



Digital Exclusion Among Older Poles.

Data from the National PolSenior 2 Project.

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CARES

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Objective No. 5 of the **National Health Program**
Promotion of Healthy and Active Aging

Examination of individual areas of the health condition of older people, including quality of life related to health (NPZ COnr5, p.4.2)



Main contractor:



Financing:



The PolSenior2 Project

- Nationwide, multicenter, cross-sectional study conducted in 2019
- 7 age-cohorts for men and women (N=5987):
 - 60-64
 - 65-69
 - 70-74
 - 75-79
 - 80-84
 - 85-89
 - 90+

80+



Methods of selecting the study group

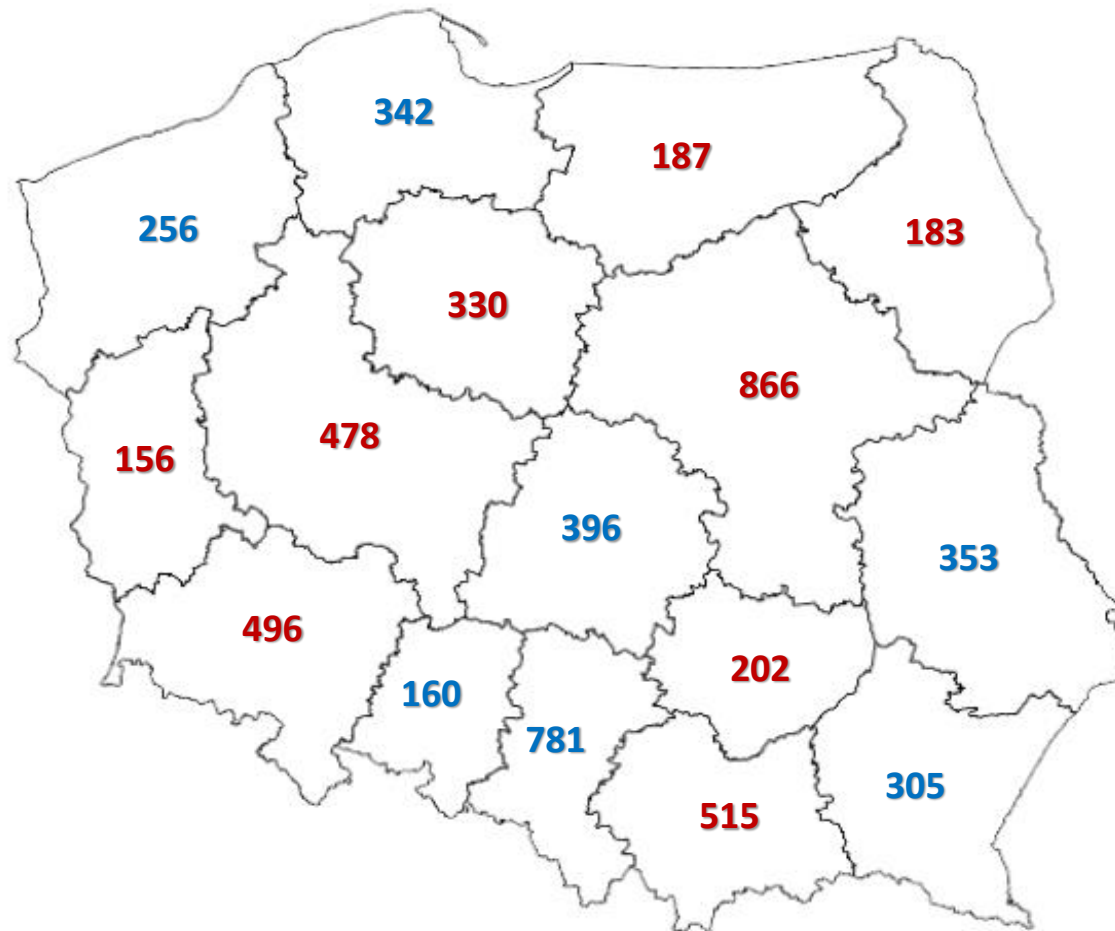
3-step sampling:

- I. sampling of municipalities
- II. sampling of streets in urban municipalities and villages in rural municipalities
- III. sampling of respondents on the area of randomly selected streets and villages

