
PSYCHOLOGICAL DIMENSIONS OF RELATIONSHIPS WITH SIBLINGS AS PREDICTORS OF LONELINESS OF YOUNG ADULTS

Katarzyna Wałęcka-Matyja

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

Summary. The aim of this research was to determine the variables differentiating the way how adult siblings experience loneliness and to indicate the sibling relationship dimensions having a predictive value for the multifacetedly defined phenomenon of loneliness.

The research covered 153 persons at an average age of 25.5 years. Women accounted for 36.3% of the group. The participants had adult siblings, with whom they stayed in contact.

The Emotional Loneliness Scale for Adults (SELSA-S) by E. DiTommaso, C. Brannen, L.A. Best (2004) was used to measure a sense of loneliness in the social and emotional dimensions. This scale was adapted to the Polish conditions by K. Adamczyk, E. DiTommaso (2014). The quality of sibling relationships in early adulthood was assessed by means of the Adult Sibling Relationship Questionnaire (ASRQ) by C. Stocker et al. (1997) in the adaptation of K. Wałęcka-Matyja (2014a). It evaluates the perception of the examined persons, their behaviours and feelings toward their siblings as well as the perception of the siblings – their behaviours and feelings toward the examined.

The obtained research results indicate that among the considered sociodemographic variables, only birth order was a factor differentiating the examined people in the area of experiencing loneliness in the family dimension. Some differences were noticed in relation to the quality of sibling relationships in the compared groups. Sisters received significantly higher average results than brothers in the dimensions of Warmth, Similarity, Intimacy, Acceptance and Knowledge whereas brothers received significantly higher average results in the dimensions of Conflict and Maternal Rivalry. There were also different constellations of the sibling relationship dimensions having a predictive value for some specific aspects of loneliness found in the groups of the examined sisters and brothers. In the group of sisters, they were: Opposition and Intimacy. In the group of brothers, the predictors of loneliness were: Paternal Rivalry, Admiration, Emotional Support, Intimacy, Knowledge.

Key words: young adults, loneliness, siblings

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

Introduction

Loneliness in the 21st century reveals a bit different face to the researchers of social sciences and humanities than traditionally accepted. Formerly, it was associated with sadness, despair, inability to realize elementary developmental tasks typical of adulthood, such as getting married and having children – today it is often a matter of choice. It is complementary with the contemporary model of family independence¹, characterizing the western cultures (Harwas-Napierała, 2010), as allows us to be independent, fulfil our own goals, concentrate on our own needs and the more and more sophisticated ways of satisfying them. And all of this for the price of losing a sufficiently protecting unconditional social support resulting from strong, authentic, positive relationships with close people.

According to J. Koziński *loneliness* is the moment when “a person realizes that the emotional ties between them and the world have been broken or weakened” (Koziński, 1996, p. 237). *Loneliness* is understood as a subjective feeling, so nagging that persons affected by it are unable to think about anything else and feel miserable and empty. A person who is lonely is overwhelmed with a feeling of sadness and emptiness (Booth, 2000). In this study, the term of *loneliness* was defined as a noticeable lack of satisfying social relationships accompanied by a feeling of psychological stress. Experiencing loneliness means feeling a lack of a close person, personal contact with other people, social and/or emotional ties with the closest surroundings and belonging to a given social group. Loneliness is considered in two categories: the social and the emotional one, into which the family loneliness and the romantic one are included (Adamczyk, DiTommaso, 2014).

It is emphasized that the phenomenon of loneliness has a temporal dimension. It can last for years (i.e. chronic loneliness), be of a temporary nature, e.g. in a situation of losing a close person, or a momentary nature in situations giving no ground for its occurrence, e.g. when a person has friendly relationships with other people.

The research of the literature on the subject allows for the statement that experiencing loneliness is a feeling of a universal nature, often considered as stressful. It increases a risk of developing a disease or emotional and behavioural problems (Rembowski, 1992; Rokach, Neto, 2005; Janicka, 2006; Szlendak, 2012; Janicka, Janicka, 2014). A lot of research has proved the existence of correlations between a sense of loneliness and depression, interpersonal hostility and difficulties in communication (Hansson et al., 1987; Lau, Kong, 1999; Edwards et al., 2001). Moreover, it has been found out that a lower level of life satisfaction is characteristic of the people

¹ In the model of family independence, it is assumed that the needs of independent individuals take precedence over group interests. Families, which are the basis of most societies, are more and more often becoming less integrated due to a strong sense of independence and personal autonomy of their individual members. A very strong desire to preserve one's own views and pursue individual goals by persons making up a family changes deep emotional bonds into a system of independent interpersonal relationships. As a result of the above, a person has a sense of autonomy but is also aware of a lack of possibility of obtaining support from the closest people (Wałęcka-Matyja, 2013).

who do not have a sense of belonging to a group as compared to the people who are able to build and maintain a social network (Pavot, Diener, Fujita, 1990).

In specific life situations, the influence of loneliness on the psychosocial functioning of a person is not so clear. An individual looking for the meaning of life and treating this search as their vocation can wilfully resign from any permanent relationships with people, also the family. But in case of laypersons, loneliness by choice usually results from the realization of objectives and values going beyond the everyday needs of an individual, e.g. focus on defence of human dignity and rights, acting among people and for people. It enhances their internal development, encouraging, at the same time, building and deepening of interpersonal relationships.

The reasons why we experience loneliness can be traced in a couple of areas as this phenomenon is determined by numerous variables, both of a subjective and environmental nature. The subjective factors include: personality type, temper, low self-esteem, experiencing strong anxiety, self-defensive attitude, low level of social competence, emotional immaturity and shyness. They often make any attempts made by an individual to start a close relationship end up in a failure. A person with low self-esteem underestimates their own virtues, avoids interacting with others. And, making continuous social comparisons does not help to shape friendly contacts with people. Persons who are lonely are usually characterized by a poor ability to communicate well and express their own needs. People sometimes choose to be alone, fearing to lose their independence and self-sufficiency (Rembowski, 1992; Janicka, Janicka, 2014).

