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A R T Y K U Ł Y I R O Z P R A W Y

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SOCIAL EXCLUSION AND THE ODDS OF NEGLECT AND SELF-NEGLECT IN OLDER ADULTS — RESULTS FROM A QUANTITATIVE STUDY CONDUCTED IN LESSER POLAND AREA*

BACKGROUND AND OBJECTIVES

Social exclusion concept

Social exclusion (SE) is receiving a growing attention for the sake of its usefulness as a conceptual framework addressing various dimensions of inequalities and social disadvantage in contemporary societies. People may be excluded due to a number of reasons, for example because of poverty, race, health status or age; it's worth noting that SE is inextricably linked with stigma (Liamputtong, Rice 2021). In a consequence, people

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experiencing SE do not have the chance for full participation in the economic and social benefits of societies they live in.

Concepts of exclusion vary by sociological paradigm and even by national context and there is still a lack of clarity about the definition (Thapa, Kumar 2015). Undoubtedly, exclusion is a process of declining participation and solidarity, which at the individual level means the incapacity to participate in normatively expected social activities. Many scholars refer in their works to inability to exercise the social rights and citizenship, including the rights to the proper standards of living. In this light SE is a synonymous with deprivation of needs, which is related to poverty, and thus is an aspect of social stratification. It is emphasized that original meaning of the term SE stresses social distance, marginalization and a lack of/inadequate integration (Silver 2007). Poverty can lead to SE, but exclusion is not limited to insufficient material resources. SE is much more complex, combining economic and social deprivation (it is always related to broken relationships) and is depicted as a cumulative process of multiple disadvantages. It should be emphasized that exclusion in one dimension may increase the risk of exclusion in others, but people are excluded rather in some respects than in all possible (Silver 2007). Exclusion has different forms in various social contexts and it's hard to determine what is its most important dimension. Joblessness and income indicators are among those factors that are easy to measure, however other aspects, such as exclusion from social relations, seem to be more crucial (Gordon et al. 2000).

Discussion about SE of older adults is important not only in social science, but also in medicine due to disparities that exclusion causes in health status, quality of life and mortality patterns; SE should also be taken into account in analyses concerning detection and prevention of abuse and neglect. SE in older age is depicted as a product of structural inequalities (Podnieks 2006) accumulated during the life course, but, although well documented, the mechanisms still remains conceptually underexplored in gerontology. Exclusion in older population is usually conceptualized as a multifaceted construct composed of exclusion from material resources and basic services, social relations and civic activities (Scharf et al. 2005a). Given the importance of the multidimensionality of the phenomena, for the needs of presented analyses broad concept of SE was adopted, merging its social and economic aspects. Following the definition presented by Giddens (2009) four dimensions of exclusion were distinguished, that is:

(1) exclusion due to poverty,

(2) exclusion due to the lack of access to basic goods and amenities,

(3) exclusion from the labor market,
(4) exclusion from social relations.

According to Giddens (2009), the thesis that a lack of or limited participation on the labor market can be considered as a sign of SE should be treated with a reserve, because a part of the population is economically passive by choice. However, it should be noted that inactivity on the labor market increases the risk of SE in other areas (e.g. economic exclusion) so this indicator (economic activity) is still worth considering.

In addition to the abovementioned, there are also other forms of SE, e.g. educational or digital (Helsper 2012). Educational exclusion is a correlate of both exclusion from the labor market and economic exclusion (e.g. poverty is a factor influencing educational chances; being highly educated reduces negative effects of unemployment and increases likelihood of reemployment, etc.; Pohlan 2019). As regards to the digital exclusion, it is a problem affecting the majority of the population of Polish older adults, although the percentages vary between different sources of data. According to Public Opinion Research Centre (CBOS 2019), only 26% of people aged 65 and over use the internet, when data from nationwide PolSenior2 project (Kwiatkowska et al. 2021) show, that 56.6% of older adults experience digital exclusion; anyhow, the percentage of those excluded is growing with age of the respondents and women are excluded more often than men. In the sample analyzed in the presented study the usage of internet was much lower than in both abovementioned projects.

Social exclusion, health outcomes and mortality

The WHO has identified SE as one of the key determinants of health (Wilkinson, Marmot 2003). Systematic review of research on SE and health conducted in OECD and EU countries has shown that high SE or low social inclusion were associated with adverse mental and general health outcomes. For physical health, the evidence was inconclusive (Bergen et al. 2018), however there are some research demonstrating the relationship between SE and somatic health status (e.g. exclusion, conceptualized as a multifaceted construct, was associated with an increased prevalence of chronic and acute pain in a project conducted in the UK; Allen et al. 2020). Evidence from the pandemics demonstrate that COVID-19 disproportionately affected poorer communities and those socially excluded (Bejaković et al. 2021). Groups experiencing various forms of exclusion (e.g. immigrants, minorities) tend to sustain higher

health risk and poorer health status. Poverty is a key factor here (Galabuzi 2016), but other dimensions of exclusion (e.g. social isolation and a lack of social support) are also very powerful determinants of health status in different age groups.

The link between exclusion from social relations and health in older age was confirmed in many studies — for example, it was proved that neighborhood exclusion is negatively associated with well--being (Dahlberg, McKee 2018) and exclusion from civic activity and social contacts (together with exclusion from services) resulted in high prevalence of depressive symptoms (Hossain et al. 2022). People with lower subjective feeling of exclusion were less likely to report depression and persons excluded from social relations had poorer self-rated health (Feng 2019). Social isolation/a lack of (or insufficient) social network increased the risk of dementia (Fratiglioni et al. 2000) and modified the relationship between some measures of Alzheimer's disease pathology and the level of cognitive functioning (Bennett et al. 2006). Lack of supporting network was related to anxiety and loneliness in older adults (Litwin, Shiovitz-Ezra 2010), and loneliness is associated with depressive symptoms (Gonyea et al. 2018). It should be noted that there is a relationship between social and digital inclusion (Helsper 2012): digital exclusion reduces the chances for maintaining social contacts. Moreover the use of internet and technology is a factor moderating the relationship between SE and poor health outcomes in older age (Sacker et al. 2017).

