and inflexible, is stable over time and leads to distress or impairment, This pattern is manifested in at least two of the following areas: cognition (i.e., ways of perceiving and interpreting self, other people, and events), affectivity (i.e., the range, intensity, lability, and appopriateness of emotional response), interpersonal functioning and impulse control. To some main questions, the specific questions are attached. For example, to the the main question: 'Before the age of 15 did you?; twelve detailed questions are added (i.e. Did you often initiate physical fights?; Did you use a weapon that cause serious physical harm to others, like a bat, brick, broken bottle, knife, gun?). The participants answer yes or no for all these detailed questions. Each individual was treated as showing the features of specific type of personality disorder when a certain number of questions was appropriately answered which meant that a sufficient number of diagnostic DSM-IV criteria was fulfilled. Taking into account these criteria allowed to distinguish the styles of dysfunctional functioning which could be both: the features of personality disorder and real personality disorder. The research didn't intend to differentiate between them.
2. The Questionnaire for Retrospective Parental Attitudes (KPR-Roc) adapted by Plopa [1] which consists of two versions of 50 statements each (separately for the assessment of maternal and paternal attitudes). The task of a tested adult is to retrospectively assess their parents' attitudes. The participants respond to each statement on a five-point scale. The scale is characterized by high theoretical relevance in the structural aspect and the reliability index of the measurements

ranging from 0.84 to 0.93 (Cronbach's alpha). It measures the intensity of attitudes: acceptance/rejection, demands, autonomy, inconsistency, and protection. Acceptance is the expression of positive feelings towards a child, creating an atmosphere of security and of a free emotional exchange. An overly demanding attitude is expressed in having high expectations of a child. It is linked with the need to respect certain rules and prohibitions without taking into the account the capacity and needs of a child. The main method of enforcing commands is the use of punishment. The attitude of allowing autonomy involves giving children freedom, increasingly so as they grow up. Parents demonstrate to their child the different ways of solving problems and give them choices. Inconsistent attitude is expressed in changeable parental behaviour, depending on the parent's mood. Such behaviour often becomes excessive and a child can be awarded or punished for the same thing, depending on a situation or the way the carer feels. This lack of stability on the parent's side results in a child becoming distant, losing the feeling of security and becoming reluctant to act as there is no link between action and the subsequent enforcements. Excessive protection consists in providing continuous care without giving a child an opportunity to test different situations.

3. A self-made questionnaire including the basic information on the persons examined that involved questions about their psychosocial situation, taking into the account the family situation and environmental factors.

Statistical analysis

Statistical analyses were computed on anonymous data using IBM SPSS 26. The profile of the research group was performed on the grounds of analysis of percentage curve of the frequency of occurence of qualitative data. Homogeneousness of the research groups was verified using chi-square. The effect of interaction between the specificity of personality pattern and parental attitudes was tested using Pearsons-r correlation. The verging level of error of the first kind was presupposed (zero hypotheis was rejected so there were no statistically significant differences, $p < 0.05$). The assumptions were tested with two-sided degree of relevance.

To evaluate of parental behaviour in the marital dyad which may have an impact on personality disorder applied cluster analysis using the mean k method (Quick Cluster). Calculations were made on the basis of standardized results Z. The comparisons between the groups of participants were conducted using Pearson's chi square (asympoptic relevance).

Our research objective was to analyse a correlation between specific personality traits and and family influences, mainly, retrospective parental attitudes that become risk factors for personality disorders. Furthermore, based on the analysis of parental attitudes and using cluster analysis, the authors identified a few types of family relations which imply developing a healthy personality and personality disorder.

However, the results of our study do not constitute a nosological diagnosis as individual evaluation should be based on observation and detailed conversation with the person in question. In fact, our analyses served the purpose of identifying individuals with the features of personality disorders and determining a correlation between the occurrence of dysfunctional characteristics patterns and certain risk factors.

