

THE RELATIONSHIPS WITH SIBLINGS IN EARLY ADULTHOOD – ANALYSIS OF CONDITIONS

Katarzyna Wałęcka-Matyja

Instytut Psychologii, Uniwersytet Łódzki
Institute of Psychology, University of Lodz

Summary. The main purpose of the presented study was to establish the determinants of sibling relationships in the period of early adulthood. The following variables were analyzed: age, gender, parent status, perception of material conditions and empathy level. The author also sought correlations between empathy and the psychological aspects of adult sibling relationships.

The study included 79 persons in the period of early adulthood coming from the administrative region of Łódź ($M = 27$ years; $SD = 4.23$). Women accounted for 52% of the surveyed people, men for 48%. The following test tools were used: the poll, the Adult Sibling Relationship Questionnaire (ASRQ) by Stocker et al. (1997) in the adaptation of Wałęcka-Matyja (2014) and the Empathic Sensitiveness Scale by Davis in the adaptation of Kaźmierczak, Płopa and Retowski (2007).

The obtained study results confirmed the significance of the factors of a psychosocial nature shaping the dimensions of sibling relationships in the period of early adulthood. The significant role of empathy in the regulation of relationships between adult siblings was verified.

Key words: siblings, early adulthood, empathy

Introduction

The problem matter of sibling interpersonal relationships has enjoyed interest of social studies researchers for a relatively short time. On the one hand, it is surprising that siblings have not played a significant role in social and humanities research for such a long time. On the other hand, it is understandable since it is very difficult to examine relationships occurring in the family system. To a great extent, that results from the changeability of the family microsystem in respect of, among other factors, the size of family, birth order, age difference between siblings, gender, somatic features or personality traits. As Braun-Gałkowska (1992) notices, taking a great number of variables into consideration in one study makes it difficult to create comparative groups. It is also hard to carry out longitudinal research, taking into account all the unknown things and the ones that keep changing between siblings in the life course.

Adres do korespondencji: Katarzyna Wałęcka-Matyja, e-mail, kwalecka@uni.lodz.pl

The person who was the first to notice the need to carry out a deep analysis of sibling relationships was A. Adler. He paid attention to the potential correlations between the birth order in the family and the personality traits of an individual. Family researches started to gradually extend the sibling research area as they realized that the importance of this relationship dynamics for the course of human development had been a bit ignored so far. At the beginning, researchers stressed the long-lasting and predictive influence of the sibling relationship in early childhood on the level of social and cognitive functioning of a human person in middle childhood and adolescence (Dunn, 1983; Furman, Buhrmester, 1985). In later years, more and more researchers began to appreciate the importance of siblings in adulthood (Cicirelli, 1995; Milevsky, 2005; Rostowska, 2010; Wałęcka-Matyja, 2014a). It is worth emphasizing that especially the stage of early adulthood, between the age of 18-20 years and 30-35 years is still the least researched one in the context of the sibling relationship psychological aspects (Milevsky, 2005; Brzezińska, Appelt, Ziółkowska, 2015).

Family researchers were also interested in the wide range of sibling relationships from love and liking to disregard, hostility and sometimes even hate. They sought actively the determinants of reciprocal sibling influences.

In the related literature, focus is placed on the specific nature of sibling relationships, which are referred to as *primary* since they last from the very birth till the end of the siblings' life. This specific nature of the sibling relationship is a result of having common family experiences that make this relationship unique and intimate. It is stressed that this bond is primary to the later relationships of friendship and love (Lanthier, Stocker, Furman, 2001; Rostowska, 2010; Komorowska-Pudło, 2014).

In this study, it has been adopted that the term "sibling relationships" shall mean a sum of interactions based on activities and communication (verbal and non-verbal) of two or more persons having the same natural parents and a specific relationship to common experiences, beliefs and feelings towards each other, from the moment of gaining self-awareness (Cicirelli, 1995). The sibling relationship consists of three dimensions: Warmth¹, Conflict² and Rivalry³ (Stocker, Lanthier, Furman, 1997), and its nature is shaped by the intra-family factors (e.g. the quality of the marriage subsystem) as well as the external environment (Rice, 1996; Lewandowska-Walter, Połomski, Peplińska, 2014).

¹ The dimension of *Warmth* covers a relationship characterized by acceptance, closeness between siblings who see their similarity to each other, admire each other, have knowledge about each other, support each other, both emotionally and instrumentally.

² The dimension of *Conflict* describes relationships characterized by lack of understanding between siblings, striving for domination, noticing differences and competitive behaviours.

³ The dimension of *Rivalry* refers to a degree in which siblings feel treated fairly or unfairly by their parents (Wałęcka-Matyja, 2014b).

Determinants of sibling relationships in adulthood

Looking for the explanation of the determinants of the psychological aspects of sibling relationships, it can be noticed that in the literature on the subject there is a huge diversity of theories concerning this issue. It is indicated that the quality of relationships between siblings to a certain extent depends on *the life events* they experience. Getting married, starting a family or having children are situations that can potentially reduce the frequency of contacts between siblings in the period of adulthood (Connidis, Campbell, 1995). On the other hand, *the attachment theory* emphasizes that siblings maintain emotional bonds regardless of the life period they are in and the related developmental tasks. What is more, there is a conviction that this bond is permanent in nature and does not change even after death of a sister or a brother (Bowlby, 1980; Cicirelli, 1995). And, *the buffer hypothesis* assumes that the bonds between siblings get stronger especially in stressful situations. In such circumstances, sibling relationships are treated as environmental resources (Milevsky, 2004). In numerous empirical reports, the authors stress the exceptionally positive role of siblings in coping with stress. Already in the period of early childhood, we can observe instances of providing support to younger siblings by elder ones, especially in crisis family situations, like, for example, the parents' divorce or death (Brody, 2004; Lewandowska-Walter, Połomski, Peplińska, 2014). Moreover, the research results show that adult siblings can rely on each other, also while experiencing positive life events (Moyer, 1992).