Phase II and III - the Ministry of Digitization

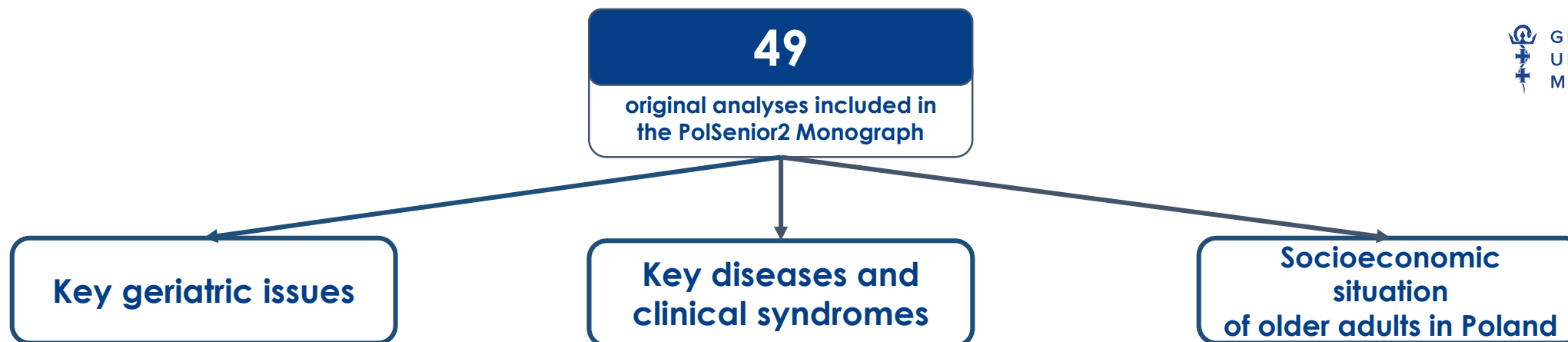


The number of randomly drawn respondents in individual voivodeships N=5987



Data were collected at the respondent's place of residence:

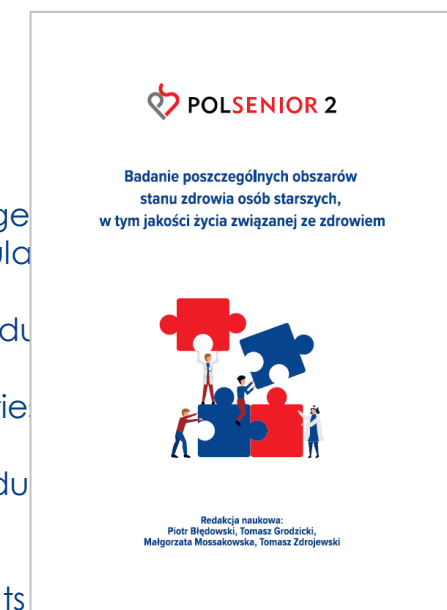
- 1. Questionnaire interviews and geriatric tests**
- 2. Blood pressure and anthropometric measurements**
- 3. Blood and urine samples**



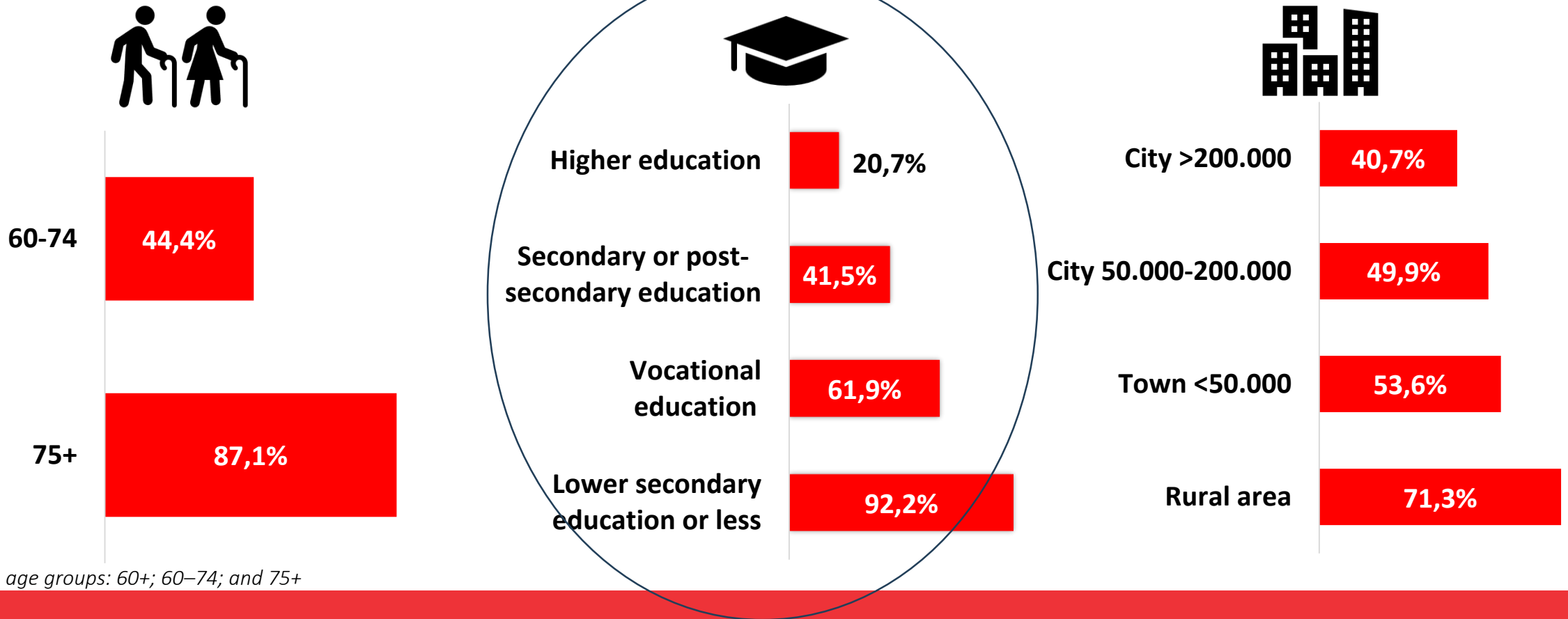
- Identification of individuals for comprehensive geriatric assessment (VES-13 results)
- Assessment of functional status (ADL and IADL results)
- Frailty syndrome
- Sarcopenia and other changes in body composition
- Falls and their consequences: hip fractures and hip arthroplasty
- Presence of chronic pain
- Visual and hearing status
- **Cognitive impairment (MMSE)**
- Cognitive impairment (Clock Drawing Test)
- Presence of depressive symptoms
- Sleep disorders
- Urinary incontinence
- Bowel disorders
- Dental status
- Neoplastic diseases