Referring to the assumptions of the theory of ecosystems, it can be noticed that some of them encourage the occurrence of a feeling of loneliness. Among the environments facilitating experiencing this feeling, two categories have been distinguished: the primary and the secondary one (Bronfenbrenner, 1979).

Considering the determinants of loneliness related to the secondary, wide development context, such factors as technology development, individual mobility, urbanization processes and the media have been highlighted as significant (Dołęga, 2015). Analysing the causes of loneliness related to the primary development environment, one cannot skip the ones that refer to the experiences included in the history of childhood and parental attitudes. The attachment theory of J. Bowlby (1980), being an attempt to understand a human person from the perspective of their relationships with the people close to them, clearly indicates the role of attachment² in shaping social interactions with other people. Moreover, it has been proved that a progress in emotional and physical development is strongly related to social development, which is manifested through establishing a relationship with the closest guardian (Schaffer, 2006). That is why, loneliness is often like unwanted luggage left by the parents, who were not able to show their child feelings and

² The term of attachment describes a long-term, emotional relationship with a specific person. It satisfies the human need for security and is a source of comfort resulting from the presence of the close person (Bowlby, 1980).

teach them adequate social reactions. A person brought up in an atmosphere of emotional coldness and distance in interpersonal relationships demonstrates difficulties in establishing close interactions. Therefore, any familiarity, intimacy appearing in a relationship with another person can be depreciated or automatically rejected as it is treated by them as a threat to their freedom and the familiar patterns of social functioning.

In the light of the systemic theory, all the family members including siblings³ take part in the social development of a human person. The role of siblings is significant in this respect, which has been proved by the results of numerous previous studies (Dunn, 1983; Furman, Buhrmester, 1985; Stocker et al., 1997; Połomski, Peplińska, 2010; Rostowska, 2010; Lewandowska-Walter, Połomski, Peplińska, 2014). Family specialists emphasize that positive sibling relationships⁴ can contribute to the proper course of family and non-family interactions as well as interfere with them, leading to a feeling of loneliness (Rembowski, 1992; Wałęcka-Matyja, 2014b).

The stage of early adulthood is the time when a young person still often feels strongly connected with the family of origin, being at the same time in the process of separating from them, e.g. through living separately, taking up education, professional work, expanding the circle of interpersonal relationships with some none-family ones. In case of having adult siblings, the way of experiencing emotional and social loneliness can undergo modifications. Sibling relationships can affect a sense of belonging to the family system, preventing loneliness. On the other hand, committed, time-consuming interpersonal relationships with a brother or a sister can sometimes hinder the establishment of close relationships with other people (Scharf, Shulman, Avigad-Spitz, 2005). All in all, sibling relationships are certainly not indifferent for experiencing loneliness by young adults.

Aim of the study

It has been emphasized that although the social relationships of sisters and brothers are considered important for the adaptation process of a human being to the social realities, this problem meets with less interest than other types of interactions in the family system, such as mother-child, parents-children (Feinberg, Solmeyer, McHale, 2012). Family specialists indicate the need for carrying out research on this family subsystem as contemporarily there is no sufficiently integrated pic-

³ *Siblings* are persons who are genetically related to each other and linked with family ties and who live in a given common sociohistorical context. These persons (two or more) have at least one common natural parent (Rostowska, 2010).

⁴ *Sibling relationships* shall be understood as a resultant of interactions based on actions and communication (verbal and non-verbal) of two or more persons having common natural parents (or at least one natural parent) and a specific attitude toward the shared experiences, beliefs and emotions toward each other, from the moment of gaining self-awareness (Cicirelli, 1995).

ture of sibling relationship development in adulthood, especially its early stage⁵ (Cicirelli, 1995; Rostowska, 2010). This gave us inspiration for formulating a complex research problem, which needed to be explored scientifically due to an insufficient number of empirical reports in this respect.

The aim of the research was to determine variables that differentiate experiencing loneliness by adult siblings and indicate psychological dimensions of sibling relationships that have a predictive value for the multifacetedly defined phenomenon of loneliness.

Due to the exploratory nature of the research, no hypotheses were formulated, only three main research questions were asked.

1. Do sociodemographic variables (gender, place of residence, gender constellation of the siblings, birth order in the family) differentiate experiencing loneliness by adult siblings and how?
2. Do the quality of sibling relationships differentiate the examined groups of women and men in early adulthood and how?
3. Do sibling relationship dimensions have a predictive value for the multifacetedly defined phenomenon of loneliness in early adulthood and what dimensions are they?

The presented research model is of an operational nature and is mainly aimed at organizing the results. There is a great likelihood that the recognized variables interact with each other, creating a network of different types of correlations. Identifying only a couple of them is an element of the research procedure.

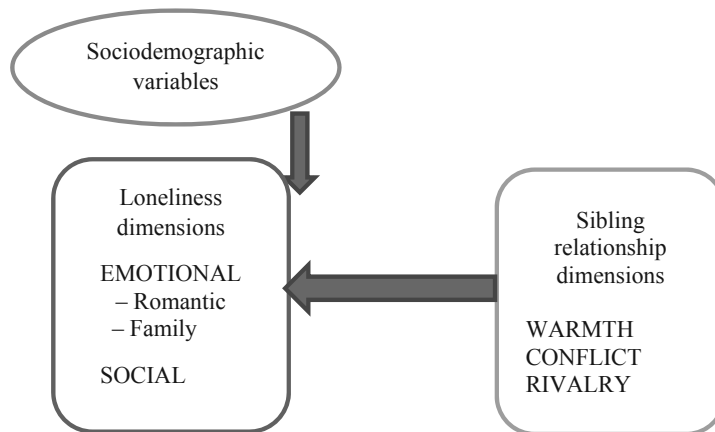


Figure 1. Model of correlations between variables analysed in own study
Source: own work

⁵ It was adopted that the period of early adulthood ranges from 18/20 till 30/35 years of age (Brzezińska, Appelt, Ziółkowska, 2015).

