Personality and interpersonal sibling relationships in early adulthood – causal analysis

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Summary

Introduction: Research on the social function of personality dimensions and emotional intelligence has so far referred to issues other than those mentioned in the present study. It is interesting from the cognitive point of view to verify the assumption that they play a significant role in determining the quality of interpersonal relationships with siblings in early adulthood.

Aims: The aim of the study was to identify personality predictors of the quality of interpersonal sibling relationships in early adulthood.

Materials and method: The participants of the study were 160 young adults (age M=25.5 years, SD=3.27) from the district of Łódź, Poland. The research tools included: Adult Sibling Relationship Questionnaire – Short Form, Personality Inventory NEO-FFI and Emotional Intelligence Questionnaire INTE.

Results: The results indicate the existence of personality determinants of the quality of interpersonal sibling relationships in early adulthood. It was found that extraversion and openness (only in men) had a predictive value for sibling relationships based on warmth. Conflicted relationships with adult siblings in both men and women were determined by a low level of agreeableness, and, only in women, by a high level of neuroticism and extraversion. Rivalry in relationships with siblings in women was determined by a low level of agreeableness. Emotional intelligence did not have any predictive value for the quality of relationships with adult siblings. It was found that women had obtained higher mean scores than men in respect of neuroticism, agreeableness and emotional support.

Discussion: The results of this study are partly consistent with the results of previous studies in this area.

Conclusions: Showing the role of personality dimensions and emotional intelligence in shaping the quality of interpersonal sibling relationships in early adulthood will contribute to updating psychological knowledge in this field and may be important for psychotherapeutic practice.

Key words: personality, emotional intelligence, sibling relationships, early adulthood.

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INTRODUCTION

Research shows that sibling relationships in adulthood are characterised not only by commitment but also, in many cases, by greater intimacy and trust than relationships with parents. The relationship with siblings changes along with achieving maturity, becoming warmer than

before [1]. This has given us an impulse to take up research aimed at looking for the psychological reasons behind the quality of sibling relationships in adulthood. The related literature emphasises that in the context of the psychological aspects of the relationship with siblings, the period of early adulthood ranging from 18-20 to 30-35 years is deemed to be the least researched [2].

In the present study, *siblings* are persons who are related genetically, have mutual family ties and live in a common socio-historical context [3], whereas the term *sibling relationship* has been described as arising from interactions based on the actions and communication (verbal and non-verbal) of two or more persons having the same natural parents (or at least one natural parent) [1].

Researchers of family problems concerning the determinants of social behaviours of persons who form a sibling dyad stress that they are determined in different ways, both by the general external environmental context in which a person lives, and by numerous subject-related variables. According to the related literature, the first category variables related to the external environment most often include: cultural models, social demands, structure and atmosphere in the family of origin, number of siblings, birth order of children, age difference between siblings, parents' education level, parents' marriage quality, parental motivation and parenting styles in the family of origin, current marital status and having children, living and housing conditions, distance between adult siblings' places of residence and many others [4, 5]. The subject-related variables include: gender, age, personality, temperament type, IQ, abilities, interests, ambitions, motivations, self-esteem, sense of control, anxiety level, adopted system of values and preferred interpersonal functioning styles. Moreover, the nature of ties is affected by the appearance and the health of the individuals in a sibling dyad [5,6]. Among the subject-related factors shaping interpersonal relationships, the ones that deserve our attention are personality and emotional intelligence. They are characterised by complexity and concern numerous aspects of an individual's life. Nevertheless, relatively few studies refer to their predictive role for the interpersonal relationship of adult siblings.

While discussing the term of personality, the assumptions of the Five Aspect Personality Model was used [7]. It assumes that personality consists of five factors, including: extraversion, neuroticism, agreeableness, conscientiousness and openness. The factors are characterised by universalism, a high degree of stability during a person's lifetime and the fact of being conditioned by genes and the environment. It is estimated that about 40% of differences between people in respect of personality is related to hereditary factors, though each factor has a different degree of heritability. According to research, the most hereditary factor of the big five is openness and the least hereditary one – conscientiousness [8].