- Arterial hypertension
- Obesity
- Diabetes and its complications
- Lipid metabolism disorders
- Ischemic heart disease, myocardial infarction, and cardiac arrhythmias
- Heart failure (+ NT-proBNP)
- Selected neurological diseases
- Respiratory diseases (+ influenza and pneumococcal vaccination)
- Prevalence of liver diseases (+ hepatitis vaccination)
- Calcium-phosphate metabolism
- Prevalence of chronic kidney disease
- Prostatic diseases in men
- Thyroid dysfunction
- Selected parameters of the red blood cell system
- **Multimorbidity**

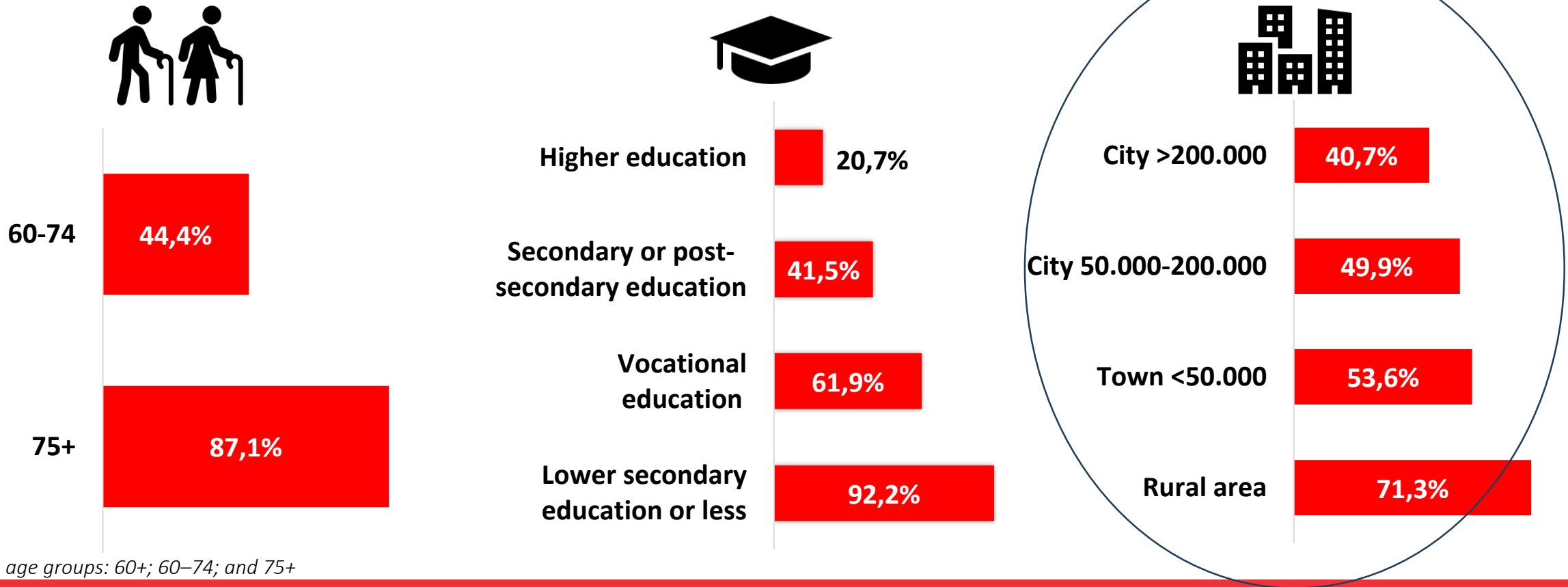
- Pharmacotherapy
- Self-rated health
- Physical activity
- Smoking
- Dietary habits
- The concept of “Healthy Age” which segment of the population apply to?
- Material situation of older adults
- Occupational activity
- Family situation and family ties
- Living conditions of older adults
- Care needs of older adults
- **Digital exclusion**
- Violence against older adults
- Quality of life assessment in older adults
- Availability of and satisfaction with medical services
- **Health inequalities** according to social factors