Method

Participants

The research included 238 persons. After taking into account three selection criteria: age (from 18/20 till 30/35), holding one biological adult sibling and full family structure, the analysis included the results of 153 qualified young adults ($M = 25.5$ years; $SD = 5.97$).

Women accounted for 36.3% of the examined ($n = 73$) and men for 39.8% ($n = 80$). The examined people lived in rural areas (23.4%; $n = 47$), small towns (25.4%; $n = 51$) and big cities (27.4%; $n = 55$). They came from complete families, were brought up with one biological sibling, with whom 30.3% of the group ($n = 61$) lived together in the family house. 45.8% of the examined group ($n = 92$) did not live together with their siblings. The following gender constellations were identified: sister-sister (22.4%; $n = 45$), brother-brother (19.9%; $n = 40$) and mixed-gender dyads (33.8%; $n = 68$). 32.8% of the examined ($n = 66$) were born as a first child in the family whereas 43.8% ($n = 87$) as a second child. The majority of the respondents declared that they had frequent contacts with their siblings (56.7%; $n = 114$), fewer of them said that they only met from time to time (17.5%; $n = 37$).

Research instruments

To collect empirical data, the test procedure was applied as the basic diagnostic method. In the study, two research instruments and a questionnaire for collecting demographic data and the ones referring to the issues related with having siblings were applied.

Emotional Loneliness Scale for Adults (SELSA-S), whose authors are E. DiTommaso, C. Brannen, L.A. Best (2004), was adapted to the Polish conditions by K. Adamczyk and E. DiTommaso (2014). This instrument takes into account a differentiation made in respect of experiencing loneliness, which can be social and emotional, and it has been adopted that the emotional loneliness dimension consists of two domains, i.e. the family loneliness and the romantic one (Weiss, 1973; DiTommaso, Brannen, Best, 2004). The scale includes 15 statements. A respondent assesses to what extent they agree or disagree with each of them. The answer shall be marked on the seven-grade scale. The answers are assigned scores and the sum of all the scores indicates a degree in which loneliness is experienced in one of the three dimensions, i.e. the social loneliness, the emotional family loneliness and the emotional romantic one. The higher the score the greater the sense of loneliness. The Cornbach's α reliability coefficient for the three SELSA-S subscales ranges from .83 to .87. The construct validity assessment of the Polish version of SELSA-S indicates the occurrence of significant correlations in the expected direction. It has been proved that a higher level of loneliness in the three domains was related to a higher level of solitude, a higher level of apprehension understood both as a state and a feature, a decreased level of perceived social support and a lower life satisfaction. The scale structure reflects the occurrence of three factors explaining 64% of the total variance. The testing standards were reviewed on the group of 417 persons (Adamczyk, DiTommaso, 2014).

Adult Sibling Relationship Questionnaire (ASRQ) by C. Stocker et al. (1997) in the adaptation of K. Wałęcka-Matyja (2014a) was used to measure relationships between siblings in adulthood. It is a self-reporting instrument, with which the examined person evaluates their behaviours and feelings towards 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 factors of sibling relationships: *Warmth*, *Conflict* and *Rivalry*.

The factor of *Conflict* describes relationships characterized by lack of understanding between siblings, willingness to dominate, noticing differences and competitive behaviours. The scales making up the factor of Conflict are: Opposition, Domination, Quarrel, Competition (Cronbach's α .92). The factor 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 (Cronbach's α .97). The factor of *Rivalry* refers to a degree in which siblings feel treated fairly or unfairly by their parents (Cronbach's α .87).

All the ASRQ items (except rivalry) are assessed on the Likert's scale, from "Hardly Anything" (1 point) to "Extremely Much" (5 points). The psychometric properties of ASRQ are good and enable carrying out scientific research (Cronbach's α .87-.97) (Stocker et al., 1997; Wałęcka-Matyja, 2014a).

Procedure

The study was conducted in Poland, in the district of Łódź in 2015. The participants were recruited via the snow-ball method. 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 of an anonymous and voluntary nature. Completing the set of tests took the respondents about 30 minutes and was done free of charge.

The collected empirical material was subjected to statistical analysis by means of the IBM SPSS Statistics 22 computer software. The statistical analysis of the research results referred to the particular issues formulated as the research questions. The student's *t* test, the Fisher-Snedecor F test and the linear regression analysis in the stepwise version were used.

In order to answer the first research question, the examined group ($n = 153$) was divided into a few comparative groups. The first division was made, taking into account the criterion of gender. Two subgroups were distinguished. The first of them ($n = 73$; 36.3%) included women and the second one ($n = 80$; 63.7%) consisted of men.

The second division was made based on another criterion, the place of residence. Three subgroups were distinguished: the persons who lived in rural areas ($n = 47$; 30.7%), small towns ($n = 51$; 33.4%) and big cities⁶ ($n = 55$; 35.9%). The next division was made based on the criterion of gender constellation of the sibling dyad.

⁶ Considering place of residence as a variable that is potentially significant for experiencing loneliness by adult brothers and sisters, three categories were distinguished: rural

There were three groups: sister dyads ($n = 45$; 29.4%), brother dyads ($n = 40$; 26.1%) and mixed-gender dyads ($n = 68$; 44.5%). The last division was made in term of the birth order criterion. The persons born as a first child in the family made up one subgroup ($n = 66$; 43.3%) whereas those born as a second child the second comparative subgroup ($n = 86$; 56.7%).

Results

Descriptive statistics

Table 1 contains the descriptive statistics of results of sibling relationships (KRDR) and loneliness (SELSA-A).