Not only limited social network but also poor economic conditions and unequal access to resources and services affect groups' and individuals' health and well-being (Galabuzi 2016; Hossain et al. 2022). Economic deprivation and socio-economic vulnerability are strongly associated with health problems (Santana 2002; Feng et al. 2019). The linkages between social inequalities and health indicators show that poverty should be analyzed here as a complex, multidimensional issue and that deprivation, economic precariousness, unemployment, psychological strain and health problems are likely to cluster (Halleröd, Larsson 2008).

The role that social inclusion plays in shaping good quality of life in older age is also well established (e.g. Raggi et al. 2016; Tobiasz--Adamczyk et al. 2017). Some older adults are especially vulnerable to exclusion; poverty seems to be the key issue here, along with exclusion from services, community activities, social isolation and discrimination. All factors together put older adults at risk of poor quality of life (Scharf et al. 2005b).

Various forms of SE are associated with mortality (Saito et al. 2012). Empirical literature emphasizes that the risk of mortality is related negatively with income (Lefèbvre et al. 2017). When it comes to exclusion form labor market/unemployment, it does not play such a role in post-productive age (not counting the obvious fact that economic inactivity during the life course contributes to poverty at the end of life), but evidence show, that suicide mortality of older adults and labor--market exit age are inversely correlated (Yur'yev et al. 2010). A lack of participation on the labor market (analyzed as an isolated dimension of SE), contributes to the suicide rates, as suicide is higher among economically inactive/unemployed persons (Yur'yev et al. 2011).

In their multidimensional analysis of poverty and SE Halleröd and Larsson (2008) demonstrated that material deprivation is connected to numerous of welfare problems such as crowded housing, lack of political activity and civic engagement, social and psychological strain (anxiety, loneliness, sleeplessness), health issues (headache, obesity, smoking) and victimization of both violence and crime.

Neglect and self-neglect concept

Victimization of older adults is a global phenomenon, depicted in terms of worldwide epidemic (Pickering et al. 2017). Neglect of older adults is defined as "the refusal or failure to fulfil a caregiving obligation" (Wolf et al. 2002: 127). Self-neglect in turn is characterized by inattention to health and personal hygiene, usually related to inability (and/or unwillingness) to access help services (Pavlou, Lachs 2006). According to some categorizations self-neglect is classified as a type of abuse, but there is a growing body of literature that conceptualize it as an independent form of maltreatment (Rathbone-McCuan 2014).

Analyzing risk factors of abuse and neglect of older adults, Storey (2020) distinguished factors related to the victim and to the perpetrator of violence. Among victim vulnerability factors there are problems with physical and/or mental health, substance abuse, social isolation and a lack of support. Self-neglect in turn is associated with dementia, substance abuse, depression and other mental health problems (Dong et al. 2013). Among risk factors there is also individual's socio--demographic characteristics: age (over 80 years), gender, disability, cognitive dysfunctions, depression, stress, financial dependency, history of violence, etc. (Halphen et al. 2009). Some of these aspects are also related to the mechanisms and dimensions of SE.

Polish older adults — characteristics in the context of factors contributing to social exclusion

As noted by Błędowski, although the opinion about low income in older age is quite common, it is not entirely true, as the income of older adults — including the amount of social benefits they get — varies significantly with regard to different factors (such as marital status, household size, etc.) (Błędowski 2021a: 851). His analyses of data gathered within PolSenior2 project[1] show that the main source of income of the studied population was, unsurprisingly, retirement pension, that was received by nearly nine out of ten respondents; 11% had additional income due to economic activity. The vast majority of older adults had worked professionally during their lives, although there were significant differences depending on gender and age (Szukalski 2021). During retirement period, men have higher incomes on average than women, which is an obvious consequence of the lack of equality between men and women on the labor market; differences in the pension benefits between genders are a result of unequal wages and the earlier statutory retirement age of women. Three out of four men and 2/3 of women interviewed within PolSenior2 project declared that their incomes allow them to meet all their most important needs[2]. However, as emphasized by Błędowski (2021a), this conclusion should be treated with a great caution, because it is likely that older adults suppress needs that simply cannot be met.

This cautious approach to the interpretation of the respondents' self-assessments is also supported by the fact that, although only 7.2% of older adults (including 8.8% of women and 5.7% of men) do not have enough income to cover any larger or unplanned expenses, as many as

[1] PolSenior2 was a nationwide study focused on health status, socio-economic situation and quality of life of older Poles, carried out as part of the National Health Program for 2016–2020. As a part of the project, a representative group of almost 6,000 Poles, aged 60–106, was examined. The study methodology was based on questionnaire survey and a measurements of selected health parameters (see: PolSenior2 website). The first wave of the project, i.e. PolSenior1, was conducted a decade earlier.

[2] As regards to self-assessment of the material situation of the respondents in PolSenior2 project: as much as 18,8% of them (22,3% of men and 15,5% of women) can afford everything they need. The rest of the sample have enough money for everything they need only because they live sparingly (54,2%) or very sparingly (19,7%) in order to save up for bigger purchases. The poorest of the respondents have money only for the cheapest food and clothes (5,1%) or can afford only for food (and not for clothes) (1,5%), whereas 0,6% of all respondents have no money for even the cheapest food and clothes.

10.9% of the respondents (13.5% of women compared to 8.1% of men) admitted that they had run out of money to buy medicines in the year preceding the interview — this clearly suggests that the respondents' actual financial situation may be even worse than declared. The lack of money for medicines refers to women more often than men (13.5% compared to 8.1%). It is important to note that every sixth person in such a situation decided not to buy prescribed medicaments (Błędowski 2021a).

Analysing the older adults' material situation Błędowski (2021a) also notes that the equipment of older adults' homes with various types of devices (i.e. cell phone, smartphone, laptop, but also car, dishwasher, washing machine, etc.) and durable goods generally had improved over the last decade (i.e. in comparison with the data derived from PolSenior1). On the other hand, analysis of the availability of the basic amenities has shown that, although most older adults had access to running hot and cold water, as well as to toilet, then the percentage of people living in places with such basic installations is decreasing with age of the respondents. Also the percentage of people not having central heating and using a coal stove increased with age (in the older age group as many as every fourth person had this kind of heating). However, the assessment of the condition of the buildings where the respondents lived made by the interviewers was in over 90% of cases good or very good (Szweda-Lewandowska 2021).

