

## ARTYKUŁY [Articles]

### RELATIONSHIPS WITH SIBLINGS AS A WAY OF COPING WITH STRESS IN THE EARLY ADULthood AND THE LEVEL OF SELF-ESTEEM

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**Summary.** The aim of this study was to determine the psychological image of sibling relationships in adulthood, as well as to answer the question of whether and how sibling relationships in early adulthood are associated with the strategies for coping with stress and the level of self-esteem.

The study included 62 persons in early adulthood (average age 30.2 years).

The following tools were used: *the Adult Sibling Relationship Questionnaire (ASRQ)* by Stocker, Lanthier and Furman (1995) in the adaptation of Wałęcka-Matyja (2014), *the Multidimensional Coping Inventory to Assess the Ways in Which People Respond to Stress (COPE)* by Carver, Scheier and Weintraub in the adaptation of Juczyński and Ogińska-Bulik (2009) and *the Self-Esteem Scale (SES)* by Rosenberg (1965) in the adaptation of Łaguna, Lachowicz-Tabaczek, Dzwonkowska (2007).

The results of the study demonstrated the existence of correlations (especially numerous in the group of sisters), diverse in the direction and strength, between the adult sibling relationship dimensions and the strategies of coping with stress. The hypothesis that there is a positive correlation between the level of self-esteem and similarity and closeness in the group of sisters was proved to be true. A negative correlation between the level of self-esteem and a relationship characterized by domination was noted in the group of brothers.

**Key words:** siblings, adulthood, strategies for coping with stress, self-esteem, social support

### Introduction

Relationships with siblings are among the strongest and the longest lasting relationships in the human life (Voorpostel et al., 2007). In the recent years, it is the western researchers who have been mainly exploring the issue of different aspects of interpersonal relationships between siblings from childhood till the period of

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late adulthood. The discussed problems concern understanding relationships with siblings as a source of well-being, support or companionship (Cicirelli, 1991; Connidis, 2007). Brotherhood, sisterhood are universal values associated by epigeneticists with non-genetic inheritance. It is also worth noting that despite a growing appreciation for the role of siblings in the period of adulthood, the existing studies often present contradictory results. This opinion refers to the studies whose subject matter includes the importance of sibling relationships in adulthood, behaviour patterns and typologies as well as quality determinants.

In the present study, relationships with siblings were first of all analyzed as a social resource of a human being. In order to develop a uniform understanding of the key words, it was assumed that *siblings* shall mean persons who are genetically related to each other, with family bonds and who live in a given social and historical context (White, 2001). And *relationships between siblings* shall be understood as joint actions and communication processes (verbal and nonverbal) done by people having the same biological parents (Cicirelli, 1991).

It has been emphasized that although sibling social relationships are deemed important for the process of human adaptation to the social environment, so far this issue has met with less interest of researchers than other types of interactions in the family system, e.g. mother-child, parents-child (Feinberg, Solmeyer, McHale, 2012).

The cause of the described situation is probably the fact that there are numerous research difficulties with determining the universal regularities of the family life. This results from the volatility of the family micro-system in term of family size, birth order, difference of age between siblings, gender, somatic or personality features, etc. As Braun-Gałkowska (1992) notices, if there are a great number of variables to be taken under consideration in one study, it is difficult to create comparative groups. It is also difficult to carry out longitudinal studies covering the constant and varying elements between the siblings over the years.

An argument for taking up studies on the problems of siblings in the period of adulthood is the appearance of many questions about the nature of these relationships, whose source lies in the effects of the investigations carried out by the western researchers. Generally, there is a consensus view that sibling relationships in adulthood are most often characterized by the dimension of *warmth* (Gold, 1989; Cicirelli, 1995; Stocker, Lanthier, Furman, 1997). *Warmth* means a positive relationship between siblings demonstrated by acceptance, knowledge about each other, noticing similarity to each other, admiration, understanding and giving each other emotional and instrumental support (Stocker, Lanthier, Furman, 1997). The dimension of *warmth* has been noticed in many studies on siblings in middle age and in early adulthood (Sugss, 1989). Thus, it is expected that *warmth* will be the most important dimension of sibling relationships in the period of early adulthood.

Focusing on the determinants of relationships with siblings, three basic reasons why this relationship shall be maintained by adult persons have been distinguished: family events or difficulties, a sense of community and problems connected with aging (Folwell et al., 1997). There are also a lot of factors of a subjective character, deciding on the quality of a sibling relationship. Among these factors, researchers

mention, for example, self-esteem, whose correlation with the quality of interpersonal relationships with siblings is of a two-way nature (Cicirelli, 1991). On the one hand, self-esteem can be the result of a sibling relationship, and on the other hand, it can decide on its psychological aspects.

In the period of early adulthood<sup>1</sup> a human person, after the time of the rapid developmental changes of adolescence, is on the way to reach maturity both in the biological and social aspects. This process is connected with the development of reproductive abilities, adequate taking up of social roles related to functioning in the family unit and in the work area. To the greatest extent, however, the period of early adulthood is connected with the modelling of competencies with regard to directing one's own life independently. The requirement of coping simultaneously with so many developmental tasks may result in stress.