Results: No Internet Use

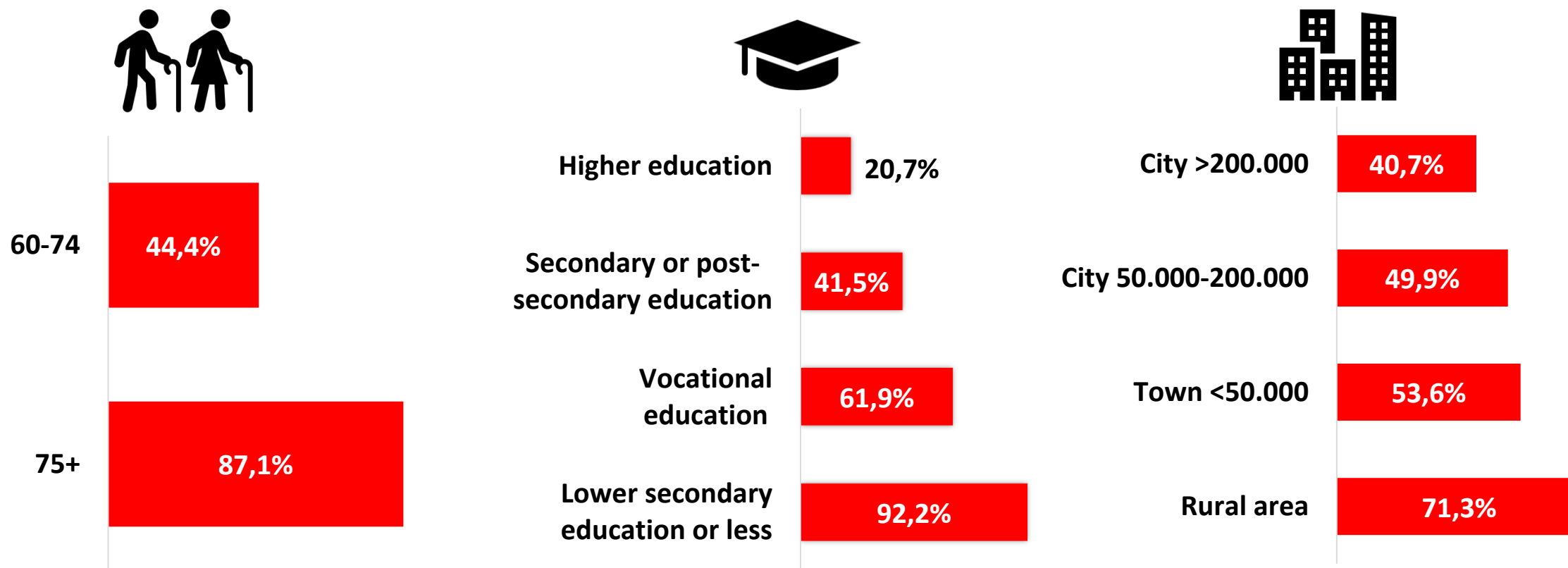


Results: No Internet Use



No Internet Use

Older age, lower education, and residence in smaller towns and rural areas are associated with lower Internet use.



