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Sociodemographic determinants of self-management in elderly patients with chronic diseases

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Społeczno-demograficzne uwarunkowania samozarządzania chorobą przewlekłą w grupie osób starszych

Słowa kluczowe: samozarządzanie chorobą przewlekłą, samoopieka, osoby starsze, choroby przewlekłe

Streszczenie. Samozarządzanie chorobą przewlekłą to proces, w którym człowiek, bazując na wiedzy i umiejętnościach zdobytych podczas edukacji terapeutycznej, podejmuje aktywność wzmacniającą zdrowie oraz sprawuje świadomą kontrolę nad swoją chorobą. Umiejętności wchodzące w zakres samodzielnego zarządzania chorobą przewlekłą to przede wszystkim: dysponowanie adekwatną wiedzą, rozpoznawanie i monitorowanie objawów choroby, aktywna postawa i pełne zaangażowanie w proces terapeutyczny, adaptacja do choroby i radzenie sobie z jej konsekwencjami oraz poczucie pewności siebie w interakcjach z personelem opieki zdrowotnej. Celem pracy była ocena społeczno-demograficznych uwarunkowań procesu samoopieki (*self-management*) w grupie badanych osób starszych w Polsce chorujących przewlekle. Badanie przeprowadzone zostało na grupie 400 przewlekle chorych respondentów ($N = 400$) w wieku 65 i więcej lat przy użyciu metody badawczej CATI (wspomaganego komputerowo wywiadu telefonicznego). Narzędziem badawczym był autorski kwestionariusz ankiety. Badani ocenili relatywnie wysoko swoją wiedzę dotyczącą choroby oraz pierwszych objawów, a także rozumieli informacje przekazywane im podczas wizyty lekarskiej. Argumentację związaną z autorytetem lekarza potwierdziły wyniki pytania 5, 9 oraz 10 – mimo iż ponad połowa respondentów przyznała, że leczenie zostało im narzucone przez lekarza, nie

kwestionowali zaleceń lekarskich, jak i zasad zdrowego stylu życia. Krytyczne podejście seniorów potwierdziły natomiast wyniki pytania 6 oraz 8. Wśród zmiennych społeczno-demograficznych znacząco wpływających na proces samozarządzania chorobą przewlekłą w grupie badanych seniorów były: poziom wykształcenia, deklarowany stan posiadanej wiedzy o chorobie, sytuacja materialna oraz stan cywilny.

Keywords: self-management of chronic diseases, self-care, elderly, chronic diseases

Abstract. Self-management in chronic disease is a process in which individuals actively engage in health-promoting activities and seek to control their disease in an informed way based on learned knowledge and skills concerning therapy. The skills of self-management in chronic disease primarily include having the relevant knowledge and the ability to identify and monitor the disease symptoms, adopting an active attitude to and being fully engaged in the therapeutic process, adapting to the disease and coping with its consequences, and feeling confident in interactions with healthcare professionals. This paper seeks to identify the socio-demographic determinants of self-management in a group of elderly patients from Poland suffering from chronic diseases. The study included a group of 400 respondents (N = 400) aged 65 years and over who had been diagnosed with a chronic condition. An original questionnaire was used as a research tool along with the CATI (computer-assisted telephone interview) research method. The respondents believed they had a relatively high level of knowledge of the disease they had been diagnosed with and were skilled to effectively recognize the preliminary symptoms; they were also able to understand the information conveyed by healthcare professionals during appointments. The socio-demographic variables that were found to have a significant impact on the process of self-management in chronic disease in the study population of elderly patients included the level of education, the declared level of knowledge of the disease, financial situation, and marital status.

Introduction

Self-care is the process of maintaining one's health by engaging in health-promoting practices and disease management (Godfrey, Harrison, Lysaght et al., 2011). The key aspects in practicing self-care include having appropriate health literacy and the ability to respond appropriately to the symptoms of an illness and, consequently, to make decisions which are conducive to health (Sørensen, 2012). The concept of self-care as a learned activity that an individual undertakes in order to maintain their health, life and well-being until all of their capabilities and resources are exhausted (self-care deficit) was first coined by Dorothea Orem in 1971 (Díaz, Gamboa, 2006; Orem, Taylor, Renpenning, 1995). Elderly people are the age group most often exposed to self-care deficits as their physical and

mental health gradually deteriorates and the need for medical care increases (González-González, Requena, 2023; Reynolds, Jeste, Sachdev et al., 2022). Seniors most often struggle with the problem of multimorbidity, which is defined as co-occurrence of two or more diseases or chronic medical problems in one individual (Navickas, Petric, Feigl, Seychell, 2016; Wieczorowska-Tobis, Kostka, Borowicz, 2018). Each diagnosed disease requires various medications. The degree to which an individual complies with doctor's recommendations in terms of prescribed medications, dietary advice or the recommended physical activity is referred to as patient adherence (Panahi et al., 2022; Sabaté, 2003).