In the present study it was assumed that sibling relationships keep changing during the course of life (Goetting, 1986; Wałęcka-Matyja, 2015). It has been the basis for analysing the literature of the subject in the context of potential factors determining the nature of sibling relationships in early adulthood. Making a review of the studies and reports concerning the problems of interpersonal relationships between adult siblings, a number of factors significantly affecting their quality have been distinguished. Among these factors, the most frequently mentioned have been: life events, age, marital status, having children (so called parental status) and living in close proximity.

Numerous authors confirm that living in close proximity to one another is the main factor affecting the occurrence of strong emotional bonds between siblings, responsibility for one another, as well as encouraging their frequent contacts (Lee, Mancini, Maxwell, 1990; Miner, Uhlenberg, 1997). Moreover, experiencing life events of a transitional nature, such as divorce, loss or serious illness of a family member or having a child, is associated with a stronger commitment in the sibling relationship (Connidis, 1992).

Connidis and Campbell distinguish three main factors affecting the strength of adult sibling bonds, i.e. gender, marital status and parental status. The authors think that sisters are more willing to foster closer relationships with their siblings than brothers. Persons who are single by choice and widowed people describe their relationships with siblings as closer than married people. In case of the last factor, parental status, on the other hand, it appears that childless persons foster stronger bonds with their siblings than persons having offspring (Connidis, Campbell, 1995).

An important factor affecting the intensity and quality of adult sibling relationships is age. It has been noticed that the loss of vitality connected with aging results in seeking relationships with siblings, which may become a valuable resource in coping with difficult situations, especially if the help of the spouse or/and the children is unavailable (Crispell, 1996). In the related literature, it has been indicated that brothers and sisters would most often seek help and support from the siblings whose age is closest to their own (van Volkom, Machiz, Reich, 2011).

The findings of Folwell et al. (1997) show there are three basic reasons for fostering adult sibling relationships: family events/difficulties, sense of community and problems connected with aging.

The fact that so many authors identify life events of an individual or family nature as especially important for interpersonal relationships with siblings allows for the conclusion that a significant variable should be the level of empathy. Empathy is one of the personality components, a regulator of a person's behaviour in various social situations. A definition of empathy adopted in the study is the one by M.H. Davis, who defines it holistically as a "set of theoretical constructs having to do with the response of one individual to the experiences of another. The author understands the concept of *theoretical constructs* as "the processes occurring in an observer and the affective and non-affective consequences of these processes. The phenomenon of empathy occurs in a situation when "(...) the observing person gets in touch in some way with the observed one and that evokes a certain kind of reaction in the observer (cognitive, affective and/or behavioural)" (Davis, 1999, p. 23). According to M.H. Davis, the constant dispositions of individuals connected with *Perspective Taking*⁴, *Empathic Concern*⁵ and *Personal Distress*⁶, have a significant impact on the occurrence of specific relational behaviours. Moreover, people's individual behaviours are determined by how they are perceived by other people, which in turn affects the kind of relationships that are possible in a given context (Davis, 1999).

The influence of empathy on better social functioning of people has been confirmed many times. The research results show that a higher level of personal empathy fosters responsible behaviours and empathic skills are positively correlated with cooperation and negatively with rivalry (Mirowska, 1994). Therefore, a question arises about the correlations of this personality trait with the quality of sibling relationships in early adulthood.

⁴ *Perspective taking* is a cognitive component of empathy and a good predictor of optimal social functioning.

⁵ *Empathic concern* is an empathy component connected with willingness to engage in relationships with other people.

⁶ *Personal distress* is an empathy component connected with irritability and experiencing constant nervous tension and emotional hostility (Każmierczak, Płopa, Retowski, 2007).

Research aim, questions and hypotheses

The aim of the taken up study was to obtain an answer to the question about the psychosocial determinants of the adult sibling relationship quality as well as the correlations between the empathy dimensions and the psychological dimensions of this relationship. It has been emphasized that although the related literature allows us to notice a lot of factors affecting the nature of adult sibling interpersonal relationships, the empirical findings in this respect are differentiated. The research questions have been formulated below:

1. Is there a differentiation in the psychological aspects of the adult sibling relationship depending on demographic variables?
2. Does parenthood differentiate the nature of the sibling relationship in early adulthood and how?
3. Do the empathy dimensions differentiate sisters and brothers and correlate with the dimensions of the sibling relationship in early adulthood and how?

Having in mind the results obtained so far, the following research hypotheses have been formulated:

Hypothesis 1: There is a differentiation in sibling relationship dimensions depending on selected demographic variables (i.e. age, gender, material situation). With age the relationships are characterized by a higher level of Warmth. Sisters' relationships with siblings are based to a greater extent on closeness, similarity and support than brothers'. Siblings' good material conditions rather decide on an affective nature of the sibling relationship than a pragmatic one (Cicirelli, 1995; Connidis, Campbell, 1995).

Hypothesis 2: There is a differentiation in sibling relationship dimensions depending on the fact of having children by the surveyed persons. Parental status results in less committed relationships with siblings in early adulthood (Connidis, Campbell, 1995).

Hypothesis 3: Sisters demonstrate a higher level of empathy in the dimensions of Empathic Concern and Perspective Taking than brothers (Davis, 1999).

Hypothesis 4: There are differentiated correlations between the sibling relationship psychological dimensions and the empathy ones. A high level of empathy on the scales of Empathic Concern and Perspective Taking will be positively correlated with the subscales making up the dimension of Warmth (Affection, Knowledge, Intimacy, Emotional Support, Admiration, Similarity, Instrumental Support, Acceptance) (Kaźmierczak, Płopa, Retowski, 2007).

Hypothesis 5: The empathy dimensions have a predictive value for the psychological sibling relationship dimensions (i.e. Warmth, Conflict, Rivalry).

Method

Participants

The research included 79 students of different majors of the University of Łódź, having adult siblings and not living with them. The average age of the surveyed was 27.15 years ($SD = 4.234$). The average age in the groups of women and men

was similar: for women $M = 27.07$; $SD = 4.845$, for men $M = 27.24$; $SD = 3.522$. The surveyed people came from the district of Łódź, mostly from the urban area (60%). Women accounted for 52% (41 persons) of the sample. The surveyed persons most often had semi-higher education (Bachelor's degree) (57.7%) and secondary education (38.8%). The fewest persons declared vocational (1.3%) and higher (1.3%) education. The majority of the respondents (80%) were active in the labour market. The economic situation was described as good in more than half cases (61%), the other respondents (38.7%) assessed it as unsatisfactory. 61.5% of the surveyed persons declared having children while 37.5% were childless.

