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Subjective quality of life of informal caregivers aged 50–69 in Poland

Introduction

One of the consequences of the population ageing process is the increase in the number of older people who need care (Doblhammer, Ziegler 2006; Vaupel, von Kistowski, 2008). This means that the number of informal caregivers will increase as this situation will be faced by a growing number of adults supporting ageing parents or spouses. As formal care services for older individuals are limited in Poland, care to adults in need is generally provided within informal support networks, mostly by women (Bień, 2006, Grotowska-Leder, 2008; Wóycicka, 2009; Czekanowski, 2002, 2006). Providing care to adults, especially elderly people, may affect many aspects of caregivers' life, such as: physical and mental health, financial situation, social contacts, etc. On the one hand, supporting dependent seniors is associated to a higher level of stress, burden and depression as well as higher mortality (Marks et al., 2002; Montgomery et al., 2007; Schulz, Sherwood, 2008). Moreover, people who provide care feel lonelier than non-caregivers (Wagner, Brandt, 2015). In other

words, being the main carer of a dependent person has an impact on the quality of life of caregivers and their life satisfaction. On the other hand, caring for older people, especially for older parents or a spouse, may be a source of positive feelings and emotions, increasing life satisfaction and the quality of life among carers. This may result from the sense of being needed, from a better health status of the care receiver or from the improvement in the relationship quality between the carer and the person cared for. Special attention should be drawn to the specific situation of the so-called in the literature *sandwich generation* (DeRigne, Ferrante, 2012; Fingerman et al., 2011; Grundy, Henretta, 2006; Künemund, 2006; Spillman, Pezzin, 2000), who seems to be most exposed to pressures imposed by the increasing demand for care to older persons caused by population ageing and changes in the family structures. Members of the *sandwich generation* used to be engaged both in professional work and care provision for the elderly relatives/parents and frequently also for adolescent children or grandchildren. It is supposed that this double burden of family and professional obligations can cause lower wellbeing reported by this group of people (Marks et al., 2002; Montgomery et al., 2007; Schulz, Sherwood, 2008).

Thus, the main purpose of this paper is to analyse the relationship between caregiving for adults and the subjective quality of life among Poles aged 50–69.¹ In particular, we would like to take into account not only the fact of providing care to adult people, but also the changes in the caregiving status over time. Therefore, with this approach we could verify how different changes in the caregiving status are associated with the quality of life expressed in terms of life satisfaction and loneliness among so-called *sandwich generation* representatives in Poland. In our opinion the analysis of these two aspects will give a more comprehensive image of the relationship between caregiving and the subjective quality of life among carers in Poland. We used the panel subsample from the Generation and Gender Surveys (GGS) carried out in Poland in 2010/2011 and in 2014. The next section outlines a theoretical background and empirical research on subjective wellbeing and its determinants with a special attention to the issue of the association between caregiving and the subjective quality of life. We focus our considerations on different aspects of caregiving on psychological wellbeing of caregivers of adults in need. This paragraph ends with research questions resulting from the literature review. In subsequent chapter we describe the data used and method of analysis employed. Next, the results of the empirical analysis are presented, followed by a conclusion and discussion.

¹ Here we use the concepts of subjective wellbeing, life satisfaction, happiness and quality of life interchangeably as they represent different aspects of quality of life/wellbeing. These terms are strongly related (Baranowska 2010) and often are applied in the literature interchangeably, thus we adopted a similar approach in this paper.

Caregiving and quality of life: literature review and research questions

Informal care

We start our considerations with the relationship between informal caregiving and subjective wellbeing of carers by a definition of (social) care which signifies providing informal or professional support to all individuals who need help in daily living.² Thus, social care may comprise social, psychological, emotional and physical support or control. Providing care may consist in instrumental care (housework, cleaning, cooking or shopping) as well as personal care (hygiene or help in activities of daily living such as walking, eating or bathing). Care may be provided as a paid or unpaid job by voluntary services. It may also be delivered by public institutions or based on moral obligations. Two types of social care may be distinguished: formal care, which means care services provided by public care institutions or voluntary organizations and purchased on the market as well as informal, unpaid care given by family members, friends or neighbours. More information on care, its dimensions and typology may be found in rich literature devoted to social care (for example Knijn, Kremer, 1997; Geissler, Pfau-Effinger, 2005). Although caregivers are the main pillar of the caring system, there is still a lack of a common definition of the family caregiver. Most of the reviewed studies defined the caregiver as “the person most or primarily involved in the patient’s care, or providing the most or the majority of care, help, or assistance” (Stajduhar et al., 2010). A more specific definition says that “informal elder care is the unpaid and often-invisible labour provided by family or friends to assist an elderly or aged person with at least one activity necessary for living life on a day-to-day basis” (Connel, 2003). An informal carer – in contrast to a professional caregiver such as a home health aide – is a person who provides unpaid, ongoing assistance with activities of daily living (ADLs) or instrumental activities of daily living (IADLs) to a person with a chronic illness or disability (Roth et al., 2015). It should be stressed that some authors do acknowledge the emotional involvement of the caregiver and have formulated the following definition of caregiving: “Caregiving is the process of helping another person who is unable to do for themselves in a ‘holistic’ (physically, mentally, emotionally, and socially) manner. Caregiving is facilitated by certain character traits, emotions, skills, knowledge, time, and an emotional connection with the care recipient” (Hermanns, Mastel-Smith,

² It should be underlined that health care does not belong to (social) care.

2012). Some studies define a caregiver as a person who lives with the patient and declares providing some assistance, other studies look at the specific type and scope of support provided (Roth et al., 2015). For the purpose of our analysis, we define a caregiver as a person who provides regular personal care to an adult in need. This definition is similar to one proposed by Roth et al. (2015), although we concentrate on support given in case of limitations in activities of daily living only as this type of engagement is the most difficult and demanding and may have the highest impact on subjective wellbeing.

Burden of care obligations

Caregiving has a significant impact on many aspects of caregivers' life, especially on their physical and mental health, financial situation, living arrangements and social life (Gililand 2001; Duggleby et al., 2011; Diwan et al., 2004; Schulz, Sherwood, 2008). Due to the demands of care for an elderly person and, quite often, also for the children who are still in the caregivers' household, the caregiver may experience a role strain. This role strain can, in turn, negatively influence the mental and physical health of the caregiver, it may cause feelings of burden, stress and depression. The idea of caregiver burden was first conceptualized by Hoenig and Hamilton in the 1960s (Hoenig, Hamilton, 1966, cited in: Deeken et al., 2003). The 'burden of care' is frequently defined by its impacts on caregivers (emotional, psychological, physical and economic), but it also involves negative emotions such as shame, embarrassment, feelings of guilt and self-blame (Awad, Voruganti, 2008). Likewise, according to Tebb (1995), providing care to a dependent relative may result in burden or an inability to be resilient related to experiencing different types of stress (physical, mental or spiritual). Similarly, caregiver burden may be associated with lower frequency of social contacts, worsening mental and physical health status and feeling of strain (Deeken et al., 2003; National Academies of Sciences, Engineering, and Medicine, 2016). It should be noted here that there are two types (components) of caregivers' burden: the subjective and the objective one. The objective burden includes, among others, the time and finances devoted to care, whereas the subjective burden is how a caregiver perceives the burden of care (Flyckt et al., 2015).

There are different determinants that influence the subjective and the objective burden. In general, factors that influence a caregiver's wellbeing can be divided into three categories:

- caregiver's characteristics (e.g. sociodemographic characteristics: gender, age, marital status, level of education, living arrangements, employment status, quality of the relationship to the patient, health status);

- patient's characteristics (e.g. age, gender, disease-related characteristics, dependency, depression);
- characteristics of the care situation (duration, intensity, change in activities, family and social support) (Nijboer et al., 1999; Connel et al., 2001; Flyckt et al., 2015; McCullagh et al., 2005; Biegel, Song, Chakravarthy, 1994).

All these determinants may deepen or weaken the effects of caregiving on informal caregivers' quality of life. Also, it should be underlined that important factors of the burden of care are health conditions of a care receiver, especially long-term diseases difficult or unlikely to be cured and the type of the relationship between these two individuals. For example, Wojtyna and Popiołek (2015) using the data for caregivers of patients with Alzheimer's disease in Poland found that in a vast majority they reported pain complaints caused by a sense of loss related to the deterioration of health status of a close family member. Similarly, in another study they showed that spouses of care receivers experienced the highest level of depression and burden of care, followed by children of patients with Alzheimer's disease, while the lowest impact of caregiving was found among other relatives and friends (Wojtyna, Popiołek, 2012).

