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# Family and social networks, subjective well-being and loneliness among older adults in Poland

**Abstract**

The main aim of the paper is the investigation of the relationship between family and social networks and subjective well-being and loneliness among people aged 65 years and more in Poland. For the purpose of our analysis, we used the 6<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) carried out in 2015. We employed linear regression and ordered probit models. Our results showed that unpartnered older adults, especially men, were less satisfied with life and more lonely than partnered individuals. Moreover, the quality of the relationship between partners, expressed here by the presence of a spouse in social networks (SN), seems to be important as well. Older adults who listed a spouse in SN felt less lonely than the others, and those married who did not have a partner in SN were less satisfied with life. Aged individuals having children had higher subjective well-being than the childless,

although this result was insignificant. The presence of children in SN contributed to a lower life satisfaction and an increased loneliness level (especially for women). Furthermore, the association between having siblings and subjective well-being and loneliness is not clear-cut.

**Keywords:** subjective well-being, life satisfaction, loneliness, family networks, social networks, older people, Poland

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## Introduction

One of the most important factors of well-being in old age is family networks and social networks of people (Becker, Kirchmaier, & Trautmann, 2019; Litwin, 2009; Pinquart & Sörensen, 2000). Family networks (kinship networks) are constituted by people belonging to kinship groups due to different family biographies lived by individuals over their life course (parents, children, grandchildren, siblings, and others). Family networks are constructed by family biographies and survival of its members, thus it may be perceived from a demographic point of view to show the potential family contacts and support. Social networks (SN) are created by persons of close social contacts and emotional bonds, who offer psychological and practical support (if needed), while their in-between relationships are meaningful. Therefore, SN may consist of both members of family networks and other people (friends, colleagues, etc.) and may differ (and they usually do) from kinship networks. Both family and social networks may change over time and the life course of an individual for many reasons. There are concerns that the observed verticalisation of kinship networks will lead to a lower social support received by older people, and as a consequence, to a higher demand for formal care services (Puur, Sakkeus, Pöldma, & Herm, 2011). Moreover, that change may lead to fewer social contacts, higher loneliness and lower subjective well-being, as it is related to the size and the structure of family and social networks (Litwin & Stoeckel, 2013c; Pinquart & Sörensen, 2000).

The presence of different persons in the family and social networks may differentiate life satisfaction of individuals. People living with a partner are more satisfied with life than those living without a partner (even if they live in multi-person households) (Blanchflower & Oswald, 2004; Böhnke & Kohler, 2010; Chłoń-Domińczak, Kotowska, Abramowska-Kmon, Kurkiewicz, & Stonawski, 2014; Dear, Henderson, & Kortens, 2002; Easterlin, 2003; Waite, 2009). This may be linked to the fact that married people are characterised by a better mental and physical health status and by a lower risk of death than single people (Uhlenberg & Mueller, 2003; Verbakel, 2012). There are several possible reasons explaining this relationship. Firstly, marriage sometimes

facilitates better social integration, which positively influences well-being. Secondly, persons living with a partner/a spouse usually have a better financial situation than single people, which also determines the health status and indirectly life satisfaction as well. On the other hand, it should be underlined that the union's quality is often more important for the well-being of married people than the marriage itself (mostly for women) (Carr, Freedman, Cornman, & Schwarz, 2014). Moreover, a partner is a source of emotional support, which significantly reduces the level of stress in daily life (Verbakel, 2012). Divorce, separation, or widowhood lower life satisfaction and increase loneliness even controlling for worsening of the financial situation after such a demographic event (Böhnke & Kohler, 2010; Rodrigues, De Jong Gierveld, & Buz, 2014; Štípková, 2019). Similarly, people who can rely on support (emotional, instrumental) from family members or friends declare higher well-being than those without a possibility of receiving any help (Böhnke & Kohler, 2010; Heukamp & Ariño, 2011; Lim & Putnam, 2010; Uhlenberg & Mueller, 2003). Additionally, Litwin and Shiovitz-Ezra (2006) indicate that well-being of older people is rather related to the fact who they spend time with and what they feel towards those people than what older adults do. Therefore, often care of grandchildren can be viewed as rewarding and can be a source of higher well-being (Uhlenberg & Mueller, 2003).

Family contacts are especially important in the Polish context, where children and family members (especially grandchildren) are considered as an important source of joy, positive feelings and well-being (Fokkema & Esveldt, 2008) and are highly ranked as an important domain of happiness (Czapiński, 2015). However, family relationships change over time and there are symptoms of their looseness and disengagement. Moreover, quite often there are negative symptoms of familial relationships, also towards older people who experience abuse, maltreatment and neglect from the other family members (Filipska, Biercewicz, Wiśniewski, Kędziora-Kornatowska, & Ślusarz, 2019). To our best knowledge, although kinship networks of older people in Poland are quite well recognised in the literature (Luty-Michalak, 2017; Szatur-Jaworska, 2012a, 2012b, 2014), the social networks of this group have not been sufficiently analysed yet. Furthermore, less is known about the relationship between family networks and social networks and subjective quality of life among older Poles and with this paper we try to fill this gap.

The main aim of the paper was to investigate the relationship between the family situation and subjective well-being and loneliness among people aged 65 years and more in Poland. For that purpose we used the 6<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) carried out in 2015. The subjective well-being variable was created on the short version of the CASP questionnaire (CASP-12), while the loneliness variable was based on the short version of the R-UCLA scale,

both used in the SHARE questionnaire. The paper is composed as follows. First, we present a literature review on empirical findings and theoretical considerations about the relationship between a family situation and different dimensions of subjective quality of life (well-being, life satisfaction, happiness, loneliness, and depression). Based on these considerations, we formulate research questions. Next, we describe the database used in the analysis, the dependent variables, control variables as well as the analytical strategy. The following section presents the results of descriptive and regression analyses. Finally, we present conclusions drawn from the results.

