Original Article Pol J Public Health, Vol. 136 (2026): 93-99

Healthcare utilization and satisfaction with medical services in outpatient care among Polish adults aged 50+

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A – Development of the concept and methodology of the study; B – Query – a review and analysis of the literature; C – Submission of the application to the appropriate Bioethics Committee; D – Collection of research material; E – Analysis of the research material; F – Preparation of draft version of manuscript; G – Critical analysis of manuscript draft version; H – Statistical analysis of the research material; I – Interpretation of the performed statistical analysis; K – Technical preparation of manuscript in accordance with the journal regulations; L – Supervision of the research and preparation of the manuscript

Abstract

Proper functioning of a healthcare system is one of the determinants of life expectancy and health status. Patient satisfaction is an important, independent and complex indicator of healthcare quality. The aim of the study was to describe healthcare utilization including characteristics of Polish outpatient care users aged 50+ and to assess the satisfaction with care received during the most recent visit, both overall and by gender, age and place of residence.

The cross-sectional study was carried out in 2024 among 2006 randomly selected, community-dwelling adults in Poland. The study sample included 1203 participants who needed care in the 12 months prior to the interview, including 605 outpatient healthcare users who assessed satisfaction with received care.

In our study outpatient care users were more likely to be men, people aged over 70 years and those with multiple chronic conditions compared with people who didn't use this type of care. Most of the outpatient care users were satisfied with received care (82.2%). Urban residents were less satisfied than rural residents with both the care they received during outpatient visit (79.9% vs 85.6%) and functioning of the healthcare system in Poland (42.2% vs 49.4%). No significant differences were found between age and gender groups.

The study showed a high level of satisfaction with outpatient medical care, despite less than half of outpatient users were satisfied with general Polish healthcare system. No age- or gender-disparities were observed in the assessment of the quality of outpatient care among this group of healthcare users.

Keywords: healthcare utilization, outpatient care, patients' satisfaction.

DOI: 10.12923/2083-4829/2026-0017

INTRODUCTION

In primary health care, people aged 65 and over were beneficiaries of almost 36% of all consultations, and in specialist care – 31% [1]. Unfortunately, the undoubted increase in demand for health services is not followed by an increase in access to them, especially at the specialist level, such as in the case of geriatricians or rehabilitation services [2].

One of the determinants of life expectancy and health status of older patients is the proper functioning of a healthcare system focused on meeting the healthcare needs of geriatric patients. The quality and availability of public healthcare services is a guarantor of fast diagnosis, treatment and long-term management of chronic diseases, which in effect reduces disability and ensures a rapid response to sudden changes in the health status of older patients [3]. The World Health Organization (WHO) emphasizes that the quality of medical services is a key element influencing individual health, and a priority in medical interventions [4]. The growing importance of patient-centered care and digitalization in healthcare makes research on accessibility, patterns of utilization and monitoring of patient satisfaction even more urgent [5].

According to previous research, utilization of healthcare services differs according to sociodemographic as well as medical characteristics [6]. While multimorbidity is one of the strongest predictors of frequent use of medical services [7], gender, domicile or socio-economic status (SES) also influence access to and utilization of them as well as satisfaction from the received care [8,9].

The healthcare system is undergoing changes, including digitization, which provides patients with safe, cost-effective and convenient access to healthcare. Reports showed progress in the digitalization of Polish households: in 2025 the percentage of internet users stood at 76% among people aged 55-64, 55% among those aged 65-74, and 36% among those over 75 [10]. It means that in the coming years Internet Patient Account (IKP) may become more important and useful tool for older patients.

Patient satisfaction is currently recognized as an important, independent and complex indicator of healthcare quality [11]. There are various, both structural and subjective factors that can influence the overall level of satisfaction, like the accessibility and quality of the services, mode of financing or its digitalization. Key factors related to patients' satisfaction are the type of care, communication and relations with medical staff [12]. Factors that influence satisfaction within the patient-doctor/medical staff interaction are: the intelligibility of the received medical information and having an opportunity to ask questions [13], followed by shared decision-making and respect for the patient's dignity, privacy, and autonomy [5]. The structural factors related to patients' satisfaction, the organization of the healthcare system and its availability are waiting time, the availability of specialists and procedures or hospital conditions [5]. The socio-demographic variables that, according to literature, are associated with patients' expectations toward medical staff and subsequently their satisfaction are age, gender, SES, marital status and education level [5,14].