Results

The questionnaire revealed that more than 30% of our students' parents were educated to the secondary level and almost 25% of all mothers and 40% of fathers completed vocational education; 25% of all mothers and 15% of fathers held university diplomas whereas 4.4% of mothers and 5.9% of fathers completed only primary education.

Our analyses of the differences in the incidence of personality disorders in men and women found that three types of disorders were statistically significantly more common in men than in women (Fischer test): histrionic personality ($p < 0.038$), narcissistic personality ($p < 0.004$) and antisocial personality ($p < 0.001$).

The analysis of the evaluations of maternal attitudes made by our young respondents with severe traits of personality disorder found significant correlations that indicated the importance of mother-child interactions (Tab. I).

In the case of subjects with schizotypal, borderline, narcissistic and conduct disorders, maternal behavior was more frequently described as inconsistent ($p < 0.01$). A lesser correlation was found between the assessment of mothers as inconsistent ($p < 0.01$) and the features of paranoid and antisocial personality. A lesser correlation ($r = 0.2$) also occurred between unaccepting maternal attitudes and dominant features of avoidant ($p < 0.01$), paranoid ($p < 0.01$), borderline ($p < 0.01$) and conduct disorders ($p < 0.01$). On the other hand, people with paranoid, narcissistic, antisocial and conduct disorders more often described their mothers as excessively demanding ($p < 0.01$). The borderline persons in our sample more often stressed that mothers limited their autonomy ($p < 0.01$).

As demonstrated by the results presented in Table II our research showed the essential correlation between fathers' attitudes and the emergence of particular personality traits. Students with strong features of narcissistic, borderline, paranoid personality and conduct disorders spoke of their fathers as inconsistent ($p < 0.01$). Our respondents who displayed the traits of avoidant personality disorder significantly more often evaluated their fathers as unaccepting ($p < 0.01$) and restricting their autonomy ($p < 0.01$). Students whose personality was predomi-

TABLE I. *Personality traits and mother's parental attitudes (Pearson's r).*

Severity of traits indicating personality disorders	Mother-acceptance	Mother-demands	Mother-autonomy	Mother-inconsistence	Mother-protection
Avoidant	-.244**	.097	-.169**	.066	.010
Dependent	-.119*	.139**	-.181**	.111*	.061
Anankastic	-.171**	.133*	-.164**	.147**	.053
Paranoid	-.205**	.205**	-.164**	.230**	.062
Schizotypal	-.197**	.141**	-.134*	.247**	.025
Schizoid	-.152**	.025	-.074	.080	-.046
Historionic	-.053	.140**	-.087	.156**	.060
Narcissistic	-.169**	.211**	-.177**	.252**	.081
Borderline	-.227**	.194**	-.229**	.251**	.090
Conduct disorder	-.240**	.216**	-.190**	.283**	-.036
Antisocial	-.185**	.214**	-.168**	.233**	-.020

*Note. *p < .05; **p < .01*

nantly paranoid significantly more frequently defined their fathers as inconsistent ($p < 0.01$), restricting their autonomy ($p < 0.01$) and usually unaccepting ($p < 0.01$). When comparing the fathers' and mother's attitudes more paternal than maternal influence was found in case of avoidant personality as fathers were more frequently defined as unaccepting. Similarly, students who displayed paranoid traits more often evaluated their fathers as inconsistent, unaccepting and restricting their autonomy. People with features of borderline personality disorder more often defined both their mothers and fathers as inconsistent.

Four types of families were distinguished on the basis of the results in the Plopa scales by means of cluster analysis using the mean k method (Quick Cluster). The numbers of individuals in each cluster were: cluster 1: N = 77; cluster 2: N = 114; cluster 3: N = 102; cluster 4: N = 59; cluster total: N = 352; missing data: N = 35.
Based on the analysis of parental attitudes and using cluster analysis, the researchers identified four types of family relations (Fig. 1) which may have an impact on the formation of a healthy (cluster 2) or features of personality disorders (clusters 1, 2 and 4):