## **Relationship between family networks and subjective quality of life of older adults – the literature review**

### **Marital status and quality of marriage**

A partnership status is one of the most commonly reported characteristics of a family network in the literature. While being married in older age increases life satisfaction (Angelini, Cavapozzi, Corazzini, & Paccagnella, 2012; Tomaszewski, 2013) and subjective well-being (George, 2010), it decreases depression scores (Hank & Wagner, 2013; Ploubidis & Grundy, 2009). In comparison to married individuals, divorced, and single people tend to have lower happiness. Widowhood was associated with reduced happiness as well (Tomaszewski, 2013; Yang, 2008) and life satisfaction, particularly for men (Berg, Hassing, McClearn, & Johansson, 2006; Berg, Hoffman, Hassing, McClearn, & Johansson, 2009; Chipperfield & Havens, 2001). Ory and Huijts (2015) also reported lower well-being among older widowed women. What is more, first years of widowhood are associated with the increased risk for depression (Schaan, 2013). Some studies focused not only on the relationship between the marital status and well-being, but also between the actual household composition and subjective well-being. An analysis of older women in Switzerland showed that living together with a partner (not necessarily a spouse) is a positive and significant predictor of life satisfaction (Burton-Jeangros & Zimmermann-Sloutskis, 2014). A similar finding for 13 European countries was reported by Litwin & Stoeckel (2013b) – living with a spouse or a partner in a household increases life satisfaction among Europeans aged 60–79. However, no significant influence was found among people aged 80+. According to another finding from the same study, the presence of a spouse or a partner increases well-being measured by CASP-12 among Europeans aged 60–79, but at the same time it decreases CASP-12 among people aged 80+.

However, the presence of a spouse may not necessarily be what is the most important for subjective well-being in older life. Carr and colleagues (2014), using the data for older married couples in the United States, found an association, substantial in magnitude, between marital quality and life satisfaction as well as momentary happiness in later life. A similar finding was reported by Hank and Wagner (2013) for the SHARE countries. Their study, based on the data from the two first waves of SHARE, showed that the mere presence of a spouse is not necessarily the protection against depression in later life. When comparing married to unmarried older people, it seems that having a partner per se does not necessarily contribute to greater psychological well-being. What matters is rather the quality of the relationship, defined in the study as being in a marital union with satisfying reciprocity (Hank & Wagner, 2013). In the study that used the Convoy Model of Social Relations for married people living in the Detroit metropolitan area and aged between 22 to 79 years, Birditt and Antonucci (2007) found that among people without best friends, the quality of the spousal relationship appears to be particularly important for subjective well-being. In contrast, in the study of confidant network types and well-being in older age (based on the data from the fourth wave of SHARE), Litwin and Stoeckel (2013a) found that a spousal network (i.e. a network inducing mainly or only a spouse) was unrelated to well-being, despite the fact that this type of network was ranked by a high degree of emotional closeness.<sup>1</sup>

## Children

Litwin and Stoeckel (2013a) found that offspring play an important role in subjective well-being in older life. In another study, the same researchers found that for older Europeans aged 60–79 more frequent contacts with children increase the CASP-12 score. However, the same age persons co-residing with an adult child (children) showed lower well-being. The latter was opposite for people aged 80 and more – the co-residence increased the CASP-12 score. When life satisfaction was considered, more contact with a child was associated with higher life satisfaction, independent of age group (Litwin & Stoeckel, 2013b). Giervald and colleagues (2012) found that the number of children serve as protection against loneliness in older age in Western European countries, regardless of living arrangements. The protection role also applies to Eastern European countries, but only for older adults who live with their partner and adult children (Gierveld, Dykstra, & Schenk, 2012). In contrast, the study on older people

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<sup>1</sup> The authors argued that this finding could be explained by the fact that the size of this network type is composed of only one confidant. It is possible that single-tie networks do not have as much social capital as multiple-tie networks, irrespective of their quality (Litwin & Stoeckel, 2013a).

based on the British Household Panel Survey by Read and Grundy (2011) reveals that having children per se does not raise the quality of life in old age and that childlessness does not necessarily lead to a poorer or better quality of life. They conclude that parity as well as fertility history (for example the timing of bearing a child) are not the only factors that influence quality of life. Moreover, the relationship quality between parents and children during the life course, especially at younger ages of children, determine contacts and this relationship influences subjective well-being later in life (Damri & Litwin, 2019). Also, this relationship may be often mediated by socio-economic, social support, and health-related factors (Read & Grundy, 2011). Similarly, the analysis based on the first and second waves of SHARE showed that childless individuals do not generally fare worse than parents in terms of their psychological well-being (Hank & Wagner, 2013). No association between having children and subjective well-being was also reported in several other studies (see the literature review in George (2010)), as it is moderated by individual financial resources and the economic situation of a given country (Neuberger & Preisner, 2018). It was found that for older adults in a disadvantageous financial situation living in a country with a lower GDP per capita having children may have a bigger positive effect on life satisfaction.

In summary, studies on interrelations between children and well-being in older age present mixed findings. While some researchers find no association of being a parent and the number of children with higher well-being, the others report that the presence of children increases an older person's quality of life. The existence of this seemingly contradictory findings in the literature was also noticed by other researchers (Litwin & Stoeckel, 2013b; Vignoli, Pirani, & Salvini, 2013).