The term emotional intelligence adopted in the study is explained by the model by Mayer and Salovey [9]. It includes four classes of ability, i.e. (1) the ability of adequate perception, judgement and expressing emotions, (2) having access to one's feelings and ability to generate them in moments when they can support thinking, (3) ability to understand emotions and emotional knowledge, and (4) regulating emotions in a way that supports emotional and intellectual development of a person [9]. It is assumed that emotional intelligence is acquired and may vary during a person's lifetime. Research shows that subject-related determinants of emotional intelligence are linked to the type of temperament, whereas external factors that have the most impact are the family environment and the development of abilities related to emotional intelligence [10].

A number of studies on personality and emotional intelligence highlight the importance of their social function [7,9]. Regarding the personality predictors of a relationship with siblings, both agreeableness and extraversion have been found to be strongly connected with engagement in interpersonal relationships and willingness to develop them [7]. Comparing the quality of sibling relationships with personality traits, it appeared that the warmer, less conflictual ones are positively correlated with the levels of extraversion, agreeableness and conscientiousness as well as with good mental health [11]. Other research confirms the importance of extraversion and personal competence for the development of proper relationships with other people, indicating their negative correlations with behaviours of a criminal nature [12], propensity to addic-

tions [13] and a tendency to experience depressive disorders [14].

It is assumed that the abilities that make up emotional intelligence are the basis for the development of positive social relationships [9]. Studies revealed a positive correlation between emotional intelligence and the number and quality of interpersonal relationships as well as satisfaction with relationships with other people [10]. Also, persons with higher emotional competence more often and more willingly sought social support and were satisfied with it [15]. Moreover, people with high scores on the emotional intelligence scale demonstrate better social competencies such as leadership abilities, prosocial activity aimed at cooperation and higher self-efficacy in terms of helping others, in comparison with persons with a lower level of emotional intelligence [10].

Research carried out so far indicates the existence of gender-specific differentiation in respect of emotional intelligence. In general research on emotional intelligence women usually obtain higher mean scores than men, whereas in more specific research the genders differ with respect of different aspects of emotional intelligence [15-17]. It was found that women could read emotions from faces better than men could, but mainly the positive emotions, and women also expressed emotional messages more clearly [16].

It is believed that gender-specific differentiation in respect of emotional intelligence is determined by differences in the socialisation process of girls and boys. Developing empathy and kindness as well as focusing on relationships with other people naturally led to a formation of abilities that form emotional intelligence [10,18].

AIMS

The aim of the study was to determine whether personal traits and emotional intelligence had predictive value for the quality of interpersonal sibling relationships in early adulthood. It was assumed that personality dimensions and emotional intelligence had a significant influence on the development and course of interpersonal relationships [7,16]. The study sought to examine two research questions.

1. Are there differences between women and men in respect of personality traits, emotional intelligence and the quality of interpersonal relationships with their adult siblings?
2. Do personality dimensions and emotional intelligence have predictive value for the quality of interpersonal relationships with adult siblings?

Based on a literature review, the following research hypotheses were presented:

H1: Women obtain higher mean scores on the neuroticism scale than men [7,19].

H2: Women obtain higher mean scores in emotional intelligence than men [15-17].

H3: Women obtain higher mean scores in respect of the relationship with siblings described by the factor of warmth than men [20].

H4: Personality traits have a predictive value for the quality of the relationship with siblings in early adulthood.

H4.1. Extraversion and agreeableness have a predictive value for the relationship with siblings described by the factor of warmth [7,11].

H4.2. Neuroticism has a predictive value for the relationship with siblings described by the factor of conflict.

H5: Emotional intelligence has a predictive value for the quality of the relationship with siblings in early adulthood [10].

H5.1. Emotional intelligence has a predictive value for the relationship with siblings described by the factor of warmth.