Quality of life of informal caregivers and its determinants

Generally, the quality of life may be defined as a perception of the 'goodness' of different aspects of life by individuals (Theofilou, 2013). These aspects include, among others: health, satisfaction with work, family, personal relationships, leisure, etc. The term *quality of life* is frequently used interchangeably with the term *wellbeing*. Moreover, in research on quality of life this term is often operationalized by different dimensions such as life satisfaction, happiness, subjective wellbeing or loneliness and the depression level. Thus, in this section we will use these various aspects to discuss the impact of informal caregiving on the quality of life.

Several studies have shown that caregivers perceive their quality of life as a set of different dimensions related to their physical, psychological, social and material functioning (Vellone et al., 2012). Quite often caregivers link family to their quality of life, which is followed by a sense of freedom, independence and free time. Due to care-connected tasks as well as their own familiar and professional obligations, caregivers have little time to respond to their own health needs. A study conducted by Acton (2002) revealed that caregivers practise significantly fewer health-promoting self-care behaviours, have more barriers to health promotion, do not get enough rest and do not have time to exercise. All these factors have a negative impact on caregivers' stress and wellbeing (Acton, 2002; Sisk, 2000).

The detrimental impact of care provision on caregivers' health was also shown in the study conducted by Vitaliano and colleagues (2003). It showed that caregivers have a higher level of stress hormones and a lower level of antibody responses than non-caregivers did. The immunological system of caregivers is weaker and it takes more time for a wound to be healed which is probably caused by the higher level of stress reported by the caregivers (Kiecolt-Glaser et al., 1995; Kiecolt-Glaser et al., 1996). What is worse, Schulz and Beach (1999) as one of the first showed that caregiving may be a risk factor for mortality, specifically when it comes to caregivers who support their spouse and report caregiving strain (mental or emotional). Interestingly, Schulz and Sherwood (2008) found that detrimental psychological effects of caregiving are stronger than physical ones. There are two types of stressors that influence caregivers' wellbeing: the primary stressors, such as the duration and type of care provided or the functional and cognitive disabilities of the care recipient, and the secondary stressors like finances and family conflict (Schulz, Sherwood, 2008). The negative effects on the health status of a caregiver may be moderated by individual characteristics of both the caregiver and the patient and the support received from other sources of informal or public care (Schulz, Sherwood, 2008; Flyckt et al., 2015; Hughes et al., 1999).

Gender and age are the basic socio-economic factors that significantly determine caregivers' wellbeing. Flyckt and colleagues (2015) showed that female and elderly caregivers experienced higher subjective burden (see also Sharma et al., 2016; Schrank et al., 2016; Montgomery et al., 1985). This is also in line with the prior research which revealed that female caregivers were more likely to assist with care provision tasks, to report work role strains, and to experience higher levels of burden than male caregivers (Kramer, Kipnis, 1995). Caregiver burden also increases with the age of a caregiver (Ampalam, 2012). Another important factor influencing caregivers' wellbeing is the kinship between the caregiver and the patient. A study conducted by Hughes and colleagues (1999) showed that co-residence with the care receiver was linked to a higher level of the objective burden. Especially, a negative impact of caregiving was found among spouses who were less happy and experienced less hope for the future than individuals not engaged in caring for a dependent partner (Adams, 2008). What is more, they felt more sad and lonely than non-caregivers. Furthermore, a meta-analysis revealed that spouse caregivers report more depression symptoms, greater financial and physical burden, and lower levels of psychological wellbeing in comparison to adult children and children-in-law (Pinquart, Sörensen, 2011). One of the reasons for it may be the fact that spouses use less informal support, perceive their physical health to be worse, provide more care, and experience more depressive symptoms than children and children-in-law do. The onset of a chronic illness, its progression and becoming dependent on others is stressful for both the

patient and the caregiver. In fact, one of the most significant factors that affects caregivers' subjective burden is the patient's level of functioning (Flyckt et al., 2015; Kumar et al., 2015). Increasing ADL/IADL limitations have a significant detrimental impact on caregivers' personal strain (Diwan et al., 2004). Another aspect which affects significantly the wellbeing of carers is their financial situation related to their employment status. On the one hand, caregivers are less likely to be employed as well as more likely to work part-time than non-caregivers (OECD, 2011), which leads to lower financial resources and lower wellbeing. On the other hand, caregivers who are employed may experience a double burden resulting from the simultaneous caring and professional responsibilities, which may diminish their quality of life. It should be noted, however, that the largest effect was found for carers working part-time (Hansen & Slagsvold, 2015).

Caregivers' quality of life is being influenced not only by the objective aspects of caregiving but also by caregivers' subjective experiences. Informal caregivers may experience physical, mental, emotional, financial, and social strain, which then may lead to depressive symptoms, poorer mental health, burnout and caregivers' lower quality of life. Surprisingly, caregivers' subjective experience has a greater impact on their quality of life than patient-related variables, such as behavioural and psychological symptoms of dementia (Takai et al., 2011). Especially in the first year of caregiving, the emotional strain and feelings (e.g. anxiety) play a crucial role rather than the level of disability, age, gender, or support received (McCullagh et al., 2005). The knowledge about the predominant burden type and its determinants allows applying the most adequate intervention in order to relieve the caregiver and prevent or at least postpone the institutionalization of the patient.

Although most of the studies on elderly care concentrate on the detrimental aspects of care provision, there are also positive sides of being a caregiver. The findings of the National Survey of Caregiving (NSOC)³ revealed that most of the caregivers indicate positive aspects of care provision and only a few reported substantial detrimental consequences of caregiving (Spillman et al., 2004). Furthermore, the positive effects of caregiving are related to better psychological well-being resulting from feeling of being needed, a possibility of acquiring new skills, which increases their sense of self-esteem and reinforcement of relationships with other people (Kramer, 1997; Jensen et al., 2004; Tarlow et al., 2004; National Academies of Sciences, Engineering, and Medicine, 2016). They may feel needed, useful, good about themselves and they learn to appreciate life more and strengthen their relationships with others (Tarlow

³ The NSOC is unique in interviewing all informal caregivers for a nationally representative sample of persons aged 65 or older receiving assistance with daily activities.

et al., 2004). These positive aspects may alleviate the burden of care and the negative consequences on caregivers' wellbeing, although it should be emphasized that it differs between different types of care relationship (Broese van Groenou, de Boer, Iedema, 2013; Conde-Sala, 2010). For instance, spouses declared both a high burden and a positive assessment at the same time, while adult children had low positive evaluation. An explanation for it could be that spouses perceive the care provision as a part of the marital commitment, and generally are both physically and emotionally closer to the patient. Furthermore, being a caregiver may become a new role for them, giving the spouse caregivers a feeling of being needed and important. On the contrary, adult children have to cope with other roles, such as being a parent or employee, which can lead to a greater burden. Also, an individual perception of care activities is of great importance (Labra et al., 2015). The caregivers who perceived their role as a burden experienced less satisfaction in the care provision process.

Research questions

Based on the above considerations we have formulated the following research questions:

1. Do people aged 50–69 who regularly provide care to adults show lower life satisfaction than those who do not care for other people?
2. Are those providing care to other adults more lonely than those who do not take care of other people at all?
3. Is the duration of caregiving important for the association between caregiving and the subjective quality of life?
4. Is there any difference in life satisfaction and loneliness between men and women with respect to their involvement in caregiving for other people?