## Grandchildren

Even more complex results refer to studies on interrelations between having grandchildren and well-being in older life. While some empirical research suggests that being a grandparent increases one's quality of life, other reports either opposite findings or the lack of the association between the two variables. These findings are sometimes reported even within one study. Litwin and Stoeckel (2013b) found that grandchildren increase life satisfaction of older Europeans aged 60–79, but decrease life satisfaction of those aged 80+. The SHARE-based study by Muller and Litwin (2011) explored the association between grandparents' role<sup>2</sup> and depression. They

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<sup>2</sup> The variable 'grandparent role' was created from three separate variables: the frequency of contact with grandchildren, beliefs and attitudes about grandparenting and grandparent-focused role occupancy (Muller & Litwin, 2011).

found a positive (although weak) relationship. Stated differently, the more central the role of a grandparent was, the greater the number of depressive symptoms was. Some researchers looked into the health aspects of providing care for a grandchild. Based on the database of the Health and Retirement Study, Hughes and colleagues (2007) found no evidence that looking after a grandchild influences dramatically their grandparent's health and health behaviour<sup>3</sup> (in contrast to some previous studies). Their analysis suggests that grandparents' health decline should be rather attributed to grandparents' background characteristics and health conditions prior to the caregiving period (Hughes, Waite, LaPierre, & Luo, 2007). A similar finding was presented by Arpino and Bordone (2014), who looked into the relationship between providing care to grandchildren and the cognitive functioning of grandparents. They found evidence of an adverse selection mechanism into more intense grandparenting. As a result, those providing grandchild care had more characteristics associated negatively with cognitive functioning. Therefore, lower scores of cognitive functioning among older people looking after their grandchildren are not the result of caregiving (Arpino & Bordone, 2014). Based on data from the first and second waves of SHARE, Neuberger and Haberkern (2014) analysed the relationship between grandparenting and the CASP-12 index. They verified whether the possible link depends on the cultural context of a country measured by grandparent obligations (i.e. what the expectations toward a grandparent role are). They found that the relationship between providing grandchild care and quality of life is framed by social expectations about the grandparental role and caring obligations. Caring for a grandchild influences one's well-being only in countries with high grandparents obligations. If that is the case, fulfilling grandparent obligations increases well-being, while the opposite has a negative effect on one's quality of life. What is more, other empirical studies show that across countries there is a considerable variation in intensity of grandparents' care for their grandchildren. Both the state arrangements as well as the cultural context play an important role, which needs to be accounted for in studies on interrelations between grandparenting and one's well-being (Hank & Buber, 2009; Igel & Szydlik, 2011). It is worth noting that an intimate relationship's histories (marriages, cohabitation, divorces, separation, remarriages) experienced by the members of all generations of a given family network shape the quality of relationships between adult children and their elderly parents and also considerably influence relationships between grandparents and grandchildren, and consequently, the life satisfaction of the former (Uhlenberg & Mueller, 2003).

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<sup>3</sup> Though they found scattered evidence that grandmothers who babysit grandchildren experience health benefits (Hughes et al., 2007).



## **Siblings and parents**

Empirical research on an association between having siblings or parents and subjective well-being is far less common than research on interrelations between a partnership status, having children and grandchildren and quality of life. To some extent, sibling and parent roles were investigated by Litwin and Stoeckel (2013a) who distinguished an 'other family' network, which consisted mostly of family members other than a spouse and children. Therefore, the network included, among the other family members, parents and siblings. This network type was positively associated with the well-being of the group of Europeans aged 65+ (the fourth wave of SHARE) (Litwin & Stoeckel, 2013a). In her paper of the research review on widowhood in later life, Martin-Matthews (2011) noted that sibling relationships play a unique role in the support network of a widowed person. The reason is that ties with siblings have relatively longer duration and are more of egalitarian nature than other family relationships. It is suggested that there is a strong emotional support between widowed people and their siblings. In the longitudinal study of a single cohort of eighty-year-old persons living in Lund (Sweden), satisfaction with sibling contacts has been found to correlate positively with life satisfaction (McCamish-Svensson, Samuelsson, Hagberg, Svensson, & Dehlin, 1999, after Berg et al., 2009). Unfortunately, we did not manage to come across studies that analysed how well-being in old age is associated with the relationship between older people and their living parents. Probably this situation is related to a relatively small number of older people having parents still alive.

## **Relationships between family and social networks and subjective well-being and loneliness in Poland: the concept and its operationalisation**

### **The theoretical background**

As may be concluded from the literature review, the interplay between life satisfaction and various family ties is complex research. Nevertheless, over the last three decades several theories have emerged that aim at explaining the possible association between quality of life and social relations. In our approach, we incorporate two of them: the Convoy Model of Social Relations and the Socioemotional Selectivity theory.

The Convoy Model offers a global theoretical framework for analysing the process in which social relations influence well-being (Antonucci & Akiyama, 1987;



Antonucci, Birditt, & Akiyama, 2009). The model posits that every individual is surrounded by a group of people – family, friends, etc. – who form the convoy of a focal person. They are organised in layers which are presented as a set of three circles that surround the individual. Each circle represents a different level of closeness, the inner one considered as the closest one. Each person moves through life with their convoy. As a result, the convoy has a dynamic and lifelong nature, which means that it changes across time and situations. However, while some of the relationships are more stable (e.g. parent-child relationships), with the passage of time they may still change their nature as the people in these relationships age and gain specific experiences. This life-span developmental model underlines, therefore, that interpersonal relationships are more of dynamic, rather than static nature (Antonucci & Akiyama, 1987; Antonucci et al., 2009). In addition, the model distinguishes different types of social networks (such as family, friends, neighbours). It also underlines the importance of both individual (e.g. age, gender) and situational characteristics (e.g. culture, government) that serve as the context for one's convoy and influence a person's quality of life (Antonucci & Ajrouch, 2007; Antonucci, Ajrouch, & Birditt, 2014; Antonucci et al., 2009). Originally, the model was used for research on how and who provides the support to the individual. However, it can be also used as a multidimensional perspective in understanding the role and the nature of social relations in shaping the quality of life of older people (Antonucci & Ajrouch, 2007). While recognising that social relations contribute to a person's psychological well-being (e.g. by providing love, reassurance of self-worth), they highlight that these relations may be both of positive and negative nature. Also, the model underlines the role of the family for the quality of life in the late phase of one's life course. The reason for that is that the relationship with family members is both the longest relationship and organisational membership to which most older people belong and because it fundamentally influences the history, past and current experiences of each individual in their late life (Antonucci & Ajrouch, 2007).