Table 1. Descriptive statistics recognized in the research model

Variables	<i>M</i>	<i>SD</i>	Min.	Max.
<i>Warmth</i>	147.23	38.97	51.0	228.0
Similarity	11.67	4.23	4	19
Intimacy	18.02	6.55	6	30
Affection	20.03	6.25	6	30
Admiration	18.88	5.56	6	30
Emotional Support	19.76	5.90	6	30
Instrumental Support	18.56	5.16	6	30
Acceptance	20.86	5.38	6	30
Knowledge	19.45	5.61	6	30
<i>Conflict</i>	47.98	15.72	23.0	91.0
Quarrel	12.96	4.15	5	23
Opposition	12.42	5.35	6	27
Competition	11.46	4.65	6	25
Domination	11.13	4.69	6	25
<i>Rivalry</i>	4.43	5.90	.0	24.0
Maternal Rivalry	2.42	3.37	0	12
Paternal Rivalry	2.01	3.38	0	13
Romantic Loneliness	4.68	1.61	1.0	7.0
Family Loneliness	5.26	1.55	1.0	7.0
Social Loneliness	5.31	1.30	1.0	7.0

M – mean value, *SD* – standard deviation, Min. – minimum value, Max. – maximum value
Source: own work

area, small town with the population between 20 thousand and 100 thousand and a big city inhabited by over 100 thousand people.

Sociodemographic determinants of loneliness of examined sisters and brothers in adulthood

In order to determine the level of experiencing loneliness in the social and emotional dimension by the examined groups of sisters and brothers in early adulthood, the Student's *t* test was applied. The obtained results show that there were no statistically significant differences between the compared groups, which means that the psychological aspects of loneliness are experienced by them in a similar small degree. Comparing the obtained results to the results of other researchers, it can be stated that they fall in the range below average (e.g. Cecen, 2007; Adamczyk, DiTommaso, 2014).

Table 2. Differentiation of adult sisters and brothers in terms of experiencing loneliness

Examined groups	Sisters <i>n</i> = 73		Brothers <i>n</i> = 80		<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Loneliness dimensions							
Romantic	4.53	1.69	4.81	1.53	1.071	151	.286
Family	5.24	1.65	5.31	1.47	.252	151	.801
Social	5.30	1.22	5.33	1.37	.124	151	.901

M – mean value, *SD* – standard deviation, *t* – Student's *t* test value, *df* – degrees of freedom, *p* – one-sided statistical significance

Source: own work

The obtained results of the carried out variance analysis (Fisher-Snedecor *F* test) provide no grounds for the statement that place of residence is significant for experiencing loneliness by the young adults participating in the research (Table 3).

Table 3. Experiencing loneliness and place of residence of adult sisters and brothers

Examined groups	Rural area <i>n</i> = 47		Small town <i>n</i> = 51		Big city <i>n</i> = 55		<i>F</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Loneliness dimensions									
Romantic	4.58	1.63	4.39	1.63	5.03	1.53	2.275	152	.106
Family	5.18	1.67	5.28	1.45	5.36	1.57	.179	152	.836
Social	5.46	1.26	5.25	1.29	5.25	1.35	.751	152	.643

M – mean value, *SD* – standard deviation, *F* – Fisher-Snedecor test value, *df* – degrees of freedom, *p* – one-sided statistical significance

Source: own work

Referring to the role of gender constellation of the siblings for experiencing loneliness, the research results obtained in this respect have been presented in

Table 4. They indicate that in early adulthood, this variable does not determine experiencing loneliness in any of the distinguished aspects.

Table 4. Experiencing loneliness and gender constellation of siblings of young adults

Examined groups	Sister-sister <i>n</i> = 45		Brother-brother <i>n</i> = 40		Sister-brother <i>n</i> = 68		<i>F</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
Loneliness									
Romantic	4.26	1.67	4.77	1.45	4.90	1.61	1.071	2.32	.102
Family	5.28	1.76	5.41	1.57	5.20	1.41	.252	.245	.783
Social	5.41	1.25	5.41	1.50	5.20	1.20	.124	.503	.606

M – mean value, *SD* – standard deviation, *F* – Fisher-Snedecor test value, *df* – degrees of freedom, *p* – one-sided statistical significance

Source: own work

Considering the last of the analysed sociodemographic variables – birth order in the family of origin, it was found out that it differentiated experiencing loneliness in the groups of examined siblings (Table 5). It appeared that the persons born as second children in the family had higher average results in respect of experiencing family loneliness in comparison to the ones born as first children. Cohen's *d* effect size⁷ value ($d = 0.374$) was low, indicating a weak relationship between birth order and experiencing loneliness.

Table 5. Experiencing loneliness and birth order of siblings

Examined groups	First child <i>n</i> = 66		Second child <i>n</i> = 86		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Loneliness								
Romantic	4.69	1.68	4.71	1.52	.068	150	.946	–
Family	4.97	1.69	5.54	1.38	2.315	150	.022	0.374
Social	5.22	1.23	5.44	1.26	1.081	150	.282	–

M – mean value, *SD* – standard deviation, *t* – Student's *t* test value, *df* – degrees of freedom, *p* – one-sided statistical significance (statistically significant differences highlighted in bold)

Source: own work

⁷ J. Cohen (1988) defined *d* as the difference between the means, *M1-M2*, divided by standard deviation of either group. He argued that the standard deviation of either group could be used when the variances of the two groups are homogeneous. *D* is a descriptive measure. It is hesitantly defined effect sizes as „small“, $d = .2$, „medium“, $d = .5$, and „large“, $d = .8$ (Cohen, 1988; King, Minium, 2009).

Differentiation in respect of psychological aspects of sibling relationships between men and women

It was interesting to determine differentiation in respect of psychological dimensions of adult sibling relationships. It was presented on the main factors (Warmth, Conflict, Rivalry) and with regard to their component subscales (Table 6, Figure 2).