Measures

The research was conducted using the poll, the Adult Sibling Relationship Questionnaire (ASRQ) by Stocker, Lanthier and Furman (1997) in the adaptation of Wałęcka-Matyja (2014b) and the Empathic Sensitiveness Scale (ESS) by Davis (1980) in the adaptation of Kaźmierczak, Plopa, Retowski (2007).

The poll included questions concerning demographic variables (gender, age of the respondents, gender, age of their siblings, place of residence, marital status, children, education level, work activity, economic situation).

The Adult Sibling Relationship Questionnaire (ASRQ) was used to measure relationships between siblings in the period of adulthood. The measured elements were the perception of the respondents, their behaviours and feelings toward their adult siblings as well as the perception of the siblings – of the behaviours and feelings toward the respondents. ASRQ includes 81 items, which make up three main composite factors of sibling relationships: Warmth, Conflict and Rivalry.

The dimension of *Warmth* covers a relationship characterized by acceptance, closeness between siblings who see their similarity to each other, admire each other, have knowledge about each other, support each other, both emotionally and instrumentally. The dimension of warmth consists of 8 scales: Affection, Knowledge, Intimacy, Emotional Support, Admiration, Similarity, Instrumental Support and Acceptance (Cronbach's α .97).

The dimension of *Conflict* describes relationships characterized by lack of understanding between siblings, striving for domination, noticing differences and competitive behaviours. The scales making up the factor of conflict are: Opposition, Domination, Quarrel, Competition (Cronbach's α .92).

The dimension of *Rivalry* refers to a degree in which siblings feel treated fairly or unfairly by their parents. Two scales: Maternal Rivalry and Paternal Rivalry together make up the whole factor of rivalry (Cronbach's α .87).

Other research also show high levels of internal consistency measured by Cronbach's α (in the original version of ASRQ Cronbach's α was in the range .88-.97; in the German adaptation of ASRQ Cronbach's α was between .94 to .75) (Stocker, Lanthier, Furman, 1997; Heyeres, 2006).

All the ASRQ items (except rivalry) are assessed on the Likert's scale, from "Hardly Anything" (1 point) to "Extremely Much" (5 points). The items measuring a level of rivalry in siblings were assessed on a scale from 0 to 2 points as it was

assumed that there are three most frequently occurring situations: a child is not favoured by the parents (0 points), parents sometimes favour one of their children and sometimes the other one (1 point) and parents usually favour only one of their children (2 points).

The Empathic Sensitiveness Scale (ESS) is a multidimensional tool measuring the empathy level in adult people. The scale was created by Davis in 1980, following the assumption that the phenomenon of empathy consists of several separate, yet interconnected constructs of an emotional and cognitive nature. The Polish adaptation of this tool was done by Kaźmierczak, Plopa, Retowski (2007).

The study to adapt the Empathic Sensitiveness Scale to the Polish conditions included 278 adult persons. They were to respond to 28 statements, using a five-grade scale: I completely disagree, I rather disagree, It's hard to say, I rather agree, I absolutely agree. There were three scales in the questionnaire: *Empathic Concern*, *Perspective Taking* and *Personal Distress*. The scale of Fantasy was not taken into account. Below there is a short description of the three enlisted scales.

Empathic Concern Scale (EC) measures a willingness to engage in relationships with other people. Persons obtaining high scores in this scale are characterized with a great need for closeness with other people and a feeling of kindness for them. They would also have rich imagination. On the other hand, such people tend to worry, to experience anxiety and to be sentimental and vulnerable. The EC scale is positively correlated with enthusiastic and spontaneous behaviours. There is also a moderate positive correlation with the strict following of the socially accepted rules of behaviour. Negative correlations were observed for secretiveness, being discrete and avoiding closeness with other people as well as a preference of individual work understood as independence, which is consistent with the specificity of Empathic Concern, which is a component usually "focused on other people".

Personal Distress Scale (PD) measures the feelings of irritability, constant nervous tension and emotional hostility, which can hinder effective social functioning. The PD scale is negatively correlated with "emotional stability", which can lead to a feeling of lack of control over one's own life. Persons obtaining high scores in this scale are characterized with shyness, timidity and anxiety, which will make it difficult for them to appear before the group. Low scores in the scale of "social boldness" are related to decreased self-esteem and a tendency to avoid changes in the environment, which could increase the feeling of insecurity.

Perspective Taking Scale (PT), a cognitive component of empathy, is a predictor of good social functioning. Persons with high scores in the PT scale are kind and understanding for other people. Moreover, they are characterized with assertiveness, boldness in interpersonal relationships, proper self-esteem and awareness of social rules. The PT scale is negatively correlated with reluctance to open to other people and focus on "I" in acting. Apart from this, people with high levels of Perspective Taking enjoy experimenting in their life and try to improve their activity by implementing appropriate changes. Such people would not experience anxiety, which is a sign of their high interpersonal skills.

The reliability of all the scales (Empathic Concern: 0.78; Personal Distress: 0.78; Perspective Taking: 0.74) is similar to that obtained by Davis (1980). The scale reliabilities in the author's study were respectively from 0.73 to 0.75 for women and from 0.68 to 0.77 for men. The presented tool is characterized with a good criterion and construct validity (Każmierczak, Plopa, Retowski, 2007).

Procedure

The research was conducted in years 2014-2015 in the district of Łódź. The surveyed persons were informed about the aim of the study and the intention to use the results only for scientific purposes. The research was anonymous, voluntary and of a group nature. Completing the set of tests took the respondents about 20 minutes and was done free of charge.

Statistical analyses

The collected empirical material was analysed, using the IBM SPSS Statistics 22 computer software. The statistical analysis of the research results referred to the individual issues formulated in the research questions. The Student's t-test, the Pearson product-moment correlation coefficient and the linear regression analysis were applied.