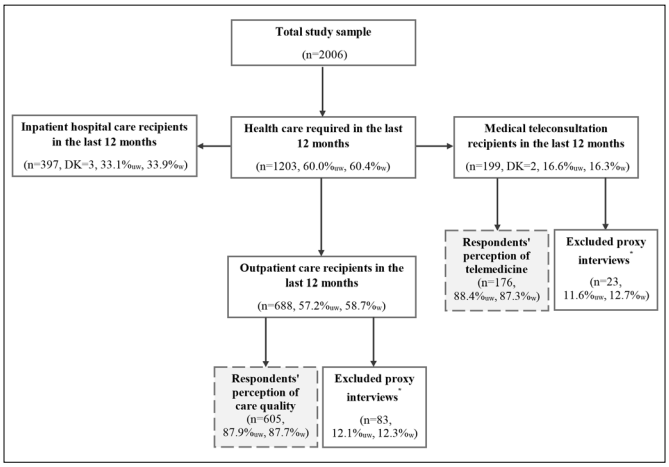

FIGURE 1. Flow chart of study participants.

Each respondent could have utilized any or all types of care, including inpatient hospital care, outpatient care and medical teleconsultation.
*Respondents excluded to subjective nature of responses to questions related to outpatient care.
DK – number of respondents who didn't know what type of medical care they were receiving in the past 12 months, percentages were calculated not including these individuals,
uw – unweighted, w – weighted data.

AIM

The study has two research objectives: the first one was to describe the patterns of use of different forms of health care in Poland and compare the characteristics of Polish outpatient care users aged 50 and older with individuals who declared a need for healthcare in the last 12 months but didn't use this type of service. The second was to assess satisfaction with healthcare received and related experiences during the most recent visit to an outpatient care facility, both overall and across gender, age, and place of residence.

METHODS AND MATERIALS

Study design, population and data collection

The cross-sectional study The role of psychosocial determinants in relation to health conditions in ageing process of Polish population (COURAGE – Poland – Comparison After a Decade) (COURAGE-CAD) was conducted in Poland in 2024. The survey included 2006 individuals randomly selected from the community-dwelling general population aged 50+ years. The sampling frame was based on the unique of Polish national identification numbers (PESEL). The sample was obtained using a stratified, three-stage cluster sampling procedure. Further details are provided elsewhere [15]. Face-to-face computer-assisted personal interviews using a structured questionnaire were conducted at the individuals' homes by specially trained interviewers.

The study included 1203 participants who reported that they needed care in the 12 months prior to the interview with 688 outpatients, with outpatient care defined as all types of healthcare except overnight hospital stays and medical teleconsultations. We assessed satisfaction with the outpatient care received within a narrowed subsample of 605 participants. Proxy interviews, i.e. those conducted when selected respondents were unable to provide answers independently because of impaired cognitive function, did not contain questions related to satisfaction with health care due to their subjective nature (see Figure 1).

Measurements

The study assessed the following sociodemographic and health-related characteristics: gender, age, place of residence, educational level, marital status and subjective SES, which was measured at the country level by means of visual analogue scale in the form of a 10-point ladder. The total number of medical conditions was calculated based on the respondents' self-reports of having been diagnosed with or treated for arthritis, angina, stroke, diabetes, chronic lung diseases, asthma,