Table 6. Differentiation in respect of main factors of sibling relationships in groups of women and men

Examined groups	Women <i>n</i> = 73		Men <i>n</i> = 80		<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Relationship dimensions								
Warmth	155.88	37.95	139.71	38.59	2.544	151	.012	-0.412
Conflict	45.30	14.43	50.42	16.52	2.034	151	.044	0.329
Rivalry	3.79	5.72	5.01	6.03	1.279	151	.203	–

M – mean value, *SD* – standard deviation, *t* – Student's *t* test value, *df* – degrees of freedom, *p* – one-sided statistical significance

Source: own work

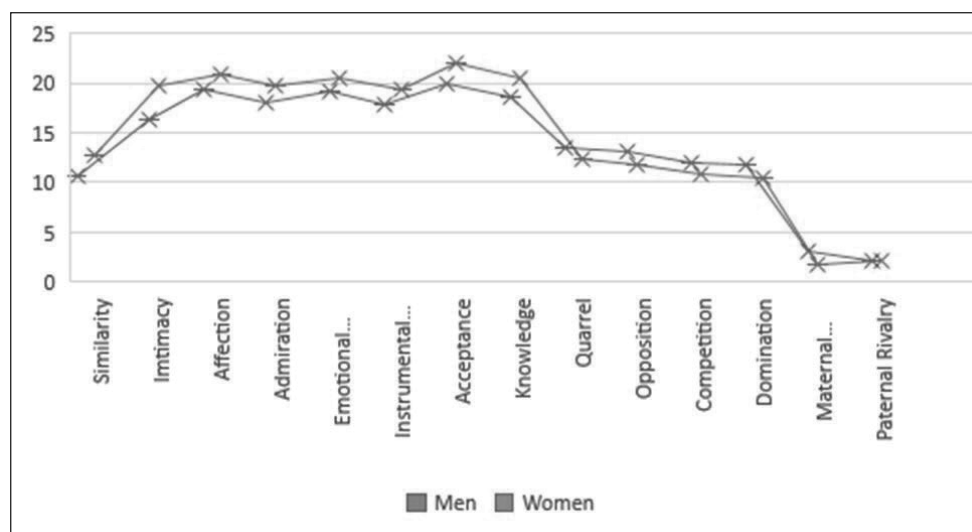


Figure 2. Differentiation in respect of subscales making up main factors of sibling relationships in groups of women and men

Source: own work

The obtained results indicate differentiation in respect of Warmth and Conflict between the examined groups of women and men. Women received higher average results in the dimension of Warmth and lower in the dimension of Conflict in comparison with the group of adult men. In both cases, Cohen's *d* effect size remained on a low level, which indicates a weak relationship of gender with the quality of relationships with adult siblings. Analysing the research results relating to the comparison of the examined groups in respect of the quality of sibling relationship detailed dimensions, statistically significant differences were found for the following subscales: Similarity⁸ ($t(-3.286) = .151; p < .001; d = 0.536$), Intimacy⁹ ($t(-3.251) = .151; p < .001; d = 0.535$), Acceptance¹⁰ ($t(-2.478) = .151; p < .014; d = 0.401$), Knowledge¹¹ ($t(-2.313) = .151; p < .022; d = 0.371$) and Maternal Rivalry¹² ($t(2.265) = .151; p < .023; d = -0.367$). Women received higher average results than men in all the scales, except the one mentioned as the last one, i.e. Maternal Rivalry, in which higher average results were obtained by brothers. The resulting values of Cohen's *d* index are the evidence of a weak relation between gender and the quality of relationships with siblings.

Predictive value of sibling relationship dimensions for experiencing loneliness among young adults

In order to receive an answer to the question about the psychological aspects of adult sibling relationships having a predictive value for a sense of loneliness, the linear regression analysis was applied. Tables 7-8 present the final list of variables that went into the regression equation established by the stepwise selection method. According to the stepwise method, consecutive variables whose coefficients of correlations with a dependent variable are the highest are introduced to the model (Szymczak, 2010). Thus, while showing the results, the presentations of consecutive steps of the analysis were skipped. In the light of the research results presented below, it was found out that it was possible to determine certain constellations of relationship variables that are the predictors of specific loneliness dimensions in the groups of the examined sisters and brothers.

⁸ *Similarity* – a variable defining the perception of the sibling functioning spheres in respect of similarity of personalities, beliefs and life styles.

⁹ *Intimacy* – a variable defining commitment to the relationship with siblings. It is demonstrated by showing siblings interest and understanding as well as talking with them about matters important for them, about feelings.

¹⁰ *Acceptance* – a variable defining respect for and acknowledgement of the sibling's personality, life style and ideas.

¹¹ *Knowledge* – a variable defining the knowledge about siblings, their relationships with other people and their ideas.

¹² *Maternal Rivalry* – a variable defining the sense of unfair treatment of one of the siblings by the mother.

Table 7. Sibling relationship dimensions having a predictive value for experiencing loneliness by examined sisters in early adulthood

Family loneliness predictors			
	R-square	β	<i>p</i>
Opposition	.095	.308	.008
Social loneliness predictors			
	R-square	β	<i>p</i>
Intimacy	.057	-.239	.042

R-square – coefficient of determination, β – Beta ratio, *p* – significance level

Source: own work

Analysing the values of β ratios included in table 7, it was found out that in the group of sisters, a predictor of family loneliness meaning a lack of personal contact with family members was one relationship dimension – Opposition¹³. It explains 9.5% of the variance of results. The more persons were characterized by this dimension, the more often they experienced loneliness in the family sphere. The variable that determined the level of experiencing loneliness in the social dimension was Intimacy ($\beta = -.239$). The higher its level was, the better the social or the emotional relationships with the closest environment were. There were no relationship variables of a predictive value for the dimension of romantic loneliness.

Table 8. Sibling relationship dimensions having a predictive value for experiencing loneliness by examined brothers in early adulthood

Family loneliness predictors			
	R-square	β	<i>p</i>
Paternal Rivalry	.084	.290	.009
Admiration	.158	.272	.011
Romantic loneliness predictors			
	R-square	β	<i>p</i>
Emotional Support	.053	.534	.039
Intimacy	.102	-.374	.046
Social loneliness predictors			
	R-square	β	<i>p</i>
Emotional Support	.058	.478	.032
Knowledge	.108	-.332	.039

R-square – coefficient of determination, β – Beta ratio, *p* – significance level

Source: own work

¹³ *Opposition* – a variable defining the perception of siblings as annoying, acting out of spite and ridiculing the other siblings.