In order to verify the first research hypothesis, the surveyed group ($n = 79$) was divided into several comparative groups. The first division was made based on the criterion of age. Two groups were distinguished. The first one ($n = 30$; 38%) included persons in emerging adulthood⁷, i.e. at the age of 18-25 years (Arnett, 2010), whereas the other group ($n = 49$; 62%) consisted of persons in early adulthood – 26-36 years of age.

The second division was based on another criterion, gender. In this way a group of sisters ($n = 41$; 52%) and a group of brothers ($n = 38$; 48%) were created.

The next division was made based on the factor of perceiving one's own material situation by the surveyed persons. One group consisted of the people who were satisfied with their financial conditions ($n = 30$; 38%) and the other group consisted of those unsatisfied ($n = 49$; 62%).

Similar steps were taken while verification of the second hypothesis. The examined people were divided into two comparative groups – one for the persons having offspring ($n = 49$; 62%) and the other for the childless ($n = 30$; 38%).

⁷ The developmental stage between adolescence and early adulthood has been called in recent years, according to Arnett (2010), emerging adulthood.

Results

Differentiation in dimensions of sibling relationships in early adulthood in terms of age

The results of the carried out analyses allow for the statement that in the compared groups there were no statistically significant differences within the three dimensions of the sibling relationship (i.e. Warmth, Conflict, Rivalry) (table 1).

Table 1. Distribution of average results for the three dimensions of sibling relationships in early adulthood in terms of age

Surveyed groups	18-25 <i>n</i> = 30		26-36 <i>n</i> = 49		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Relationship dimensions							
Warmth	150.8	36.31	151.8	35.85	-.114	77	.909
Conflict	49.4	16.76	47.8	15.54	.404	77	.665
Rivalry	3.7	6.87	4.3	5.09	-.419	77	.677

Source: own work

To deepen the analysis, the surveyed groups of sisters and brothers were compared in respect of the fourteen subscales making up the three main dimensions of the sibling relationship. The obtained results allow for the statement that persons in emerging adulthood received lower average results ($M = 19.24$; $SD = 5.06$) in the dimension of Intimacy than those in early adulthood ($M = 21.42$; $SD = 5.36$). In the light of the Student's *t* test, they were statistically significant, wherein the small value of an effect size index means that the difference between the variables is not of a big significance ($t(77) = -1.85$; $p < .049$; $d = 0.42$). It can be assumed that this results from the small sample size. The obtained result allows us to confirm the correctness of hypothesis 1 (figure 1).

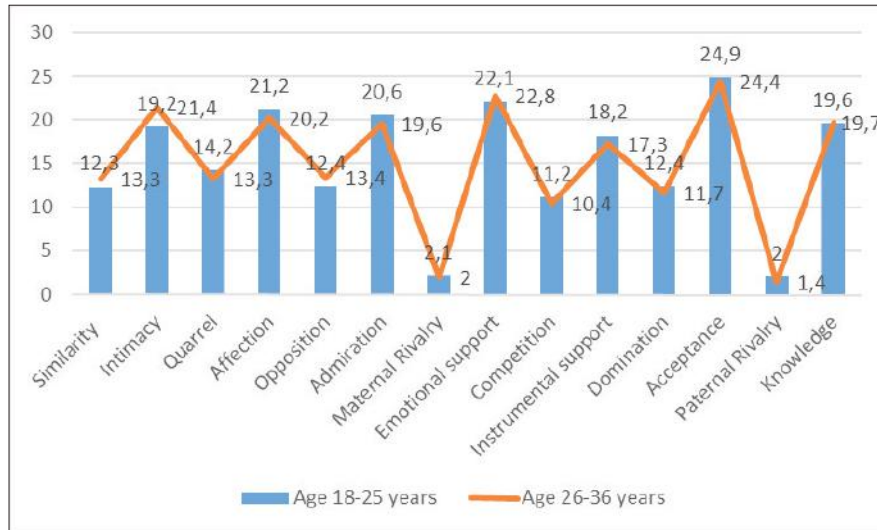


Figure 1. Distribution of average results for the main subscales of adult sibling relationship dimensions in terms of age

Source: own work

The results received in the other aspects of sibling relationships in early adulthood show a lack of statistically significant differences in the compared groups: Similarity ($t(77) = -1.213; p < .229$), Quarrel ($t(77) = .798; p < .427$), Affection ($t(77) = .787; p < .434$), Opposition ($t(77) = -.714; p < .478$), Admiration ($t(77) = .855; p < .395$), Maternal Rivalry ($t(77) = .165; p < .869$), Emotional Support ($t(77) = -.605; p < .547$), Competition ($t(77) = -.938; p < .351$), Instrumental Support ($t(77) = .820; p < .415$), Domination ($t(77) = .934; p < .353$), Acceptance ($t(77) = .385; p < .701$), Paternal Rivalry ($t(77) = .959; p < .341$), Knowledge ($t(77) = -.042; p < .966$).

Differentiation in dimensions of sibling relationships in early adulthood in terms of gender

Studying the issue of psychological dimensions of adult sibling relationships in terms of gender, it can be noticed that there were no relevant differences in the compared groups of sisters and brothers as far as the main relationship dimensions are concerned. The relationships of the examined siblings from both the groups were characterized by Warmth, Conflict and Rivalry in a similar degree (table 2).