Data and analytical strategy

Data. In order to perform the study, we used the data from the 1st and 2nd wave of Generation and Gender Surveys (GGS) carried out in Poland. This is a nationally representative survey of 18–79-year-old individuals and covering a broad array of topics including fertility, partnership, the transition to adulthood, economic activity, care duties and attitudes (Kotowska, Józwiak, 2011).⁴ The first wave was carried out in 2010/2011, and the second one in 2014. For the purpose of our analyses, we used

⁴ For more details see <http://www.ggp-i.org/>

the panel part of the Polish GGS data. Namely, the individual characteristics were taken from the second round, while the information on care provided to other people was used from both waves. Thanks to this, it was possible to capture the changes in caregiving status between the waves, and thus, to determine the association between the duration of caregiving and the wellbeing of caregivers. It should be noted that the changes in other individual characteristics between the waves could also have led to the diversification in life satisfaction and level of loneliness, however, as we had two waves of the survey only, we decided to focus on the changes in the caregiving status between the waves.⁵ For the purpose of our study, the sample was limited to individuals aged 50–69 at the moment of the survey (2nd wave), as the proportion of caregivers in the population is the highest among this age group. Thus, the analytical sample contained the information on 4,425 individuals (1,729 males and 2,696 females).

Dependent variables. We assumed that the subjective quality of life may be expressed by two variables: one describing life satisfaction, and the second one – loneliness. The life satisfaction variable was created on the basis of the answers to the following question:

“Please tell me to what extent you agree with the following statements:

- a. In most ways my life is close to my ideal;
- b. The conditions of my life are excellent;
- c. I am completely satisfied with my life;
- d. So far I have gotten the important things I want in life;
- e. If I could live my life over again, I would change almost nothing.”

with the following answers: 1 – “I definitely agree”, 2 – “I agree”, 3 – “I neither agree nor disagree”, 4 – “I disagree”, 5 – “I definitely disagree”. These responses were recoded so that 1 signifies “I definitely disagree”, while 5 – “I definitely agree”. Next, all the recoded answers were summed up in order to create the final life satisfaction variable. This variable ranges from 5 to 25 and describes satisfaction with life. It means the higher values are, the higher life satisfaction is. This is a classical *Satisfaction with Life Scale – SWLS*, proposed by Diener et al. (Diener et al., 1985; Diener et al., 1999; Pavot & Diener, 1993).

The variable describing loneliness was based on the following question:

“I am going to read out six statements about your current experiences. Please indicate for each of them to what extent they have applied to you recently:

- A. There are plenty of people that I can lean on in case of trouble;
- B. I experience a general sense of emptiness;

⁵ In other words, our approach is based on the cross-sectional database with special attention paid to information on caregiving at the two waves.

- C. I miss having people around;
- D. There are many people that I can count on completely;
- E. Often, I feel rejected;
- F. There are enough people that I feel close to.”

with the possible answers: 1. Yes, 2. Partly, 3. No. These questions were used to construct the shortened 6-item version of the loneliness scale developed by J. de Jong-Gierveld and T. Van Tilburg (de Jong-Gierveld & Van Tilburg, 1999; de Jong-Gierveld, 2006). This scale uses both the emotional loneliness and social loneliness scales. The emotional loneliness is based on statements A, D and F, while the social loneliness – on declarations B, C and E. After adequate transformations, we created a new variable describing the level of loneliness with values 0 (not lonely) to 6 (the highest level of loneliness).

Covariates in the models. We incorporated into the models individual characteristics such as: age, sex (ref. males), education level (ref. primary or lower), marital status (ref. never married), living arrangements (ref. living alone), fact of having children (ref. no), employment status (ref. not working), health status (ref. without limitations in the activity of daily living), subjective evaluation of the household’s financial situation,⁶ place of residence (ref. urban). The key explanatory variable for our analyses was regular care provided to adult people in two waves. This variable was based on the following question: “Over the last 12 months have you given people regular help with personal care, such as eating, getting up, dressing, bathing, or using the toilet? Do not include the care you may have given to small children.” (with answers yes or no).⁷ We incorporated the intersection between these two variables into a model in order to capture the changes in the caregiving status and its association with wellbeing. Thus, the final variable had four categories: 1. w1=no, w2=no; 2. w1=yes, w2=no; 3. w1=no, w2=yes; 4. w1=yes, w2=yes. The reference category were those individuals who did not provide care to an adult at both points in time.

Table 1 presents descriptive statistics for variables in the models. The mean age was 60.2 years and men made up 40% of the final sample. One third of the analysed sample were composed of people with vocational and junior secondary education, almost 31% had secondary education, while the proportions of individuals with the lowest and the highest level of education were similar (respectively 18.5% and 17.6%). A majority of the sample (67%) was constituted by married persons,

⁶ Based on the question whether the household is able to make ends meet (with great difficulty, with difficulty, with some difficulty, fairly easily, easily, very easily). This variable was incorporated into the models as a continuous.

⁷ Unfortunately, there is no information on the frequency of given support, however, we assume that the ‘regular care’ means help provided on a daily basis.

15.5% were widowed, every tenth were divorced or separated, and 8% were never married. As for living arrangements, one fifth of this group lived alone, 36% with a spouse only, additional 31% lived with a spouse and other persons, while 13% co-resided with other people only. More than 77% of this population had children, 87% did not report limitations in performing activities of daily living (ADL) and almost 68% did not work. Most of the respondents (61.5%) lived in urban areas. As for the subjective financial situation, a majority of the sample reported rather a disadvantageous financial situation: 60% of them had at least some difficulties in making ends meet.

Table 1. Descriptive statistics

Variable	Men	Women	Total
	mean	mean	mean
Age	60.2	60.2	60.2
Life satisfaction	15.19	15.17	15.18
	proportion	proportion	proportion
Sex			
men	n.a.	n.a.	40.1
women	n.a.	n.a.	59.9
Level of education			
primary and lower	15.9	20.3	18.5
vocational and junior secondary	43.1	26.6	33.2
secondary	27.2	33.0	30.7
tertiary and post-secondary	13.8	20.1	17.6
Marital status			
never married	10.3	6.6	8.1
married, in cohabitation	76.7	60.2	66.8
widowed	5.6	22.2	15.5
divorced, in separation	7.3	11.1	9.6
Living arrangements			
living alone	14.7	24.0	20.2
with spouse only	40.3	33.0	36.0
with spouse and other persons	36.6	27.1	30.9
without spouse, but with other persons	8.4	15.9	12.9
Having children			
no	27.4	19.6	22.7
yes	72.6	80.4	77.3

Cont. from page 47

Health status			
without limitations in ADL	86.3	88.1	87.4
with limitations in ADL	13.7	11.9	12.6
Employment status			
in employment	41.7	26.3	32.3
not employed	58.3	73.7	67.7
Place of residence			
urban	58.5	63.4	61.5
rural	41.5	36.6	38.5
Subjective financial situation of HH – Household able to make ends meet			
with great difficulty	13.6	13.4	13.5
with difficulty	17.1	19.6	18.6
with some difficulty	27.5	28.8	28.3
fairly easily	29.0	26.9	27.7
easily	11.3	9.9	10.5
very easily	1.6	1.5	1.5
Care for adults (in two waves)			
w1=no, w2=no	86.6	77.6	81.2
w1=yes, w2=no	5.4	8.6	7.3
w1=no, w2=yes	5.6	8.7	7.4
w1=yes, w2=yes	2.3	5.1	4.0
Loneliness			
not lonely (categories 0–1)	49.0	54.1	52.1
moderate lonely (categories 2–4)	39.4	34.6	36.5
severely lonely (categories 5–6)	11.6	11.3	11.4

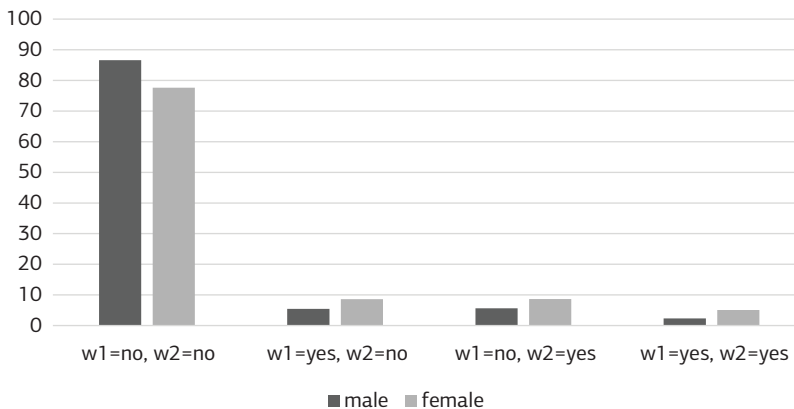
Note: proportions sum up to 100 in columns.

Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGG-PL); unweighted data.