Data regarding poverty in the population of Polish older adults provided by GUS[3] indicate that in Poland in 2017–2020 the extreme poverty (determined on the basis of the subsistence minimum), relative poverty (GUS set its threshold at 50% of the amount spent monthly by households in Poland) as well as statutory poverty (this indicator reflects the percentage of people who are eligible to apply for financial benefits from the social welfare) rates remained at a similar level: the scale of extreme poverty among seniors ranged from 3.6% in 2017 to 4.4% in 2020 and 3.4% in 2021 (relative poverty — 2017: 11%, 2020: 10%; statutory poverty — 2017: 6.4%, 2020: 6%). As noted by GUS, in 2022 3.9% of people age 65 and over lived in extreme poverty (or 4,2%[4]), 9.8% in relative poverty, and 4.5% in statutory poverty. In 2023, due to growing inflation, 5.7% of people aged 65 and over had been affected by

[3] All data presented in this paragraph and the paragraph below are based on reports by GUS; see: GUS website.

[4] The range of extreme poverty among people 65 and older constituted for 3,9% in 2022 (according to the GUS report published in 2023) or 4,2% (according to the GUS report published in 2024).

extreme poverty (relative poverty was stable: 11%, and statutory poverty lower: 2.7%).

Another measure used by GUS is the sphere of deficiency (also referred to as the sphere of low consumption). Deficiency is based on different standards of the level of satisfaction of needs. The basket includes not only goods and services that are vital for satisfying existential needs (as in the case of the subsistence minimum), but also goods and services necessary for performing work, maintaining family ties and social contacts, and for modest participation in culture and recreation. In 2023 its scope amounted to 46%, and that was the highest recorded value of the deficiency sphere in the period 2010–2023. At the same time the number of persons receiving so called „starvation pension" (i.e. pension that is lower than the national minimum) had grown from 166,6 thousands in 2017 to 365,3 thousands in 2022.

Also UE has its indicator of the risk of poverty or SE — this is the percentage of people with incomes lower than 60% of the median in a given country, which results in severe material deprivation. Data for people 65 plus living in Poland demonstrate that in 2017 as much as 14% of this population was at risk of poverty/SE, whereas in 2022 this percentage raised to 16 (data for 2023 are unavailable at the date; see: Eurostat website). All the cited data indicate a growing risk of poverty and therefore increasing risk of SE among the Polish older adults.

As regards to social network of older adults, the image of family life and personal situation of the older Poles compared to that obtained in the PolSenior1 research project has not changed significantly within decade (Szatur-Jaworska 2021). The marital status of people aged 60 and over was differentiated by gender: 82% of men lived in marriages comparing with 51% of women. Every fifth older person (20%) lived alone — more often women (26.6%) than men (10.9%). 92% of older people had at least one living child and it was the person(s) that seniors most often maintained regular contact with; adult children and their spouses also constituted the core of the social support network built around the older person.

As commonly known, need for help increases with age, with a significant increase in the percentage of people who definitely need support observed in people aged 80 and over; older women require help more often than men. Among older adults who needed assistance, 80% required it constantly or every day. In 90% of cases, help was provided by family, but informal help by neighbors/friends was also of great importance (Błędowski 2021b).

Although the most seniors received help as often as they needed (Błędowski 2021b), 8.5% of the older respondents in PolSenior2 project answered positively to the question: "Do you feel neglected by your family?" (9.3% of women and 7.3% of men). It should be noted that with age the frequency of positive answers to the question on neglect increased. The highest percentage of seniors reporting neglect from their family was recorded in the age group of 85–89 (as much as 16.1%). It should be also emphasized that the higher the older adults' education level, the lower the risk of neglect from their family (Halicka et al. 2021). As regards to the evaluation by the interviewer, 94% of them stated, that their respondents were well-groomed; also in terms of cleanliness of older adults' apartments, the assessments were mostly positive (Szweda-Lewandowska 2021).

QUANTITATIVE STUDY CONDUCTED IN LESSER POLAND AREA

Aim of the study

The aim of the presented analyses was to find the answer to the following research question: what is the relationship between multidimensional SE and the risk of neglect and self-neglect in older adults?

The following hypotheses were tested:

H1: Exclusion due to objective poverty increases the odds of (a) neglect, (b) self-neglect.

H2: Exclusion due to subjective poverty increases the odds of (a) neglect, (b) self-neglect.

H3: Exclusion due to the lack of access to basic goods and amenities increases the odds of (a) neglect, (b) self-neglect.

H4: Exclusion from the labor market (during the life course) increases the odds of (a) neglect, (b) self-neglect.

H5: Exclusion from social relations (social isolation, insufficient social network) increases the odds of (a) neglect, (b) self-neglect.

Research design and methods

The cross-sectional study entitled "Elder neglect and self-neglect — challenges for formal and informal caregivers and medical and social professional care system" was conducted in Poland in 2017[5]. Analyses

[5] Detailed study design was described elsewhere (Zawisza et al. 2020).

that are presented in this paper were performed on the sample of 1634 community-dwelling individuals aged 65 and over, randomly selected from among the general population; response rate was 69.6%. Face to face computer-assisted personal interviews (CAPI) were conducted at individuals' homes by trained interviewers, who not only interviewed study participants using structured questionnaires, but also evaluated physical appearance of respondents and standards of living conditions. The tool was therefore divided into two parts:

(1) Questionnaire for interview, including, among others, sections about general health status, mental health and depression (*Global Deterioration Scale* — GDS), functional status (*Activity of Daily Living Scale* — ADL, *Instrumental Activities of Daily Living Scale* — IADL), social network/social support (COURAGE-SNI) and exposure to violence/abuse, neglect and self-neglect.

(2) Characteristic of the respondent by the interviewer, including objective signs of neglect (like dirty body and clothes, signs of dehydration and malnutrition, etc.), assessment of respondent's behavior (e.g. low functional capacity, anxiety) and characteristics of the respondent's flat/house (cleanliness, access to basic amenities in the house, etc.).

Analyses presented in this paper are focused on the relationship between the various dimensions of SE and neglect/self-neglect in older adults.

Measurement of the variables

Social exclusion

Following the multi-dimensional concept of the studied phenomenon by Giddens (2009), several types of SE were analyzed:

(1) Exclusion due to poverty was measured in an objective[6] and subjective[7] way.