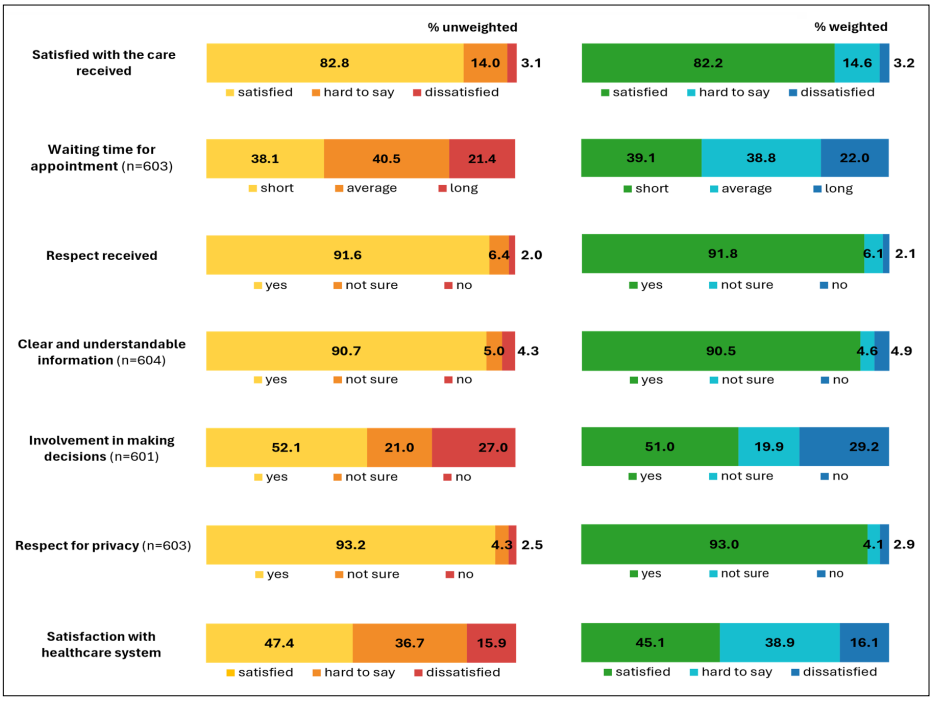

FIGURE 2. Outpatient care users' evaluation of selected experiences (n=605).

hypertension, cataract, dental issues, kidney diseases, gastrointestinal diseases and cancer. The presence of multimorbidity was defined as having two or more chronic physical diseases. Respondents were also asked about having voluntary health insurance and accessing IKP.

Patient satisfaction with the last outpatient visit and the healthcare system in Poland was assessed by direct questions rated on a five-point Likert scale (ranging from "very satisfied" to "very dissatisfied"). Other experiences that may affect the general satisfaction with the outpatient care were assessed on a 5-point response scale (from "strongly agree" to "strongly disagree" or from "very short" to "very long", depending on the item) by 5 questions about waiting time for an appointment at an outpatient facility, received respect, clearness and intelligibility of the information received, involvement in decision making and respect of the patient's privacy. For the purposes of analysis, the scale responses were aggregated into three categories by combining the most extreme options and retaining the neutral response as a separate category, shown in Figure 2.

Statistical analysis

All data were weighted to generalize the study sample to the Polish population aged 50+. In order to compare baseline characteristics between patients using outpatient care in the last 12 months and those who declared needing healthcare but didn't use this type of service, we performed the Chi-squared test or Student's test, where appropriate. Categorical variables were described using percentages while continuous variables were reported as the mean and standard deviation. Accordingly, this is only applicable within the group of outpatients. Differences in the evaluation of healthcare experiences were examined, stratified by gender, age and place of residence. The level of significance was set at 0.05. Statistical analysis was performed using the IBM SPSS Statistics (V.31).

RESULTS

Description of the healthcare utilization in Poland

More than half of the adults aged 50+ (60.4%) required medical care within the 12 months prior to the survey and nearly all of them received such care (99.5%). During that time, 58.7% of individuals visited outpatient care facilities, one-third were hospitalized, and 16.3% had a teleconsultation (Figure 1). Patients using outpatient care facilities had an average of 3.88 (SD=3.19) visits per year, with a median of 3. The average number of teleconsultations was 3.34 (SD=2.68) with a median of 2.

Primary care facilities were most frequently cited as the typical places where people sought medical assistance (68.7%); these were followed by specialized outpatient services (23.7%) and hospitals (6.4%). Only a negligible percentage of individuals sought help from natural/alternative medicine practitioners, in pharmacies or other facilities (such as occupational health clinics, prisons or addiction treatment centers). Visits were usually covered by the National Health Fund (89.5%), while a much smaller percentage was paid out of pocket (8.1%) or covered by voluntary insurance (2.4%).

Characteristics of Polish outpatients' care users vs non-users

The overall characteristics of Polish users of outpatient medical care, compared with individuals who reported a need for health care but didn't utilize outpatient care in the last 12

TABLE 1. Baseline characteristics of participants who needed care in the last 12 months, categorized by outpatient care use (users vs. non-users), % weighted data, n – unweighted counts.

	Use of outpatient care (n=1203)		
	Yes (n=688)	**No (n=515)**	***p-value***
	%	**%**	
Gender			
women	57.0	63.1	***0.040***
men	43.0	36.9	
Age groups [years]			
50-59	22.1	28.7	***0.034***
60-69	32.6	33.0	
70-79	30.7	25.8	
80 yrs or more	14.7	12.5	
Place of residence			
rural	39.2	34.5	*0.105*
urban	60.8	65.5	
Educational level			
primary or lower	15.0	12.1	*0.074*
vocational	39.3	34.7	
secondary	30.8	36.9	
higher	14.9	16.3	
DK (n=1)			
Marital status			
never been married	5.0	6.5	*0.634*
married	61.7	61.5	
separated/divorced	7.8	8.4	
widowed	25.5	23.6	
DK (n=2)			
Subjective SES Mean (SD)	5.86 (1.67)	6.07 (1.70)	*0.053*
NA (n=134)			
DK (n=52)			
RF (n=12)			
Multimorbidity			
yes	61.3	45.5	***<0.001***
no	38.7	54.5	
Mandatory health insurance			
yes	98.9	97.7	*0.162*
no	1.1	2.3	
DK (n=2)			
Private/voluntary health insurance			
yes	30.3	32.0	*0.577*
no	69.7	68.0	
DK (n=20)			
Use of the IKP app			
yes, independently	17.7	16.7	*0.887*
yes, but with someone's help	2.8	3.1	
no	79.4	80.1	
NA (n=134)			
DK (n=23)			