TABLE II. *Personality traits and father's parental attitudes (Pearson's r).*

Severity of traits indicating dysfunctional personality	Father-acceptance	Father-demands	Father-autonomy	Father-inconsistence	Father-protection
Avoidant	-.270**	.065	-.235**	.122*	-.142**
Dependent	-.139**	.176**	-.137**	.183**	.044
Anankastic	-.184**	.183**	-.171**	.242**	.001
Paranoid	-.310**	.191**	-.266**	.332**	-.075
Schizotypal	-.217**	.142**	-.179**	.225**	-.006
Schizoid	-.134*	.052	-.066	.149**	-.037
Historionic	.021	.124*	-.022	.089	.094
Narcissistic	-.197**	.196**	-.153**	.275**	-.007
Borderline	-.234**	.186**	-.208**	.302**	-.011
Conduct disorder	-.113*	.217**	-.115*	.290**	.054
Antisocial	-.112*	.157**	-.094	.227**	.060

*Note.*p < .05; **p < .01*

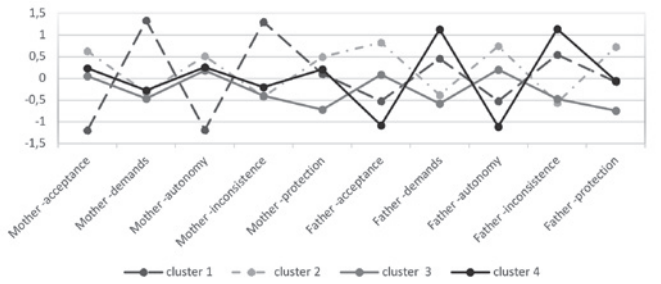

FIGURE 1. *A graphic presentation of clusters regarding the specific character of parental impact in the marital dyad.*

1. **Intolerant parents who realize their own needs in the upbringing of their children, with inappropriate behaviour predominantly on the mother's part** (cluster 1). In this case characteristic is the lack of acceptance especially on the mother's part but also low acceptance by the father while big demands and lack of autonomy are notable mainly in case of mothers, as is their inconsistent behaviour towards the child.
2. **Tolerant parents – open to the individual development of the child** (cluster 2) characterized by positive attitudes towards the child, relatively high level of acceptance at relatively low demands allowing a lot of freedom in the child's activity.
3. **Passive parents, not quite involved in providing support in their child's development** (cluster 3). Parents who have little time for the child, hardly ever express approval of the child's activity; relatively low demands are placed by fathers and average demands by mothers; in general both parents follow a specific set of rules.
4. **Parents who are inconsistent/incoherent in their parental interventions (disharmonious marriage)** (cluster 3). Overall acceptance on the mother's part; mother relatively consistent and moderately demanding; rejecting father - unaccepting, not allowing autonomy while highly demanding and inconsistent.

These four types of family relations were analysed with the use of Pearson's chi-square test.

Our research demonstrates (Tab. IV) the existence of correlations between the specific functioning of parents as the marital dyad and their children's personality traits. These were significant in case of avoidant, anankastic, paranoid personality ($p < 0.001$), in which cases our respondents defined their parents primarily as inconsistent and also, to a lesser extent, intolerant. Similar correlations obtained in the case of students whose personalities were predominantly narcissistic, in which case a considerable percentage of respondents focused on the lack of tolerance in the behaviour of both parents who were mostly focused on their own needs ($p < 0.001$). Students who displayed impaired behaviours, typical for borderline personality disorder more significantly ($p < 0.001$) assessed their parents as intolerant or incoherent. In the group of participants with histrionic personality we encountered statistically significant appearance of extreme opinions ($p < 0.01$), meaning that some students saw their parents as tolerant and others as intolerant. We found no statistically significant differences in the evaluation of parents by people with schizoid and dependent personalities.