In consideration of the foregoing, the ability to practice self-care among elderly individuals with chronic diseases gains a new dimension and can be termed 'self-management in chronic disease'. It can be defined as a process in which individuals actively engage in health-promoting activities and seek to control their disease in an informed way based on learned knowledge and skills concerning therapy (Alqahtani, Alqahtani, 2022; Mackey et al., 2016). The skills of self-management in chronic disease primarily include having the relevant knowledge and the ability to identify and monitor the disease symptoms, adopting an active attitude to and being fully engaged in the therapeutic process, adapting to the disease and coping with its consequences, and feeling confident in interactions with healthcare professionals (Noohi, Karamitanha, Shoghli, 2022). It also involves the ability to respond to emergency situations (disease exacerbations), follow medical recommendations (adherence and compliance), having well-balanced diet and being physically active, using the available social resources, and maintaining healthy relationships with other people (Clark, 1991; Mirczak, 2017).

Self-management activities among elderly patients diagnosed with a chronic disease is important for maintaining health, reducing the risk of complications and frequent hospitalizations, improving the quality of life, and maintaining the sense of having control over one's health (Ausili, 2014).

The ability to practice self-management and the individual demand for care are determined by many socio-demographic factors, including age, gender, marital status, stage of development, health status, cultural setting, environmental factors and many others (Pincus et al., 1998; Ryan, Sawin, 2009). Research on the determinants of self-management is vital to develop and deliver appropriate therapeutic education to geriatric patients in order to help them better address and solve their problems and deficits in self-management.

Purpose

This paper seeks to identify the socio-demographic determinants of self-management in a group of elderly patients from Poland living with chronic diseases.

Materials and methods

The data was obtained using the CATI research method (computer-assisted telephone interview) in March and April 2021 by interviewers appointed by a contracted company, Biostat (Biostat Sp. z o. o., Rybnik, Poland, http://www.biostat.com.pl).

The study was conducted on a group of 400 respondents (N = 400) aged 65 years and over, diagnosed with a chronic condition. The study was approved by the Rector's Research Ethics Board of the Pedagogical University of Kraków (No R/D.0201-19/2020 of 7 September 2020). Obtaining respondent's consent to voluntarily participate in the study was mandatory before the interview was initiated.

The study questionnaire consisted of two parts. The first section was designed to collect socio-demographic data and included questions about gender, age, education, marital status, place of residence, financial status, and health. The second part featured questions designed to examine the ability of the surveyed elderly patients to practice self-management in chronic disease. The questionnaire also asked the respondents to assess their knowledge about the disease (ability to recognize symptoms and monitor them), active engagement in disease management, and adherence to medical recommendations and healthy lifestyle.

Results

More than half of respondents were married; every fourth was widowed. Most respondents declared they had secondary or vocational education. The vast majority of respondents had children. Respondents most often suffered from hypertension, hypercholesterolemia, heart disease, diabetes and rheumatic diseases. The average duration of the underlying disease was 14.4 years, most often around 10 years. The respondents considered their health to be *moderate* (mean score of 3.13), as was their declared financial situation (mean score of 3.14). Only a small percentage of respondents had been diagnosed with learning difficulties.

The study sample was representative in terms of age, gender and the place of residence (province). For full description of the study population, refer to Table 1.