### **The concept of stress and coping**

According to the theory of Lazarus and Folkman (1987), "stress" is understood as a dynamic relationship between a human person and the environment, which is seen by the individual as requiring adaptation effort or too demanding. A person and the environment influence each other so this relationship undergoes continuous transformation since both the parties of the transaction also keep changing – the environment transforms and so does the person. In the transactional approach, differences in coping with stress depend on cognitive appraisal, thanks to which an individual becomes aware of and interprets a given event. The authors of this concept distinguish two types of this appraisal, i.e. primary and secondary ones. *Primary appraisal* decides on the intensity and the type of emotional response to an event. Whereas, in case of *secondary appraisal*, the abilities and resources for coping with stress are evaluated (Lazarus, Folkman, 1987).

In the literature on the subject, the concept of "coping with stress" in the transactional interpretation is understood as "cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of a person" (Heszen-Niejodek, 2000, p. 476). The researchers of the problems of stress and coping provide a number of classifications of the ways of coping with stress. In the present study, the interpretation of Carver et al. was adopted, where, referring to the theory of Lazarus, they suggested over a dozen strategies of coping with stress. They reflect both dispositional and situational coping. They include: Active Coping, Planning, Seeking of Instrumental Support, Seeking of Emotional Support, Suppression of Competing Activities, Turning to Religion, Positive Reinterpretation and Development, Restraint Coping, Acceptance, Focus on and Venting of Emotions, Denial, Mental Disengagement, Behavioural Disengagement, Use of Alcohol and Other Psychoactive Substances and Sense of Humour (Juczyński, Ogińska-Bulik, 2009).

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<sup>1</sup> The period of early adulthood ranges from the age of 20-23 years to 35-40 years (Obuchowska, 2009).

The findings of the studies carried out in this respect allow for the statement that while coping with stress, people apply different problem solving strategies. Some of them act actively, some prefer escape behaviours and others focus on emotions and venting of them. So then the question arises: What do the different responses to stress depend on? In the literature on the subject, an opinion prevails that the effectiveness of coping with stress depends on both the situational factors, referring to the properties of a difficult situation, and the personal ones, related to the resources of a person. *Resources* are described as relatively constant, personal and environmental properties and abilities present in the surroundings of a human person, in them themselves and in the relationships with other people (Sęk, 2003). The list of possible resources is continuously extending, but, generally speaking, there are *personal resources* (individual) and *environmental* (social) ones. Personal resources include individual achievements, material status, attractive appearance or competencies. Social resources include, on the other hand, close relationships with the family, siblings or friends that are a source of emotional, informational and material support (Juczyński, Ogińska-Bulik, 2003; Hobfoll, 2010).

People differ as regards the amount of resources and the ability of using them, which is the cause why there are so many different ways of coping with stress. In the *Conservation of Resources Theory* (COR) of Hobfoll, resources keep changing and developing. It is them that play the key role in coping with stress, not the appraisal of one's relationship with the environment as in the concept of Lazarus. Hobfoll thinks that changes, transition states are not stressful themselves if they do not lead to a loss of resources. And what is more, a loss of resources does not necessarily have to lead to stress. That is possible because every real loss can be compensated with other resources. Thus, according to COR, resources are a theoretical category used to explain psychological stress.

In the transactional interpretation, resources serve a range of positive functions, e.g. defensive, regulatory, adaptation, pro-health ones (Sęk, 2003). It is emphasized that they affect the choice of specific preventive strategies and the appraisal of the event itself – fewer resources increase the likeliness of perceiving the situation as stressful (Jelonkiewicz, Kosińska-Dec, 2004).

Relationships with siblings belong to the category of environmental resources. In many empirical reports, the authors emphasize an exceptionally positive role of siblings in coping with stress. Already in the period of early childhood, we can observe examples of providing support to younger siblings by elder ones, especially in negative family situations (Brody, 2004). Avioli (1989) describes two types of support to be noticed in sibling relationships: instrumental and emotional. *Instrumental support* includes practical help provided to siblings (e.g. advice, information, activities for the household, material and financial means) so it is important how close they live to each other. *Emotional support*, on the other hand, meaning help in understanding the world, coping with emotions and spiritual dilemmas, is more often provided by sisters than brothers and positively correlated with age, when relationships become warmer than in the previous periods of life. Furthermore, emotional support is more often provided when siblings live further from each other

(Cicirelli, 1991; Voorpostel, van der Lippe, 2007). The results of the studies show that adult siblings can rely on each other, especially in a stress-inducing crisis situation, though, as it has been noticed, support is also given during positive life events (Moyer, 1992; Cicirelli, 1995). It is emphasized that although positive sibling relationships are a resource in coping with stress, they should not be taken for granted. Such relationships need to be continuously maintained and cared for. They cannot be used only in a crisis situation.