(2) Exclusion due to the lack of access to basic goods and amenities available to other members of the population was based on the

[6] Objective poverty was assessed on the basis of the amount of money that respondent has monthly (income from all sources), classified into three categories: 1. income above the minimum pension in Poland (for 2017), 2. poverty: income below/up to the minimum pension, but above the subsistence minimum; 3. extreme poverty: income below to/around the subsistence minimum.

[7] Subjective poverty was classified on the basis of answers to the following question: Do you have enough money to satisfy your needs? (yes/no).

interviewer's assessment of housing conditions, including a lack of: water, heating, electricity and gas, bathroom and/or toilet[8].

(3) Exclusion from the labor market was evaluated on the basis of the length of work experience through the life course (question on the number of years of work activity)[9].

(4) Exclusion from social relations — evaluation was based on the Courage Social Network Index. The instrument is composed of questions on social ties, frequency of direct contact and support received from others[10]. The tool is described in details elsewhere (Zawisza et al. 2014).

Neglect and self-neglect

For the needs of this study neglect is defined as the failure to fulfill caregiving obligations (see: Krug et al. 2002: 127), without taking into account whether it was conscious and intentional. Self-neglect is understood as inattention to health and personal hygiene, that may be related to inability and/or unwillingness to search for help and support (Pavlou, Lachs 2006). A wide variety of symptoms were taken into account in the data-collection phase of this study. Neglect and self-neglect were assessed on the basis of Self-Reported Neglect Scale (SRNS) and Self--Reported Self-Neglect Scale (SRSNS), i.e. tools that were developed and validated within the presented research project. SRNS consists of questions about different groups of deprived needs, including basic and physiological, as well as deprivation of psychological needs. SRSNS is a tool assessing negligence in meeting own needs[11]. The detailed description of the scales construction and the analyses of their validity are presented elsewhere (Zawisza et al. 2020, 2021).

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[8] The index was created as following: electricity and gas (0 — yes, 1 — a lack of), bathroom (0 — yes, 1 — a lack of), toilet (0 — yes, 1 — a lack of), water (0 — yes, in the building, 1 — a lack of or outside the building), heating (0 — yes, 1 — a lack of) (total values — from 0 to 5).

[9] Work experience was categorized to the following categories: up to 20 years of experience, 21–30 years, over 30 years. Less than 3% of the total sample (i.e. 43 persons) had never been employed. Current status of employment was not taken into account, as vast majority of the respondents (nearly 94% of the total sample) were economically inactive.

[10] Presented categories (up to 5%, 6–10%, 11–15%, 16–20%, over 20%) represent groups distinguished on the basis of percentiles (5th, 10th, 15th and 20th). The higher percentile — the more extensive social network.

[11] On the basis of the signs of neglect (SRNS) and self-neglect (SRSNS) two dichotomous variables were created, where "zero" meant no occurrence of the signs of neglect (or the signs of self-neglect) and "one" means the occurrence of the signs of neglect (or the signs of self-neglect).

Statistical analyses

Data was weighted in order to more accurately reflect the studied population. Weighting adjustment was done with regard to gender (due to over-representation of women in the sample) and age (for the procedure see: Tobiasz-Adamczyk et al. 2019a).

At the beginning the comparison of socio-demographic as well as health-related characteristics and SE types by the signs of neglect and the signs of self-neglect was done using chi-square test or Mann-Whitney U test. Then one by one all SE variables (i.e. subjective poverty, objective poverty, etc.) were analyzed as determinants of neglect or self-neglect (dependent variables) in logistic regression models. Each model was adjusted for all covariates, i.e. age, gender, marital status/partnership, education, functional status (ADL, IADL), depression (GDS and self--reported), smoking and alcohol addiction (self-reported).

The analyses were done using IBM SPSS Statistics v. 26.0.0.1. The values of $p < 0.05$ were considered as statistically significant.

Results

Socio-demographic analysis of the sample has shown that majority of the studied population were females. Nearly 65% of the respondents were people aged 65–79 years. Vast majority of the respondents (72%) had at most a vocational education. More than half of the sample (52%) were married or in informal relations. Most of the respondents (89%) reported having at least one child. About 54% of the participants lived in the countryside. More detailed comparison of socio-demographic as well as health-related characteristics and SE types by the signs of neglect and the signs of self-neglect is presented in the table 1.

As described above, in order to test the hypotheses a series of multivariate logistic regression models were analyzed, with the signs of neglect and self-neglect as dependent variables and types of SE as independent variables, with standardization for socio-demographic characteristics, functional status, depression, smoking and alcohol addiction. Tables 2, 3, 4 present determinants of neglect/self-neglect in the studied population. Only those models are presented where the analyzed types of SE were significantly related to neglect and/or self-neglect[12].

[12] Tables 1, 2, 3, 4 see on the pages 132–136.

From among all analyzed dimensions of SE only subjective poverty and poor social network were significantly related to the odds of neglect. Not having enough money for satisfying own needs (self-reported; $p = 0.005$) and having the smaller social network ($p < 0.001$) increased the odds of being neglected. The latter was also related to self-neglect ($p = 0.046$), but here, surprisingly, having the smaller social network (up to 5%) decreased the odds of self-neglect. Objective poverty also increased the odds of self-neglect ($p = 0.029$). Exclusion from the labor market and a lack of access to basic goods/amenities were not related to the odds of neglect/self-neglect in the studied population. To sum up, only some of the hypotheses, i.e. H1b, H2a and H5ab were confirmed.

From among other analyzed factors, depression (GDS) was the most strongly related to the odds of neglect/self-neglects. It was observed in each of the analyzed models (including those not presented here). Also more advanced age and not having children were significant in all models with self-neglect as a dependent variable. Among factors unrelated to the odds of neglect/self-neglect (all models) were: gender, the level of education, functional status and self-reported depression.

Apart from subjective poverty and depression (GDS) ($p < 0.001$) also not having a partner ($p = 0.012$) was related to the odds of neglect (table 3). Objective poverty was related to the odds of self-neglect (table 2), as were: more advanced age ($p = 0.008$), not having children (in this case the odds were lower; $p = 0.013$), being depressed (GDS; $p < 0.001$) and addicted to alcohol ($p = 0.039$).