Table 1. Respondents' characteristics (N = 400)

Factor		Score (N)	Distribution (%)
Age	65 – 69 years	142	35.5
	70 – 74 years	99	24.7
	75 – 79 years	60	15.0
	80 – 84 years	52	13.0
	85 years and more	47	11.8
Gender	Female	242	60.5
	Male	158	39.5
Province	dolnośląskie	33	8.3
	kujawsko-pomorskie	21	5.3
	lubelskie	21	5.3
	lubuskie	11	2.8
	łódzkie	28	7.0
	małopolskie	33	8.3
	mazowieckie	56	14.0
	opolskie	11	2.8
	podkarpackie	21	5.3
	podlaskie	12	3.0
	pomorskie	24	6.0
	śląskie	50	12.5
	świętokrzyskie	14	3.5
	warmińsko-mazurskie	13	3.3
	wielkopolskie	34	8.5
	zachodniopomorskie	18	4.5
Marital status	Single	15	3.8
	Married	235	58.8
	Divorced, separated	36	9.0
	Widowed	97	24.3
	Unofficial relationship	17	4.3
Education	Higher	77	19.3
	Secondary	163	40.7
	Vocational	126	31.5
	Primary	34	8.5
Place of residence	Cities with a population of up to 20 000	68	17.0
	Cities with a population of 20–100 000	113	28.3
	Cities with a population of over 100 000	129	32.3
	Rural	90	22.5
Children	Yes	350	87.5
	No	50	12.5

Factor		Score (*N*)	Distribution (%)
Cohabitation	With a spouse	159	39.8
	With a spouse and other family members	80	20.0
	With children and/or grandchildren	55	13.8
	With other people	16	4.0
	Residing alone	90	22.5
Diagnosed disease	Hypertension	235	58.8
	Hypercholesterolemia	118	29.5
	Heart diseases	103	25.8
	Diabetes	86	21.5
	Rheumatic disease	85	21.3
	Cataract	48	12.0
	Digestive system disorders	47	11.8
	Depression	41	10.3
	Neoplastic condition	38	9.5
	Atherosclerosis	36	9.0
	Pulmonary diseases	30	7.5
	Stroke	13	3.3
	Other (please specify)	89	22.3
Perception of the current state of health	Very good	5	1.3
	Good	119	29.8
	Moderate	210	52.5
	Bad	55	13.8
	Very bad	11	2.8
Perception of the current financial situation	Very good	12	3.0
	Good	104	26.0
	Moderate	222	55.5
	Bad	52	13.0
	Very bad	10	2.5
Diagnosed with learning disabilities	Yes	13	3.3
	No	387	96.8
Reading brochures or leaflets from a hospital or pharmacy (last year)	Yes	237	59.3
	No	163	40.8

Source: own search.

Almost fifty percent (49.0%) of respondents believed they were highly knowledgeable of their disease; 39.8% of them believed their knowledge of the disease was moderate (Table 2). The mean score was 3.62. The respondents' perceived level of knowledge correlated with that of their health, i.e. individuals who believed their health status was poorer also reckoned they were less knowledgeable of their disease ($p = 0.007$). Individuals who declared to be in a good financial situation were more likely to have a positive perception of their knowledge about the disease – the total percentage of *good* and *very good* responses was

70.2%, while respondents who considered their financial situation to be *very bad* were much less likely to provide a more neutral assessment of their knowledge ($p = 0.013$). The respondents had a similar perception of their ability to recognize the signs and symptoms of their disease. Here, the mean score was 3.64. Single men ($p < 0.001$) and respondents without children ($p = 0.010$) perceived their ability much less favorably. Respondents who believed their financial situation was very good were significantly more likely to be much more confident about their ability to recognize the symptoms of the disease and significantly less likely to opt for a neutral assessment ($p = 0.011$). Moreover, there was a visible downturn in the mean score correlating with a decline in the declared financial situation.

Most respondents regularly monitored their health by measuring blood pressure, blood sugar levels, body weight and other vital parameters – 68.5% of them declared they were doing it *often* and *very often*. This score was as high as 88.2% among respondents who were in an unofficial relationship. The responses were notably different among single men and women – as many as 26.7% ($p < 0.001$) of them declared they were monitoring their health *very rarely* or *never*. People with children were also monitoring their health status less regularly ($p = 0.010$), even if they still resided with their children (*very often* – 12.7%, *rarely* – 34.5%; $p < 0.001$). Every eighth respondent who resided with individuals other than a spouse and children never monitored their health parameters. A decrease in the regularity of health monitoring was observed in individuals who were at two extremes as regards the financial situation; 16.7% of those in a very good financial situation monitored their health only *very rarely*, while 30% of those who experienced financial difficulties checked their health parameters *very rarely* or *never* ($p = 0.003$).

On the one hand, most respondents often (44.8%) or very often (24.8%) felt they were equal partners when consulting a healthcare professional. On the other hand, almost every fourth respondent only rarely felt respected or was afraid to ask questions during an appointment. About 8.3% of respondents who enjoyed financial well-being *very often* felt like a partner when talking to a doctor, while 16.7% of them only *very rarely* felt that way ($p = 0.016$).