### **The concept of self-esteem**

Relationships with siblings can be considered in the context of self-esteem, which, if positive, is a personal resource helping to cope with difficult situations (Sęk, 2003). For the purpose of this study, it has been assumed that self-esteem is a positive or negative attitude toward I, a kind of global self-appraisal. M. Rosenberg emphasizes that *high self-esteem* means a conviction that a person is sufficiently good, which does not have to mean that the person feels better than others. Whereas, *low self-esteem*, as the author understands it, means a state of dissatisfaction with oneself, including a rejection of I. The level of self-esteem determines the quality of social functioning. It appears that people with high self-esteem experience fewer difficult emotions, such as sadness, apprehension, in comparison with people with low self-esteem. Moreover, they are more active and socially efficient, demonstrating at the same time more predispositions for effective task performance (Łaguna, Lachowicz-Tabaczek, Dzwonkowska, 2007). The correlation between self-esteem and relationships with siblings can be analyzed from two perspectives. The first one assumes that the closest "social mirror", i.e. parents and siblings, shows the reflection of a person, whose view about themselves is to a great extent based on this (e.g. I am valuable or not, I am a pretty child or not)<sup>2</sup>. The second perspective, on the other hand, illustrates the quality of relationships with siblings, depending on the individual's self-esteem level. In the period of adulthood, sibling relationships can be a source of self-satisfaction (self-esteem) or an experience of loneliness, which is connected with a feeling of psychological comfort and security or quite the opposite (Cicirelli, 1991). In the taken up study, an attempt was made to answer the research questions, which occurred as a result of the above considerations. Self-esteem was recognized as a variable related to the quality of sibling relationships.

### **The research questions and hypotheses**

The research problem included determining the psychological picture of sibling relationships in adulthood as well as finding an answer to the question whether and how sibling relationships in early adulthood are related to stress coping strate-

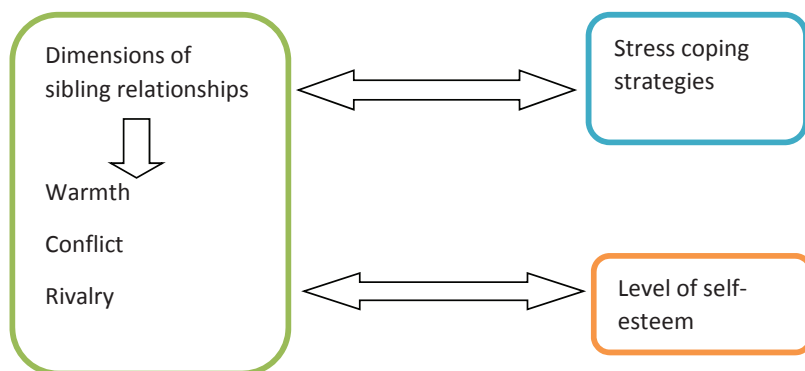
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<sup>2</sup> The theory of Leary et al. (1995) assumes that self-esteem, on the one hand, is the result of social acceptance or actual social rejection, and, on the other hand, reflects subjective convictions about possible reactions to a given person, i.e. accepting, rejecting ones. The effect of social acceptance will be high self-esteem and low self-esteem will be the result of social rejection and exclusion.

gies in the compared groups of sisters and brothers and the level of self-esteem. The formulated research questions are as follows:

1. What is the psychological picture of the dimensions of sibling relationships in the period of early adulthood?
2. Are sibling relationships in the period of early adulthood correlated with stress coping strategies and how?
3. Are sibling relationships in the period of early adulthood correlated with the level of self-esteem and how?

A graphic illustration of the verified research model:



Source: own work

While looking for answers to the presented research questions, actions were taken in the further part of the study to confirm the following hypotheses.

Hypothesis 1: In the period of early adulthood sibling relationships are mainly characterized by the dimension of warmth.

Hypothesis 2: There is a difference in terms of perceiving psychological aspects of sibling relationships by sisters and brothers in the period of early adulthood. Relationships of sisters with siblings are characterized by a higher level of:

- a) intimacy (emotional closeness),
- b) emotional engagement,
- c) emotional support.

Hypothesis 3: There is a difference in terms of the preferred stress coping strategies in the investigated groups of sisters and brothers. It has been supposed that sisters will more often use strategies focusing on emotions and venting of them than brothers.

Hypothesis 4: There are correlations differentiated in terms of strength and direction between sibling relationships in early adulthood and stress coping strategies based on Focus on and Venting of Emotions.

Hypothesis 5: There is a difference in terms of self-esteem of the examined sisters and brothers. Sisters will demonstrate a lower level of self-esteem than brothers. The presented supposition is based on empirical findings showing a lower level



of self-esteem in women than men (Łaguna, Lachowicz-Tabaczek, Dzwonkowska, 2007).

Hypothesis 6: There are correlations differentiated in terms of strength and direction between sibling relationships in early adulthood and the level of self-esteem. Warm relationships with siblings will be positively correlated with the level of self-esteem.