Note: SD – standard deviation, NA – not applicable, DK – don't know, RF – refused; percentages, mean, standard deviation and p-value were calculated excluding 'not available', 'not know' or 'refused' answers; p-value for the Chi-squared test of independence or t-test as applicable.

months, are presented in Table 1. Among outpatient care users were higher percent of men, older age groups (70 years or older) and individuals with multimorbidity compared to those who didn't utilize this type of care. No statistically significant differences were observed between outpatient care users and those utilizing other types of care in terms of place of residence or marital status. However, a tendency was noted for subjective SES, with outpatient care users exhibiting lower SES (p=0.053).

Nearly all outpatients (98.9%) were covered by mandatory health insurance, and one-third of them (30.3%) also had voluntary (private) health insurance. 20.6% of people used the IKP, with 86.2% of them doing so on their own. No significant differences in health insurance coverage and using IKP were found between outpatient users and non-users.

When assessing their most recent outpatient visit, people aged 50+ indicated that they had seen a primary care physician or family doctor (57.1%); consultations with other specialists were less common (36.3%). A small number of individuals reported seeing a geriatrician or dentist during their most recent visit (2.7% each). In rare cases, patients sought care from community nurses, physical therapists, home hospice staff, and other healthcare professionals.

Satisfaction with outpatient care

The distribution of overall characteristics among outpatient care users who evaluated their satisfaction with the care received remained unchanged after the excluding proxy interviews (Table 2).

Most of the outpatient care users were satisfied with care they received (82.2%). The waiting time for appointment in healthcare facility was estimated as short by 39.1% of them, average by 38.8%, while 22% individuals claimed it was long. The majority of outpatient users received respect (91.8%) and perceived the information given by medical staff as clear and understandable (90.5%). About half of them (51%) felt involved in decision making and as many as 93.0% experienced respect for their privacy. The healthcare system in Poland received a slightly lower ratings: only 45% of respondents were satisfied with how the system operates (Figure 2).

Taking sociodemographic factors into account – significantly smaller percentage of urban residents than rural residents reported satisfaction with the care they received (79.9% vs 85.6%), with such aspects of their interactions with outpatient facility staff as respect (89.7% vs 94.9%), clarity of information (87% vs 95.7%) privacy (91% vs 96%) and with the functioning of the healthcare system (42.2% vs 49.4%). There were no significant differences between women and men, and between compared age groups (Table 3).

TABLE 2. Baseline characteristics of outpatient care users evaluating satisfaction with the most recent visits, % weighted data, n – unweighted counts.

Outpatient care users (n=605)	
	%
Gender	
women	57.1
men	42.9
Age groups [years]	
50-59	23.6
60-69	34.7
70-79	30.2
80 yrs or more	11.4
Place of residence	
rural	40.1
urban	59.9
Educational level	
primary or lower	13.0
vocational	38.2
secondary	32.4
higher	16.4
Marital status	
never been married	5.2
married	63.0
separated/divorced	7.9
widowed	23.9
Subjective SES Mean (SD)	5.86 (1.67)
DK (n=32)	
RF (n=3)	
Multimorbidity	
yes	58.0
no	42.0
Mandatory health insurance	
yes	99.2
no	0.8
Private/voluntary health insurance	
yes	29.7
no	70.3
DK (n=6)	
Use of the IKP app	
yes, independently	17.7
yes, but with someone's help	2.8
no	79.4
DK (n=11)	

Note: SD – standard deviation, DK – don't know, RF – refused; percentages, mean and standard deviation were calculated excluding 'not know' or 'refused' answers.

DISCUSSION

In our study, the need for medical care was lower than in other reports. According to data from the Central Statistical Office (GUS) from 2024, 84.5% of people aged 60 and older had needed treatment or a medical examination in the previous 12 months, and this percentage has been rising in recent years [16]. According to CBOS data, in the six months preceding

TABLE 3. Outpatient care users' evaluation of selected experiences by gender, age groups and place of residence, % weighted data, n – unweighted counts.