Moreover, Antonucci and Ajrouch (2007) underline that a large social network does not guarantee either happiness or a buffer from stress. The reason behind that is that the mere existence of the relationship is less important than its quality (Antonucci & Ajrouch, 2007; Antonucci et al., 2014). This notion was confirmed by the amount of research described earlier in the paper (Birditt & Antonucci, 2007; Carr, Freedman, Cornman, & Schwarz, 2014; Hank & Wagner, 2013). Additionally, in the study based on the first wave of the English Longitudinal Study of Ageing, Netuveli and colleagues (2006) found that having trusting relationships with children and other family members increased the CASP-19 score of older people (Netuveli, Wiggins, Hildon, Montgomery, & Blane, 2006). In another longitudinal study of

Swedish twins aged 80+, Berg and colleagues (2009) found that individuals who became more satisfied with their social network also became more satisfied with their life, suggesting a close relationship between quality of life and life satisfaction. In the earlier cross-sectional analysis of the same database, they found that the quality of a relationship is a strong marker of life satisfaction as well (Berg et al., 2006).

One of the theories that offers an explanation to the relationship between quantity and quality of social relations in older age is the theory of socioemotional selectivity (George, 2010). It suggests that social contacts are motivated by a variety of goals and their importance changes with age. The regulation of emotions becomes increasingly salient in old age due to one's perception of time – the more future is perceived as limited, the bigger importance is given to emotional states. Consequently, an individual may reduce the size of the social network with ageing, while focusing on emotionally rewarding relations (Carstensen, 1995). Findings from longitudinal data show that with age time spent with acquaintances and close friends declines during adulthood, while there is an increase in time spent with close family members and a person's sense of emotional closeness with them (Carstensen, 1992, after Kryla-Lighthall & Mather, 2009). Also, the evidence shows that the size and the structure of a family network is an important aspect of socioemotional selectivity (Lang, Staudinger, & Carstensen, 1998).

Bearing in mind the above considerations, it is interesting to verify what the differences between family (kinship) networks and social networks are among older individuals in Poland. Thus, we propose to look at the family situation of older people from the perspective of social networks, i.e. emotional bonds between their members. The aim of this paper is to investigate the relationship between family and social networks and well-being and loneliness among people aged 65+ in Poland. Based on the literature review, we formulated the following research questions:

1. Does living with a partner contribute to higher subjective well-being/lower loneliness than living without a partner?
2. How is childlessness related to life satisfaction and loneliness?
3. What is the relationship between having living parents and well-being/loneliness?
4. What is the association between having living siblings and subjective well-being and loneliness?
5. What is the link between grandparenting and satisfaction with life and loneliness?
6. How do these relationships, if any, change when social network/family network is accounted for? In other words, how does the structure/presence of family members listed in social networks contribute to older people's well-being in Poland?

## Data

We used the 6<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) (Börsch-Supan et al., 2013, Borsch-Supan, 2017). The original database contains information on 43,636 respondents aged 50 and older who were interviewed in 2015. In this wave a special module was devoted to social networks of the respondents. For the purpose of our analyses, we limited the sample to older individuals aged 65 and older living in private households in Poland. We kept the observations with non-missing values for all variables in the models. The final sample included 658 respondents (291 males and 367 females).

## Dependent variables

We defined two variables describing subjective quality of life: the subjective well-being (SWB) variable and the loneliness variable. The first one was proxied by the CASP measure, which describes well-being in four domains: Control, Autonomy, Self-realisation and Pleasure. Depending on the CASP version, it may have a different number of items measured. Here, we used the CASP-12 indicator, which was implemented in the SHARE survey (von dem Knesebeck, Hyde, Higgs, Kupfer, & Siegrist, 2005). An important (and positive) quality of the CASP measure is that it is not based on individual subjective evaluation on one's life satisfaction, but it refers to the level of needs fulfillment in main domains of life, which are important for positive emotional states (Control, Autonomy, Self-realisation, Pleasure). This variable was created on the basis of a set of 12 questions related to different statements experienced by the respondents over the past four weeks with the possible answers measured on the Likert scale: often, sometimes, rarely or never. The answers were originally coded as follows: 1 – often, 2 – sometimes, 3 – rarely, 4 – never. After necessary transformations, the obtained dependent variable ranges from 12 to 48 and the higher the values are, the higher well-being is. It should be noted that the CASP-12 index correlates strongly with life satisfaction, which can be seen as the confirmation of its credibility. We assumed that the CASP-12 indicator may be treated as a continuous variable.

In the SHARE data the loneliness level was assessed by the use of the short version of the Revised University of California at Los Angeles Loneliness scale (R-UCLA; Hughes, Waite, Hawkey, & Cacioppo, 2004). This scale is based on three questions about the frequency of feelings of the lack of companionship, being left out and isolation from others with the following possible responses: 1 – often, 2 – some of the time and

3 – hardly ever or never. After the necessary modifications and the summation, the final variable ranges from 3 to 9. We treated this variable as an ordered one.

## Control and explanatory variables

In the models we controlled for the basic socio-demographic variables (such as sex, age, health status,<sup>4</sup> education level,<sup>5</sup> household size<sup>6</sup>), the economic variable (subjective financial situation<sup>7</sup>) and the size of a social network. For this analysis, we created two sets of binary/categorical variables to describe the presence of different relatives in family networks and in social networks. In the model 1a/2a, we included the partnership status,<sup>8</sup> having at least one living parent, having at least one brother or sister alive, having children and having grandchildren. As stated earlier, in the special module on social networks the data on close relationships with other people were gathered. In particular, the respondents were asked about up to 7 persons with whom they talk about their feelings and personal issues. Also, the data on other characteristics of such contacts were collected: the relationship, the frequency of contacts, proximity and closeness. In other words, these data allow for taking into account close and significant relationships with other people. Thus, in model 1b/2b we included the following variables: satisfaction with SN, presence of a spouse, children and siblings in SN. Due to small numbers of parents in SN, we excluded them from the analyses. Moreover, in order to secure the comparability between the two models as much as possible, we did not incorporate the presence of other family members, friends and other persons in SN.