As regards the key explanatory variable describing care provided to adult persons at both waves, a vast majority of the analysed population aged 50–69 did not care for others at the two waves. More than 7% were engaged in caregiving at the first wave and stopped doing this before the second wave, another 7% started to provide care between the two waves, while 4% were doing this for a longer period of time (we assume that they cared for the same person at both waves). As it could be expected, females more often than males provided regular care to adult persons (Figure 1). There are quite significant differences between males and females with respect to certain variables which are presented in the Table 1. For example, women were better educated

than men: the share of those with tertiary and post-secondary education was higher among women than men (20.1% vs. 13.8%). Moreover, females were less often married (60.2%) and more often widowed (22.2%) than males (respectively 76.7% and 5.6%). Also, women more often lived without a partner in their household than men: for example, 24% of females and 14.7% of males lived alone. As for the employment status, men more frequently were employed than women (41.7% vs. 26.3%).

Figure 1. Caregiving for adults by gender (data in %)



Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGs-PL); unweighted data.

After necessary transformations, we introduced almost all explanatory variables into the models as categorical variables with the reference categories enumerated above. We assumed that age and the subjective financial situation of the household may be treated as continuous variables.

Models. Due to the character of our dependent variable describing life satisfaction, we estimated linear regression models. Also, using the approach proposed by de Jong-Gierveld and Van Tilburg we recoded the level of the loneliness variable into three categories, so that 0 signified not lonely (values 0–1 of the original variable), 1 – moderate lonely (values 2–4) and 2 – severely lonely (5–6). Thus, we could employ the ordered logistic regression model. In both cases we estimated models for the total population, and, in order to examine the differences between sexes, for males and females separately. In all the models we incorporated the same set of covariates (described above).

Empirical results and discussion

Descriptive findings

Table 2 displays the descriptive findings for the dependent variable describing life satisfaction. As mentioned above, the values of this variable range from 5 to 25. The mean score was 15.2 both for men and women. More differences may be observed for other independent variables. Here, we present the biggest differences for various categories of explanatory variables. Individuals with the highest level of education (tertiary and post-secondary) were on average more satisfied with life than those with the primary or lower level of education (16.2 vs. 14.3). Married persons had the highest level of life satisfaction (16) among all the categories of marital status, a similar result was found for those living with a spouse only (16.2). People having children were more satisfied with life than the childless (15.5 vs. 14.2). The health status also differentiates life satisfaction: persons without limitations in activities of daily living had higher subjective wellbeing than those limited in ADL (15.4 vs. 13.6). Also, the better subjective financial situation, the higher life satisfaction: the mean level for those having great difficulties in making ends meet amounted to 12.1, compared to 18.1 for those making ends meet very easily. As for care for adults, the respondents not providing care at all were the most satisfied with life, while those who stopped caregiving between the waves were the least ones, however, it should be stressed that those differences are not significant. It is worth mentioning that 48% of the analysed group of Poles aged 50–69 felt to some extent lonely, including 11.4% of those severely lonely (see Table 1). The proportion of the individuals lonely to some degree changes with respect to the fact of providing care: 51% of those who stopped helping others between the waves and of those who continued providing care were lonely as compared to almost 48% of those not engaged in caregiving at two waves (Figure 2).

Table 2. Satisfaction with life among persons aged 50–69 years in Poland

Variable	Total		Men		Women	
	Mean	SD	Mean	SD	Mean	SD
Total	15.18	3.59	15.19	3.60	15.17	3.59
Age groups						
50–54 years	14.95	3.76	14.97	3.63	14.94	3.85
55–59 years	14.88	3.61	14.64	3.68	15.03	3.56
60–64 years	15.43	3.50	15.33	3.56	15.49	3.46
65–69 years	15.35	3.55	15.74	3.48	15.09	3.58

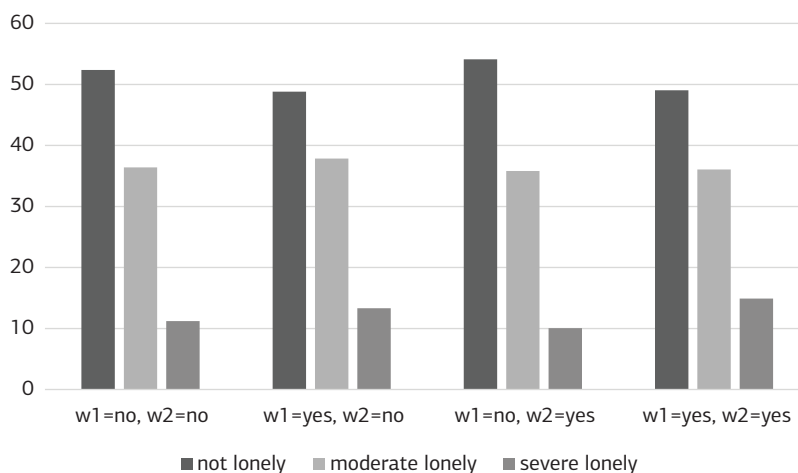
Variable	Total		Men		Women	
	Mean	SD	Mean	SD	Mean	SD
Level of education						
primary and lower	14.34	3.64	13.82	3.62	14.62	3.63
vocational and junior secondary	14.99	3.59	14.98	3.51	15.01	3.67
secondary	15.31	3.54	15.53	3.54	15.19	3.54
tertiary and post-secondary	16.23	3.37	16.81	3.26	15.96	3.39
Marital status						
never married	12.93	3.67	12.52	3.46	13.37	3.84
married, in cohabitation	15.98	3.34	15.93	3.27	16.02	3.39
widowed	14.29	3.33	14.06	3.26	14.33	3.34
divorced, in separation	12.92	3.59	12.10	3.76	13.27	3.46
Living arrangements						
living alone	13.70	3.58	12.74	3.76	14.10	3.43
with spouse only	16.23	3.41	16.13	3.35	16.32	3.45
with spouse and other persons	15.71	3.22	15.72	3.17	15.69	3.27
without spouse, but with other persons	13.29	3.49	12.71	3.19	13.49	3.56
Having children						
no	14.17	3.69	14.14	3.63	14.20	3.74
yes	15.48	3.51	15.59	3.51	15.41	3.51
Health status						
with limitations in ADL	13.56	3.78	13.63	3.70	13.51	3.84
without limitations in ADL	15.41	3.50	15.44	3.52	15.39	3.49
Employment status						
in employment	15.79	3.36	15.90	3.24	15.69	3.49
not employed	14.91	3.65	14.71	3.75	15.02	3.59
Place of residence						
urban	15.28	3.67	15.42	3.68	15.19	3.66
rural	15.03	3.47	14.88	3.47	15.14	3.46
Financial situation of HH – Household able to make ends meet						
with great difficulty	12.09	3.50	11.67	3.19	12.37	3.67
with difficulty	14.13	3.20	14.05	3.11	14.18	3.25
with some difficulty	15.13	3.19	15.13	3.21	15.12	3.18
fairly easily	16.42	3.13	16.42	3.00	16.42	3.23
easily	17.05	3.09	17.73	3.15	17.33	3.05
very easily	18.06	3.55	18.36	2.78	17.84	4.04
Care for adults (in two waves)						
w1=no, w2=no	15.23	3.58	15.25	3.62	15.21	3.55

Cont. from page 51

Variable	Total		Men		Women	
	Mean	SD	Mean	SD	Mean	SD
w1=yes, w2=no	14.94	3.77	15.26	3.59	14.81	3.84
w1=no, w2=yes	15.02	3.62	14.57	3.51	15.21	3.66
w1=yes, w2=yes	15.13	3.65	14.80	3.48	15.23	3.70
Loneliness						
not lonely (categories 0–1)	16.67	3.05	16.77	2.95	16.61	3.11
moderate lonely (categories 2–4)	14.28	3.20	14.49	3.21	14.12	3.19
severely lonely (categories 5–6)	11.24	3.14	10.90	3.12	11.47	3.14

Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGS-PL); unweighted data.

Figure 2. Loneliness by caregiving status at the two waves (data in %)



Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGS-PL); unweighted data.