## The method

### The examined persons

The presented research included 62 people in the period of early adulthood (average age 30.2 years;  $SD = 7.089$ ) having adult siblings. The reason of taking up research in this age group is the fact that the picture of development of sibling relationships in early adulthood is insufficiently integrated (Circelli, 1995). Women accounted for 40.3% (25 persons) of the examined, men for 59.7% (37 persons). More than half of the examined people lived in urban areas (62.9%; 39 persons) whereas the others lived in the country (37.1%; 23 persons). The marital status of the respondents was differentiated. Most of them described it as single (43.5%;  $n = 27$ ); the same percentage of the respondents declared living in a formal relationship (22.6%;  $n = 14$ ) as being divorced (22.6%;  $n = 14$ ); the fewest respondents described themselves as widowed (11.3%;  $n = 7$ ). A significant part of the examined people had children (71.0%;  $n = 44$ ), the others were childless (29.0%;  $n = 18$ ). The education level of the majority of the respondents can be described as higher (58.1%;  $n = 36$ ) and secondary (41.9%;  $n = 26$ ). Other education categories did not occur. All the examined people were professionally active and mostly assessed their economic situation as good (61.3%;  $n = 38$ ) or average (38.7%;  $n = 24$ ).

### The measure

In the study, the following measuring methods were used: a diagnostic poll – *the Adult Sibling Relationship Questionnaire* (ASRQ) by Stocker, Lanthier and Furman (1997) in the adaptation of Wałęcka-Matyja (2014), *the Multidimensional Coping Inventory to Assess the Different Ways in Which People Respond to Stress* (COPE) by Carver, Scheier and Weintraub in the adaptation of Juczyński and Ogińska-Bulik (2009) and *the Self-Esteem Scale* (SES) by Rosenberg (1965) in the adaptation of Łaguna, Lachowicz-Tabaczek, Dzwonkowska (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 feel-

ings 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.

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.

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.

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 psychometric properties of ASRQ are good and enable carrying out scientific research (Cronbach's  $\alpha$  .87-.97) (Wałęcka-Matyja, 2014).

***The Multidimensional Coping Inventory to Assess the Different Ways in Which People Respond to Stress (COPE)*** by Carver, Scheier and Weintraub in the adaptation of Juczyński and Ogińska-Bulik is a tool basing on self-description. It consists of 60 statements, which are answered according to a 4-point scale. An examined person shall each time mark their answer on this scale, where 1 means "I usually don't do this at all", 2 – "I usually do this a little bit", 3 – "I usually do this a medium amount" and 4 – "I usually do this a lot".

The COPE questionnaire enables the assessment of 15 strategies of responding to stress situations, which have been classified into three main scales, i.e. *Active Coping*, *Avoidance Behaviours* and *Seeking of Support and Focus on Emotions*.

The first scale – *Active Coping* – covers five strategies: Planning, Positive Reinterpretation and Growth, Active Coping, Suppression of Competing Activities and Restraint Coping.

The second scale called *Avoidance Behaviours* consists of six strategies: Denial, Behavioural Disengagement, Humour, Mental Disengagement, Alcohol-Drug Use and Acceptance.

The last scale called *Seeking of Support and Focus on Emotions* covers four strategies: Seeking Emotional Social Support, Focus on and Venting of Emotions, Seeking Instrumental Social Support and Turning to Religion.



The abovementioned ways of acting in difficult situations can reflect both dispositional and situational coping. The norms for adult people aged 20-65 years are determined by the mean values and standard deviations.

The COPE Inventory meets the standards of a psychometric instrument. Cornbach's *alpha* coefficients for individual scales range from 0.48 to 0.94 (i.e. Active Coping 0.49, Turning to Religion 0.94, Denial 0.60, Planning 0.71, Positive Reinterpretation and Growth 0.68, Mental Disengagement 0.48, Seeking Instrumental Social Support 0.77, Restraint Coping 0.53, Behavioural Disengagement 0.74, Seeking Emotional Social Support 0.83, Acceptance 0.79, Alcohol-Drug Use 0.91, Suppression of Competing Activities 0.54, Focus on and Venting of Emotions 0.71, Humour 0.84). Stability indicators measured every 1.5 months ranged from 0.46 to 0.86 (Juczyński, Ogińska-Bulik, 2009).

**The Self-Esteem Scale (SES)** by Rosenberg (1965) (in the adaptation of Łaguna, Lachowicz-Tabaczek, Dzwonkowska, 2007) consists of 10 statements. It is designed to measure a general level of self-esteem, i.e. the relationship to oneself, which, being revealed in the self-description, is treated as a relatively constant feature and not a temporary state. The respondent is asked to indicate to what extent they agree with each of the statements, choosing an answer on a four-point scale. It is a reliable (0.81 to 0.83) and valid measure. The instrument also demonstrated quite a satisfactory stability.