Analysing the data included in Table 8, it was noticed that two relationship variables, i.e. Paternal Rivalry and Admiration, determined the occurrence of loneliness of a family nature. The variable Paternal Rivalry¹⁴ had a stronger predictive value. It explained 8.4% of the variance of results. A higher level of unfair treatment of a person by the father led to experiencing by them more loneliness in the family sphere. The variable *Admiration*¹⁵ was a stronger predictor of experiencing family loneliness (15.8% of the explained variance) than Rivalry due to fathers' reaction, which could contribute to the occurrence of the feelings of envy or excessive distance.

It was observed that the dimension of Emotional Support¹⁶ the most strongly determined two aspects of loneliness, i.e. the romantic (it explained 5.3% of the variance of results) and the social (it explained 5.8% of the variance of results) ones. When interpreting the obtained results, it was found out that a higher level of reciprocal emotional support in the group of brothers did not encourage establishing close, romantic relationships with another person and demonstrating commitment in interpersonal contacts with people from the closest surroundings.

Considering the next relationship variable having a predictive value for the dimension of romantic loneliness – Intimacy, it was noticed that its higher level in the siblings discouraged the creation of committed relationships with other people. Intimacy explains 10.2% of the variance of results. Knowledge appeared to be a predictor of the social aspect of loneliness. It explained 10.8% of the variance of result. A higher level of knowledge about the siblings encouraged experiencing a lack of belonging to a non-family social group.

Conclusions and discussion

The problem of experiencing loneliness by a human being has been arousing an unflagging interest of psychologists for many years due to the links between the related feelings and mental health affecting the quality of the human life (Hansson et al., 1987; Rembowski, 1992; Lau, Kong, 1999; Edwards et al., 2001; Rokach, Neto, 2005; Janicka, 2006; Adamczyk, DiTommaso 2014; Dołęga, 2015). Another reason why researchers keep studying loneliness is a frequent occurrence of this phenomenon in highly-developed societies. In the literature on the subject, the negative approach prevails, both in respect of the way of experiencing loneliness by a human being and its psychological consequences.

The aim of the presented study was to determine variables of a sociodemographic nature which differentiate experiencing loneliness by adult siblings and

¹⁴ *Paternal Rivalry* – a variable defining the sense of unfair treatment of one of the siblings by the mother.

¹⁵ *Admiration* – a variable referring to pride and appreciation experienced because of having siblings.

¹⁶ *Emotional Support* – a variable defining the way siblings behave in situations that are difficult for their siblings, for example consoling behaviors, providing help, discussing important decisions.

indicate the sibling relationship dimensions having a predictive value for the sense of loneliness of brothers and sisters in early adulthood.

Looking for sociodemographic determinants of the phenomenon of loneliness among young adults, it appeared that birth order in the family was the only factor that significantly differentiated the examined people in this respect. The other variables included in the analysis: gender, place of residence, gender constellation of the siblings were of no significance.

Interpreting the obtained result, it was noticed that the persons born as second children more often experienced family loneliness than those born as first ones. This can be a result of their position in the family and slightly different experiences determined by birth order. Children born as second ones usually feel more lonely in the family when the parents' attention is focused on the firstborn child or when the firstborn brother or sister is not interested in them or leaves the family home, which dramatically changes their relationship (Richardson, Richardson, 1999). Moreover, emotional distance that appears in adult sibling relationships can invoke a feeling of uncertainty about the course of their interpersonal relationships in the further life perspective. While considering the phenomenon of uncertainty in the context of sibling relationships, its two aspects were distinguished. The first one concerns a situation when one of the siblings is unable to foresee what attitudes and behaviours will appear in the sphere of sibling relationships. The other uncertainty dimension, referred to as the relational one, is linked to the doubts felt by all the members of the sibling subsystem in connection with the relationship status (e.g. important vs. unimportant) (Knobloch, Solomon, 1999).

Discussing the significance of the gender factor in the context of sibling relationship differentiation, it is emphasized that the obtained results are coherent with the existing reports (Spitze, Trent, 2006). Women provide their siblings with more emotional support and acceptance, more often perceive similarity to them, have greater knowledge about them and perceive the relationship with them as closer than men. Men, on the other hand, demonstrate more behaviours of a conflictual and competitive nature. The obtained research results can be interpreted in the light of the socialization processes (Lieber, Sandefur, 2002).

Giving an answer to the last of the formulated research questions, referring to determining sibling relationship dimensions with a predictive value for the sense of loneliness, it was noticed that there were different constellations of variables for the groups of brothers and sisters. In the group of sisters, the fact of perceiving siblings as annoying, acting out of spite and ridiculing their siblings (*Opposition*) significantly contributed to experiencing loneliness by them in the family aspect.

The dimension of Intimacy had a predictive value for experiencing social loneliness. The more intimate and committed were their relationships with siblings, the less they experienced loneliness in the social aspect. It can be assumed that positive sibling relationships facilitated successful bonds with people from a non-family circle. Moreover, close sibling relationships can make people share the relationships with their friends (Nadwana, Katoch, 2009).

In the group of brothers, a greater number of relational variables with a predictive value for the phenomenon of loneliness were discovered than in the group of sisters. Paternal rivalry and admiring siblings encouraged experiencing loneliness in the family dimension. The obtained results can be connected with the causative orientation¹⁷ of the examined brothers rather than the community orientation present in the group of sisters.

Considering the romantic loneliness determinants quality, it was noticed that the relationships of brothers with their siblings, characterized by providing emotional support, were connected with a lack of close romantic relationships experienced by the brothers. And, intimacy in interpersonal sibling relationships determined a lower level of loneliness experienced in the romantic aspect. The reason for the obtained results can be connected with the psychological needs of a human being and the ways of satisfying them by interpersonal relationships. Moreover, according to the attachment theory, social competencies revealed by building intimate, committed, positive sibling relationships encourage the establishment of intimate romantic relationships (Bowlby, 1980).

The experience of loneliness in the social context in the group of the examined brothers was determined by two variables included in the regression model, i.e. receiving emotional support from siblings and a low level of knowledge about them. A supporting relationship with a brother or a sister in adulthood can be time consuming for both the parties involved in the interaction. According to the exchange theory of G. Homans (1992), brothers and sisters show a tendency to bear high costs in the relationships with their siblings. On the one hand, they feel obliged by the family bonds, and, on the other hand, they are convinced that their prosocial behaviour can be profitable as the potentially big favours done for the siblings will most probably be returned at the time of need. A low level of knowledge about siblings can be caused by lack of interest in a sister or a brother or insufficient social competencies, which do not let a person gain knowledge of this kind. Low competencies in respect of establishing and maintaining satisfying social contacts encourage experiencing social loneliness.