Table 2. Distribution of average results for the three dimensions of the sibling relationship in early adulthood in terms of gender

Surveyed groups	Sisters <i>n</i> = 41		Brothers <i>n</i> = 37		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Warmth	154.3	35.34	148.3	36.49	.726	77	.458
Conflict	47.3	14.91	49.5	17.08	-.634	77	.528
Rivalry	3.6	4.98	4.63	6.61	-.793	77	.462

Source: own work

Going deeper into the issue of the psychological determinants of the adult sibling relationship dimensions in the context of gender, the surveyed groups of brothers and sisters were compared in respect of the fourteen subscales making up the dimensions of Warmth, Conflict and Rivalry. The deeper analysis allowed us to confirm the assumption that gender is one of the more important determinants of the quality of the sibling relationship in early adulthood. The obtained research results show that between the compared groups of sisters (*n* = 41; 52%) and brothers (*n* = 38; 48%) there were statistically significant differences in the following dimensions: Emotional Support ($t(77) = 3.737; p = .000; d = 0.88$), Domination ($t(77) = -3.935; p = .000; d = -1.34$), Intimacy ($t(77) = 3.460; p < .001; d = 0.88$) and Similarity ($t(77) = 2.784; p < .007; d = 0.78$). Sisters more often characterized their relationships with siblings basing on the dimension of emotional availability, related to providing support, intimacy and perceived similarity, than brothers. On the other hand, in the group of brothers, the prevalence of domination-based aspect of the relationship could be clearly noticed. The obtained results confirm hypothesis 1 (figure 2).

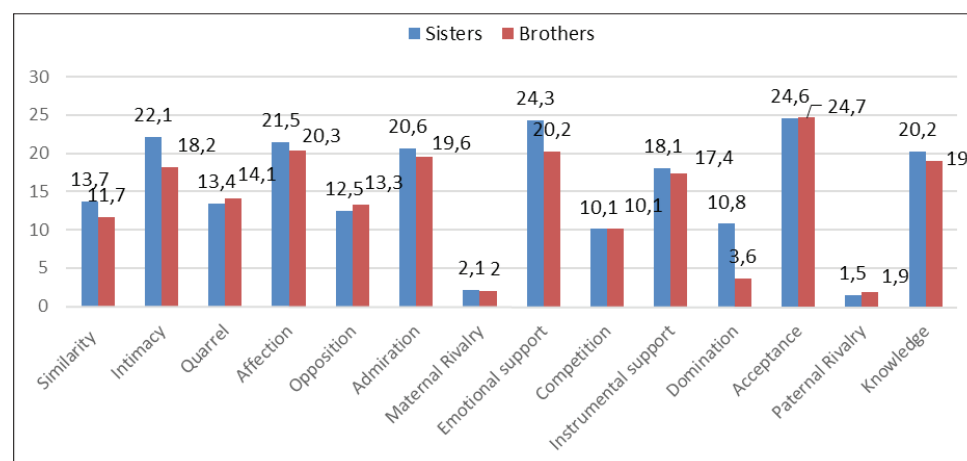


Figure 2. Distribution of average results for the subscales of the main adult sibling relationship dimensions in terms of gender

Source: own work

In respect of the other psychological aspects of adult sibling relationships, there were no statistically significant differences between the compared groups of sisters and brothers: Quarrel ($t(77) = -.694; p < .490$), Affection ($t(77) = .510; p < .611$), Opposition ($t(77) = -.639; p < .525$), Admiration ($t(77) = .816; p < .417$), Maternal Rivalry ($t(77) = .098; p < .922$), Competition ($t(77) = .020; p < .984$), Instrumental Support ($t(77) = .659; p < .512$), Acceptance ($t(77) = -.033; p < .974$), Paternal Rivalry ($t(77) = -.764; p < .447$), Knowledge ($t(77) = 1.051; p < .297$).

Differentiation in dimensions of sibling relationships in early adulthood in terms of perception of material conditions

Analysing the obtained results, it was found out that the surveyed persons, although differentiated in terms of their perception of their material conditions, generally perceived their relationship with siblings in early adulthood very similarly (table 3).

Table 3. Distribution of average results for the three dimensions of the sibling relationship in early adulthood depending on their perception of economic situation

Surveyed groups	Satisfaction with econ. sit. <i>n</i> = 30		Dissatisfaction with econ. sit. <i>n</i> = 49		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Relationship dimensions							
Warmth	150.1	35.34	152.2	36.41	.243	77	.809
Conflict	48.0	16.14	48.6	15.96	.159	77	.874
Rivalry	4.7	5.38	3.6	6.05	-.818	77	.416

Source: own work

Statistical analyses covering the comparison of the examined groups in the dimensions of the fourteen subscales of ASRQ indicated the existence of one area that differentiated them (figure 3). It was connected with the variable of Instrumental Support ($t(76) = 2.284; p < .025; d = 0.54$). The persons perceiving their material conditions as unsatisfactory obtained higher average results ($M = 18.69; SD = 4.650$) than the ones who assessed their material resources better ($M = 16.30; SD = 4.219$). Interpreting Cohen's *d* effect size, it was assumed that differentiation between the surveyed groups in respect of the variable of Instrumental Support was on an average level. The obtained research results confirm hypothesis 1.

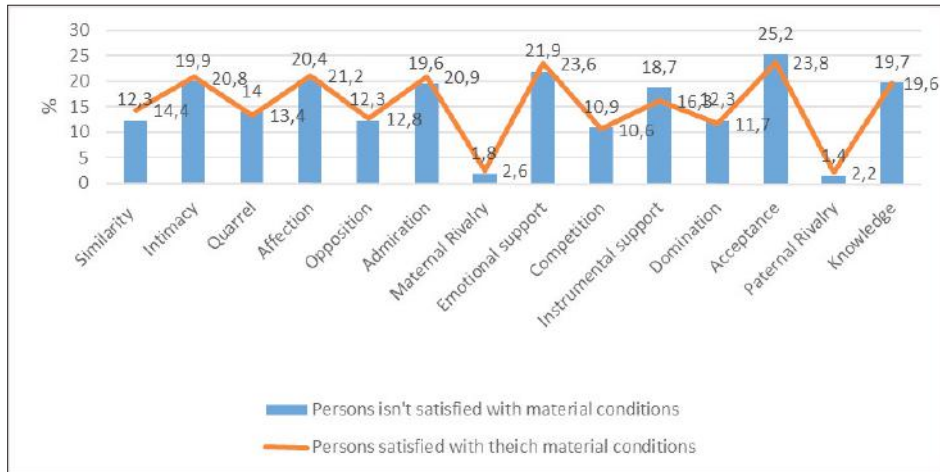


Figure 3. Distribution of average results for the subscales of the main adult sibling relationship dimensions in terms of their perception of material conditions

Source: own work

In the other dimensions of relationships between siblings of a different economic status, there were no statistically significant differences: Similarity ($t(77) = -1.426$; $p < .158$), Intimacy ($t(77) = -.737$; $p < .463$), Quarrel ($t(77) = .554$; $p < .581$), Affection ($t(77) = .520$; $p < .605$), Opposition ($t(77) = .031$; $p < .975$), Admiration ($t(77) = -.982$; $p < .329$), Maternal Rivalry ($t(77) = -1.095$; $p < .272$), Emotional Support ($t(77) = -.992$; $p < .324$), Competition ($t(77) = .325$; $p < .746$), Domination ($t(77) = .774$; $p < .441$), Acceptance ($t(77) = 1.025$; $p < .308$), Paternal Rivalry ($t(77) = -1.100$; $p < .275$), Knowledge ($t(77) = .058$; $p < .954$).