Modelling results

Life satisfaction. Table 3 presents the estimates of the three linear regression models with the life satisfaction dependent variable. In the model for the total analyzed population aged 50–69, almost all the estimates were significant at the level of 0.1. Only the place of residence turned out to be statistically insignificant. Moreover, the estimates for some categories of the explanatory variables were insignificant as well. In general, our outcomes are in line with the findings described in the literature on determinants of life satisfaction and here we will describe the significant outcomes only. The results show that women were more satisfied with life than men. Also, life satisfaction increased

with age. Individuals with the secondary or higher level of education had significantly higher wellbeing than those with the lowest level of education. Widowed people were more satisfied with life than those never married, while divorced or in separation had lower satisfaction with life. Similarly, those living with a spouse in the same household had higher wellbeing than those living alone. Having children increases life satisfaction in comparison to the childless. Individuals with limitations in ADL had lower wellbeing than those without limitations in ADL. Employment was positively associated with the level of life satisfaction as well as a better subjective perception of the financial situation of the household. As for care provided to adult people, only a few estimates for the changes in the caregiving status were statistically significant. We found for example that those who stopped caring for an adult in need were less satisfied with life than those not providing care at all at the two waves. It may be related to the reason of ending caregiving, which we assume is probably the death of the care receiver.⁸ Thus, this event may cause negative emotions, which in turn may lower life satisfaction. The separate models for both sexes revealed similar findings for most of the variables in the models. The only difference may be observed for the estimates of the variable describing caregiving. In the model for females, those who stopped providing care for other adults were significantly less satisfied with life than those not caring for others at all. In the model for males this result turned out to be insignificant, but what is worth underlining is that the direction of the association was positive.

Loneliness. Table 4 displays the estimates of the three ordered logistic regression models with the level of loneliness dependent variable. In the model for the total analyzed population aged 50–69, almost all the estimates were significant at the level of 0.1. Only the employment status and age turned out to be statistically insignificant. Moreover, the estimates for some categories of the explanatory variables were insignificant as well. As expected, our results confirm findings described in the literature devoted to loneliness. First of all, women were less lonely than men. People better educated reported a lower level of loneliness than those with the lowest education. Widowed individuals were less lonely than those never married, while the married, the divorced and in separation did not differ with respect to the level of loneliness from those never married. In general, living with other people reduced the level of loneliness among people aged 50–69 in Poland. Similarly, parents were less lonely than the childless. Health problems, expressed in terms of limitations in ADL, increased the level of loneliness in comparison to persons without any limitations in ADL. A favorable financial situation lowered the loneliness level among the analysed population.

⁸ As a majority of carers aged 50–69 provide care to older parents in need or an older partner (mainly among women).

Table 3. Estimates of parameters for the regression models of life satisfaction

Variables	Total			Men			Women		
	β	SE	p-value	β	SE	p-value	β	SE	p-value
Sex (ref. men)									
women	0.29	0.10	0.00	***					
Age	0.05	0.01	0.00	***	0.05	0.02	0.00	0.04	0.02
Level of education (ref. primary and lower)									
vocational and junior secondary	0.18	0.14	0.20		0.35	0.22	0.11	0.10	0.19
secondary	0.24	0.14	0.09	*	0.52	0.25	0.03	0.10	0.18
tertiary and postsecondary	0.67	0.17	0.00	***	0.91	0.28	0.00	0.57	0.21
Marital status (ref. never married)									
married	0.56	0.34	0.10		0.43	0.47	0.36	0.59	0.50
widowed	0.59	0.23	0.01	**	0.55	0.42	0.19	0.48	0.32
divorced (in separation)	-0.75	0.26	0.00	***	-1.21	0.41	0.00	-0.59	0.34
Living arrangements (ref. living alone)									
with spouse only	1.24	0.30	0.00	***	1.55	0.40	0.00	1.07	0.43
with spouse and other people	1.12	0.31	0.00	***	1.47	0.40	0.00	0.90	0.44
without spouse, but with others	-0.26	0.17	0.13		0.03	0.33	0.92	-0.37	0.20
Having children (ref. no)									
yes	0.56	0.13	0.00	***	0.38	0.20	0.06	0.68	0.18
Health status (ref. without limitations in ADL)									
with limitations in ADL	-1.15	0.15	0.00	***	-0.82	0.23	0.00	-1.37	0.21
Employment status (ref. not working)									
working	0.52	0.12	0.00	***	0.71	0.18	0.00	0.30	0.17
Subjective financial situation of HH	0.95	0.04	0.00	***	1.03	0.06	0.00	0.91	0.06

Place of residence (ref. urban)												
rural	0.08	0.10	0.41	0.16	0.15	0.29	0.03	0.13	0.80			
Care for adults (ref. w1=no, w2=no)												
w1=yes, w2=no	-0.38	0.20	0.06	*	0.34	0.35	0.33	-0.68	0.24	0.00	***	
w1=no, w2=yes	0.04	0.18	0.83		-0.18	0.29	0.54	0.09	0.22	0.68		
w1=yes, w2=yes	0.08	0.26	0.75		0.33	0.49	0.51	-0.00	0.30	1.00		
Constant	7.18	0.73	0.00	***	6.30	1.07	0.00	***	8.26	1.00	0.00	***
Observations	4,425				1,729				2,696			
R-squared	0.28				0.35				0.25			

Note: β – parameter estimates, SE – standard errors.

Significance of parameters estimates: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGS-PL); unweighted data.

Table 4. Estimates of parameters for the ordered logistic regression models of loneliness

Variables	Total			Men			Women					
	β	SE	p-value	β	SE	p-value	β	SE	p-value			
Sex (ref. men)												
women	-0.29	0.07	0.00	***								
Age	-0.01	0.01	0.21		-0.01	0.01	0.34		-0.00	0.01	0.79	
Level of education (ref. primary and lower)												
vocational and junior secondary	-0.05	0.09	0.56		-0.03	0.14	0.81		-0.06	0.12	0.60	
secondary	-0.21	0.09	0.03	**	-0.34	0.16	0.04	**	-0.13	0.11	0.26	
tertiary and postsecondary	-0.19	0.11	0.09	*	-0.11	0.20	0.58		-0.20	0.13	0.15	
Marital status (ref. never married)												
married	-0.29	0.21	0.16		0.12	0.33	0.71		-0.55	0.26	0.04	**
widowed	-0.53	0.14	0.00	***	-0.37	0.29	0.20		-0.55	0.18	0.00	***

Cont. from page 55

Variables	Total			Men			Women					
	β	SE	p-value	β	SE	p-value	β	SE	p-value			
divorced (in separation)	-0.01	0.16	0.95	0.61	0.25	0.02	**	0.20	0.14			
Living arrangements (ref. living alone)												
with spouse only	-0.93	0.19	0.00	***	-1.81	0.31	0.00	***	-0.49	0.23	0.03	**
with spouse and other people	-1.14	0.19	0.00	***	-1.98	0.31	0.00	***	-0.70	0.24	0.00	***
without spouse, but with others	-0.25	0.11	0.02	**	-0.48	0.22	0.03	**	-0.14	0.13	0.25	
Having children (ref. no)												
yes	-0.46	0.08	0.00	***	-0.38	0.13	0.00	***	-0.51	0.11	0.00	***
Health status (ref. without limitations in ADL)												
with limitations in ADL	0.45	0.09	0.00	***	0.33	0.14	0.02	**	0.54	0.12	0.00	***
Employment status (ref. not working)												
working	-0.12	0.08	0.15		-0.16	0.13	0.22		-0.03	0.11	0.77	
Subjective financial situation of HH	-0.29	0.03	0.00	***	-0.36	0.05	0.00	***	-0.27	0.03	0.00	***
Place of residence (ref. urban)												
rural	-0.12	0.07	0.09	*	-0.31	0.11	0.00	***	0.02	0.09	0.86	
Care for adults (ref. w1=no, w2=no)												
w1=yes, w2=no	0.22	0.12	0.06	*	0.30	0.24	0.20		0.18	0.14	0.18	
w1=no, w2=yes	-0.12	0.12	0.35		0.09	0.23	0.69		-0.17	0.15	0.25	
w1=yes, w2=yes	0.28	0.17	0.10	*	-0.22	0.34	0.52		0.41	0.19	0.03	**
$\mu 1$	-3.03	0.48	0.00	***	-3.81	0.76	0.00	***	-2.09	0.64	0.00	***
$\mu 2$	-0.84	0.48	0.08	*	-1.21	0.76	0.11		-0.08	0.64	0.91	
Observations	4,434				1,731				2,703			
Pseudo R2	0.08				0.13				0.06			

Note: β – parameter estimates, SE – standard errors.
 Significance of parameters estimates: *** p<0.01, ** p<0.05, * p<0.1.
 Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGS-PL); unweighted data.