Data: age groups: 60+; 60-74; and 75+

The number of individuals experiencing digital exclusion

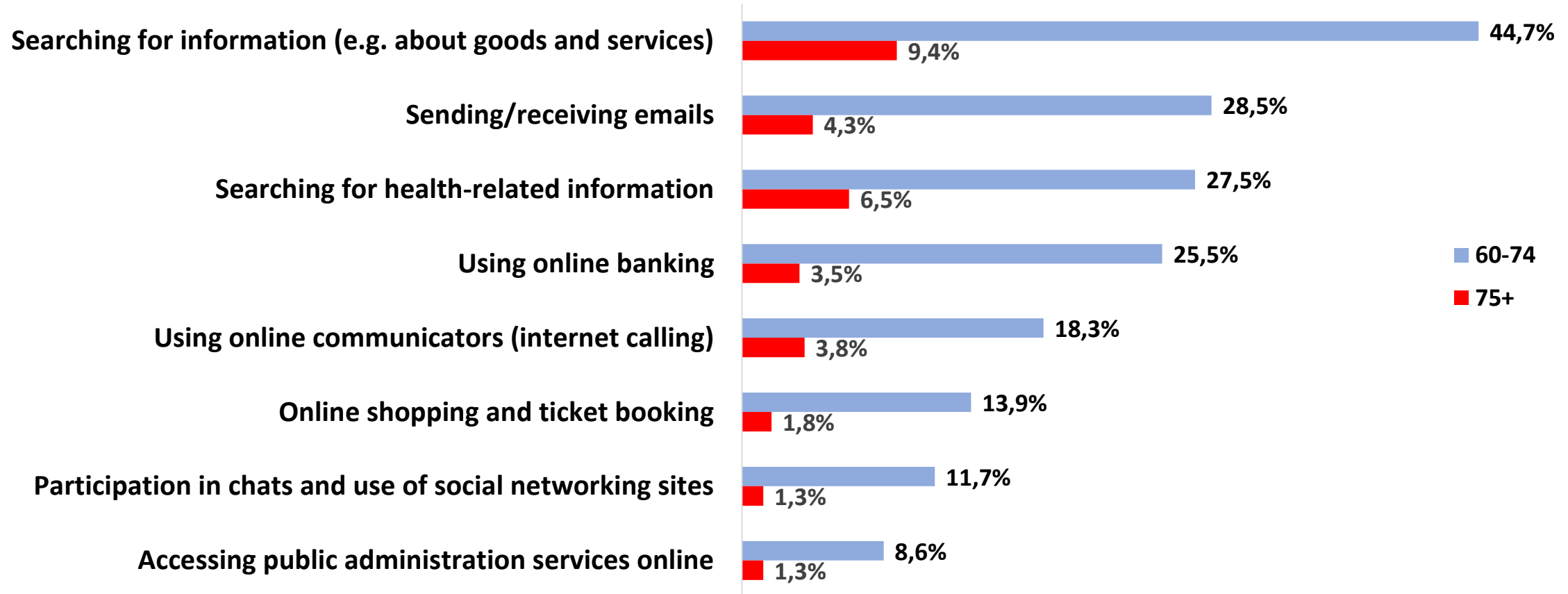
Nearly 5.5 million individuals aged 60 years and older do not use the Internet (56.6%).

The majority are women - over 3.3 milion - while men account for over 2.1 million.

Among individuals aged 75 years and older, nearly 2.4 million do not use the Internet (as many as 87.1%).

The majority are women—over 1.6 million—while men account for over 0.75 million.

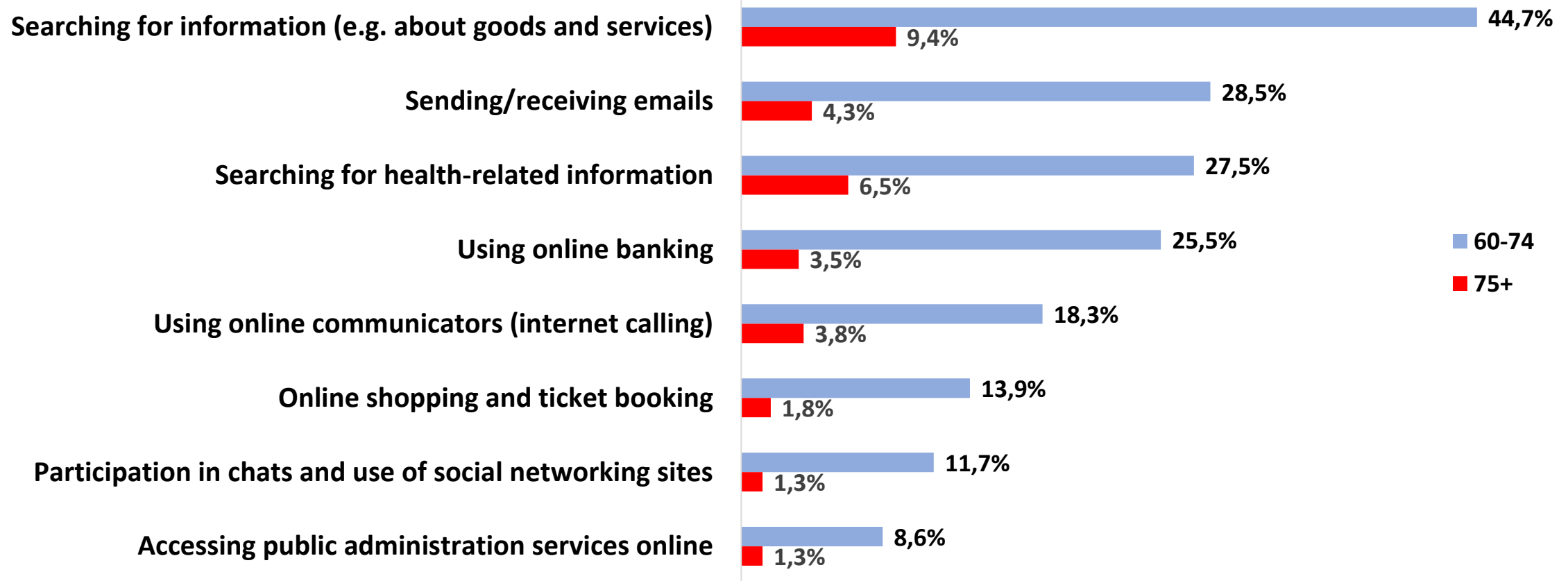
Purposes of Internet Use:



Data: age groups: 60+; 60–74; and 75+

Purposes of Internet Use:

Older adults use the Internet mainly to search for information and to send/receive emails.



Data: age groups: 60+; 60–74; and 75+

CONCLUSIONS



- **High prevalence of digital illiteracy among older adults.**
- **Older individuals with lower levels of education living in smaller towns and rural areas are more likely to be digitally excluded.**
- **Support for the digital inclusion of older adults is essential:**
 - **investments in infrastructure and in equipment,**
 - **assistance in using digital solutions.**



Health inequalities by level of education and place of residence

Research area:

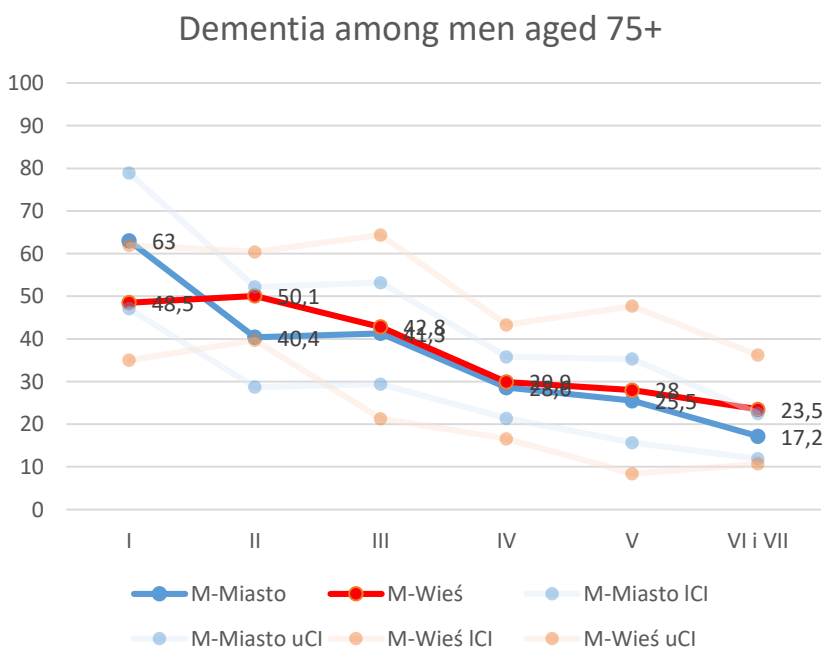
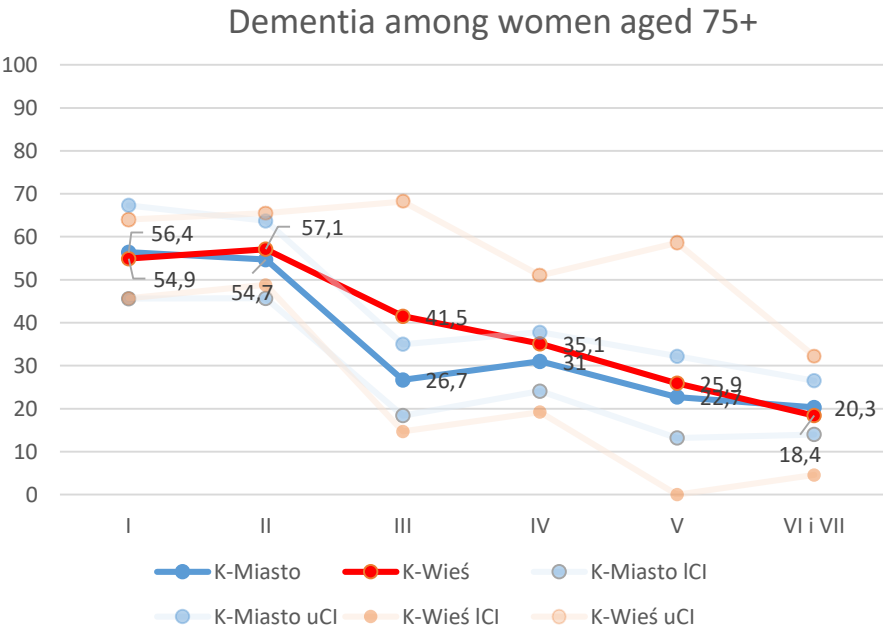
Cognitive impairment assessed using the *MMSE*