### **The course of the study**

The study was carried out in years 2013-2014 on the territory of the Łódź voivodeship. It was of an individual nature, the principles of anonymity and voluntariness were applied. The participants of the study were informed about its purpose. They were interested in the study and decided to take part in it. The collected empirical material was statistically analyzed. In order to carry out the analysis, the IBM SPSS Statistics 21 computer software was used. The statistical analysis of the research results covered the issues relating to the individual research questions.

## **The study results**

### **Psychological aspects of adult sibling relationships**

Analyzing the results of the study describing the nature of adult sibling relationship, it can be stated that the average distribution of the composite factors of this relationship in the investigated groups of sisters ( $n = 25$ ) and brothers ( $n = 37$ ) was undifferentiated. The average results obtained by the compared groups were close to each other in terms of demonstrating warmth (in the group of sisters  $M = 154.88$ ;  $SD = 33.775$ , in the group of brothers  $M = 150.30$ ;  $SD = 34.741$ ;  $t = .515$ ;  $df = 60$ ;  $p = .608$ ), conflict (in the group of sisters  $M = 47.96$ ,  $SD = 14.158$ ; in the group of brothers  $M = 48.76$ ,  $SD = 16.591$ ;  $t = .196$ ;  $df = 60$ ;  $p = .845$ ) and rivalry (in the group of sisters  $M = 4.08$ ,  $SD = 4.261$ , in the group of brothers  $M = 4.03$ ,  $SD = 5.819$ ;  $t = .039$ ,  $df = 60$ ;  $p = .968$ ). Looking at the distribution of the composite factors of sibling relationships in the compared groups of sisters and brothers, i.e. warmth, conflict and rivalry,

it was noticed that the factor of warmth was prevailing over the factors of conflict and rivalry. This confirmed the first hypothesis.

In order to show a detailed picture of adult sibling relationships in the perception of sisters and brothers, covering the results of the individual scales making up the composite factors of sibling relationships, the Student's t-test was conducted, taking the gender criterion into account (table 1).

Table 1. Average results on the scales describing the dimensions of adult sibling relationships

Sibling relationship dimensions	Examined groups		Sisters <i>n</i> = 25		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>	<i>M</i>	<i>SD</i>			
Similarity	11.60	2.291	11.68	3.837	-.097	60	.923		
Intimacy	21.16	7.392	17.76	5.590	1.95	41.95	<b>.043</b>		
Affection	21.56	6.384	20.35	5.978	.760	60	.450		
Admiration	20.56	5.189	19.59	5.781	.672	60	.504		
Emotional support	23.84	5.498	19.81	5.976	2.69	60	<b>.009</b>		
Instrumental support	17.96	4.344	17.41	4.512	.482	60	.632		
Acceptance	24.72	5.136	24.68	5.553	.032	60	.975		
Knowledge	24.40	5.188	19.03	4.658	4.456	60	<b>.000</b>		
Quarrel	13.24	4.236	14.16	5.247	-.732	60	.487		
Opposition	12.72	4.477	13.30	6.240	-.424	59.74	.673		
Competition	10.72	4.208	10.81	3.821	-.088	60	.930		
Domination	11.28	4.128	10.49	4.207	.734	60	.466		
Maternal rivalry	2.60	2.872	2.05	3.135	.695	60	.490		
Paternal rivalry	1.48	2.293	1.97	3.270	-.652	60	.517		

Source: own work

The obtained research results (table 1) show the existence of a few differences in adult sibling relationships demonstrated by the examined sisters and brothers. The most conspicuous difference concerned the level of knowledge about siblings. The sisters' average results were statistically higher (*M* = 24.40) than the brothers'

ones ( $M = 19.03$ ), which most probably means that sisters enter into closer, deeper relationships with their siblings than brothers, are more interested in them, and this results in the level of knowledge in this respect. Another difference between the compared groups of sisters and brothers referred to providing emotional support. It was sisters who more often used this kind of support ( $M = 23.84$ ) than brothers ( $M = 19.81$ ). The last of the differences in adult sibling relationships was connected with the level of intimacy. Again, the sisters obtained higher average results in this dimension ( $M = 21.16$ ) than brothers ( $M = 17.76$ ), which can be interpreted as demonstrating by them greater commitment in sibling relationships based on closeness. The obtained results prove the correctness of hypothesis 2.

### Stress coping strategies and the correlations with the dimensions of adult sibling relationships

Taking up activities aimed at getting an answer to the research question concerning the occurrence of correlations between sibling relationships and the preferred stress coping strategies, in the first place it was checked (using the Student's  $t$ -test) if there is a differentiation in this respect between the compared groups of sisters and brothers. The obtained results are presented in table 2.