Individuals living in rural areas were more lonely than those in urban areas. As for the variable describing care for adults in the two waves, those individuals who stopped or continued caring regularly for an adult in need were more lonely than those not providing support to other people.

In the model for males aged 50–69 only a few additional categories of independent variables turned out to be insignificant, including our key explanatory variable describing caregiving. Males with the secondary level of education were significantly less lonely than the lowest educated ones. The association between being divorced or in separation and loneliness was positively significant. Similarly, as earlier, living with other people as well as having children diminished significantly the loneliness level. Limitations in ADL enlarged the level of loneliness compared with those without limitations in ADL. As earlier, the better financial situation was, the lower level of loneliness. Men living in rural areas were more lonely than those living in urban areas. The results for women show some similarities, but also dissimilarities in comparison to outcomes received for men. The estimates for the level of education and place of residence turn out to be insignificant. Married and widowed women were less lonely than those never married. Moreover, living with a spouse was negatively associated with the level of loneliness. Similar results were obtained for having children and the subjective financial situation of the household. Limitations in ADL was positively related to the loneliness level. As for our key explanatory variable, those women who provided regular care to dependent adults felt more lonely than those not engaged in this kind of activity.

The results may be interpreted by using Average Adjusted Predictions (AAP) in the estimated ordered logistic regressions. In table 5 we present the results for our key explanatory variable describing caregiving. The significant differences were obtained for the model for the total population and for women. According to the model for the total population, on all other things being an equal basis, 52% of those who provided care in the first wave and stopped doing this before the second wave felt to some extent lonely compared to 47% of those not taking care for other people at all. Similarly, more than 53% of those individuals who were caregivers for a longer period (at the first and second waves) were somewhat lonely. The AAP values in the model for women show that 54.5% of those engaged in caregiving at the first and second waves felt to some extent lonely (among them 16.2% were severely lonely) in comparison to 45% of those females not caring for adults at both waves (11.4% were severely lonely). To sum up, our results show that the positive relationship between caregiving for a longer period of time and loneliness may be observed for women only. This means that providing care for a longer period of time increases the level of loneliness.

With respect to our research questions, we may conclude that our findings suggest that providing regular care to dependent adults may be detrimental to caregivers' life satisfaction (research question 1), but only in the case of ending caregiving between the waves, especially among women. Moreover, caregiving increases the level of loneliness (question 2), however, this holds only for women who provided care for a longer period of time (questions 3 and 4). To conclude, we would like to stress that our findings on a greater negative association between caregiving and the subjective quality of life among women than among men are in line with those described in the section devoted to the literature review. This may be related to a higher burden, a bigger involvement and intensity of caregiving among women (Flyckt et al., 2015; Sharma et al., 2016; Schrank et al., 2016). Moreover, we found that ending caregiving may be a source of negative feelings, which may reflect a loss of a partner or a parent (Leopold, Lechner, 2015; Moor, Graaf, 2016; Sikorski et al., 2014; Vable, Subramanian, Rist, Glymour, 2015).

Table 5. Estimates of Average Adjusted Predictions (AAP) for the independent variable 'care provided to adults in the two waves' in the ordered logistic regression models

Care for adults (in two waves)	Not lonely (0–1)	Moderate lonely (2–4)	Severely lonely (5–6)
total			
w1=no, w2=no	0.529	0.357	0.114
w1=yes, w2=no	0.480	0.380	0.140
w1=no, w2=yes	0.557	0.341	0.102
w1=yes, w2=yes	0.466	0.389	0.145
men			
w1=no, w2=no	0.500	0.387	0.112
w1=yes, w2=no	0.434	0.411	0.156
w1=no, w2=yes	0.470	0.407	0.124
w1=yes, w2=yes	0.504	0.384	0.113
women			
w1=no, w2=no	0.549	0.337	0.114
w1=yes, w2=no	0.503	0.358	0.139
w1=no, w2=yes	0.597	0.309	0.094
w1=yes, w2=yes	0.455	0.383	0.162

Source: own calculations based on data from the two waves of the Polish Generations and Gender Survey (GGs-PL); unweighted data.

Conclusion and future research

The main aim of this paper was to analyse the association between providing care to adults in need and the subjective quality of life among Poles aged 50–69. In particular, we wanted to verify how support provided to adults differentiates the wellbeing of people aged 50–69. More specifically, we tried to show how different changes in the caregiving status are associated with the quality of life expressed in terms of life satisfaction and the level of loneliness. We used two dependent variables describing different aspects of the quality of life (life satisfaction and loneliness). Our results are mostly in line with those obtained by other researchers and described in the section devoted to the literature review. Our findings suggest that providing regular care to dependent adults may be detrimental to the subjective quality of life/wellbeing of caregivers. Caring for adults is associated with lower life satisfaction, especially in a situation when care ended between the waves. This effect may be reinforced by a plausible loss of a close person (an older parent or a spouse). It is worth stressing that this holds for women only. Also, our results suggest that taking care of adults for a longer period of time increases the level of loneliness, again mainly among women, which confirms that long-term support provided to others may lead to isolation and smaller social networks. We assume that men are less likely to experience a negative impact of caregiving on their subjective wellbeing than women, since they are less likely to provide help to others and even in a situation of caregiving their support is different (less intense) than women's. This topic needs further investigations. Especially, additional analyses for specific groups of carers and their relationship to the care receiver (those providing care to older parents or to a spouse) would shed more light on the effects of caregiving on subjective wellbeing. Also, a qualitative survey among caregivers would be helpful in understanding the consequences of caregiving with respect to the quality of life of different groups of the society. Moreover, detailed characteristics of caregiving (its intensity, duration, exact activities, reasons for the end of caregiving, etc.) as well as health conditions of the care recipient and quality of the relationship between the caregiver and the care receiver would give more knowledge on the effects of providing support on the quality of life of caregivers in Poland.

To conclude, in the context of the demographic changes (population ageing and changes in family models) a diagnosis of older people's needs in terms of care provided to the dependent elderly population is of great importance. However, in order to improve the quality of life of all members of the society in designing social policy one should take into account not only the situation and needs of older adults, but also the requirements, challenges and limitations of people providing care to others.

This is particularly crucial in times of increasing longevity and a growing demand for care, which will lead to the rise in the proportion and number of adults providing care to other people (especially to spouses and parents).

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References

- Acton, G.J., 2002, *Health-Promoting Self-Care in Family Caregivers*, “Western Journal of Nursing Research”, no. 24(1), 73–86.
- Adams, K.B., 2008, *Specific effects of caring for a spouse with dementia: Differences in depressive symptoms between caregiver and non-caregiver spouses*, “International Psychogeriatrics”, no. 20, 508–520.
- Ampalam, P., Gunturu, S., Padma, V., 2012, *A comparative study of caregiver burden in psychiatric illness and chronic medical illness*, “Indian J Psychiatry”, no. 54(3), 239–243.
- Awad, A.G., Voruganti, L.N., 2008, *The burden of schizophrenia on caregivers: a review*, “Pharmacoeconomics”, no. 26(2), 149–62.
- Baranowska, A., 2010, *Family formation and subjective well-being. A literature overview*, “Studia Demograficzne”, no. 1–2 (157–158), 103–127.
- Biegel, D.E., Song, L., Chakravarthy, V., 1994, Predictors of Caregiver Burden Among Support Group Members of Persons with Chronic Mental Illness, [in:] E. Kahana, D.E. Biegel, M. Wykle (Eds.), *Family Caregiving Across the Lifespan*, Thousand Oaks: Sage Publications.
- Bień, B. (Ed.), 2006, *Family caregiving for the elderly in Poland*, Białystok: Wydawnictwo Uniwersyteckie Transhumana.
- Broese van Groenou, M.I., de Boer, A., Iedema, J., 2013, *Positive and negative evaluation of caregiving among three different types of informal care relationships*, “European Journal of Ageing”, no. 10(4), 301–311.
- Conde-Sala, J.L., Garre-Olmo, J., Turró-Garriga, O., Vilalta-Franch, J., López-Pousa, S., 2010, *Quality of Life of Patients with Alzheimer’s Disease: Differential Perceptions between Spouse and Adult Child Caregivers*, “Dementia and Geriatric Cognitive Disorders”, no. 29(2), 97–108.