Table 1 presents the descriptive statistics for dependent and control variables used in the models with respect to sex. The categorical variables were coded as binary ones. The following variables: age, SN size, SN satisfaction were included into the models as the continuous variables.

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<sup>4</sup> Self-rated health status with the following categories: 1 – good, very good and excellent, 2 – fair, 3 – poor. Due to small numbers of observations we combined the three categories of good health.

<sup>5</sup> Three categories of the educational level were created: low level corresponding to the following values of the ISCED-97 codes 0, 1 and 2, mid level – for the ISCED-97 code 3, and high level related to the 4, 5, and 6 codes of the ISCED-97 scale.

<sup>6</sup> With categories: 1 person, 2 persons and 3+ persons in a household.

<sup>7</sup> In the SHARE the data on a household income was gathered. However, due to the fact that this variable is characterised by a high non-response rate, we decided to use a variable describing a subjective financial situation, which was based on the following question: “Thinking of your household’s total monthly income, would you say that your household is able to make ends meet...” with possible answers: 1. With great difficulty, 2. With some difficulty, 3. Fairly easily, 4. Easily. To sum up, the higher value of this variable, the better financial situation of the respondent’s household.

<sup>8</sup> Living or not with a partner/a spouse in the same household.

**Table 1. Descriptive statistics for dependent and control variables in the models (respondents aged 65+)**

variable	total		men		women	
	mean	SE	mean	SE	mean	SE
Well-being (CASP-12)	35.03	0.26	35.74	0.39	34.47	0.34
Loneliness	4.19	0.06	4.14	0.09	4.23	0.08
Age	72.91	0.06	73.15	0.38	72.73	0.35
Size of SN	2.33	0.06	2.35	0.07	2.29	0.09
Satisfaction with SN	8.86	0.07	8.74	0.12	8.96	0.08
variable	proportion	SE	proportion	SE	proportion	SE
<b>Sex</b>						
men	0.44	0.02				
women	0.56	0.02				
<b>Education level</b>						
low	0.49	0.02	0.38	0.03	0.57	0.03
medium	0.37	0.02	0.39	0.03	0.35	0.03
high	0.14	0.01	0.23	0.03	0.08	0.01
<b>Subjective financial situation – meeting ends</b>						
with difficulties	0.16	0.01	0.13	0.02	0.18	0.02
with some difficulties	0.46	0.02	0.40	0.03	0.51	0.03
rather easily	0.27	0.02	0.33	0.03	0.22	0.02
easily	0.12	0.01	0.14	0.02	0.10	0.02
<b>Subjective health</b>						
excellent, very good or good	0.35	0.02	0.36	0.03	0.35	0.03
fair	0.38	0.02	0.38	0.03	0.38	0.03
poor	0.27	0.02	0.26	0.03	0.27	0.02
<b>Household size</b>						
1	0.17	0.02	0.09	0.02	0.24	0.02
2	0.46	0.02	0.53	0.03	0.41	0.03
3+	0.37	0.02	0.38	0.03	0.36	0.03
<b>Partnership status</b>						
without a spouse	0.30	0.02	0.16	0.02	0.41	0.03
with a spouse	0.70	0.02	0.84	0.02	0.59	0.03
<b>Children</b>						
no	0.04	0.01	0.05	0.01	0.04	0.01
yes	0.96	0.01	0.95	0.01	0.96	0.01
<b>Parents alive</b>						
no	0.96	0.01	0.96	0.01	0.96	0.01
yes	0.04	0.01	0.04	0.01	0.04	0.01

variable	proportion	SE	proportion	SE	proportion	SE
<b>Siblings alive</b>						
no	0.21	0.02	0.20	0.02	0.21	0.02
yes	0.79	0.02	0.80	0.02	0.79	0.02
<b>Grandchildren</b>						
no	0.08	0.01	0.10	0.02	0.07	0.01
yes	0.92	0.01	0.90	0.02	0.93	0.01
<b>Spouse/partner in SN</b>						
not having a spouse/partner	0.33	0.02	0.17	0.02	0.45	0.03
having a spouse/partner, but not in SN	0.10	0.01	0.07	0.02	0.12	0.02
spouse/partner in SN	0.58	0.02	0.76	0.03	0.43	0.03
<b>Children in SN</b>						
not having children	0.07	0.01	0.08	0.02	0.07	0.01
having children, but not in SN	0.28	0.02	0.34	0.03	0.24	0.02
children in SN	0.64	0.02	0.57	0.03	0.70	0.02
<b>Siblings in SN</b>						
not having siblings alive	0.21	0.02	0.20	0.02	0.21	0.02
no siblings in SN	0.65	0.02	0.69	0.03	0.62	0.03
siblings in SN	0.14	0.01	0.11	0.02	0.17	0.02

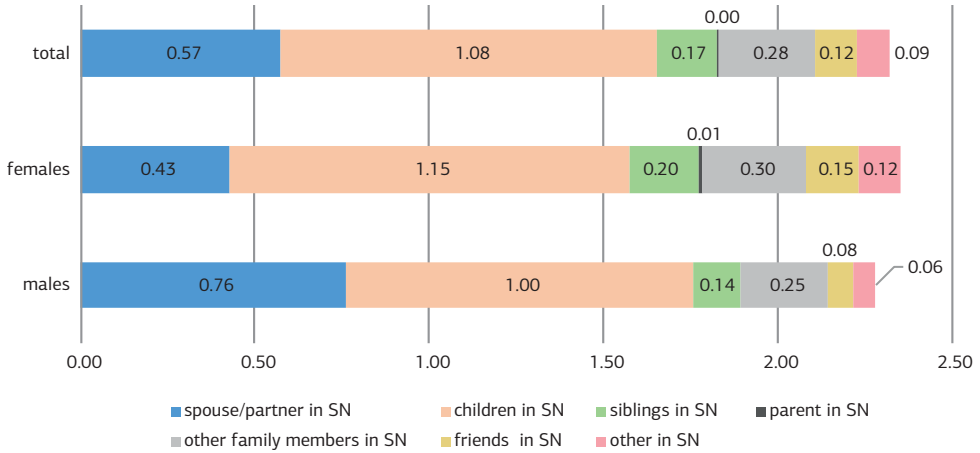
Note: The proportions may not sum up to 100 (in columns for some variables) due to rounding.