The obtained research results explain the occurrence of numerous correlations, both positive and negative, between the analysed relational variables and loneliness dimensions. Thereby, they confirm the view that the development of the mechanisms regulating social relationships of a human being is significantly related to the interpersonal relationships existing in the adult sibling subsystem. Also, there were identified different constellations of sibling relationship dimensions having a predictive value for specific aspects of loneliness in the groups of the examined sisters and brothers, which enables predicting the occurrence of specific types of social behaviours.

¹⁷ The dimensions of causative and community orientation refer to the perception of other people. *Causative orientation* is associated with perceiving individual features related to the effectiveness of achieving one's own goals. The second dimension – *community orientation* refers to perceiving an individual through the social lens, through interpersonal contacts (Wojciszke, Szlendak, 2010).

Summing up, it is worth continuing research which is focused on searching for psychosocial determinants of loneliness, essential for improving the quality of life of the present generation of young adults. Having in mind the fact that sibling relationships are the least researched relationships in the family system, studies focusing on siblings' contribution to experiencing a lack of or unsatisfying relationships with other people are of a significant scientific value. Assuming that this family bond is the longest lasting relationship and brothers and sisters are permanent members of potentially the most available social network, they can play the role of a safety buffer in the life of people experiencing loneliness in different aspects of life.

References

- Adamczyk, K., DiTommaso, E. (2014). Psychometric Properties of the Polish Version of the Social and Emotional Loneliness Scale for Adults (SELSA-S). *Psychologiske Teme*, 23 (3), 327-341.
- Booth, R. (2000). Loneliness as a Component of Psychiatric Disorders. *Medscape General Medicine*, 2, 2. Available: www.medscape.com/viewarticle/430545_2
- Bowlby, J. (1980). *Attachment and Loss, t. 3. Sadness and Depression*. London: Hogarth Press.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, Massachusetts: Harvard University Press.
- Brzezińska, A.I., Appelt, K., Ziółkowska, B. (2015). Psychology of human development. W: J. Strelau, D. Doliński (red.) *Academic Psychology. Textbook* (t. 2, s. 95-292). Gdańsk: GWP.
- Cecen, R.A. (2007). The Turkish Short Version of The Social and Emotional Loneliness Scale for Adults (SELSA-S): Initial Development and Validation. *Social Behavior and Personality*, 35 (6), 717-734.
- Cicirelli, V.G. (1995). *Sibling relationships across the life span*. New York: Plenum.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.
- DiTommaso, E., Brannen, C., Best, L.A. (2004). Measurement and validity characteristics of the short version of the Social and Emotional Loneliness Scale for Adults. *Educational and Psychological Measurement*, 64 (1), 99-119, doi: 10.1177/0013164403258450
- Dołęga, Z. (2015). Family cohesion and the loneliness of adolescents from temporarily disconnected families due to economic migration. *Polish Psychological Bulletin*, 46 (1), 45-52, doi: 10.1515/ppb-2015-0005
- Dunn, J. (1983). Sibling relationships in early childhood. *Child Development*, 54, 787-811.
- Edwards, R., Bello, R., Brandau-Brown, F., Hollems, D. (2001). The effects of loneliness and verbal aggressiveness on message interpretation. *Southern Communication Journal*, 66, 139-150.
- Feinberg, M.E., Solmeyer, A.R., McHale, S.M. (2012). The Third Rail of Family Systems: Sibling Relationships, Mental and Behavioral Health and Preventive In-

- tervention in Childhood and Adolescence. *Clinical Child and Family Psychology Review*, 15 (1), 43-57, PMID: PMC3517254.
- Furman, W., Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. *Child Development*, 56, 448-461.
- Hansson, R.O., Jones, W.H., Carpenter, B.N., Remondet, J.H. (1987). Loneliness and adjustment to old age. *The International Journal of Aging and Human Development* 24 (1), 41-53.
- Harwas-Napierała, B. (2010). Family in the context of contemporary threats. W: T. Rostowska, A. Jarmołowska (red.), *Developmental and educational aspects of family life* (s. 11-21). Warszawa: Wydawnictwo Difin.
- Homans, G. (1992). Fundamental social processes. W: M. Kempny, J. Szmatka (red.), *Contemporary theories of social exchange. Corpus* (s. 173-229). Warszawa: PWN.
- Janicka, I. (2006). *Cohabitation and marriage in the psychological perspective. Comparative study*. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.
- Janicka, I., Janicka, K. (2014). Young women's sense of security and commitment in interpersonal relationships. *Polish Psychological Forum*, 19 (2), 209-228, doi: 10.14656/PFP20140203
- King, B.M., Minium, E.W. (2009). *Statystyka dla psychologów i pedagogów*. Warszawa: Wydawnictwo Naukowe PWN.
- Knobloch, L.K., Solomon, D.H. (1999). Measuring the sources and content of relational uncertainty. *Communication Studies*, 50, 261-278.
- Kozielecki, J. (1996). *Multidimensional person*. Warszawa: Wydawnictwo Akademickie "Żak".
- Lau, S., Kong, C.K. (1999). The Acceptance of Lonely Others: Effects of Loneliness and Gender of the Target Person and Loneliness of the Perceiver. *Journal of Social Psychology*, 139, 229-241, doi: 10.1080/00224549909598377
- Lewandowska-Walter, A., Połomski, P., Peplińska, A. (2014). The mediation role of parenting styles in the connection of the number of siblings with the development of personality and social competence in early adulthood. *Polish Psychological Forum*, 19 (1), 50-70, doi: 10.14656/PFP20140103
- Lieber, C.A., Sandefur, G.D. (2002). Gender differences in the exchange of social support with friends, neighbours and co-workers at midlife. *Social Science Research*, 31, 364-391.
- Nadwana, S., Katoch, M. (2009). Perception of Sibling Relationship during Middle Adulthood Years: A Typology. *Journal of Social Science*, 21 (1), 67-72.
- Pavot, W., Diener, E., Fujita, F. (1990). Extraversion and happiness. *Personality and Individual Differences*, 11 (12), 1299-1306.
- Połomski P., Peplińska, A. (2010). The psychological picture of single children vs. social stereotypes. W: T. Rostowska, A. Jarmołowska (red.), *Developmental and educational aspects of family life* (s. 182-205). Warszawa: Wydawnictwo Difin.
- Rembowski, J. (1992). *Loneliness*. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.
- Richardson, R.W., Richardson, L.A. (1999). The oldest, middle, youngest. How birth order affects your character. Gdańsk: GWP.