- Connel, C.M., Janevic, M.R., Gallant, M.P., 2001, *The Costs of Caring: Impact of Dementia on Family Caregivers*, "Journal of Geriatric Psychiatry and Neurology", no. 14(4), 179–87.
- Connell, P.J., 2003. *A phenomenological study of the lived experiences of adult caregiving daughters and their elderly mothers*, Doctoral dissertation, University of Florida.
- Czekanowski, P., 2002, Rodzina w życiu osób starszych i osoby starsze w rodzinie [Family in life of older people and older people in family], [in:] B. Synak (Ed.), *Polska Starość*, Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.
- Czekanowski, P., 2006, Family carers of elderly people, [in:] B. Bień (Ed.), *Family caregiving for the elderly in Poland*, Białystok: Wydawnictwo Uniwersyteckie Transhumana.
- De Jong Gierveld, J., 2006, *A 6-Item Scale for Overall, Emotional, and Social Loneliness. Confirmatory Tests on Survey Data*, "Research on Aging", no. 28(5), 582–598.
- De Jong-Gierveld, J., Van Tilburg, T., 1999, *Manual of the Loneliness Scale*, 1–26, retrieved from:
- Deeken, J., Taylor, K.L., Mangan, P., Yabroff, K.R., Ingham, J.M., 2003, *Care for the Caregivers: A Review of Self-Report Instruments Developed to Measure the Burden, Needs, and Quality of Life of Informal Caregivers*, "Journal of Pain and Symptom Management", no. 26(4), 922–53.
- DeRigne, L., Ferrante, S., 2012, *The sandwich generation: a review of the literature*, "Florida Public Health Review", no. 9, 95–104.
- Diener, E., Emmons, R.A., Larsen, R.J., Griffin, S., 1985, *The Satisfaction with Life Scale*, "Journal of Personality Assessment", no. 49(1).
- Diener, E., Emmons, R.A., Larsen, R.J., Griffin, S., 1985, *The Satisfaction with Life Scale*, "Journal of Personality Assessment", no. 49(1), 71–75.
- Diener, E., Eunkook, M.S., Lucas, R.E., Smith, H.L., 1999, *Subjective well-being: three decades of progress*, "Psychological Bulletin", no. 125(2), 276–302.
- Diwan, S., Hougham, G.W., Sachs, G.A., 2004, *Strain experienced by caregivers of dementia patients receiving palliative care: Findings from the palliative excellence in Alzheimer care efforts (PEACE) program*, "Journal of Palliative Medicine", no. 7(6), 797–807.
- Doblhammer, G., Ziegler, U., 2006, Future elderly living conditions in Europe: demographic insights, [in:] G.M. Backes, V. Lasch, K. Reimann (Eds.), *Gender, health and ageing: European perspectives on life course, health issues and social challenges*, Wiesbaden: VS Verlag.
- Duggleby, W.E., Swindle, J., Peacock, S., Ghosh, S., 2011, *A mixed methods study of hope, transitions, and quality of life in family caregivers of persons with Alzheimer's disease*, "BMC Geriatrics", no. 11(88).
- Fingerman, K.L., Pitzer, L.M., Chan, W., Birditt, K., Franks, M.M., Zarit, S., 2011, *Who gets what and why? Help middle-aged adults provide to parents and grown children*, "Journals of Gerontology – Series B Psychological Sciences and Social Sciences", no. 66 B (1), 87–98.
- Flyckt, L., Fatouros-Bergman, H., Koernig, T., 2015, *Determinants of subjective and objective burden of informal caregiving of patients with psychotic disorders*, "The International Journal of Social Psychiatry", no. 61(7), 684–692.

- Geissler, B., Pfau-Effinger, B., 2005, Change in European care arrangements, [in]: Pfau-Effinger B., Geissler B. (Eds.), *Care and social integration in European societies*, Bristol: The Policy Press University of Bristol.
- Gilliland, M.P., Bush, H.A., 2001, *Social support for family caregivers: Toward a situation-specific theory*, "Journal of Theory Construction and Testing", no. 5(2), 53–62.
- Grotowska-Leder, J., 2008, Sieci społeczne seniorów mieszkających w rejonach niezurbanizowanych w perspektywie teoretycznej i empirycznej, [in:] J.T. Kowaleski, P. Szukalski (Eds.), *Pomyślne starzenie się w perspektywie nauk o pracy i polityce społecznej*, Łódź: Zakład Demografii i Gerontologii Społecznej UŁ.
- Grundy, E., Henretta, J.C., 2006, *Between elderly parents and adult children: a new look at the intergenerational care provided by the "sandwich generation"*, "Ageing and Society", no. 26(05), 707–722.
- Hansen, T., Slagsvold, B., 2015, *Feeling the squeeze? The effects of combining work and informal caregiving on psychological well-being*, "European Journal of Ageing", no. 12, 51–60.
- Hermanns, M., Mastel-Smith, B., 2012, *Caregiving: A qualitative concept analysis*, "The Qualitative Report", no. 17(75), 1–18.
- Hoening, J., Hamilton, M.W., 1966, *The schizophrenic patient in the community and his effect on the household*, "Int J Soc Psychiatry", no. 12(3), 165–76.
- Hughes, S.L., Giobbie-Hurder, A., Weaver, F.M., Kubal, J.D., Henderson, W., 1999, *Relationship Between Caregiver Burden and Health-Related Quality of Life*, "The Gerontologist", no. 39(5), 534–545.
- Jensen, Ch.J., Ferrari, M., Cavanaugh, J.C., 2004, *Building on the Benefits: Assessing Satisfaction and Well-Being in Elder Care*, "Ageing International", no. 29(1), 88–110.
- Kiecolt-Glaser, J.K., Glaser, R., Gravenstein, S., Malarkey, W.B., Sheridan, J., 1996, *Chronic stress alters the immune response to influenza virus vaccine in older adults*, "Proceedings of the National Academy of Sciences", no. 93, 3043–3047.
- Kiecolt-Glaser, J.K., Marucha, P.T., Mercado, A.M., Malarkey, W.B., Glaser, R., 1995, *Slowing of wound healing by psychological stress*, "Lancet", no. 346(8984), 1194–1196.
- Knijjn, T., Kremer, M., 1997, *Gender and the caring dimension of welfare states: toward inclusive citizenship*, "Social Policy", no. 4(3), 485–508.
- Kotowska, I.E., Jóźwiak, J., 2011, *Panelowe badanie przemian relacji między pokoleniami, w rodzinie oraz między kobietami i mężczyznami: Generacje, rodziny i płęć kulturowa*, "Studia Demograficzne", no. 159(1), 99–106.
- Kramer, B.J., 1997, *Gain in the Caregiving Experience: Where Are We? What Next?*, "The Gerontologist", nr 37(2): 218–232.
- Kramer, B.J., Kipnis, S., 1995, *Eldercare and Work-Role Conflict: Toward an Understanding of Gender Differences in Caregiver Burden*, "Gerontologist", no. 35(3), 340–348.
- Kumar, C.N., Suresha, K.K., Thirthalli, J., Arunachala, U., Gangadhar, B.N., 2015, *Caregiver burden is associated with disability in schizophrenia: results of a study from a rural setting of south India*, "The International Journal of Social Psychiatry", no. 61(2), 157–163.