In both models with social network as dependent variable, network size was related to the odds of neglect/self-neglect (table 4). Signs of neglect were also associated with not having partner ($p = 0.02$) and being depressed ($p < 0.001$). Self-neglect in turn was related to advanced age ($p = 0.008$), not having children ($p = 0.002$) and being depressed ($p < 0.001$).

Discussion

As emphasized above, SE is related to variety of welfare problems (Halleröd, Larsson 2008) and to marginalization, deprivation and violence experienced by older adults. Additionally, loosing of power and status during the ageing process makes it difficult to access services, seek information, adequately respond to neglect, and protect ourselves against mistreatment, exclusion and discrimination (Podnieks 2006).

Table 1

Comparison of respondents' characteristics and SE types by the signs of neglect/self-neglect

	No signs of neglect		Signs of neglect		*p* unweighted (*p* weighted)	No signs of self-neglect		Signs of self-neglect		*p* unweighted (*p* weighted)
	N (%)	%W	N (%)	%W		N(%)	%W	N(%)	%W	
Gender										
female	846 (57.4)	60.4	84 (64.1)	72.3	0.135[1]	689 (57.2)	60.7	254 (60.3)	65.3	0.259[1]
male	628 (42.6)	39.6	47 (35.9)	27.7	(0.006[1])	516 (42.8)	39.3	167 (39.7)	34.7	(0.091[1])
Age										
65–79	966 (65.5)	69.6	76 (58.0)	59.0	0.084[1]	818 (67.9)	72.1	236 (56.1)	59.6	<0.001[1]
80+	508 (34.5)	30.4	55 (42.0)	41.0	(0.008[1])	387 (32.1)	27.9	185 (43.9)	40.4	(<0.001[1])
Marriage/partnership										
yes	797 (54.1)	54.2	30 (22.9)	28.5	<0.001[1]	658 (54.6)	54.0	178 (42.3)	48.1	<0.001[1]
no	677 (45.9)	45.8	101 (77.1)	71.5	(<0.001[1])	547 (45.4)	46.0	243 (57.7)	51.9	(0.035[1])
Children										
yes	1331 (90.5)	89.3	102 (77.9)	79.1	<0.001[1]	1070 (89.0)	87.3	382 (90.7)	92.1	0.370[1]
no	140 (9.5)	10.7	29 (22.1)	20.9	(<0.001[1])	132 (11.0)	12.7	39 (9.3)	7.9	(0.007[1])
Level of education										
primary or lower	605 (41.0)	39.0	66 (50.4)	48.3		478 (39.7)	38.1	200 (47.6)	42.7	
vocational	430 (29.2)	30.6	42 (32.1)	36.0	0.024[1]	362 (30.0)	29.9	117 (27.9)	34.0	0.014[1]
high school	274 (18.6)	18.2	16 (12.2)	10.2	(0.003[1])	220 (18.3)	18.1	70 (16.7)	13.9	(0.007[1])
university degree	165 (11.2)	12.2	7 (5.3)	5.4		145 (12.0)	13.9	33 (7.9)	9.4	
Place of living										
countryside	818 (55.5)	51.7	62 (47.3)	42.1	0.088[1]	640 (53.1)	48.8	245 (58.2)	53.3	0.081[1]
city	656 (44.5)	48.3	69 (52.7)	57.9	(0.035[1])	565 (46.9)	51.2	176 (41.8)	46.7	(0.116[1])
Labor market										
up to 20 years	110 (7.6)	8.7	14 (11.3)	11.3		84 (7.1)	7.8	39 (9.4)	11.3	
21–30 years	336 (23.1)	22.9	25 (20.2)	22.7	0.293[1] (0.525[1])	254 (21.5)	21.4	113 (27.2)	26.3	0.010[1] (0.004[1])
over 31 years	1006 (69.3)	68.3	85 (68.5)	66.0		843 (71.4)	70.8	263 (63.4)	62.4	
Lack of access to basic goods and amenities										
0	47 (4.4)	4.0	6 (7.5)	4.1		35 (4.1)	3.5	19 (6.4)	5.5	
1	977 (91.2)	91.5	64 (80.0)	83.4	0.004[3]	795 (92.2)	92.5	254 (84.9)	86.6	0.002[1]
2	42 (3.9)	3.9	8 (10.0)	10.3	(0.013[3])	28 (3.2)	3.5	22 (7.4)	6.6	(0.020[1])
3	5 (0.5)	0.6	2 (2.5)	2.2		4 (0.5)	0.6	4 (1.3)	1.4	

Table 1 cont.