Source: own estimations based on the data from the 6<sup>th</sup> wave of the SHARE (unweighted results).

As stated earlier, the respondents could mention up to 7 persons with whom they discussed personal matters. The average size of SN among older people in Poland amounted to 2.33 persons, and it was a slightly bigger for women than for men (2.35 vs. 2.29) (Figure 1). The majority of the analysed group (78%) indicated from one to three persons, almost 19% – four and more, while 3% – nobody. The biggest part of SN was composed of children and spouses, however, it is worth mentioning that the number of children listed in SN was smaller than the actual number of children. For instance, two thirds of those having children mentioned them as members of their SN, women more often than men (73% vs. 60%), while only 18% of people having siblings talked to them about personal problems (14% for men and 22% for women) (Figure 2). What is more, older people in Poland indicated a lower number of children and siblings in their SN than they really had them. The mean number of children in SN amounted to a little more than one child (versus the average 2.65 living children), while the mean number of siblings in SN was equal to 0.17 (in comparison to 2.26 living siblings on average). Moreover, 83% of older adults listed a spouse in their SN among partnered individuals (90% for men and 100% for

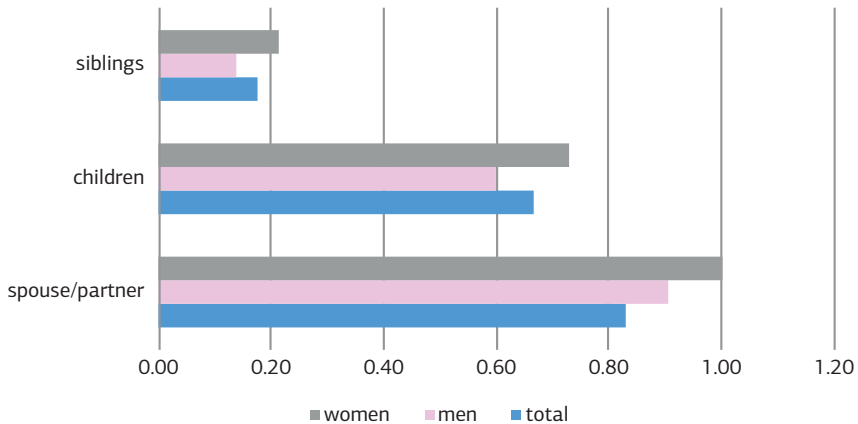
women<sup>9</sup>). Surprisingly, the average number of friends in older people's SN was very small – it amounted to 0.12 person for both sexes (0.15 for women and 0.08 for men).

**Figure 1. Size and composition of social networks among older people in Poland (by sex)**



Source: own estimations based on the data from the 6<sup>th</sup> wave of the SHARE (unweighted results).

**Figure 2. Percentage of older people who listed different persons in their SN by sex**



Source: own estimations based on the data from the 6<sup>th</sup> wave of the SHARE (unweighted results).

<sup>9</sup> There were some discrepancies between variables describing marital status and the status of a spouse in SN, as some individuals could describe themselves as divorced or widowed and at the same time they mentioned a spouse as a person with whom they discuss personal issues. This may suggest that those persons had informal unions/partnerships.



## **Analytical models**

Due to the fact that the first dependent variable describing well-being (CASP-12) may be treated as continuous, we employed a linear regression model (Cameron & Trivedi, 2010). The second dependent variable of loneliness with 7 possible values was considered as ordered one, thus we performed an ordered probit model (Cameron & Trivedi, 2010). For both variables we estimated models for the total sample, and for two sexes separately in order to verify potential differences between men and women. Also, in each case we included a different set of key explanatory variables describing the family situation (model 1a/2a – variables indicating the presence of a given person in the respondent's life, model 1b/2b – variables signifying the presence of those persons in SN as a sign of the quality of a given relationship).

## **Relationships between family and social networks and subjective well-being and loneliness in Poland: the results**

### **Subjective well-being**

The estimates of the parameters of linear regression models for the total population and for men and women separately are presented in Table 2. The parameter estimates for most control variables were significant at the level of 0.01 (less often at the level 0.05 or 0.1), with an exception of sex and household size. The obtained results are mostly in line with the findings presented in the literature on determinants of subjective well-being, however, some of them do not confirm previous findings. Our outcomes show that subjective well-being decreases with age, which is in contradiction to the previous findings for high-income countries saying that after the age of 40/45, well-being increases (Blanchflower & Oswald, 2004, 2008; Böhnke & Kohler, 2010; Clark, 2007; Gerdtham & Johannesson, 2001; Helliwell, 2003), but confirm findings for Eastern-European countries (Steptoe, Deaton, & Stone, 2015). However it holds for women only. As it could be expected, people rating their health status as fair or poor had notably lower well-being than those with the better subjective health status (for both sexes separately) (Ferrer-i-Carbonell, 2013; Somarriba Arechavala & Zarzosa Espina, 2019; Steptoe et al., 2015). The results for education are quite surprising: significantly higher life satisfaction was detected for people with the medium level of education in comparison to those with the low level of education (both for men and women), while for those with the highest level of education the results were

insignificant. Thus, this result confirms previous research on this association only partly (Blanchflower & Oswald, 2004; Böhnke & Kohler, 2010; Somarriba Arechavala & Zarzosa Espina, 2019). A better subjective financial situation contributed to the higher life satisfaction (Ambrosio, Jäntti, & Lepinteur, 2020; Ferrer-i-Carbonell, 2013; Somarriba Arechavala & Zarzosa Espina, 2019) as well as the bigger SN size (Litwin & Stoeckel, 2013c; Pinquart & Sörensen, 2000).