	Outpatient care (n=605)								
	Gender			Age [years]			Place of residence		
	Women (n=345)	Men (n=260)	*p-value*	50-69 (n=367)	≥70 (n=238)	*p-value*	Rural (n=232)	Urban (n=373)	*p-value*
	%	%		%	%		%	%	
Satisfied with the care received									
satisfied	81.6	82.9		82.9	81.1		85.6	79.9	
hard to say	14.2	15.1	*0.281*	14.5	14.7	*0.553*	13.6	15.2	***0.012***
dissatisfied	4.2	2.0		2.6	4.1		0.8	4.9	
Waiting time for appointment									
short	38.7	39.7		36.9	42.2		39.6	38.8	
average	40.8	36.2	*0.429*	41.1	35.7	*0.338*	41.0	37.4	*0.412*
long	20.5	24.0		22.0	22.1		19.4	23.8	
DK (n=2)									
Respect received									
yes	91.2	92.6		92.0	91.5		94.9	89.7	
not sure	5.8	6.4	*0.213*	6.2	5.9	*0.727*	4.4	7.2	***0.045***
no	3.0	1.0		1.7	2.6		0.7	3.0	
Clear and understandable information									
yes	89.9	91.3		91.4	89.2		95.7	87.0	
not sure	5.1	3.9	*0.784*	4.8	4.4	*0.349*	3.2	5.6	***<0.001***
no	5.0	4.8		3.8	6.3		1.1	7.4	
DK (n=1)									
Involvement in making decisions									
yes	48.7	54.0		54.1	46.4		50.5	51.2	
not sure	22.5	16.4	*0.155*	16.9	24.1	*0.057*	18.9	20.5	*0.799*
no	28.9	29.6		29.0	29.5		30.5	28.3	
DK (n=4)									
Respect for privacy									
yes	92.3	93.9		94.0	91.6		96.0	91.0	
not sure	4.0	4.4	*0.347*	4.3	3.9	*0.112*	3.6	4.5	***0.008***
no	3.7	1.8		1.7	4.5		0.4	4.5	
DK (n=2)									
Satisfaction with the healthcare system									
satisfied	45.8	44.1		42.5	48.7		49.4	42.2	
hard to say	38.8	38.9	*0.844*	40.0	37.3	*0.246*	39.2	38.7	***0.026***
dissatisfied	15.4	17.0		17.6	14.0		11.4	19.2	

Note: DK – don't know; percentages and p-value were calculated excluding 'not know' answers; p-value from the Chi-squared test of independence.

the survey, 88% of Poles used some form of medical service due to health issues (their own or their child's): 71% visited a general practitioner during this period and 61% visited a specialist [17]. However, it should be noted that the CBOS data refer to the general population, including children. A nationwide survey conducted in 2025 showed that 92.2% of adults aged 50-59 and 87.8% of those over 60 had used health care services in the past 12 months [18]. According to data from the GUS, 91.1% of seniors received treatment or underwent a medical examination whenever they needed it [16]. In our survey, only 0.5% of respondents reported unmet healthcare needs. Other sources indicate that this figure may be 2.3% [19] or even 3.8% of the Polish population [20]. The frequency of visits to outpatient facilities among the study participants was consistent with that reported in the Polsenior 2 study [3] or in another study among Polish patients aged 60 years and older [21].

Our research confirms that advanced age and multimorbidity are associated with an increased need for outpatient care. This finding is supported by other studies [21-23]. In our study people who use outpatient care were more likely to be men in comparison to those who didn't use this type of care. Most studies indicate that women seek medical care more often than men as well as more frequently use outpatient care than men [24] but some studies indicate that gender differences in healthcare utilization change with age and are no longer observed after age 65 [25], which may partially explain our findings.

The number of respondents having voluntary health insurance, about one-third, corresponds to data from Polish national/populational survey [17].

In the present survey, approximately 20% of respondents used the IKP. Other sources indicate that 23% of people aged 45-59 and 12% of those over 60 use the IKP [26]. According to CBOS, the IKP is the least popular digital service: over 43% of Poles use it, but only 16% do it frequently. The percentage of IKP users is relatively lower in older age groups: 35% in the 55-64 age group and 20% among people over 60 [27]. The implementation of telemedicine and digitalization of healthcare enhances convenience by reducing the need for in-person visits and making interactions with healthcare providers more efficient [5,28]. Moreover, remote communication with medical practitioners, electronic prescriptions and other e-health services can be helpful in dealing with transport exclusion, saving time and energy of patients and doctors.