		No signs of neglect		Signs of neglect		*p* unweighted (*p* weighted)	No signs of self-neglect		Signs of self-neglect		*p* unweighted (*p* weighted)
		N (%)	%W	N (%)	%W		N(%)	%W	N(%)	%W	
Poverty objective											
extreme poverty		14 (1.1)	0.8	1 (0.9)	0.9	0.128[3] (0.568[3])	9 (0.9)	0.6	6 (1.6)	1.2	0.005[1] (0.002[1])
poverty		47 (3.9)	4.1	9 (7.8)	5.7		31 (3.2)	3.1	25 (6.8)	7.0	
> minimum pension		1159 (95.0)	95.1	106 (91.4)	93.4		940 (95.9)	96.3	334 (91.5)	91.8	
Poverty subjective											
no		1195 (81.2)	82.1	78 (59.5)	55.3	<0.001[1] (<0.001[1])	992 (82.4)	83.4	300 (71.8)	70.9	<0.001[1] (<0.001[1])
yes		276 (18.8)	17.9	53 (40.5)	44.7		212 (17.6)	16.6	118 (28.2)	29.1	
Social network											
up to 5%		9 (0.7)	0.3	10 (8.7)	11.6	<0.001[3] (<0.001[3])	17 (1.6)	1.7	2 (0.5)	0.4	0.134[3] (0.016[3])
6–10%		7 (0.5)	0.8	1 (0.9)	0.5		5 (0.5)	0.9	3 (0.8)	0.3	
11–15%		5 (0.4)	0.3	2 (1.7)	2.3		4 (0.4)	0.3	4 (1.0)	1.2	
16–20%		7 (0.5)	0.5	0 (0.0)	0.0		4 (0.4)	0.3	3 (0.8)	0.8	
over 20%		1281 (97.9)	98.1	102 (88.7)	85.6		1029 (97.2)	96.8	374 (96.9)	97.3	
Depression (self-report)											
no		1414 (96.1)	96.2	117 (89.3)	90.8	<0.001[1] (0.004[1])	1173 (97.3)	97.5	382 (90.7)	91.1	<0.001[1] (<0.001[1])
yes		58 (3.9)	3.8	14 (10.7)	9.2		32 (2.7)	2.5	39 (9.3)	8.9	
Smoking											
no		1347 (91.4)	92.3	114 (87.0)	89.2	0.094[1] (0.163[1])	1111 (92.2)	92.8	370 (87.9)	90.2	0.008[1] (0.079[1])
yes		127 (8.6)	7.7	17 (13.0)	10.8		94 (7.8)	7.2	51 (12.1)	9.8	
Alcohol addiction											
no		1463 (99.3)	99.6	128 (97.7)	97.8	0.083[3] (0.040[3])	1200 (99.7)	99.8	412 (97.9)	98.6	0.001[3] (0.012[3])
yes		10 (0.7)	0.4	3 (2.3)	2.2		4 (0.3)	0.2	9 (2.1)	1.4	
ADL	UW	6.00 (6.00; 6.00)		6.00 (5.00; 6.00)		0.021[2] (<0.001[2])	6.00 (6.00; 6.00)		6.00 (5.00, 6.00)		<0.001[2] (<0.001[2])
	W	6.00 (6.00; 6.00)		6.00 (5.00; 6.00)			6.00 (6.00; 6.00)		6.00 (5.00, 6.00)		
IADL	UW	16.00 (13.00; 6.00)		15.00 (10.00; 16.00)		0.006[2] (0.006[2])	16.00 (14.00; 16.00)		14.00 (10.00, 16.00)		<0.001[2] (<0.001[2])
	W	16.00 (13.00; 6.00)		16.00 (11.00; 16.00)			16.00 (14.00; 16.00)		15.00 (10.00, 16.00)		
GDS	UW	2.00 (1.00; 5.00)		8.00 (3.00; 9.00)		<0.001[2] (<0.001[2])	2.00 (1.00; 4.00)		5.00 (2.00; 9.00)		<0.001[2] (<0.001[2])
	W	2.00 (1.00; 5.00)		8.00 (3.00; 9.00)			2.00 (1.00; 4.00)		5.00 (2.00; 9.00)		

[1]Pearson chi-square test; [2]Mann-Whitney U test; [3]Fisher exact test; UW — unweighted; W — weighted

Table 2

Poverty (objective) as the determinant of neglect/self-neglect

	Signs of neglect			Signs of self-neglect		
	exp(B)	confidence interval	*p*	exp(B)	confidence interval	*p*
POVERTY (objective)						
extreme poverty	0.417	(0.047; 3.687)	0.432	0.986	(0.249; 3.906)	0.984
poverty	1.133	(0.465; 2.760)	0.783	**1.932***	**(1.070; 3.488)**	**0.029**
> minimum pension	1.000			1.000		
AGE	**1.656***	**(1.048; 2.618)**	**0.031**	**1.512***	**(1.113; 2.055)**	**0.008**
GENDER	0.730	(0.449; 1.185)	0.203	0.957	(0.714; 1.283)	0.769
MARRIAGE OR PARTNERSHIP						
no	1.563	(0.981; 2.492)	0.060	0.936	(0.695; 1.259)	0.661
yes	1.000			1.000		
CHIDREN						
no	0.920	(0.486; 1.739)	0.796	**0.533***	**(0.324; 0.878)**	**0.013**
yes	1.000			1.000		
LEVEL OF EDUCATION						
primary school or lower	1.252	(0.526; 2.978)	0.612	0.926	(0.560; 1.530)	0.764
vocational education	1.795	(0.776; 4.148)	0.171	1.400	(0.868; 2.258)	0.168
high school	1.075	(0.410; 2.816)	0.883	1.373	(0.812; 2.321)	0.238
university degree or higher	1.000			1.000		
PLACE OF LIVING						
countryside	0.779	(0.511; 1.188)	0.247	1.074	(0.815; 1.415)	0.612
city	1.000			1.000		
ADL	1.126	(0.896; 1.413)	0.309	1.017	(0.872; 1.188)	0.826
IADL	1.022	(0.957; 1.091)	0.512	0.986	(0.944; 1.030)	0.535
GDS	**1.181***	**(1.116; 1.250)**	**<0.001**	**1.196***	**(1.147; 1.248)**	**<0.001**
DEPRESSION (SELF-REPORTED)						
yes	1.278	(0.608; 2.689)	0.517	1.405	(0.778; 2.538)	0.260
no	1.000			1.000		
SMOKING						
yes	1.902	(0.986; 3.670)	0.055	1.541	(0.974; 2.438)	0.065
no	1.000			1.000		
ALCOHOL ADDICTION						
yes	**6.542***	**(1.181; 36.245)**	**0.032**	**10.358***	**(1.119; 95.858)**	**0.039**
no	1.000			1.000		

Bold values (with asterisks) denote statistical significance at the $p < 0.05$ level