Our analysis of correlations between the formal family structure and irregularities that led to personality disorder revealed a statistically significant correlation in case of people with predominantly narcissistic characteristics (chi sq. = 6.456; df-2; $p < 0.05$). Among these students 7% came from reconstructed families of origin (3% in case of other students in our sample). Fewer students with narcissistic personality traits were brought up in incomplete families (4%) although 13% of students with other personality disorders grew up in such families. As far these differences are concerned a clear trend ($p < 0.057$) was also observed in case of borderline personality (chi sq. = 5.732; df-2; $p < 0.057$). In this group 9% of students in our sample were brought up in reconstructed families whereas the equivalent figure for other respondents was 2.8%. 13% of students with borderline characteristics and 11% of other respondents lost one of the parents early in their lives (incomplete family).

Within this research we also analysed the correlations between students' evaluation of the atmosphere in their families and the severity of irregular personality traits. Our respondents were asked to evaluate the atmosphere in their family home on the five-step scale, from bad, inadequate, average to good and very good. The analyses showed that compared to other students with prevalent traits of avoidant personality more often and statistically significantly (chi sq.= 20,100; df-4; $p < 0.001$) assessed the situation in their families as inappropriate, including 4% who said it was bad, 5% inadequate, 16% as average, 44% as good and 31% as very good whereas among other students in the sample the percentages were respectively as follows: 0; 5; 9; 38 and 49%. Similar results obtained in terms of obsessive-compulsive personality (chi sq.= 17.082; df-4; $p < 0.002$). Approximately 3% of these students assessed the atmosphere in their family as bad, 8% as inadequate, 14% as average, 41% as good and 35% as very good whereas none of the other respondents thought the situation in their family of origin was bad, 4% said it was inadequate, 8% average, 39% good and 50% very good. Our research also confirmed that students with paranoid personality significantly frequently perceived irregularities in their family relations (chi sq. = 25.521; df-4; $p < 0.000$). Among the respondents in this group, 4% rated the atmosphere as bad, 7% as inadequate, 16% as average, 46% as good, and 28% as very good, while among others it

TABLE III. *Severity of features of dysfunctional personality vs. specific interventions of the parental subsystem (a cross table – Pearson's chi square).*

Personality disorders (severity)	S 1 Intolerant parents	S 2 Tolerant parents	S 3 Passive parents	S 4 Inconsistent parents	Total	Pearson's chi square (asymptotic relevance)	Df	P
Avoidant								
Population	n = 29	n = 27	n = 22	n = 29	n = 107	17.916	3	< .001
%	37.7	23.7	21.6	49.2	30.4	Likelihood ratio = 17.438		
Adjusted residual	1.6	-1.9	-2.3	3.4		Linear correlation test = 0,749	3	.001
Dependent								
Population	n = 12	n = 6	n = 11	n = 9	n = 38	6.675	3	.083
%	15.6	5.3	10.8	15.3	10.8	Likelihood ratio = 7.110		
Adjusted residual	1.5	-2.3	0	1.2		Linear correlation test = 0.71	3	.068
Anankastic								
Population	n = 42	n = 38	n = 31	n = 40	n = 151	29.966	3	< .001
%	54.5	33.3	30.4	67.8	42.9	Likelihood ratio = 30.180		
Adjusted residual	2.3	-2.5	-3.0	4.2		Linear correlation test = .669	3	.0
Paranoid								
Population	n = 33	n = 12	n = 21	n = 30	n = 96	44.337	3	< .001
%	42.9	10.5	20.6	50.8	27.3	Likelihood ratio = 45.124		
Adjusted residual	3.5	-4.9	-1.8	4.5		Linear correlation test = 1.141	3	.0
Schizotypal								
Population	n = 9	n = 2	n = 2	n = 6	n = 19	13.921	3	< .003
%	11.7	1.8	2,0	10.2	5.4	Likelihood ratio = 13.72		
Adjusted residual	2.8	-2.1	-1.8	1.8		Linear correlation test = .04	3	.003
Schizoid								
Population	n = 8	n = 7	n = 9	n = 6	n = 30	1.391	3	.708
%	10.4	6.1	8.8	10.2	8.5	Likelihood ratio = 1.442		
Adjusted residual	.7	-1.1	.1	.5		Linear correlation test = .024	3	.696
Historionic								
Population	n = 26	n = 23	n = 14	n = 11	n = 74	11.053	3	< .011
%	33.8%	20.2%	13.7%	18.6%	21,0%	Likelihood ratio = 1.564		