Every second respondent believed that doctors very often or often forced their point of view and their preferred method of treatment upon their patients. Only 6% of respondents have never experienced this type of behavior on the part of healthcare professionals. There were no significant differences in the sociodemographic characteristics of the study population.

Almost 75% of respondents declared they often or very often had the opportunity to ask questions during an appointment, while every seventh respondent admitted that they never or only very rarely had the chance to do so. Notably, men were much less likely to admit they rarely had the opportunity to ask questions during an appointment ($p = 0.010$). The percentage of respondents who opted for the *very often* option increased proportionally to the level of education ($p = 0.046$). Every tenth respondent living in cities with a population of up to 20 thousand only rarely had the opportunity to ask questions during a doctor's appointment ($p = 0.004$). Moreover, respondents who were in a good financial position were more likely to declare that they very often or often had the opportunity to ask questions to their doctors ($p = 0.023$).

Every fourth respondent admitted that they never had any problems understanding what doctors were saying during medical appointments, while 6 out of 10 respondents very rarely or rarely had problems understanding their doctors. Respondents who enjoyed good health were significantly more likely to declare that they never had any problems understanding their doctors; the poorer the health status, the weaker the understanding of the information shared by healthcare professionals ($p = 0.035$). As the respondents' financial condition grew worse, more respondents declared they very often had problems understanding doctors during medical appointments ($p = 0.017$).

The majority of respondents often or very often wanted to be empowered and actively involved in deciding how to manage their disease. Notably, more respondents aged 65 to 69 and 75 to 79 years declared they very often or often wanted to be actively involved in their care and health-related decisions on equal terms with their doctors ($p = 0.006$). More than half of the respondents living in cities with a population of 100 thousand or more admitted they often wanted to actively participate in decision-making concerning their therapy ($p = 0.006$).

Almost all respondents acknowledged they very often or often adhered to the medical recommendations (almost two-thirds of these respondents *very often* complied with the medical advice given.) There were no significant differences in the sociodemographic characteristics of the study population.

More than half of the respondents, mostly single men and women, declared they were often adhering to the principles of healthy living on a daily basis ($p = 0.022$).

The percentage of respondents who declared they were very often following the principles of healthy living increased with the levels of education ($p < 0.001$). As many as 8 out of 10 respondents who perceived their health as

very good admitted they were very often following the principles of healthy lifestyle ($p = 0.014$). Notably, respondents who believed their health was good more often than others declared that they were often adhering to healthy living behaviors ($p = 0.004$).

Table 2. Self-management in chronic disease

Questions	Very low (%)	Low (%)	Moderate (%)	High (%)	Very high (%)
1. What is your level of knowledge about your disease(s)?	1.0	2.0	39.8	49.0	8.3
2. What is your ability to recognize the first signs/symptoms of your disease(s)?	4	3.5	38.8	46.0	11.3

Questions	Never (%)	Very rarely (%)	Not very often (%)	Often (%)	Very often (%)
1. How often do you monitor your health by measuring your blood pressure, blood sugar levels, body weight, etc.?	0.5	3.5	27.5	47.3	21.3
2. How often do you feel like an equal partner in interactions with a GP or specialist (i.e. not being afraid to ask questions, feeling well respected, etc.)?	1.0	5.8	23.8	44.8	24.8
3. How often do you feel forced to accept the point of view and methods of treatment proposed by your doctors?	6.0	7.8	36.0	36.5	13.8
4. How often do you have the opportunity to ask your doctor questions during an appointment?	0.8	4.5	22.8	37.3	34.8
5. How often are you unable to understand what the doctor tells you during an appointment?	25.5	29.8	31.3	10.0	3.5
6. How often do you want to actively participate in and co-decide your treatment?	6.0	6.0	27.0	47.5	13.5
7. How often do you follow your doctor's recommendations (i.e. take your medications as prescribed)?	0.0	1.0	2.8	30.5	65.8

Questions	Never (%)	Very rarely (%)	Not very often (%)	Often (%)	Very often (%)
8. How often do you follow the basic principles of healthy living, which include regular physical activity, well-balanced diet, avoiding stimulants (alcohol, cigarettes) and effective methods to fight stress in your everyday life?	0.5	3.8	22.8	53.3	19.8

Source: own search.