Table 3

Poverty (subjective) as the determinant of neglect/self-neglect

	Signs of neglect			Signs of self-neglect		
	exp(B)	confidence interval	*p*	exp(B)	confidence interval	*p*
POVERTY (subjective)						
yes	**1.825***	**(1.202; 2.772)**	**0.005**	1.287	(0.941; 1.760)	0.115
no	1.000			1.000		
AGE	1.529	(0.996; 2.346)	0.052	**1.527***	**(1.145; 2.036)**	**0.004**
GENDER	0.889	(0.565; 1.398)	0.610	0.889	(0.674; 1.172)	0.403
MARRIAGE/PARTNERSHIP						
no	**1.781***	**(1.135; 2.795)**	**0.012**	0.893	(0.675; 1.181)	0.427
yes	1.000			1.000		1.000
CHIDREN						
no	1.008	(0.597; 1.701)	0.977	**0.407***	**(0.258; 0.642)**	**<0.001**
yes	1.000			1.000		
LEVEL OF EDUCATION						
primary school or lower	1.217	(0.528; 2.803)	0.645	0.740	(0.471; 1.164)	0.192
vocational education	1.570	(0.696; 3.538)	0.277	1.086	(0.707; 1.668)	0.705
high school	1.000	(0.403; 2.485)	1.000	0.914	(0.571; 1.464)	0.709
university degree or higher	1.000			1.000		
PLACE OF LIVING						
countryside	0.858	(0.572; 1.287)	0.458	**1.304***	**(1.002; 1.696)**	**0.048**
city	1.000			1.000		
ADL	1.092	(0.882; 1.352)	0.420	1.056	(0.914; 1.220)	0.462
IADL	1.044	(0.979; 1.112)	0.190	0.981	(0.941; 1.022)	0.360
GDS	**1.179***	**(1.116; 1.246)**	**<0.001**	**1.187***	**(1.139; 1.236)**	**<0.001**
DEPRESSION (SELF-REPORTED)						
yes	1.137	(0.551; 2.345)	0.729	1.549	(0.886; 2.709)	0.125
no	1.000			1.000		
SMOKING						
yes	1.566	(0.824; 2.978)	0.171	**1.549***	**(1.002; 2.396)**	**0.049**
no	1.000			1.000		
ALCOHOL ADDICTION						
yes	4.019	(0.788; 20.508)	0.094	4.759	(0.985; 22.992)	0.052
no	1.000			1.000		

Bold values (with asterisks) denote statistical significance at the $p < 0.05$ level

Table 4

Exclusion from social relations (social network) as the determinant of neglect/self-neglect

	Signs of neglect			Signs of self-neglect		
	exp(B)	confidence interval	*p*	exp(B)	confidence interval	*p*
SOCIAL NETWORK						
up to 5%	**19.279***	**(5.634; 65.974)**	**<0.001**	**0.177***	**(0.033; 0.967)**	**0.046**
6–10%	0.396	(0.027; 5.721)	0.497	0.232	(0.027; 2.029)	0.187
11–15%	2.490	(0.464; 13.351)	0.287	2.261	(0.430; 11.876)	0.335
16–20%	<0.001	—	0.999	1.905	(0.335; 10.854)	0.468
over 20%	1.000			1.000		
AGE	1.484	(0.938; 2.348)	0.092	**1.504***	**(1.113; 2.033)**	**0.008**
GENDER	0.725	(0.444; 1.185)	0.200	0.949	(0.709; 1.270)	0.726
MARRIAGE/PARTNERSHIP						
no	**1.758***	**(1.094; 2.826)**	**0.020**	0.897	(0.669; 1.204)	0.470
yes	1.000			1.000		
CHIDREN						
no	0.676	(0.345; 1.322)	0.253	**0.445***	**(0.269; 0.736)**	**0.002**
yes	1.000			1.000		
LEVEL OF EDUCATION						
primary school or lower	1.017	(0.425; 2.436)	0.969	0.757	(0.469; 1.224)	0.256
vocational education	1.681	(0.731; 3.864)	0.222	1.180	(0.753; 1.849)	0.471
high school	0.973	(0.378; 2.505)	0.955	0.927	(0.563; 1.525)	0.764
university degree or higher	1.000			1.000		
PLACE OF LIVING						
countryside	0.911	(0.592; 1.400)	0.670	1.290	(0.978; 1.701)	0.071
city	1.000			1.000		
ADL	1.111	(0.884; 1.396)	0.365	1.051	(0.903; 1.224)	0.521
IADL	1.031	(0.963; 1.103)	0.384	0.997	(0.954; 1.043)	0.903
GDS	**1.180***	**(1.115; 1.250)**	**<0.001**	**1.211***	**1.162; 1.262)**	**<0.001**
DEPRESSION (SELF-REPORTED)						
yes	1.364	(0.653; 2.849)	0.409	1.665	(0.930; 2.982)	0.086
no	1.000			1.000		
SMOKING						
yes	1.796	(0.912; 3.538)	0.091	1.507	(0.953; 2.383)	0.079
no	1.000			1.000		
ALCOHOL ADDICTION						
yes	4.468	(0.862; 23.164)	0.075	4.485	(0.922; 21.806)	0.063
no	1.000			1.000		

Bold values (with asterisks) denote statistical significance at the $p < 0.05$ level

Both neglect and self-neglect are related to various psychosocial risk factors, including exclusion from social relations and economic deprivation. Performed analyses clearly demonstrate that exclusion due to objective/subjective poverty increases the odds of neglect/self-neglect. Comparison of those results with the findings from other studies revealed that our results are similar to the observations by other researchers. Due to the number of research, low or modest financial resources as well as income dependency of older adults are among risk factors of neglect (Burnes et al. 2015). Persons with low income/fever economic resources are also more likely to experience self-neglect (Wang et al. 2019). However some research suggest that self-neglect can affects people across various social strata (Dong 2017; Mardan et al. 2014). Lower levels of income is associated with other risk factors of neglect/self-neglect, such as very advanced age, low level of education (Halicka i in. 2021) and the familial status.

Presented analyses did not reveal any significant relationships between exclusion from the labor market and exclusion due to the lack of access to basic goods/amenities and neglect/self-neglect. Undoubtedly, unemployment and a lack of access to goods are correlates of material deprivation. In this study the percentage of persons unemployed during the whole life course was very low (less than 3%) and the category with the shorter work experience was the "up to 20 years" group. Perhaps if the percentage of the people excluded from the labor market for the most (or the whole) of their professional lives was greater, analyzes would have demonstrated the impact of this dimension of SE on neglect/self-neglect.

Discussed analyses demonstrated that exclusion from social relationships was related to the odds of neglect/self-neglect in older population. These findings are coherent with outcomes of other research. There is a large body of evidence showing that neglect/self-neglect are associated with social relations (e.g. Garre-Olmo et al. 2009; Mosqueda, Dong 2011; Tobiasz-Adamczyk et al. 2019b; Zawisza, Tobiasz-Adamczyk 2019). On one hand neglect — as a form of mistreatment — influences emotional and social life of older adults (Park 2014), and on the other — loneliness is a consequence of not having (or having poor) social network, which may lead to neglect and is cited among its risk factors (Choi, Mayer 2000). Studies confirm that victims of neglect had lower levels of social support in comparison with others (i.e. person not experiencing the negligence of care) (Fulmer et al. 2005). Thus social isolation and its consequences are both a cause and a result of neglect (Elsherbiny, Maamari 2018) and self-neglect (Day et al. 2011).