As for the variables describing a family situation (model 1a), the estimates were significant only for the partnership status (for men only) and the fact of having grandchildren. Men living without a spouse were significantly less satisfied with their life than those partnered/married. Having children increased life satisfaction, while having siblings decreased it, although these results were not significant. Contrary to the common belief, having grandchildren contributed to a lower level of subjective well-being, particularly among older males.

Interesting results were obtained in the second model (1b), when the variables describing the key members of social networks were incorporated. First, not listing a partner/spouse as a person with whom the respondent discussed personal matters was negatively related to subjective well-being in comparison to unpartnered older adults, and this effect was higher (and significant) for women than for men. This may reflect low relationship quality between the spouses and, in turn, it may lead to lower subjective quality of life. Individuals listing a spouse in their SN did not differ in terms of their SWB level as compared to those not having a spouse. The outcomes for the presence of children in SN suggest that having at least one child in one's SN was negatively associated to life satisfaction (especially for women) and the absence of children in SN did not differ significantly in terms of SWB in comparison to the childless (without children alive). This finding is very surprising as Poland is considered as a family-oriented country with a high appreciation of family and children, where they are perceived as a source of happiness not only in old age (Fokkema & Esveldt, 2008).

Another interesting finding relates to the presence of siblings in SN; especially older men who had no meaningful contacts with their siblings were less satisfied with their life than those not having siblings alive, while those listing them had higher SWB, although the results were not significant. Also, the higher satisfaction with SN was, the higher happiness level was. The results for the presence of grandchildren turned out to be insignificant.

Table 2. Parameter estimates of the linear regression model for dependent variable CASP-12

variables	Model 1a – CASP-12			Model 1b – CASP-12		
	total	men	women	total	men	women
<b>Sex (ref. males)</b>						
females	-0.26			-0.49		
<b>Age</b>	-0.09**	-0.06	-0.14***	-0.10***	-0.08	-0.14***
<b>Educational level (ref. low)</b>						
medium	1.25**	1.38*	1.31**	1.02**	1.37*	0.73
high	0.29	0.92	-0.71	0.24	0.92	-0.64
<b>Subjective financial situation – meeting ends (ref. with difficulties)</b>						
with some difficulties	1.87***	2.66***	1.53*	2.00***	3.03***	1.59*
rather easily	4.91***	4.78***	5.53***	5.07***	5.45***	5.34***
easily	6.29***	6.88***	6.21***	5.91***	7.13***	5.02***
<b>Subjective health (ref. excellent, very good or good)</b>						
fair	-1.98***	-1.31	-2.50***	-1.85***	-1.15	-2.39***
poor	-5.85***	-5.81***	-5.74***	-5.54***	-5.52***	-5.46***
<b>Household size (ref. living alone)</b>						
2 person hh	-0.37	-0.56	-0.04	0.52	1.64	0.40
3+ person hh	-0.75	-0.59	-0.78	0.12	1.74	-0.40
<b>Social network size</b>	0.51***	0.63***	0.38*	0.55***	0.73***	0.32
<b>Partnership status (ref. living with a spouse)</b>						
without a spouse	-0.98	-2.57**	-0.23			
<b>Children (ref. no)</b>						
yes	1.41	0.94	0.75			
<b>Parents alive (ref. no)</b>						
yes	-0.26	2.31	-2.02			
<b>Siblings alive (ref. no)</b>						
yes	-0.09	-0.95	0.38			
<b>Social network satisfaction</b>				0.79***	0.62***	1.04***
<b>Spouse/partner in SN (ref. not having a spouse/ partner)</b>						
has a spouse/partner, but not in SN				-1.54*	-1.35	-1.81*
spouse/partner in SN				0.01	-0.08	0.01
<b>Children in SN (ref. not having children)</b>						
has children, but not in SN				-0.96	-0.37	-1.89
1+ children in SN				-2.25**	-1.63	-3.18**
<b>Siblings in SN (ref. not having siblings alive)</b>						
no siblings in SN				-0.63	-1.70*	-0.04
1+ siblings in SN				0.13	-0.73	0.87

variables	Model 1a – CASP-12			Model 1b – CASP-12		
	total	men	women	total	men	women
<b>Grandchildren (<i>ref. no</i>)</b>						
yes	-1.66**	-1.90*	-1.52	-0.18	-0.49	0.24
Constant	40.45***	38.53***	44.09***	35.45***	33.16***	36.87***
Observations	630	277	353	658	291	367
R-squared	0.37	0.36	0.40	0.41	0.39	0.45

Significance level: \*\*\* 0.01, \*\*0.05, \*0.1.

Source: own estimations based on the data from the 6<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE).

## Loneliness

The analogous picture on the relationship between the family situation and loneliness among older people in Poland may be seen from the results of ordered regression models (Table 3). As previously, similar control variables were significant mostly at 0.01 level (in some cases at 0.1 level). Loneliness increased with age, in particular for older women. Individuals with the medium educational level were less lonely than those less educated, again this holds mostly for females. The estimates for the higher level of education were not significant, and we could observe different effects for both sexes in this respect, i.e better educated older women were more lonely than those with the lowest level of education. A better financial situation reduced loneliness, while fair or poor self-rated health was positively associated with it. The bigger SN was, the lower loneliness was found. In the model 2a with variables describing the family situation only the partnership status turned out to be significant (at 0.01), especially for men. This result indicates that older adults living without a spouse felt more lonely than the married ones. In the model 2b, individuals who listed a spouse in their SN had lower loneliness than those not having a spouse/partner. Again, this finding may be a sign of a better relationship between spouses, since they talked about personal matters which had an impact on both positive and negative dimensions of subjective quality of life. The noteworthy result is that having children in SN was positively related to loneliness, and this outcome was significant for women only. Moreover, not listed children in SN increased the level of loneliness, however, this result was not significant.