Differentiation in dimensions of sibling relationships in early adulthood in terms of parental status

Considering the significance of the family situation for the nature of relationships in adulthood, attention was focused on the variable of *parental status*. The results obtained on the basis of the carried out statistical analyses, both for the three relationship dimensions (i.e. Warmth, Conflict and Rivalry) (table 4) and in the area of the fourteen subscales making them up, did not confirm the significance of the variable of *parental status* for the quality of adult sibling relationships.

Table 4. Distribution of average results for the three dimensions of the sibling relationship in early adulthood in terms of parental status

Surveyed groups	Childless person <i>n</i> = 30		Parental status <i>n</i> = 49		<i>t</i>	<i>df</i>	<i>P</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Warmth	151.5	35.79	151.6	36.40	.044	77	.965
Conflict	46.8	14.10	49.3	17.02	.667	77	.507
Rivalry	3.8	6.72	4.2	5.22	.259	77	.796

Source: own work

The results obtained for the subscales making up the dimensions of Warmth, Conflict and Rivalry were following: Similarity ($t(77) = .20; p < .836$), Intimacy ($t(77) = .089; p < .930$), Quarrel ($t(77) = -.227; p < .782$), Affection ($t(77) = .667; p < .507$), Opposition ($t(77) = 1.409; p < .163$), Admiration ($t(77) = .325; p < .746$), Maternal Rivalry ($t(77) = .894; p < .374$), Emotional Support ($t(77) = -.423; p < .673$), Competition ($t(77) = -.669; p < .506$), Instrumental Support ($t(76) = -1.042; p < .300$), Domination ($t(77) = 1.637; p < .106$), Acceptance ($t(77) = -.082; p < .935$), Paternal Rivalry ($t(77) = -.437; p < .664$), Knowledge ($t(77) = .482; p < .631$). The comparison of the average results obtained in both the surveyed groups is presented in figure 4. In this way the second hypothesis was not confirmed.

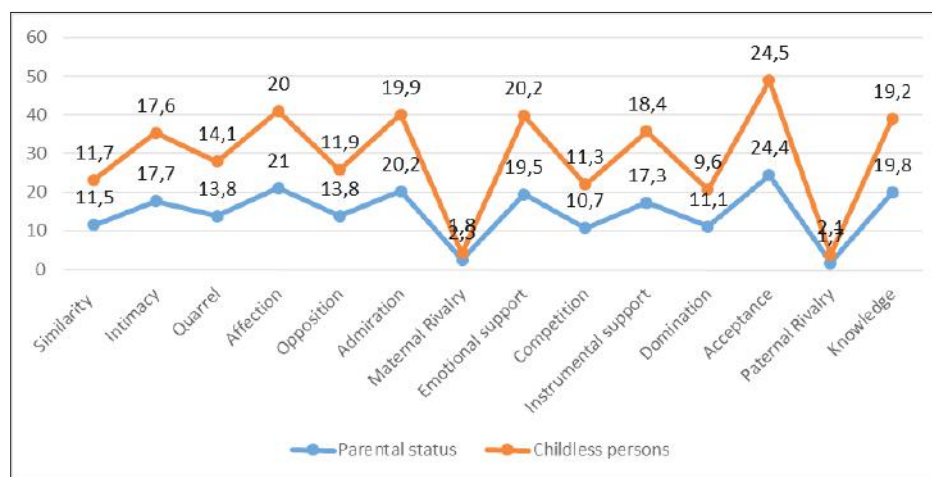


Figure 4. Distribution of average results for the subscales of the three main adult sibling relationship dimensions in terms of parental status

Source: own work

Differentiation in the level of empathy dimensions in the groups of sisters and brothers in early adulthood

Determining the level of empathy dimensions in the group of the examined persons, the factor of gender was taken into account since, as it was shown in the study of Kaźmierczak, Plopa and Retowski (2007), between groups of women and men there are significant differences concerning each of the empathy components, i.e. Empathic Concern, Personal Distress and Perspective Taking.

Analysing the obtained own research results, it was found out that the sisters had received higher average results than brothers in the scales of Empathic Concern ($t(77) = 2.228; p < .027$) and Perspective Taking ($t(77) = 2.143; p < .035$). Thereby, the third hypothesis was proved. According to Cohen's d index, the significance of this differentiation can be assessed as average. It is worth mentioning that the results of both the compared groups fall in the range of average scores (5-6 sten) (table 1). Interpreting the obtained result, it has been noticed that both scales, i.e. Empathic Concern and Perspective Taking, are positively correlated with social adaptation. The obtained results show the sisters' tendency to demonstrate more commitment in interpersonal relationships and a benevolent attitude toward their siblings.

Table 5. Differentiation in the level of empathy dimensions of the surveyed sisters and brothers in early adulthood

Surveyed groups Variables	Sisters <i>n</i> = 41		Brothers <i>n</i> = 37		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Empathic Concern	41.3	7.82	37.8	6.07	2.228	76	.027	0.51
Personal Distress	22.3	4.39	21.1	4.87	1.202	76	.233	0.27
Perspective Taking	34.7	4.96	32.3	4.86	2.143	76	.035	0.49

Source: own work

Correlations between sibling relationship dimensions and the empathy level

Basing on the overview of the related literature, it was assumed that in the group of sisters, whose relationships with siblings are to a greater extent based on closeness than in the group of brothers, there would be numerous correlations between the empathy dimensions (Empathic Concern, Perspective Taking) and the subscales of Warmth (Similarity, Intimacy, Affection, Admiration, Emotional Support, Instrumental Support, Acceptance, Knowledge). However, the obtained results indicate the existence of only one correlation, i.e. the one between Empathic Concern and the sibling relationship dimension of an antagonistic nature (Quarrel), which is negative and moderately strong (figure 5).