As demonstrated in Spanish population-based study (Garre-Olmo et al. 2009), conducted on the sample of inhabitants aged 75 and over, participants who did not have a person they trusted were more likely to experience neglect. Interestingly, in the same study suspected neglect was also associated with living with others: a higher percentage of neglected persons was observed among participants living with other family members than in those living with a partner and other family members at the same time, those living only with a partner and those living alone, which may be due to the fact that spouse is the most important source of social support. According to the results shown in the presented paper, having the smaller social network decreased the odds of self-neglect which may be related to the fact, that not solely existence of social network, but also its composition is important. Moreover, not having a partner increased the odds of neglect in two of the discussed models, what is consistent with the findings form the Spanish study.

Undoubtedly social isolation and a lack of social support are significant risk factors of self-neglect as its incidents often take place in older adults living alone (Rathbone-McCuan 2014). On the other hand study examining the role of social isolation of older adults in recidivism of self-neglect revealed that there is no significant relationship between the variables under study. Also mental health concerns were unrelated, whereas substance abuse was significantly associated with self-neglect recidivism (Spensley 2008). Anyhow, social network (with the family in the center) is the main source of personal care (Błędowski 2021b) and thus a lack of network support combined with the reduced independence may expose older adults to neglect/self-neglect. Greater levels of social support in turn can minimize the risk of depression what is crucial giving the importance to the fact that poor mental health is strongly related to neglect/self-neglect in the population of older adults (Aylaz et al. 2020).

Implications

Poverty as well as the exclusion from social relations are among the most important factors contributing to the odds of neglect and self--neglect of older adults, thus both of these variables require more in--depth analyses, especially in the light of the fact, that social and financial resources are likely to shrink in the later periods of life. Characteristics of the economic situation of older adults (see: introductory section of this paper) indicate a growing range of poverty among the older Poles and therefore rising odds of SE and — as a consequence — increased

risk of neglect and self-neglect in this population. It's worth noting that data about subjective (i.e. based on self-assessment) poverty in the older age should be treated with a caution, because, as emphasized by Błędowski (2021a), there is probability that older adults suppress needs that cannot be met — thus subjective poverty measure does not reflect the real scope of the problem. Therefore objective poverty is more reliable measure than subjective poverty. The linkages between social inequalities and health indicators show that poverty should be analyzed as a complex phenomenon and that deprivation, economic precariousness, psychological strain and health problems are likely to cluster (Halleröd, Larsson 2008). Analyzing social network in the context of neglect and self--neglect researchers should in turn keep in mind that not solely existence of social network, but also its composition is important.

Neglect/self-neglect of older adults are serious public health and social problems that are still difficult to recognize and diagnose. It's crucial to search for and analyze determinants as well as risk factors of neglect/self-neglect in order to improve detection and to counteract them effectively. Given the importance of severity of consequences of SE, more analyses of the relationships between exclusion and other social problems (including neglect) is needed. It may be helpful not only for the purpose of identification of the vulnerable, socially isolated groups but also for tailoring interventions to help older adults who are deprived of adequate care.

Strengths and limitations

Presented analyses have several important strengths. First of all the study was focused mainly on neglect/self-neglect, conceptualized and studied as separate phenomena, not as forms of abuse. Research on neglect/self-neglect in Poland is very scarce, and the discussed study was the first complex analysis of these phenomena in the Polish population, focused solely on the negligence of care. Secondly, strengths of the project lies in the methodological approach. Both original tools created within this study and used for gathering data on neglect/self-neglect (SRNS, SRSNS) have good psychometric properties (Zawisza et al. 2020). Research was performed on a random sample and, regardless of the fact that both neglect and self-neglect are taboo topics, the response rate was high. In this analyses broad concept of SE was adapted. To the authors' best knowledge neglect/self-neglect haven't yet been studied in Poland in relation to the SE of older adults.

This study has also some limitations. First of all, analyses are based on cross-sectional research that not allows to determine the causal relationships between the variables under study. Secondly, it should be taken into account that social and cultural norms influence the way that neglect/self-neglect are perceived. Moreover, there are different norms and standards (e.g. hygiene or cleanliness) in various social milieus and it is impossible to create universal list encompassing all possible signs of neglect/self-neglect. Regardless of social standards, both neglect and self-neglect are sensitive issues and are seen as taboo topics, which could have influenced the process of data gathering. Thirdly, data were gathered in 2017, i.e. before word crises (pandemics, war) influencing the life circumstances of contemporary societies, and older people within them. Rising inflation influences the economic situation of older people significantly, increasing the risk of poverty and — in turn — of SE. It would be recommended to repeat the research project on SE in the context of neglect and self-neglect of older adults, because dealing with these problems is — and will be — a challenge for formal and informal caregivers, medical and social care professionals as well as social policy makers.

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Abstract

Background/objectives: Social exclusion is gaining attention as a conceptual framework useful in addressing various dimensions of inequality. The aim of this paper is to explore and discuss the relationship between social exclusion and the risk of neglect or self-neglect in older adults. Following Anthony Giddens, four dimensions of social exclusion were distinguished. Research design/methods: Quantitative analyses were conducted using data from a randomly selected sample of community-dwelling individuals aged 65+ (1634 observations). Logistic regression models were employed to examine the relationship between social exclusion and neglect or self-neglect. Findings: Among the dimensions of social exclusion analysed, only subjective poverty and a poor social network were significantly associated with the odds of neglect. The chances of being neglected also increased when having insufficient money for satisfying own needs, or having a smaller social network. The latter was also related to self-neglect, the likelihood of which was increased by objective poverty. Discussion/implications: The exclusion of older adults is a crucial matter in medicine given its impact on health, quality of life, and mortality patterns. It also has implications for detecting and preventing abuse and neglect. Neglect and self--neglect in older adults remain difficult to identify and diagnose, while the findings

presented here may aid in identifying vulnerable groups and tailoring interventions to support older adults who are deprived of care.

key words: social exclusion, neglect, self-neglect, poverty, deprivation, social isolation, Lesser Poland

słowa kluczowe: wykluczenie społeczne, zaniedbanie, samozaniedbanie, ubóstwo, deprywacja, izolacja społeczna, województwo małopolskie