Table 2. Differentiation of the average results on the preferred stress coping strategies

Stress coping strategies \ Examined groups	Sisters $n = 25$		Brothers $n = 37$		$t$	$df$	$p$
	$M$	$SD$	$M$	$SD$			
Active	11.88	1.509	10.84	1.500	2.677	60	<b>.010</b>
Planning	12.12	2.369	11.24	1.847	1.635	60	.107
Seeking of Instrumental Support	11.40	2.582	10.00	1.886	2.468	60	<b>.016</b>
Seeking of Emotional Support	10.56	3.042	8.81	2.767	2.346	60	<b>.022</b>
Suppression of Competing Activities	9.76	2.006	9.57	1.324	.422	38.009	.676
Turning to Religion	8.56	4.360	5.95	2.953	2.619	38.705	<b>.013</b>
Positive Reinterpretation	10.64	1.729	10.89	1.712	-.566	60	.574
Restraint Coping	10.92	2.040	10.08	1.816	1.698	60	.095
Acceptance	10.24	2.332	9.78	2.123	.798	60	.428

cont. table 2

Focus on and Venting of Emotions	11.32	2.249	9.11	2.378	3.671	60	<b>.001</b>
Denial	6.40	2.327	6.43	1.708	-.063	60	.950
Mental Disengagement	9.12	2.068	8.73	1.836	.780	60	.438
Behavioural Disengagement	6.64	2.325	6.73	1.953	-.164	60	.870
Alcohol/Substance Use	4.72	1.671	6.51	2.714	-3.217	59.591	<b>.002</b>
Humour	6.56	2.274	7.41	2.640	-1.306	60	.197

Source: own work

Analyzing the data included in table 2, it was noticed that the significant differences between the investigated groups of sisters and brothers concerning stress coping strategies were related to a factor connected with seeking of support and focus on emotions, i.e. focus on and venting of emotions ( $p = .001$ ), turning to religion ( $p = .013$ ), seeking instrumental social support ( $p = .016$ ) and seeking emotional social support ( $p = .022$ ). The abovementioned strategies were more characteristic of sisters, who obtained higher average results in this respect than brothers. The other statistically significant differences in the stress coping strategies preferred by the examined sisters and brothers were related to demonstrating avoidance behaviours, which included: alcohol or other psychoactive substance use ( $p = .002$ ; higher results in this respect were obtained by the brothers than the sisters) and active coping behaviours ( $p = .010$ ; higher results in this respect were obtained by the sisters than the brothers). In this way, the third hypothesis was confirmed.

The obtained findings were the basis for carrying out further statistical analyses, namely determining the strength and the direction of the correlation between the dimensions of sibling relationships and stress coping strategies. In order to do this, the Pearson product-moment correlation coefficient (Pearson's  $r$ ) was used for examining the correlations between the psychological variables separately in the groups of sisters and brothers. The obtained results are presented in table 3.

Analyzing the data included in table 3, it can be noticed that there are numerous correlations between the examined psychological variables in the group of sisters. In this group, there were significantly more correlations and they were stronger (moderate) than in the group of brothers (correlations were clear but on a low level), which can prove that the qualities of the sisters' relationships with their siblings in adulthood played a bigger role in the choice of the preferred stress coping strategies.

Discussing the correlations in the group of sisters, negative correlations were observed between a strategy based on suppression of competing activities and demonstrating domination over the siblings and between behaviours of mental disengagement and maternal rivalry. Also significant, though, weaker correlations were observed between a strategy based on seeking of instrumental support (advice, information) and a sibling relationship based on similarity (negative correlation) as well as a relationship based on domination (positive correlation). It can be supposed that the sisters who saw their similarity to their siblings were less willing to seek emotional support in a stress situation. Such a strategy was more often correlated with assuming a dominant attitude toward siblings. A stress coping strategy based on positive reinterpretation and growth was negatively correlated with sibling relationships based on quarrel and opposition. In the group of sisters, a stress coping strategy using humour to reduce the experienced tension and alleviate unpleasant emotions was positively correlated with the dimensions of quarrel and conflict in sibling relationships and negatively with affection. Summing up, although in the group of sisters we can notice numerous correlations between the psychological aspects of adult sibling relationships and stress coping strategies, they are weak or moderately strong. Thus, the obtained results confirmed hypothesis 4.

Table 3. Correlations between the dimensions of adult sibling relationships and stress coping strategies

Examin- ed groups Stress coping strategies	Sisters <i>n</i> = 25	Brothers <i>n</i> = 37
Active Coping	ni.	ni.
Planning	ni.	ni.
Seeking of Instru- mental Support	Similarity <i>r</i> = -.451* Domination <i>r</i> = .449*	ni.
Seeking of Emo- tional Support	ni.	Affection <i>r</i> = -.453 ** Knowledge <i>r</i> = -.360* Warmth <i>r</i> = -.335* Intimacy <i>r</i> = .365*
Suppression of Competing Activ- ities	Domination <i>r</i> = -.641**	Affection <i>r</i> = .343* Emotional support <i>r</i> = .355*
Turning to Religion	ni.	ni.
Positive Reinterpretation	Quarrel <i>r</i> = -.420* Opposition <i>r</i> = -.493*	Rivalry <i>r</i> = -.354*
Restraint Coping	ni.	ni.
Acceptance	ni.	ni.

cont. table 3

Focus on and Vent- ing of Emotions	Similarity $r = -.435^*$ Opposition $r = .469^*$	ni.
Denial	ni.	ni.
Mental Disengage- ment	Maternal rivalry $r = -.567^{**}$ Rivalry $r = -.464^*$	ni.
Behavioural Disen- gagement	ni.	ni.
Alcohol Use	ni. Quarrel $r = .517^*$	ni.
Humour	Conflict $r = .457^*$ Affection $r = -.447^*$	ni.