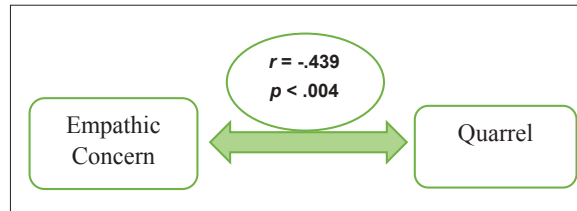


Figure 5. Correlation between the empathy dimension and the subscale of the conflictual sibling relationship factor

Source: own work

In the group of brothers, the empathy dimension referred to as Empathic Concern was negatively correlated with the kind of sibling relationships based on competition (Competition) (figure 6). On the other hand, the empathy dimension referred to as Personal Distress was positively correlated with admiring the siblings (Admiration) (figure 7).

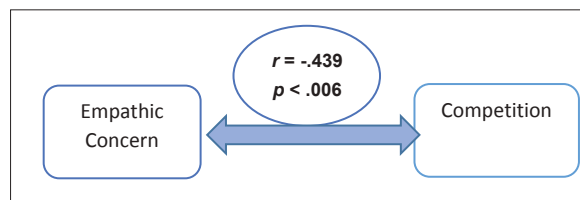


Figure 6. Correlation between the empathy dimension and the subscale of the conflictual sibling relationship factor

Source: own work

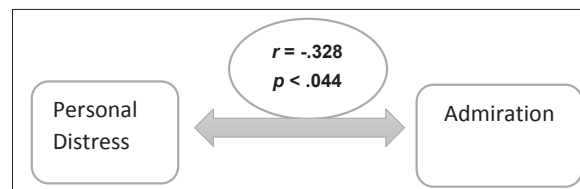


Figure 7. Correlation between the empathy dimension and the subscale of the warm sibling relationship factor

Source: own work

The observed correlations between the empathy dimensions and the aspects of sibling relationships were clear though moderately strong. Nevertheless, they are evidence of a dependence between empathy and sibling relationships.

Looking for an answer to the question about the predictive value of the empathy dimensions for the sibling relationship in early adulthood, the method of linear regression analysis was applied. Its aim was to study the correlations between many independent variables (explanatory) and a dependent variable (criterion) (Bedyńska, Książek, 2012). In the regression equation, the explanatory variables

were the empathy dimensions (independent variables) and the response variables – individual dimensions of the sibling relationship (Warmth, Conflict, Rivalry) (dependent variables). Table 6 presents the final list of variables which were included into the regression equation established with the method of backward elimination⁸. In the result presentation, the consecutive analysis stages were not described, the focus being placed only on the variables whose coefficients of correlation with the dependent variable were the highest. The analysis was carried out for the whole surveyed group ($n = 79$) since the results obtained separately for the groups of brothers and sisters were statistically insignificant and did not provide grounds for deeming the empathy dimensions as the sibling relationship predictors.

Table 6. Empathy dimensions as sibling relationship predictors in the surveyed group of adults

Empathic predictors of warm sibling relationship					Collinearity statistics	
	B	SEB	β	p	Tolerance	VIF
Personal Distress	1.770	.855	-.230	.042	1.000	1.000
R-squared value = .053 $p = .042$						
Empathic predictors of conflictual sibling relationships					Collinearity statistics	
	B	SEB	β	p	Tolerance	VIF
Personal Distress	-.516	.387	-.151	.186	1.000	1.000
R-squared value = .023 $p = .186$						
Empathic predictors of competitive sibling relationships					Collinearity statistics	
	B	SEB	β	p	Tolerance	VIF
Empathic Concern	-.087	.081	-.121	.287	1.000	1.000
R-squared value = .015 $p = .287$						

Designation used in the table:

R – squared value – coefficient of determination

B – coefficient of regression

SEB – error level

β – Beta ratio

p – significance level

Source: own work

⁸ *Method of Backward Elimination* means starting from the full model taking into account all the variables, from which in next stages consecutive variables are removed until no other variable can be removed (due to a lack of variables meeting the criterion of removal or due to achieving the model with absolute term only) (Bedyńska, Książek, 2012).

Analysing the data included in table 6, it can be stated that the determinant of warm relationships with siblings in adulthood was one variable, i.e. the empathy dimension referred to as Personal Distress. It appeared significant for the independent variable ($\beta = -.151$; $t = 2.070$; $p < .042$). The regression model was characterized by significance ($F(78) = 4.283$; $p < .042$) and explained 5,3% of the independent variable (R-squared value = .053). That means that a higher level of irritability, continuous nervous tension and emotional hostility was correlated with the siblings' occasional behaviours based on Warmth. For the other two factors describing the sibling relationship in adulthood (Conflict, Rivalry), no predictive value of the studied empathy dimensions was established.

Discussion

So far, family specialists dealing with the problems of close relationships between siblings have been interested in the research on sibling relationships at one specific stage of development – childhood. In the course of life, siblings accompany each other in numerous family, social situations, both positive and the ones that induce mental stress. Thus, carrying out analyses of sibling relationships at different stages of existence is a chance of gaining broader knowledge on the specificity of these relationships as well as information on how sibling relationships evolve with time, from childhood till late adulthood. The psychological range of shades of sibling relationships is very diverse since on the one hand it includes feelings of jealousy and conflicts and on the other hand warmth and similarity of behaviours, which can be determined genetically or are a matter of deliberate choice (Myers, Goodboy, 2010).