Percentage of individuals aged 75+ with symptoms of dementia - MMSE score <24 out of 30 :

FEMALES	
RURAL AREA	51.8 % (45.6-58,0 %CI)
URBAN AREA	36.8 % (32.2-41.3 %CI)

MALES	
RURAL AREA	42,0% (34.4-49.7 %CI)
URBAN AREA	30.2 % (26.4-34,0 %CI)

Percentage of individuals with symptoms of dementia by socioeconomic status (I–VI and VII)





Changes in the use of the Internet and online medical services during the COVID-19 pandemic in older adults

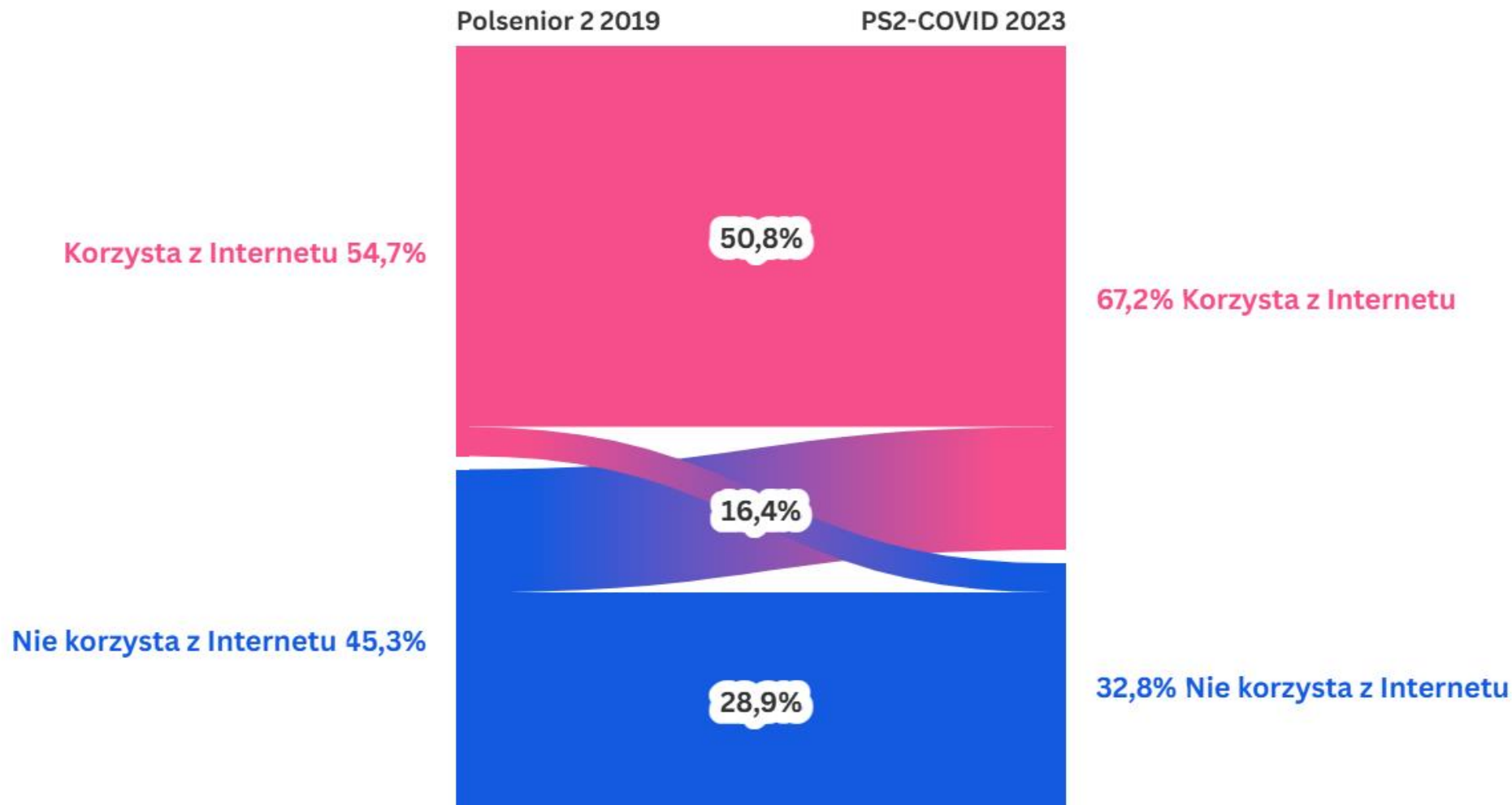
Changes in access to internet in households (%)