\*  $p < 0.05$ ; \*\*  $p < 0.01$

ni. – there are no statistically significant correlations between the examined psychological variables

Source: own work

Considering the correlations between the dimensions of sibling relationships and stress coping strategies in the group of brothers, it was noticed that a strategy based on seeking emotional support in a stress situation was negatively correlated with affection, knowledge about siblings and the level of warmth in a sibling relationship. On the other hand, a stress coping strategy based on suppression of competing activities was positively correlated with sibling relationships based on affection, knowledge and emotional support. In the examined group of brothers, a strategy based on positive reinterpretation and growth was negatively correlated with adult sibling relationships based on rivalry. The discussed correlations between the examined psychological variables were weak or moderately strong.

**The level of self-esteem and its correlation with the dimensions of adult sibling relationships**

In order to determine the correlations between the psychological aspects of sibling relationships in the period of early adulthood and the level of self-esteem, statistical analyses were carried out, using the Student's t-test and the Pearson's r coefficient. The results of the Student's t-test allowed for the statement that the level of self-esteem in the investigated groups of sisters and brothers was similar, i.e. the average results were respectively 28.76;  $SD = 4.075$  (5 sten) and  $M = 30.43$ ;  $SD = 4.220$  (6 sten). The obtained results fell in the range of average scores and did not differentiate the compared groups ( $t = -1.552$ ;  $df = 60$ ;  $p = .126$ ). That means that the examined people from both the groups demonstrated an average level of self-esteem typical of the population. In this way, hypothesis 5 was not confirmed to be true. The obtained research results enabled carrying out a statistical analysis based



on the pairwise correlation procedure using the Pearson’s *r* coefficient for the whole group of the examined persons. However, to obtain more detailed data, a decision was made to carry out an analysis in terms of the gender criterion. The obtained correlations between the examined psychological variables in the group of sisters are presented graphically below (figure 1).

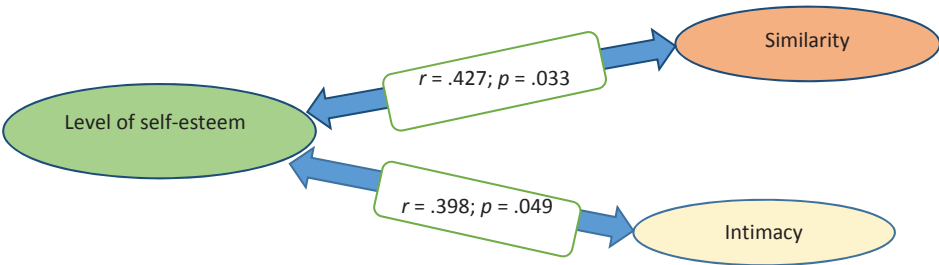


Figure 1. Correlations of the dimensions of sibling relationships (sisters) with the level of self-esteem  
Source: own work

Considering the obtained results, it can be stated that in the group of sisters there were moderately strong and weak positive correlations between the level of self-esteem and two dimensions of sibling relationships, i.e. similarity and intimacy (closeness). That means that a higher level of perceived similarity and experiencing closeness (dimensions of warmth) in sibling relationships were connected with a higher level of self-esteem.

Analyzing the correlation directions in the group of brothers, a statistically significant negative weak correlation between the dimension of a sibling relationship based on domination and the level of self-esteem was noticed. Interpreting the result, it can be stated that a higher level of domination in brothers’ relationships toward their adult siblings was correlated with a lower level of self-esteem (figure 2). The results of the study do not confirm the correctness of hypothesis 6.

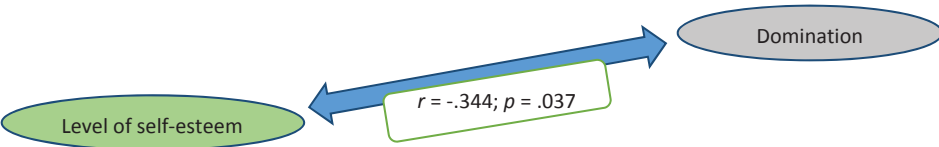


Figure 2. Correlations of the dimensions of sibling relationships (brothers) with the level of self-esteem  
Source: own work

The review of the literature on the subject does not allow for the establishment of clear cut correlations between self-esteem and the functioning of a person since there are some conflicting research results in this respect. The empirical findings de-

scribed in this study show that the level of self-esteem is correlated with the quality of sibling relationship in the period of early adulthood, which can stimulate further research on this issue.