MATERIALS AND METHOD

The participants of the study were 160 persons (55% of women and 45% of men) in the period of early adulthood covering the age range from 19 to 35 years (M=25.5, SD=3.27). They came from the district of Łódź and were students of higher schools of Łódź. Nearly half of the respondents had higher education, including 45 women (28%) and 29 men (18%). Over half of the participants were in an informal relationship, including 53 women (33%) and 32 men (20%). 95 of the respondents had siblings of a different gender, 40 dyads were of a brother-brother type and 55 dyads were of a sister-sister type. 43% of the respondents were the youngest child in the family,

42.5% were the oldest, and 11.9% were the middle one. The majority of the respondents (78.8%) live in a city with over 500,000 citizens, and more than a half (57.5%) live in the same location as their brother or sister.

The research was conducted[1] in Poland in 2017 in the period from March to September. Participants were informed about the aim of the study, its voluntary nature and that the results would be used only for scientific purposes. They did not receive any compensation for participation in the project. The survey took them approximately 40 minutes to complete.

Three research instruments and a questionnaire for collecting demographic data were used.

The Adult Sibling Relationship Questionnaire – Short Form (ASRQ-SF) was created on the basis of Adult Sibling Relationship Questionnaire by Stocker et al. (1997) [20]. ASRQ-SF was used to measure the psychological aspects of interpersonal relationships between siblings in adulthood. It allowed us to evaluate the perception of behaviours and feelings of respondents toward their siblings as well as their siblings' perceptions – of the behaviours and feelings toward the respondents. ASRQ includes 61 items, which make up three main composite factors describing interpersonal sibling relationships: warmth, conflict and rivalry. The subscales making up the factor of warmth are: affection, knowledge, intimacy, emotional support, admiration, similarity, instrumental support, acceptance (Cornbach's α .97). The conflict factor consists of the following subscales: opposition, domination, quarrel and competition (Cornbach's α .91). Rivalry includes two subscales: maternal rivalry and paternal rivalry (Cornbach's α .89). Respondents give their answers on a five-point Likert scale. The psychometric properties of ASRQ are good and enable conducting scientific research [20].

NEO Five-Factor Inventory (NEO-FFI) is a 60-item inventory used to measure the five basic personality factors. For each scale (neuroticism, agreeableness, conscientiousness, extraversion, openness) 12 items were selected. The instrument uses a five-point Likert response format. Measurement validity measured by Cornbach's alpha coefficient for individual scales in the Pol-

ish adaptation was: conscientiousness α .82, neuroticism α .80, extraversion α .77, openness α .68 and agreeableness α .68 [19].

The Emotional Intelligence Questionnaire (INTE) was created by Schutte et al. (1998) based on Salovey and Mayer's theory of emotional intelligence [7]. Emotional intelligence is understood as a set of abilities consisting of the ability of adequate perception, judgement and expressing emotions, the ability to regulate one's own emotions and the emotions of other people as well as the ability to use emotions as factors that support thinking and acting. The INTE Questionnaire consists of 33 items. Respondents give their answers on a five-point Likert scale ranging from 1 – I strongly disagree to 5 – I definitely agree. In the Polish adaptation of INTE, Cornbach's alpha coefficients were .84 for both genders, whereas in the group of adult women α .86, and in the group of adult men α .83 [16].

Our own questionnaire was used to obtain demographic and social data (age, gender, residence, marital status, family of origin, type of relationship between the respondent and their siblings, economic situation, professional activity).

In order to estimate the statistical parameters of the examined samples, descriptive statistics were applied. To compare the groups of women and men in terms of personality dimensions, emotional intelligence and the quality of interpersonal relationships with adult siblings, the Student's t test was used. To determine the predictive value of personality variables (independent variables) against the variable of the sibling relationship (dependent variable), stepwise regression analysis was applied. Statistical significance was set at p <0.05. The results were presented in tables using standard statistics symbols [21]. The IBM SPSS 24 software was used to carry out the analyses.

RESULTS

The descriptive statistics of the analysed variables were presented separately for the compared groups of women and men (Table 1 and 2).

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[1]   The research was conducted by Katarzyna Puzanista, a participant in my seminar.