Satisfaction with outpatient care

Our analysis shows that majority of the respondents were satisfied with the outpatient care they received, as well as with various aspects of their relationship with healthcare professionals, and nearly half of them view the Polish healthcare system positively. Overall, satisfaction with the medical care received in the past 12 months by outpatient care users in our study (82%) was similar to the results of the Polsenior 2 study (approximately 80%) [3]. Study conducted in representative sample of the Polish population also confirmed relatively high satisfaction with primary and specialised ambulatory healthcare [29]. Among the identified aspects of satisfaction with healthcare system in Poland, the assessment of the availability of doctors (specialists and general practitioners) and diagnostic tests has the greatest impact on it, followed by the quality of treatment (commitment, competence of doctors, approach to the patient, use of modern solutions in medical care and ease of obtaining information on medical advice) and assistance in emergency situations [30]. This is confirmed by our study, in which a similar percentage of respondents rated waiting times for appointment at outpatient facilities and the performance of the healthcare system in a similar manner.

However, according to previous studies, the quality of medical care is assessed positively by the oldest respondents, residents of the largest cities, respondents who positively assess the financial situation of their households and those who received treatment exclusively through the National Health Fund (NFZ) in the six months preceding the survey [30]. According to the recent report by CBOS only 25% respondents is satisfied with the functioning of healthcare in Poland, but the vast majority assess it negatively (70%). Satisfaction with the healthcare system is more often expressed by older respondents, those aged 65 or over (36%), residents of large and largest cities (30-35%), with primary or lower secondary education (32%), and income ranging from PLN 2,000 to PLN 3,999 per capita (32-33%) [30].

In the presented study, no significant differences between men and women or across age groups were found, as in other studies [29]. Only place of residence was statistically significant factor that differentiated level of satisfaction with healthcare in our study unlike in other Polish research [29]. Rural residents were more satisfied than urban residents with both the care they received during outpatient visits and functioning of the healthcare system in Poland. They were more likely to report that they were treated with respect and assessed the information they received as clear and understandable. Furthermore, rural residents rated that the medical interview was conducted with respect for their privacy. These data do not allow for conclusions to be drawn about the factors that influenced this level of satisfaction with healthcare and its various aspects. However, there are some prospective directions for explanation. In smaller facilities, with less complex structure and with smaller number of patients, that are mostly based in rural areas and small towns, the waiting time can be shorter. Moreover, less spatial mobility (as migrations in younger age are frequently driven by education and labour market) favours long-term relations with medical staff, what makes patients less anonymous. Research shows that personal or cordial communication with medical staff is valued by patients. Nevertheless, rural areas are seen as struggling with transport exclusion, especially of the oldest and disabled residents. This fact seems to contrast with higher satisfaction with health care services and pose a question about associations between difficulty in reaching the facility and its effect on the admission's perception.

Since the Polish population is continuously changing in terms of demographic and social characteristics, as well as macrostructural factors (e.g., ongoing depopulation), there is a need of further research on the associations between patients socio-demographic characteristics (like associations between place of living, availability of transport to the facility and satisfaction from health care, or age and overall expectations toward communication with a doctor) and healthcare system (like the ease of navigating the path from GP to specialist or differences in functioning between facilities of various sizes and/or numbers of patients).

Strengths and limitations of the study

The use of a large, nationally representative study sample of community-dwelling individuals aged 50+ years is a major strength of this study. However, our study has several limitations: cross-sectional nature of the study allows only to observe correlations without establishing a cause-and-effect relationship. Due to the design of the questionnaire (questions about typical use of services and the most recent visit), we are unable to provide in our study a complete picture of healthcare utilization. Furthermore, the satisfaction assessment was based on the most recent visit within the past 12 months, which excludes individuals who use health care less frequently.

CONCLUSIONS

Our research confirms that more men, people aged over 70 years and those with multiple chronic conditions were more prevalent among individuals using outpatient care compared with those who didn't use this type of care.

The study showed a high level of satisfaction with outpatient care, despite less than half of outpatient users were satisfied with general Polish healthcare system. The vast majority of respondents view the behaviour of medical staff positively in terms of respecting patient dignity and privacy, and recognizing patient autonomy. A smaller percentage of respondents perceive the possibility of actively participating in the treatment process. However, active patient involvement in the treatment process and shared decision-making with patient preferences in mind are associated with higher levels of satisfaction.

No age- or gender-related differences were observed in the assessment of outpatient care quality among this group of healthcare users.