Discussion

The aim of this study was to identify the socio-demographic determinants of self-care practices in a group of elderly individuals residing in Poland. An analysis of the data collected provided insightful findings about the significant correlations between the analyzed variables. First, the level of knowledge about the diagnosed disease and the health self-assessment were found to be correlated – the lower the knowledge about health, the worse the self-perception of the individual health status. Individuals who know little about their disease may have difficulty recognizing specific symptoms or health problems, and thus may downplay the first symptoms of the disease, which may ultimately affect their well-being and lead to a more negative perception of their health.

Individuals who declared to be in a good financial situation were found to have a better perception of their knowledge about the disease and the ability to recognize its symptoms. This may be attributed to the fact that people in a better financial situation are better equipped and have more resources to deepen their knowledge and search for information. They can take care of their health by doing regular check-ups, make appointments with specialists, take dietary supplements or have a healthy diet. Being more aware means seeking more information about a disease to learn how to manage it more effectively.

Respondents who were financially comfortable had a better perception of their ability to recognize symptoms of their disease and regularly monitored their health parameters (blood pressure, sugar levels etc.) than people in a worse financial situation. This correlation may be attributed to a greater access to and more frequent use of diagnostic tests that are paid out-of-pocket. This corresponds to the results of other studies that also pointed to gender, age and marital

status as the determinants of self-care, in addition to the financial status (Adu, 2019; Floriano, Tavares, 2022).

The data collected also indicate that the financial situation is an important determinant of the sense of being an equal decision-maker in interactions with healthcare professionals and of understanding the subject matter of such interactions – in favor of those individuals who enjoyed a better financial position. This may suggest that individuals with lower financial status may experience difficulties communicating with healthcare professionals and may therefore have a poorer understanding of medical/nursing recommendations (Armitage, Conner, 2000).

Marital status and having children were two variables that were also shown to have a significant impact on the process of self-management of the elderly population of this study. Childless and unmarried individuals (singles) had a less favorable perception of their ability to recognize symptoms of diseases and were monitoring their health less regularly. This may be due to the fact that childless and unmarried individuals enjoyed less social support, which is important for effective self-management (DiMatteo, 2004; Manzoli, Villari, Pirone, Boccia, 2007).

This study has also confirmed the important role of education in self--management in chronic disease. Respondents with a higher level of education were significantly more likely to ask questions during a medical appointment and to follow the principles of a healthy lifestyle than those with a lower level of education.

This correlation may be traced back to the higher health awareness among better educated individuals. These individuals may be more likely to seek more information about their health condition and be more interested in learning how to manage it. They can thus be better prepared to have a more informed conversation with their doctors and can ask more relevant questions about their health condition and the therapy options. Additionally, better educated individuals may be more knowledgeable of a healthy lifestyle, which makes them more likely to make more conscious health decisions conducive to maintaining health (Alexandre, 2017).

An analysis of the data collected revealed that socio-demographic factors should be accounted for when planning measures to promote and implement the idea of self-management among elderly patients with chronic diseases. Financial programs and other forms of social support should be created to enable seniors with a lower financial status, single individuals and people with a lower level of education to effectively practice self-management, including through

effective communication with healthcare professionals (Byrne, Keogh, Daly, 2022; Dineen-Griffin, 2019). Moreover, further research is needed to explore the mechanisms that underlie these correlations to better understand how other socio-demographic factors influence the self-management process among the elderly (Thapa, 2023; Xie, 2020).

It is also important to continue research on effective methods of promoting health and self-management among seniors, taking into account their changing social and demographic needs. Further research may contribute to the development of new tools and strategies supporting self-management among the elderly, and may help identify barriers and challenges those seniors may face in their everyday life (Chia, 2023; Grady, Gough, 2014).

In the context of deinstitutionalization, which has been a worldwide trend recently, conclusions from this study may also be important when planning actions to develop individualized community care services as an alternative to stationary full-time care institutions.

Conclusions

Respondents perceived their knowledge of the disease they have been diagnosed with and their ability to recognize the first symptoms as relatively good.

Most respondents confirmed that they had the opportunity to ask questions during their medical appointments and expressed their willingness to be actively involved in deciding how their condition was managed.

The socio-demographic variables that were found to have a significant impact on the process of self-management in chronic disease in the study population of elderly patients included the level of education, the declared level of knowledge of the disease, financial situation, and marital status.

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