TABLE III. *continues*

Personality disorders (severity)	S 1 Intolerant parents	S 2 Tolerant parents	S 3 Passive parents	S 4 Inconsistent parents	Total	Pearson's chi square (asymptotic relevance)	Df	P
Adjusted residual	3.1	-.3	-2.1	-.5		Linear correlation test = 6.774	3	.014
Narcissistic								
Population	n = 30	n = 14	n = 13	n = 16	n = 73	25.942	3	< .001
%	39.0	12.3	12.7	27.1	20.7	Likelihood ratio = 24.695		
Adjusted residual	4.5	-2.7	-2.4	1.3		Linear correlation test = 3.651	3	0
Borderline								
Population	n = 19	n = 7	n = 8	n = 15	n = 49	22.851	3	< .001
%	24.7	6.1	7.8	24.4	13.9	Likelihood ratio =		
Adjusted residual	3.1	-2.9	-2.1	2.8		Linear correlation test =	3	0

Note. SCID II: severity of features of personality disorders, specific interventions of the parental subsystem – cluster analysis

was 0; 5; 9; 37 and 50%. Similar correlations were related to schizoid personality (statistically significant differences: Chi sq. = 12.12; df-4; $p < 0.01$). Among the surveyed students in this group 3% defined the atmosphere as bad, no one pointed to the situation as inadequate, 27% considered it as average, 32% good and 38% very good; in the group of people who did not display such traits the corresponding figures were 1; 6; 9; 40 and 44% respectively. Narcissistic individuals also rated the family atmosphere as worse (statistically significant differences: chi sq. = 9.55; df-4; $p < 0.05$). Among the people primarily focused on themselves 4% rated the atmosphere in their family of origin as bad, 5% as inadequate, 14% as average, 40% as good, and 37% as very good (the non-narcissistic perceptions were slightly different at 0, 5, 10, 40, and 45%, respectively). The study also revealed that people with high borderline scores were significantly more likely to negatively assess their family relations: approximately 4% assessed their family atmosphere as bad, 5% as inadequate, 30% as average, 42% as good and 18% as very good. Other respondents, on the other hand, most often evaluated the atmosphere in their families as very good (48%) and good (39%).

The study did not show statistically significant differences in family atmosphere scores for students with irregularities towards the dependent (chi sq.= 2.573; df-4; $p < 0.63$), schizotypal (chi sq.= 6.815; $p < 0.146$) and histrionic (chi sq.= 0.074; df-4; $p < 0.999$) personalities.

Discussion

Our research showed that people with the prevalent features of avoidant, obsessive-compulsive, paranoid, schizoid, narcissistic and borderline personality statistically significantly more often assessed the atmosphere in the family as abnormal. However, there no relationship has been found between the specificity of the assessment of family atmosphere and schizotypal or histrionic personality.

Taking into account the differences in the incidence of personality dysfunctions in men and women, it was demonstrated that three types of disorders were significantly more common in men than in women. These were the histrionic ($p < 0.038$), narcissistic ($p < 0.004$) and antisocial personality ($p < 0.001$) disorders. The prevalence of histrionic personality disorder in men was not confirmed by other studies [3,24]. These differences in results may be due to oversensitivity of the screening instruments to the occurrence of personality disorders, inadequate number of respondents and inequality as far as the gender of respondents is concerned but also specificity of the group of students in the sample studied or the trends emerging in the Polish society or, more specifically, among students in the second decade of the twenty-first century. A significantly higher incidence of histrionic personality disorder in men can result from psychosocial transformations due to changes in traditional male and female roles, as well as a unification in the expression of personality traits, such as greater social acceptance for young men expressing emotions or attracting other peo-