Further research is needed to investigate factors related to patients' sociodemographic characteristics and the healthcare utilization. Factors influencing patients' satisfaction with healthcare should be continuously monitored and analysed. Further research is needed to analyze long-term relationship and its possible causes.

Funding

This research is funded by National Science Centre, Poland, OPUS23 grant UMO-2022/45/B/NZ7/04030.

REFERENCES

1. Główny Urząd Statystyczny. Ambulatoryjna opieka zdrowotna w 2024 r. Warszawa, Białystok: GUS; 2025. Available from: https://stat.gov.pl/obszary-tematyczne/zdrowie/zdrowie/ambulatoryjna-opieka-zdrowotna-w-2024-r-,13,9.html [cited 2026 Jul 7]
2. Błędowski P, Chudek J, Grodzicki T, et al. Wyzwania dla polityki zdrowotnej i społecznej. Geneza projektów badawczych PolSenior1 i PolSenior2. In: Błędowski P, Grodzicki T, Mossakowska M, Zdrojewski T, editors. Polsenior 2. Badanie poszczególnych obszarów stanu zdrowia osób starszych, w tym jakości życia związanej ze zdrowiem. Gdańsk: Gdański Uniwersytet Medyczny; 2021. p. 19-35. Available from: https://polsenior2.gumed.edu.pl/attachment/attachment/82370/Polsenior_2.pdf [cited 2026 Jul 7]
3. Tobiasz-Adamczyk B, Gałaś A, Jędrzejczyk T, et al. Dostępność i poziom satysfakcji z usług medycznych. In: Błędowski P, Grodzicki T, Mossakowska M, Zdrojewski T, editors. Polsenior 2. Badanie poszczególnych obszarów stanu zdrowia osób starszych, w tym jakości życia związanej ze zdrowiem. Gdańsk: Gdański Uniwersytet Medyczny; 2021. p. 1011-1034. Available from: https://polsenior2.gumed.edu.pl/attachment/attachment/82370/Polsenior_2.pdf [cited 2026 Jul 7]
4. Szperka B, Ziółkowska K. Patients' satisfaction with e-medical services introduced to primary health care. Zeszyty Naukowe PANS w Koszalinie. 2024;6:69-102.
5. Mularczyk-Tomczewska P, Gujski M, Koperdowska JM, et al. Factors influencing patient satisfaction with healthcare services in Poland. Med Sci Monit. 2025;31:e948225. https://doi.org/10.12659/MSM.948225
6. Doherty AS, Miller R, Mallett J, et al. Heterogeneity in longitudinal healthcare utilisation by older adults: a latent transition analysis of the Irish Longitudinal Study on Ageing. J Aging Health. 2022;34(2):253-265. https://doi.org/10.1177/08982643211041818
7. Ilinca S, Calciolari S. The patterns of health care utilization by elderly Europeans: frailty and its implications for health systems. Health Serv Res. 2015;50(1):305-320. https://doi.org/10.1111/1475-6773.12211
8. Bastani P, Mohammadpour M, Samadbeik M, et al. Factors influencing access and utilization of health services among older people during the COVID-19 pandemic: a scoping review. Arch Public Health. 2021;79(1):190. https://doi.org/10.1186/s13690-021-00719-9
9. van Gaans D, Dent E. Issues of accessibility to health services by older Australians: a review. Public Health Rev. 2018;39:20. https://doi.org/10.1186/s40985-018-0097-4
10. Centrum Badania Opinii Społecznej. Korzystanie z internetu w 2025 roku. Komunikat z badań nr 60/2025. Warszawa: CBOS; 2025. Available from: https://www.cbos.pl/SPISKOM.POL/2025/K_060_25.PDF [cited 2026 Jul 7]
11. Cleary PD, McNeil BJ. Patient satisfaction as an indicator of quality care. Inquiry. 1988;25(1):25-36. Available from: [suspicious link removed] [cited 2026 Jul 7]
12. Zawisza K, Gałaś A, Tobiasz-Adamczyk B. Factors associated with patient satisfaction with health care among Polish older people: results from the Polish part of the COURAGE in Europe. Public Health. 2020;179:169-177. https://doi.org/10.1016/j.puhe.2019.10.012
13. Sinyiza FW, Kaseka PU, Chisale MRO, et al. Patient satisfaction with health care at a tertiary hospital in Northern Malawi: results from a triangulated cross-sectional study. BMC Health Serv Res. 2022;22(1):727. https://doi.org/10.1186/s12913-022-08087-y
14. Grönroos C. A service quality model and its marketing implications. Eur J Mark. 1984;18(4):36-44. https://doi.org/10.1108/EUM0000000004784