Table 1. Descriptive statistics of analysed variables – women (n=88)

Variables	M	SD	Min	Max	Me	K	SKE
Emotional intelligence	126.93	12.97	93.00	155.00	126.00	-0.526	-0.080
Extraversion	29.44	7.54	6.00	43.00	30.00	0.378	-0.630
Openness	29.73	6.57	11.00	43.00	30.00	-0.422	0.508
Agreeableness	31.34	8.35	8.00	44.00	33.50	0.743	-1.029
Consciousness	30.76	8.67	13.00	47.00	31.50	-0.935	-0.134
Neuroticism	25.35	9.57	4.00	45.00	25.00	-0.554	-0.153
Warmth	123.97	31.48	36.00	175.00	133.50	0.055	-0.818
Conflict	32.30	13.93	15.00	70.00	29.50	0.268	0.994
Rivalry	29.58	4.95	17.00	50.00	30.00	4.28	0.759

Women obtained average mean scores in personality dimensions (5 – 6 sten) and emotional intelligence (5 sten). The mean scores for the main factors of the sibling relationship were as follows: warmth 123.97, conflict 32.30, rivalry 29.58. Analysing the shape of the distribution of the variables in the group of women, only the variables of openness, conflict and rivalry showed a rightward skewed distribution, which meant that the scores lying above the normal distribution prevailed. The other variables were characterised by a leftward skewed distribution.

Table 2 shows the descriptive statistics of the variables for the group of men.

Table 2. Descriptive statistics of analysed variables – men (n=72)

Variables	M	SD	Min	Max	Me	K	SKE
Emotional intelligence	123.97	12.39	96.00	157.00	125.00	-0.074	0.130
Extraversion	29.67	8.25	7.00	48.00	31.00	0.385	-0.455
Openness	27.74	6.53	14.00	43.00	27.50	-0.814	0.059
Agreeableness	28.39	6.23	10.00	44.00	28.50	0.217	-0.081
Consciousness	30.31	7.88	15.00	46.00	31.00	-0.642	-0.052
Neuroticism	19.79	9.08	4.00	37.00	20.50	-0.871	0.139
Warmth	119.47	30.87	36.00	176.00	118.00	0.113	-0.341
Conflict	30.44	10.88	15.00	66.00	29.50	0.203	0.609
Rivalry	30.64	5.51	18.00	50.00	30.00	3.628	1.060

The results included in Table 2 show that in men personality dimensions and emotional intelligence reached an average level (5-6 sten). The distribution for the variables of emotional intelligence, openness, neuroticism, conflict and rivalry is rightward skewed, which means that the scores lying above the normal distribution prevail. The other variables are characterised by a leftward skewed distribution. In the group of men, the variable of neuroticism achieved the highest kurtosis value (-.871). The mean values of warmth and conflict in the relationship with siblings for the examined men were: 119.47 for warmth and 30.44 for conflict. The mean scores in rivalry were 30.64. Rivalry achieved the highest kurtosis value (3.63).

As the first step of the statistical analysis, we checked for differentiation between the groups of young women and men in respect of personal traits, emotional intelligence and the quality of interpersonal relationships with their adult siblings. In order to do that, the Student's t test was applied (Tables 3 and 4).

Table 3. Personal traits and emotional intelligence in groups of women and men

Personality variables	Gender				t	p	η2
	Women (n=88)		Men (n=72)				
	M	SD	M	SD			
Emotional intelligence	126.93	12.97	123.97	12.391	1.465	0.145	-
Extraversion	29.44	7.54	29.67	8.25	-.179	0.858	-
Openness	29.73	6.57	27.74	6.53	1.913	0.058	-
Agreeableness	31.34	8.35	28.39	6.23	2.557	0.012	0.038
Consciousness	30.76	8.67	30.31	7.88	0.344	0.366	-
Neuroticism	25.35	9.57	19.79	9.08	3.741	0.000	0.081

The analysis (Table 3) showed that the examined women obtained higher mean scores than men on the scales of neuroticism (t(158)=3.741; p<.000; η2=.081) and agreeableness (t(158)=2.557; p<.012; η2=.038). The variable of neuroticism explains 8.1% of variance in the results of the dependent variable of personality whereas openness explains 3.8% of variance in results. This confirmed the first hypothesis. No significant differences in terms of emotional intelligence were found, which does not confirm the second hypothesis.