## Discussion

The research problem concerned determining the psychological picture of sibling relationships in adulthood as well as finding an answer to the question whether and how sibling relationships in early adulthood are related to stress coping strategies in the compared groups of sisters and brothers and the level of self-esteem. The discussion of the results covered all the issues mentioned above.

In the presented study, a dominating factor in sibling relationships in the period of early adulthood was, according to the expectations, the dimension of warmth. Both the sisters and the brothers participating in the study most often described their relationships with siblings as positive. The obtained results are congruent with the current research reports (Cicircelli, 1991; Wałęcka-Matyja, 2014). It has been stressed that sibling relationships tend to fluctuate from childhood till adulthood, becoming more committed, closer and more harmonious (Connidis, 2007). As it was found out in the study, relationships of sisters and brothers with their siblings are qualitatively different. Sisters demonstrate more engagement, closeness and knowledge about their siblings than brothers (comp. Voorpostel, van der Lippe, 2007). They also more frequently provide them with support. The obtained results are congruent with the findings of other authors (comp. Cicirelli, 1991; White, 2001). They can be interpreted in the light of the view that women, playing the role of a mother or a sister, are more engaged in the family life than men (Lieber, Sandefur, 2002).

Some interesting findings of the studies on providing social support by siblings show that an important role is played here by perceiving similarity to siblings in terms of such features as age, having siblings of the same age, especially sisters, being a parent. Some authors (Lee, Mancini, Maxwell, 1990) think that people who are siblings and have their own children feel less obliged to take care of their siblings as they believe that the role of a parent is more important than the role played in the sibling subsystem. Nevertheless, White (2001) claims that having children by siblings can increase their mutual contacts since it results in a bigger emotional engagement in the relationship and providing widely understood support.

Bearing in mind that sibling relationships treated as a social resource affect the choice of specific coping strategies and the appraisal of the event itself (possibly stress-inducing), significant differences were noted in the stress coping strategies preferred by the examined sisters and brothers. The sisters mainly applied strategies connected with seeking support and focus on emotions. It may be the effect of functioning in close, committed sibling relationships, which enabled them to gain experience facilitating a response to stress using social support and emotions. Research also indicates the role of the subsystem of parents, who, giving each other support, building the atmosphere of help in the family, stressing its importance, fa-

cilitate desirable behaviours toward the siblings in a difficult situation (Voorpostel, Blieszner, 2008).

Considering the correlations between the psychological aspects of sibling relationships and stress coping strategies, it appeared that there were more correlations between the examined psychological variables and they were stronger in the group of sisters than brothers. It may prove the fact that the qualities of the sisters' relationships with their siblings in the period of adulthood played a bigger role in the choice of the preferred stress coping strategies. Analyzing the level of self-esteem in the groups of sisters and brothers, it appeared that it fell in the range of average scores, and there were no differences between the examined groups. Nevertheless, while establishing the correlations between the level of self-esteem in sisters and brothers, it was found out that it was correlated with other dimensions of sibling relationships. In the group of sisters, the level of self-esteem was positively correlated with perceiving similarity to the siblings and closeness whereas in the group of brothers it was negatively correlated with domination. Interpreting the obtained result, we can refer to the study of Leder (1993) showing that sister relationships are characterized by a high level of closeness whereas brother relationships are based on the dimension of rivalry, where an attitude of domination is one of the strategies helping an individual to gain advantage over their siblings.

Focusing on the role of sibling relationships in the period of adulthood, it must be emphasized that, treated as a resource in coping with stress, they need proper commitment and care. Having assessed the resources in terms of their importance in life, people are motivated to strive for them, take care of them, protect from being lost or they knowingly fail to take any actions to get and retain the resources. Social resources in the form of close, warm sibling relationships are of an exceptional importance as our times are characterized by a significant modification of the family bonds. Currently, the family model mainly encouraged by the western cultures but also gradually accepted by the Polish society (i.e. the independence model) emphasizes the value of being an autonomous, self-contained person (Harwas-Napierała, 2010). It is assumed that the family creates a system of independent interpersonal relationships, which results in a sense of freedom and a reduced possibility of getting support. It is especially important in the context of lengthening of the average human lifespan and longer life in solitude. A lot of adults face numerous stressful life events, such as divorce, loss of job, loss of health, death of a family member. The observed phenomenon of helplessness of the present 40-50-yearolds (*sandwich generation*) (Riley, Bowen, 2005) in the face of dysfunctionality affecting their parents is a disturbing signal for social services showing that the provided assistance is insufficient. The aim of the carried out study is to emphasize that a proper nature of a sibling relationship can prevent a significant reduction of the life comfort of both the aging parents and the sister/brother taking care of them since a sense of emotional (and not only) support provided by siblings is an important psychological factor affecting the choice of more effective stress coping strategies.

The presented results of the study are an initial signal of a great number of interesting phenomena. They need to be deepened (using qualitative and quantita-

tive methods) by the engagement of more participants. Sibling relationships in the period of early adulthood are characterized by a high degree of complexity and the knowledge about these issues requires continuous broadening and updating.

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