The purpose of the presented study was to establish factors significant for the quality of sibling relationships in early adulthood. The considered variables included: *age, gender, parental status, level of satisfaction with economic conditions and empathic skills*. As a result of the conducted research, it has been found out that all the above-mentioned factors, except the variable of parental status, are significant for the nature of relationships between siblings in early adulthood.

Discussing the role of the variable of age in shaping the quality of sibling relationships in adulthood, it has been found out that the persons entering adulthood (18-25 years old) perceived their relationships with siblings as less close than the ones in early adulthood. It has been indicated that the difference between the average results of both the groups was not big. However, it is worth emphasizing that the compared persons were in a similar age range, i.e. the period of emerging and early adulthood. It has been assumed that younger persons usually live in their families of origin while older ones start their own families and carry out different developmental tasks, related to their role of a parent, going to work, etc. (see Havighurst, 1981), which may affect the obtained result of the research. Moreover, the siblings who still live together in their parents' home (this concerns mostly siblings in emerging adulthood) experience more conflicts and rivalry than the ones who live separately, which definitely affects the way they perceive the quality of the relationship (van Volkom, Machiz, Reich, 2011).

Analysing the significance of the factor of gender in the context of shaping sibling relationships, it has been indicated that the obtained results correspond with the existing reports in this respect (Milevsky, 2005; Spitze, Trent, 2006). Sisters more often provide their siblings with emotional support, see similarity to them and perceive the relationship as closer than brothers. On the other hand, brothers demonstrate more domination-based behaviours in sibling relationships. The obtained results can be interpreted in the light of socialization processes (Lieber, Sandefur, 2002).

Considering the role of the variable of *parental status* in shaping close relationships with adult siblings, it has been found out that it is not of a big significance. The research results obtained by other authors in this respect are unclear. White (2001) claims that having children by siblings can enhance contacts between them since it increases emotional engagement in the relationship and the willingness to provide widely understood support. Other authors, on the other hand, think that brothers or sisters having their own children feel less committed to caring for their siblings as they regard their parental role as more important than their role of a sibling (Lee, Mancini, Maxwell, 1990).

The next factor of the research analysis deciding on the quality of adult sibling relationships was the level of *satisfaction with their material status*. It has been found out that the persons unsatisfied with their material conditions more often indicated the dimension of instrumental support as a significant pillar of sibling relationships than the persons satisfied with their economic status. Numerous researchers emphasize that such support is possible if siblings live close to each other (Connidis, Campbell, 1995; Knijn, Liefbroer, 2006). The results obtained by other family researchers stress that adult siblings provide not only emotional but also economic support. It has been proved that persons from 45 till 54 years of age are most willing to support their siblings by giving them at least 1000 dollars a year. This amount rapidly decreases to 300 dollars after the age of 65 years (Crispell, 1996).

The last discussed variable, affecting the adult sibling relationship was *empathy*. The presented research results have confirmed the hypothesis that the level of empathy (on the scales of Empathic Concern and Perspective Taking) in sisters was higher than in brothers, which is coherent with the existing knowledge in this respect (Każmierczak, Plopa, Retowski, 2007). There have also been negative correlations observed between the empathy dimension referred to as Empathic Concern (EC), i.e. willingness to engage in relationships with other people, and quarrelsomeness in the group of sisters and between the ET scale and competitive behaviours in the group of brothers. This means that having a high level of empathy in respect of EC makes sibling relationships less filled with opposition and rivalry and more with the pursuit of harmony and concord. On the other hand, the empathy dimension referred to as Personal Distress (PD), relating to irritability and experiencing constant nervous tension and emotional hostility was positively correlated with admiring siblings and, possibly, demonstrating envy.

Experiencing negative emotions in relationships with siblings is to a great extent determined by the process of education, especially in crisis situations for the family life, such as the birth of a second child. It is crucial whether siblings feel favoured by their parents or not.

The last conclusion from the research concerns the results of the carried out regression analysis. It has been found out that the empathy dimension referred to as Personal Distress has a predictive value for sibling relationships based on Warmth. It is emphasized that this correlation is negative. For the two other aspects of the sibling relationship, i.e. Conflict and Rivalry, no empathy dimensions with a predictive value have been distinguished.

Summing up, the nature of sibling relationships in early adulthood is extremely complicated in terms of many different dimensions as well as various factors affecting them. The surveyed adults having siblings often declared that the relationships with them are an important source of emotional and instrumental support during their lifetime. Such variables as gender, life events, age, marital status, parental status, perception of material conditions and living in close proximity are definitely the main determinants of the quality of adult sibling relationships. Due to the great complexity of the problems concerning the psychological aspects of sibling relationships in the context of their determinants, still there is a need for taking up scientific research in this field.

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ROZWÓJ RELACJI Z RODZEŃSTWEM W OKRESIE WCZESNEJ DOROSŁOŚCI
– ANALIZA KONDYCYJONALNA

Streszczenie. Głównym celem prezentowanych badań było określenie uwarunkowań relacji między rodzeństwem w okresie wczesnej dorosłości. Analizie poddano następujące zmienne: wiek, płeć, status rodzica, percepcję warunków materialnych oraz poziom empatii. Poszukiwano także związków empatii z psychologicznymi aspektami relacji dorosłego rodzeństwa.

W badaniach uczestniczyło 79 osób w okresie wczesnej dorosłości, pochodzących z województwa łódzkiego ($M = 27$ lat; $SD = 4.23$). Kobiety stanowiły 52% badanych, mężczyźni 48%. Zastosowano następujące narzędzia badawcze: ankietę, Kwestionariusz Relacji Dorosłego Rodzeństwa (KRDR) Stockera i in. (1997) w adaptacji Wałęckiej-Matyja (2014) oraz Skalę Wrażliwości Empatycznej Davisa w opracowaniu Kaźmierczak, Płopy i Retowskiego (2007).

Uzyskane rezultaty badań potwierdziły istotne znaczenie czynników o charakterze psychospołecznym, kształtujących wymiary relacji między rodzeństwem w okresie wczesnej dorosłości. Zweryfikowano znaczącą rolę empatii w regulacji więzi dorosłego rodzeństwa.

Słowa kluczowe: rodzeństwo, wczesna dorosłość, empatia

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