- Künemund, H., 2006, *Changing welfare states and the “sandwich generation”: increasing burden for the next generation?*, “International Journal of Ageing and Later Life”, no. 1(2), 11–29.
- Labra, C., Millán-Calenti, J.C., Buján, A., Núñez-Naveira, L., Jensen, A.M., Peersen, M.C., Mojs, E., Samborski, W., Mased, A., 2015, *Predictors of caregiving satisfaction in informal caregivers of people with dementia*, “Archives of Gerontology and Geriatrics”, no. 60(3), 380–388.
- Leopold, T., Lechner, C.M., 2015, *Parents’ death and adult well-being: gender, age, and adaptation to filial bereavement*, “Journal of Marriage and Family”, no. 77, 747–760.
- Marks, N.F., Lambert, J.D., Choi, H., 2002, *Transitions to caregiving, gender, and psychological well-being: a prospective U.S. national study*, “Journal of Marriage and Family”, no. 64(3), 657–667.
- McCullagh, E., Brigstocke, G., Donaldson, N., Kalra, L., 2005, *Determinants of Caregiving Burden and Quality of Life in Caregivers of Stroke Patients*, “Stroke”, no. 36, 2181–2186.
- Montgomery, R.J.V., Gonyea, J.G., Hooyman, N.R., 1985, *Caregiving and the Experience of Subjective and Objective Burden*, “Family Relations”, no. 34(1), “The Family and Health Care”, 19–26.
- Montgomery, R.J.V., Rowe, J.M., Kosloski, K., 2007, *Family Caregiving*, [in:] J.A. Blackburn, C.N. Dulmus (Eds.), *Handbook of gerontology: evidence-based approaches to theory, practice, and policy*, New Jersey: John Wiley & Sons.
- Moor, N., de Graaf, P.M., 2016, *Temporary and Long-Term Consequences of Bereavement on Happiness*, “Journal of Happiness Studies”, no. 17, 913–936.
- National Academies of Sciences, Engineering, and Medicine, 2016, *Families caring for an aging America*, Washington, DC: The National Academies Press.
- Nijboer, C., Triemstra, M., Sanderman, R., van den Bos, G.A.M., 1999, *Determinants of caregiving experiences and mental health of partners of cancer patients*, “Cancer”, no. 86(4), 577–588.
- OECD, 2011, *The Impact of Caring on Family Carers*, [in:] *Help Wanted? Providing and Paying for Long-Term Care*, OECD Publishing.
- Pavot, W., Diener, E., 1993, *Review of the Satisfaction with Life Scale*, “Psychological Assessment”, no. 5(2), 164–172.
- Pinquart, M., Sorensen, S., 2011, *Spouses, adult children, and children-in-law as caregivers of older adults: a meta-analytic comparison*, “Psychology and Aging”, no. 26(1), 1–14.
- Roth, D.L., Fredman, L., Haley, W.E., 2015, *Informal Caregiving and Its Impact on Health: A Reappraisal From Population-Based Studies*, “Gerontologist”, no. 55(2), 309–319.
- Schrank, B., Ebert-Vogel, A., Amering, M., Masel, E.K., Neubauer, M., Watzke, H., Zehetmayer, S., Schur, S., 2016, *Gender differences in caregiver burden and its determinants in family members of terminally ill cancer patients*, “Psychooncology”, no. 25(7), 808–814.
- Schulz, R., Beach, S.R., 1999, *Caregiving as a risk factor for mortality: The caregiver health-effects study*, “Journal of the American Medical Association”, no. 282, 2215–2219.

- Schulz, R., Sherwood, P.R., 2008, *Physical and Mental Health Effects of Family Caregiving*, "The American Journal of Nursing", no. 108 (9 Suppl), 23–27.
- Sharma, N., Chakrabarti, S., Grover, S., 2016, *Gender differences in caregiving among family – caregivers of people with mental illnesses*, "World J Psychiatry", no. 6(1), 7–17.
- Sikorski, C., Luppa, M., Hesel, K., Ernst, A., Lange, C., Werle, J., ... Riedel-Heller, S.G., 2014, *The role of spousal loss in the development of depressive symptoms in the elderly – Implications for diagnostic systems*, "Journal of Affective Disorders", no. 161, 97–103.
- Sisk, R.J., 2000, *Caregiver burden and health promotion*, "International Journal of Nursing Studies", no. 37(1), 37–43.
- Spillman, B.C., Pezzin, L.E., 2000, *Potential and active family caregivers: changing networks and the "sandwich generation"*, "The Milbank Quarterly", no. 78(3), 347–374.
- Spillman, B.C., Wolff, J., Freedman, V. A., Kasper, J.D., 2014, *Informal Caregiving for Older Americans: An Analysis of the 2011 National Study of Caregiving*, U.S. Department of Health and Human Services Assistant Secretary for Planning and Evaluation Office of Disability, Aging and Long-Term Care Policy.
- Stajduhar, K.I., Funk, L., Toye, C., Grande, G.E., Aoun, A., Todd, C.J., 2010, *Part 1: Home-based family caregiving at the end of life: a comprehensive review of published quantitative research (1998–2008)*, "Palliative Medicine", no. 24(6), 573–593.
- Takai, M., Takahashi, M., Iwamitsu, Y., Oishi, S., Miyaoka, H., 2011, *Subjective experiences of family caregivers of patients with dementia as predictive factors of quality of life*, "Psychogeriatrics", no. 11(2), 98–104.
- Tarlow, B.J., Wisniewski, S.R., Belle, S.H., Rubert, M., Ory, M.G., Gallagher-Thompson, D., 2004, *Positive Aspects of Caregiving*, "Research on Ageing", no. 26(4), 429–453.
- Tebb, S., 1995, *An aid to empowerment: A caregiver wellbeing scale*, "Health and Social Work", no. 20(2), 87–92.
- Theofilou, P., 2013, *Quality of Life: Definition and Measurement*, "Europe's Journal of Psychology", no. 9(1), 150–162.
- Vable, A.M., Subramanian, S.V., Rist, P.M., Glymour, M.M., 2015, *Does the "widowhood effect" precede spousal bereavement? Results from a Nationally Representative Sample of Older Adults*, "American Journal of Geriatric Psychiatry", no. 23(3), 283–292.
- Vaupel, J.W., von Kistowski, K.G., 2008, *Living longer in an ageing Europe: a challenge for individuals and societies*, "European View", no. 7(2), 255–263.
- Vellone, E., Piras, G., Venturini, G., Alvaro, R., Cohen, M.Z., 2012, *Quality of Life for Caregivers of Persons With Alzheimer's Disease Living in Sardinia, Italy*, "Journal of Transcultural Nursing", no. 23(1), 46–55.
- Vitaliano, P.P., Zhang, J., Scanlan, J.M., 2003, *Is Caregiving Hazardous to One's Physical Health? A Meta-Analysis*, "Psychological Bulletin", no. 129(6), 946–972.
- Wagner, M., Brandt, M., 2015, *Loneliness among informal caregivers aged 50 + in Europe*, [in:] A. Börsch-Supan, T. Kneip, H. Litwin, M. Myck, G. Weber (Eds.), *Ageing in Europe – supporting policies for an inclusive society*, Berlin/Boston: Walter de Gruyter GmbH & Co.

- Wojtyna, E., Popiołek, K., 2012, *Character of the relationship with Alzheimer patient and the psychological costs of care*, "Polish Psychological Bulletin", no. 43(4), 244–252.
- Wojtyna, E., Popiołek, K., 2015, *The pain of a heart being broken: pain experience and use of analgesics by caregivers of patients with Alzheimer's disease*, "BMC Psychiatry", no. 15(176), 1–8.
- Wóycicka, I., 2009, *Model opieki w Polsce (The care model in Poland)*, [in:] I.E. Kotowska (Ed.), *Strukturalne i kulturowe uwarunkowania aktywności zawodowej kobiet w Polsce*, Warszawa: Wydawnictwo Scholar.

Subjective quality of life of informal caregivers aged 50–69 in Poland

Abstract

Providing informal care to adults, especially elderly people, may affect many aspects of caregivers' life, such as: physical and mental health, financial situation, social contacts, etc. Supporting dependent seniors is associated to a higher level of stress, burden and depression as well as higher mortality. The main purpose of this paper is to analyse the relationship between caregiving for adults and the subjective quality of life among Poles aged 50–69. We took into account not only the fact of providing care to adult people, but also its beginning, continuation and ending between waves. We assumed that subjective quality of life may be expressed by two variables: one describing life satisfaction, and the second one – loneliness. We used the panel subsample from the Generation and Gender Surveys (GGS) carried out in Poland in 2010/2011 and in 2014. We found a negative effect of stopping caregiving between waves on wellbeing of women-carers, which may be related to the loss of a close person. Moreover, providing care for a longer period of time increases loneliness, which confirms that providing support to others may lead to isolation and smaller social networks.

Keywords: elderly care, caregivers, sandwich generations, life satisfaction, loneliness, well-being, quality of life