**Table 3. Parameter estimates of ordered probit regression models for the dependent variable of loneliness**

variables	Model 2a			Model 2b		
	total	men	women	total	men	women
<b>Sex (ref. males)</b>						
females	-0.04			-0.06		
<b>Age</b>	0.02**	0.01	0.03**	0.02**	0.01	0.03**
<b>Educational level (ref. low)</b>						
medium	-0.22**	-0.09	-0.35***	-0.21**	-0.09	-0.25*
high	0.05	-0.07	0.34	0.05	-0.06	0.34
<b>Subjective financial situation – meeting ends (ref. with difficulties)</b>						
with some difficulties	-0.31**	-0.27	-0.36**	-0.34**	-0.35*	-0.41**
rather easily	-0.47***	-0.43*	-0.59***	-0.51***	-0.52**	-0.61***
easily	-0.46**	-0.68**	-0.29	-0.44**	-0.70***	-0.23
<b>Subjective health (ref. excellent, very good or good)</b>						
fair	0.24**	0.10	0.37***	0.22**	0.11	0.34**
poor	0.50***	0.37*	0.61***	0.50***	0.35*	0.63***
<b>Household size (ref. living alone)</b>						
2 person hh	0.08	0.10	0.10	0.09	-0.13	0.23
3+ person hh	-0.04	0.00	-0.04	-0.03	-0.26	0.11
<b>Social network size</b>	-0.10***	-0.11**	-0.09*	-0.10***	-0.10*	-0.08
<b>Partnership status (ref. living with a spouse)</b>						
without a spouse	0.42***	0.85***	0.25			
<b>Children (ref. no)</b>						
yes	-0.10	-0.07	0.15			
<b>Parents alive (ref. no)</b>						
yes	-0.02	-0.53	0.18			
<b>Siblings alive? (ref. no)</b>						
yes	-0.08	-0.12	-0.05			
<b>Social network satisfaction</b>				-0.11***	-0.09**	-0.14***
<b>Spouse/partner in SN (ref. not having a spouse/ partner)</b>						
has a partner/spouse, but not in SN				-0.22	-0.47	-0.16
spouse/partner in SN				-0.43***	-0.59**	-0.39**
<b>Children in SN (ref. not having children)</b>						
has children, but not in SN				0.32	0.41	0.48
1+ children in SN				0.36	0.29	0.60*
<b>Siblings in SN (ref. not having siblings alive)</b>						
no siblings in SN				-0.09	-0.04	-0.11
1+ siblings in SN				0.14	0.39	-0.04

variables	Model 2a			Model 2b		
	total	men	women	total	men	women
<b>Grandchildren (ref. no)</b>						
yes	0.00	0.08	-0.07	-0.15	-0.04	-0.27
/cut1	0.64	0.04	1.63*	-0.29	-0.86	0.35
/cut2	1.20*	0.56	2.24**	0.28	-0.32	0.95
/cut3	1.57**	0.89	2.65***	0.66	0.01	1.39
/cut4	2.19***	1.54	3.28***	1.27**	0.64	2.02**
/cut5	2.54***	1.93**	3.64***	1.61***	1.02	2.36***
/cut6	2.96***	2.30**	4.11***	1.98***	1.35	2.79***
Observations	630	277	353	658	291	367
Pseudo R2	0.058	0.065	0.072	0.069	0.071	0.085

Significance level: \*\*\* 0.01, \*\*0.05, \*0.1.

Source: own estimations based on the data from the 6<sup>th</sup> wave of the Survey of Health, Ageing and Retirement in Europe (SHARE).

## Conclusion

The aim of the paper was the analysis of the relationship between family networks and social networks of Poles aged 65+ and subjective quality of life expressed by two dimensions: subjective well-being and loneliness. The obtained results showed that subjective quality of life decreased with age, while loneliness increased. People better educated and better well-off (in comparison to those with low categories of education) had significantly higher well-being and lower loneliness. The worse self-rated health status was negatively related to life satisfaction and positively to loneliness.

Our results confirmed the importance of having a spouse/partner for subjective well-being. Unpartnered older adults, especially men, were less satisfied with life and more lonely than partnered individuals. Furthermore, the quality of the relationship between partners, expressed here by the presence of a spouse in one's SN, seems to be of great importance as well. Older adults who listed a spouse in their SN felt less lonely than others, while those married who did not declare a partner in their SN were less satisfied with their life. Aged individuals having children had higher subjective well-being than the childless, although this result was insignificant, while those for loneliness were not conclusive. Moreover, contrary to our expectations, the presence of children in SN contributed to lower life satisfaction and increased loneliness (especially for women). Furthermore, the association between having siblings and subjective well-being and loneliness is not clear-cut. The only significant result was observed for men having siblings alive who were not listed in their SN – this

situation was related to a lower level of well-being. This finding may reflect the poor relationship with one's siblings.

Our findings shed a new light on the importance of family networks for subjective quality of life among older people in Poland. Family members (especially close relatives) are perceived as a source of positive emotions and happiness and the family is often presented as an important domain of individual well-being (Czapiński, 2015). Our findings are surprising since they showed that the social networks of older people in Poland are rather small (2.33 persons) and in a majority of cases they are composed of family members (partners and children). Moreover, it should be emphasised that not all family members believed to be close (children, partner and siblings) were listed in SN. This might reflect the fact of looseness of family connections or difficult relationships in families, which in turn may have an impact on subjective quality of life, receiving emotional support and personal care among older adults. Thus, the concerns about the decreasing size of kinship networks due to demographic and family changes, expressed mainly in the context of growing care needs for older population, should be confronted with a real change in social networks of aged people. This topic needs further investigation, especially SN of older people are worth analysing, taking into account not only the presence of selected persons in SN, but also other SN characteristics, such as proximity, frequency of contacts, provided emotional and practical support, as well as negative situations experienced by older people (neglect, abuse, etc.).

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