ple's attention. As suggested by Bakkevig and Karterud [25] two distinct bundles can be distinguished in the diagnostic criteria of the histrionic personality: the exhibitionistic features and seeking attention of others and focusing on impressions. Perhaps one of these bundles is more common in men as it thus influences the research results for the whole category of histrionic personality. Our research confirmed the significance of parental attitudes in the formation of personality disorders. It is only in case of the schizoid and dependent personality that the clear influence of maternal and paternal influences was not confirmed, which suggests a stronger role of biological factors in the development of these type of disorders. It is also important to realize the relevance of interactions between parents and children, i.e. certain behaviours on the part of children could provoke certain parental responses. In fact parents' own personality disorders are an essential element of their children developing a dysfunctional personality, both in terms of the transmission of genetic susceptibility and in the development of stressful, abnormal patterns of behaviour or relationships in the child's immediate environment [26]. Studies by other authors confirm that mothers with the borderline personality disorder are more likely to be insensitive, highly intrusive and have difficulty identifying their children's emotional states [27]. They also engage in deviant interactions with their children characterized by low sensitivity, excessive protection and hostility [13]. Parental neglect may be related to the transgenerational influence of the mother on the development of personality disorder in their teenage daughters [28].

The four types of parental interventions identified in the study, one of which implies the development of healthy personality and three of personality disorders (tolerant vs intolerant, passive and inconsistent parents) are conceptualized a little differently in the research conducted by other authors. For example it was confirmed that the perceived parental affectionless control of both parents, particularly by a child's mother, is a predictor of the development of all kinds of personality disorders [29] while the carers' criticism was an important feature of the child-parents relationship in the perception of patients with the borderline personality disorder [30]. The study by Musser et al. [31], shows that the following negative parental attitudes of invalidating children are predictive of the development of borderline disorders: emotional inaccuracy, misattribution of children's emotional states or emotional expression to their negative traits, discouraging children from expressing negative emotions and oversimplification of child-related problem solving. The importance of the parent-child relationship in the development of borderline personality disorder was presented by Boucher et al. [32]. Low parental care, high overprotection and parental inconsistency were the predictors of this disorder. In turn, the parental interventions based on considerable permissiveness correlated positively with the histrionic, narcissistic and antisocial personality disorders of their children [33]. Because of the existence of complex correlations between the occurrence personality disorders and mental disorders, it is necessary to undertake preventive interventions to inhibit the development of interpersonal difficulties. Students and adolescents should be particularly involved in various psychological interventions, aimed at the development of social competences. In some justified cases it is also necessary to undertake long-term individual and systemic psychotherapy.

This study is not without of its limitations. First, we have only assessed the students from one region of Poland and it could be difficult to predict whether the research in other areas of the country would yield similar results. Second, the number of women who took part in our study was twice as high as the number of men so the strength of conclusions may be limited. To overcome these limitations, further studies could be undertaken in other regions of Poland and with more equal number of women and men. The next issue, which could be questionable is the matter of retrospective analysis of parental attitudes. To what extend the recollections from the perspective of a child or adolescent can be reliable source of knowledge. Some other authors [34] assume that subjective concept of parental attitudes seems more valid than that declared by parents. We also supposed that. We realize we have considered only some psychosocial predictors of developing specific personality traits. We remember about some biological and systemic factors but they weren't the subject of our study. Thus, the research doesn't allow to understand a causality direction between risk factors and results.

The authors hope that the results of this research will prove useful to psychologists, psychiatrists, pedagogues, social workers and all those who have the situation of young adults very much at heart.

Ethical consideration

Komisja Bioetyczna Rzeszowskiego (Ethical Committee University of Rzeszow) nr 20/03/18.

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Conflict of interest

The Authors have no conflict of interest to declare

Author contributions

Author Contributions DO and JP involved in conceptualization, resources, original draft preparation, statistical analysis, presenting results, discussion, review and editing. Both Authors have read and agreed to the published version of the manuscript.

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