Table 4. Quality of sibling relationships in groups of women and men

Sibling relationships	Gender				t	p
	Women (n=88)		Men (n=72)			
	M	SD	M	SD		
Warmth	123.97	31.48	119.47	30.87	0.906	0.366
Emotional support	6.26	2.30	5.28	2.30	2.695	0.008
Conflict	32.30	13.93	30.44	10.88	0.921	0.358
Rivalry	29.58	4.95	30.64	5.51	-1.280	0.202

The results presented in Table 4 do not reveal any differences in respect of main factors describing relationships with adult siblings in the compared groups of women and men. The only statistically significant difference was discovered in the subscale of warmth – emotional support. Women obtained significantly higher mean scores on this subscale than men (t (158)=2.695; p<0.008; η2=0.044). Emotional support explains 4.4% of variance in results. This confirmed the third research hypothesis.

At the next step of the statistical analysis, we sought an answer to the question whether personality dimensions and emotional intelligence have a predictive value for the quality of relationships with adult siblings (Table 5). Therefore, we used stepwise regression analysis, which means that only statistically significant explanatory variables were introduced to the model [22]. In the first place, we checked the predictive value of personality variables for the factor of warmth in the relationship with adult siblings.

Table 5. Results of multiple regression analysis

Gender	Independent variables	Dependent variables	B	SE-B	β	t	p
Women	Extraversion		1.06	0.44	0.25	2.43	0.017
		Warmth					
Men	Openness		2.29	0.49	0.49	4.64	0.000
	Extraversion		1.29	0.37	0.35	3.50	0.001
Women	Neuroticism	Conflict	0.69	0.14	0.47	4.95	0.000
	Agreeableness		-0.46	-0.46	-0.28	-2.92	0.004
	Extraversion		0.42	0.42	0.23	2.40	0.019
Men	Agreeableness		– 0.61	0.20	-0.35	-3.14	0.003
Women	Agreeableness	Rivalry	-0.21	0.06	-0.35	-3.46	0.001

The results of the analysis presented in Table 5 show that in the group of women extraversion had a predictive value for the relationships with adult siblings based on the factor of warmth and it explained 5% of variance in results. The Beta index (β=0.25) indicates a positive, yet weak, correlation between extraversion and warmth in sibling relationships in the group of women. In the group of men, openness and extraversion appeared to be significant predictors for the factor of warmth. These personality traits jointly explain 33% of variance in results. The Beta indexes show that there is a positive, medium-strength correlation between openness and the factor of warmth (β=0.49) and a weaker correlation between extraversion and warmth (β=0.35) in interpersonal contacts with siblings.

Next, we checked the predictive values of personality variables for the factor of conflict. We found that in the group of women the most significant predictor of sibling relationships based on the factor of conflict was neuroticism. As shown by the Beta index (β=0.47), the correlation was positive and medium strength. In the group of women, the variables with negative predictive value were agreeableness and extraversion, jointly accounting for 31% of variance in results. In the group of men, the only significant variable which was included in the regression model was agreeableness, explaining 11% of variance in results. Interpreting the Beta index (β=-0.35) indicates a negative correlation between agreeableness and the factor of conflict.

In the group of women, agreeableness, which explains 11% of variance in results, has a predictive value for the factor of rivalry. The correlation between agreeableness and the relationship with adult siblings based on the dimension of rivalry is weak and negative (β=-0.35). In the group of men, none of the explanatory variables appeared to be a significant predictor for the factor of rivalry. These results confirm the fourth hypothesis as well as the specific hypotheses 4.1 and 4.2.

The study did not show that emotional intelligence have a predictive value for the quality of interpersonal relationships with siblings in early adulthood. This result is surprising and does not support the fifth hypothesis as well as the specific hypothesis 5.1.