- Rokach, A., Neto, F. (2005). Age, culture, and the antecedents of loneliness. *Social Behavior and Personality*, 33 (5), 477-494.
- Rostowska, T. (2010). Psychosocial aspects of interpersonal relationships in the sibling subsystem of monozygotic twins. W: T. Rostowska, B. Pastwa-Wojciechowska (red.), *Development of twins in the course of life. Biopsychological aspects* (s. 101-122). Kraków: Oficyna Wydawnicza Impuls.
- Schaffer, H.R. (2006). *Psychology of the child*. Warszawa: Wydawnictwo Naukowe PWN.
- Scharf, M., Shulman, S., Avigad-Spitz, L. (2005). Sibling relationships in emerging adulthood and in adolescence. *Journal of Adolescent Research*, 20, 64-90, doi: 10.1177/0743558404271135
- Spitze, G., Trent, K. (2006). Gender differences in adult sibling relations in two-child families. *Journal of Marriage and Family*, 68, 977-992, doi: 10.1111/j.1741-3737.2006.00308
- Stocker, C.M., Lanthier, R.P., Furman, W. (1997). Sibling relationships in early adulthood. *Journal of Family Psychology*, 11 (2), 210-221, doi: 10.1177/0192513X02250098
- Szlendak, T. (2012). *Sociology of family*. Warszawa: Wydawnictwo Naukowe PWN.
- Szymańska, P. (2016). An analysis of sibling relationship in adulthood: STQ-Now, Polish version. *Archives of Psychiatry and Psychotherapy*, 1, 55-64, doi: 10.12740/APP/61610
- Szymczak, W. (2010). *Statistics basics for psychologists*. Warszawa: Wydawnictwo Difin.
- Wałęcka-Matyja, K. (2013). Individualism of an adolescent and the family community system in the psychological perspective. *Horizons of Education*, 24, 37-58.
- Wałęcka-Matyja, K. (2014a). Psychometric properties of the polish adaptation of the Adult Sibling Relationship Questionnaire (ASRQ). *Archives of Psychiatry and Psychotherapy*, 16 (4), 77-88, doi: 10.12740/APP/32460
- Wałęcka-Matyja, K. (2014b). Psychological aspects of adult sibling relationships in the perception of men. *Fides et Ratio. Scientific Quarterly*, 3 (19), 90-104.
- Wojciszke, B., Szlendak, M.A. (2010). Skale do pomiaru orientacji sprawczej i wspólnotowej. *Psychologia Społeczna*, 1 (13), 57-70.

PSYCHOLOGICZNE WYMIARY RELACJI Z RODZEŃSTWEM JAKO PREDYKTORY POCZUCIA SAMOTNOŚCI MŁODYCH DOROSŁYCH

Streszczenie. Celem badań było określenie zmiennych różnicujących doświadczenie samotności przez dorosłe rodzeństwo oraz wskazanie wymiarów relacji z rodzeństwem o wartości predykcyjnej dla wieloaspektowo ujmowanego zjawiska samotności.

W badaniach wzięły udział 153 osoby, o średniej wieku 25,5 lat. Kobiety stanowiły 36,3% grupy. Uczestnicy posiadali dorosłe rodzeństwo, z którym utrzymywali kontakt.

Do pomiaru poczucia samotności w wymiarze społecznym oraz emocjonalnym wykorzystano *Emotional Loneliness Scale for Adults* (SELSA-S) autorstwa E. DiTommaso, C. Brannen, L.A. Best (2004). Skala została zaadoptowana do warunków

polskich przez K. Adamczyk, E. DiTommaso (2014). Jakość relacji z rodzeństwem w okresie wczesnej dorosłości oceniono za pomocą Kwestionariusza Relacji Dorosłego Rodzeństwa (ASRQ – *Adult Siblings Relationships Questionnaire*) C. Stockera i in. (1997) w adaptacji K. Wałęckiej-Matyja (2014a).

Uzyskane rezultaty badań wskazują, że wśród rozpatrywanych zmiennych społeczno-demograficznych jedynie kolejność urodzeń stanowiła czynnik różnicujący badanych w obszarze doświadczania samotności w wymiarze rodzinnym. Zauważono różnice w zakresie jakości relacji z rodzeństwem w porównywanych grupach. Siostry uzyskały istotnie wyższe niż bracia wyniki średnie w zakresie wymiarów: Ciepła, Podobieństwa, Bliskości, Akceptacji oraz Wiedzy. Badani bracia natomiast otrzymali wyższe wyniki średnie niż siostry w wymiarach: Konflikt i Rywalizacja matczyzna. Stwierdzono także istnienie odmiennych konstelacji wymiarów relacji z rodzeństwem mających wartość predykatywną dla określonych aspektów samotności w grupach badanych siostr i braci. W grupie siostr były to: Przeciwnieństwo oraz Bliskość. W grupie braci predyktorami samotności były: Rywalizacja ojcowska, Podziw, Wsparcie emocjonalne, Bliskość, Wiedza.

Słowa kluczowe: młodzi dorośli, samotność, rodzeństwo

Data wpłynięcia: 7.04.2016

Data wpłynięcia po poprawkach: 17.10.2016

Data zatwierdzenia tekstu do druku: 21.10.2016