15. Woźniak B, Gajdzica M, Sekuła P, et al. Personal online social networks as moderators of the association between loneliness and quality of life in Polish adults aged 50+. Sci Rep. 2025;15(1):24545. https://doi.org/10.1038/s41598-025-24545-z
16. Główny Urząd Statystyczny. Sytuacja osób starszych w Polsce w 2024 r. Warszawa, Białystok: GUS; 2025. Available from: https://stat.gov.pl/obszary-tematyczne/osoby-starsze/osoby-starsze/sytuacja-osob-starszych-w-polsce-w-2024-r-,2,7.html [cited 2026 Jul 7]
17. Centrum Badania Opinii Społecznej. Korzystanie ze świadczeń i ubezpieczeń zdrowotnych. Komunikat z badań nr 69/2025. Warszawa: CBOS; 2025. Available from: https://www.cbos.pl/SPISKOM.POL/2025/K_069_25.PDF [cited 2026 Jul 7]
18. Olearczyk A, Sękowski K, Jankowski M, et al. Perceptions of public and private health services in Poland: findings from a 2025 nationwide survey. BMC Health Serv Res. 2026;26(1):14287. https://doi.org/10.1186/s12913-026-14287-7
19. OECD, European Observatory on Health Systems and Policies. Poland: Country Health Profile 2023, State of Health in the EU. Paris: OECD Publishing; Brussels: European Observatory on Health Systems and Policies; 2023. Available from: https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/12/poland-country-health-profile-2023_80434439/f597c810-en.pdf [cited 2026 Jul 7]
20. OECD. Health at a Glance 2025: OECD Indicators. Paris: OECD Publishing; 2025. https://doi.org/10.1787/8f9e3f98-en
21. Zakrzewski KM, Mularczyk-Tomczewska P, Koweszko T, et al. Patterns of healthcare use and disease burden among older adults in Poland: a large-scale retrospective study of primary care utilization. Geriatrics (Basel). 2025;10(6):150. https://doi.org/10.3390/geriatrics10060150
22. Wang C, Kuo HC, Cheng SF, et al. Continuity of care and multiple chronic conditions impact frequent use of outpatient services. Health Informatics J. 2020;26(1):318-327. https://doi.org/10.1177/1460458218824720
23. Hajek A, König HH. Which factors lead to frequent attendance in the outpatient sector among individuals in the second half of life? Evidence from a population-based longitudinal study in Germany. BMC Health Serv Res. 2018;18(1):645. https://doi.org/10.1186/s12913-018-3487-x
24. Golinelli D, Sanmarchi F, Guarducci G, et al. Gender differences in healthcare utilization across Europe: evidence from the European Health Interview Survey. Health Policy. 2025;162:105448. https://doi.org/10.1016/j.healthpol.2025.105448
25. Prütz F, Rommel A. Utilization of outpatient medical care in Germany. J Health Monit. 2017;2(2):82-87. https://doi.org/10.17886/RKI-GBE-2017-127
26. Centrum e-Zdrowia. Internetowe Konto Pacjenta i aplikacja mobilna mojeIKP w liczbach. Warszawa: CeZ; 2024. Available from: https://cez.gov.pl/sites/default/files/2024-01/raport_ikp_i_mojeikp_w_liczbach.pdf [cited 2026 Jul 7]
27. Centrum Badania Opinii Społecznej. Korzystanie ze świadczeń i ubezpieczeń zdrowotnych. Komunikat z badań nr 101/2023. Warszawa: CBOS; 2023. Available from: https://www.cbos.pl/SPISKOM.POL/2023/K_101_23.PDF [cited 2026 Jul 7]
28. AlShareef SM, AlWabel AA. A comparison of the convenience, quality of interaction, and satisfaction of virtual and in-person healthcare consultations: a nationwide study. J Clin Med. 2024;13(17):5203. https://doi.org/10.3390/jcm13175203
29. Pochrzęst-Motyczyńska A, Ostrowski J, Sys D, et al. Patient satisfaction in primary and specialised ambulatory healthcare: a web-based cross-sectional study in the Polish population. Healthcare (Basel). 2025;13(10):1147. https://doi.org/10.3390/healthcare13101147
30. Centrum Badania Opinii Społecznej. Opinions on the functioning of the healthcare system. Research Announcement No. 86/2025. Warszawa: CBOS; 2025. Available from: https://www.cbos.pl/SPISKOM.POL/2025/K_086_25.PDF [cited 2026 Jul 7]

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