DISCUSSION

The aim of the current study was to determine personality predictors of the quality of sibling relationships in early adulthood. The factors we analysed were personality traits and emotional intelligence, as they are the basis for the decisions and social behaviours of people and play a significant role in shaping interpersonal relationships [7,9]. Furthermore, we checked if there was differentiation in terms of personality dimensions, emotional intelligence and the quality of sibling relationships between the groups of young women and men.

The available related literature suggests that although the results of the research on the differences in respect of personality traits of women and men are ambiguous, certain differences do appear. First, they concern a higher level of neu-

roticism in women than in men [7]. In our own study, women received higher mean scores in neuroticism and agreeableness than men. These results are congruent with the results of previous studies indicating differences between women and men in terms of these personality traits. It was found that women were characterised by higher scores on the scales of neuroticism, agreeableness, openness and consciousness [23]. Interpreting the results obtained in our own studies, we can refer to the cultural influences and social expectations related to the stereotypical way of fulfilling the role of a woman, which is more charged with anxiety and agreeableness than the role of a man [24].

The two groups of young adults in the current study did not differ in terms of emotional intelligence, which is a surprising finding, since research conducted so far has indicated the occurrence of gender-specific differences in this aspect [16]. The reasons behind these results can include the influence of factors other than gender on emotional intelligence since the process of its development is mainly determined by such social factors as education and individual experiences [9].

Another issue was finding any differences in terms of the quality of adult sibling relationships in the groups of women and men. We discovered that although there were no differences in respect of the three main factors describing the relationship with adult siblings (warmth, conflict, rivalry), it is worth noting that women obtained higher mean scores on the scale of emotional support, which is a component of the warmth factor. That means that women provide their siblings with emotional support to a greater degree than men. These results are consistent with the previous findings in this area [20]. The reason behind them is a different course of the socialisation process in women and men. In women, social influences shape a greater focus on social relationships as they are taught how to take care of close interactions between people. Women can also talk about their feelings more openly. On the other hand, men, who are more restrained in showing their feelings, are aware of the emotional advantages of relationships with siblings and understand their significance [25].

While seeking the personality predictors of interpersonal sibling relationships in early adulthood, we found that they had been determined

for each of the factors describing the quality of a sibling relationship. The analysis of the obtained results indicates that in the group of women, there are more personality traits with a predictive value for the quality of sibling relationships than in the group of men. The findings show that in the group of women, extraversion appeared to be the best predictor of warm relationships with siblings whereas in the group of men, it was extraversion and openness. And in the case of conflictual relationships in the group of women, the personality traits with the highest significance were neuroticism, extraversion and a low level of agreeableness. In the group of men, agreeableness was the only trait which appeared to be a significant predictor of conflict, which means that the lower the level of agreeableness, the higher the probability that the relationships with siblings will be conflictual. Referring to the factor of rivalry, a low level of agreeableness appeared to be the predictor, but only in women. Emotional intelligence did not play an expectedly important part in explaining relationships with siblings in early adulthood. With high probability, it can be stated that in adulthood, when the relationships are already stable, the personality traits that have more influence on their quality are those which are visible in social behaviours demonstrated in interpersonal relationships.

The study provides psychological knowledge on the subject which has been insufficiently explored so far, both in Poland and worldwide [2]. It has some limitations, which must be mentioned. Firstly, the study used self-descriptive tools, which, are burdened with numerous defects. This makes it necessary to refine the conditions for conducting psychological research. Second, the study covers a sample of adults in early adulthood and it would be advisable to extend it to individuals in middle and late adulthood. There is great potential in studying adult sibling relationships, which shall enable scientists and practitioners as well as sibling dyads to better understand this dynamic system of family relationships.

CONCLUSIONS

The interpersonal relationship with siblings in early adulthood based on the factor of warmth

can facilitate experiencing satisfaction with so-cial contacts. Knowledge of the personality pre-dictors of warm relationships with siblings can contribute to encouraging them in the education process, which is one of the desirable preventive activities aimed at mental disorders. It should be kept in mind that there is a lot of evidence of a positive influence of close interpersonal re-lationships on coping with anxiety, decreasing the symptoms of depression and reducing the impact of stress through increasing self-esteem, reducing negative emotions and providing help in solving problems [26-28].

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