2019 vs. 2023 PS2-COVID

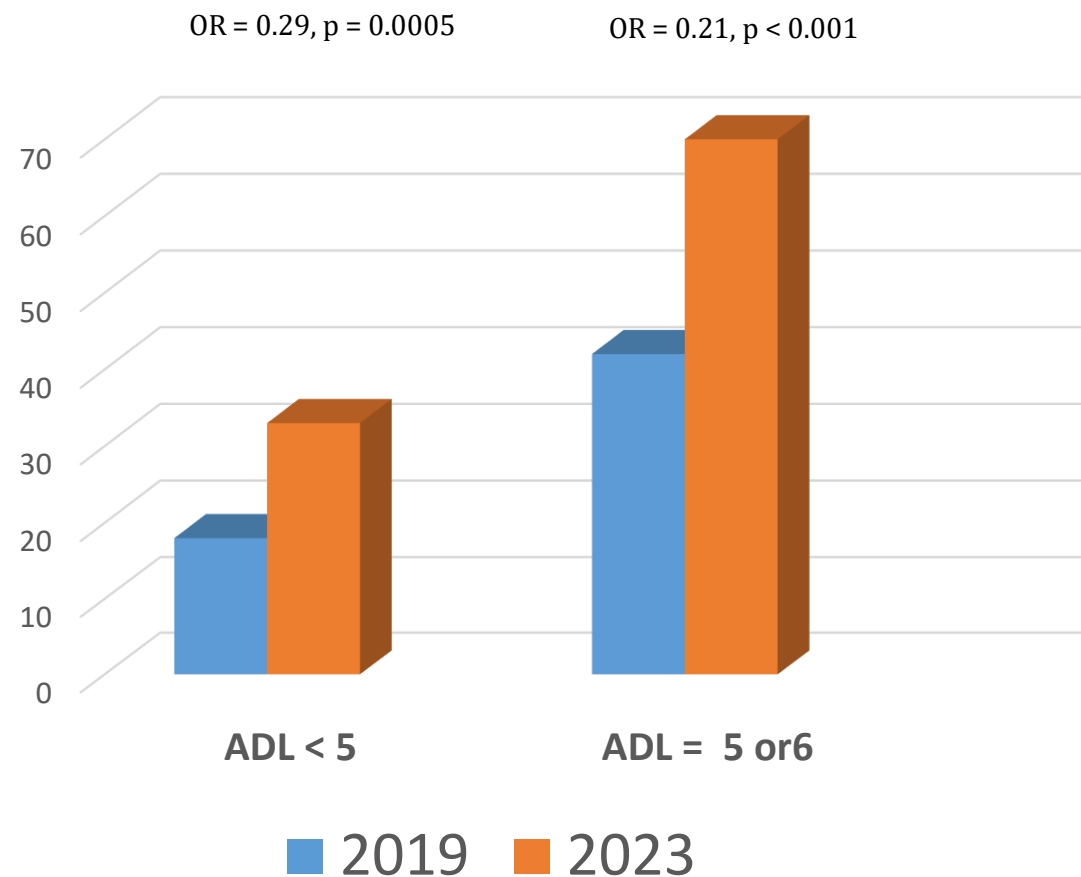


Personal use of the Internet by respondents

2019 vs. 2023 PS2-COVID



Changes in personal use of the Internet according to the ADL Scale (Activities of Daily Living): 2019 vs. 2023 PS2-COVID





Thank you for your attention.

Dziękuję za uwagę.



Personal use of the Internet according to ADL Scale (Activities of daily Living): 2019 vs. 2023 PS2-COVID

PolSenior2 2019

ADL	Korzysta n (%)	nie korzysta n (%)
≤5 pkt	10 (18.2%)	47 (81.8%)
6 pkt	397 (42.1%)	547 (57.9%)

OR = 0.29, p = 0.0005

PS2-COVID 2023

ADL	Korzysta n (%)	nie korzysta n (%)
≤5 pkt	15 (32.6%)	31 (67.4%)
6 pkt	451 (69.6%)	197 (30.4%)

OR = 0.21, p < 0.001

IADL	korzysta n (%)	nie korzysta n (%)
≤22 pkt	26 (13.7%)	164 (86.3%)
23–24 pkt	381 (46.9%)	430 (53.1%)

OR = 0.18, p < 0.001

IADL	korzysta n (%)	nie korzysta n (%)
≤22 pkt	38 (31.1%)	84 (68.9%)
23–24 pkt	428 (74.8%)	144 (25.2%)

OR = 0.15, p < 0.001

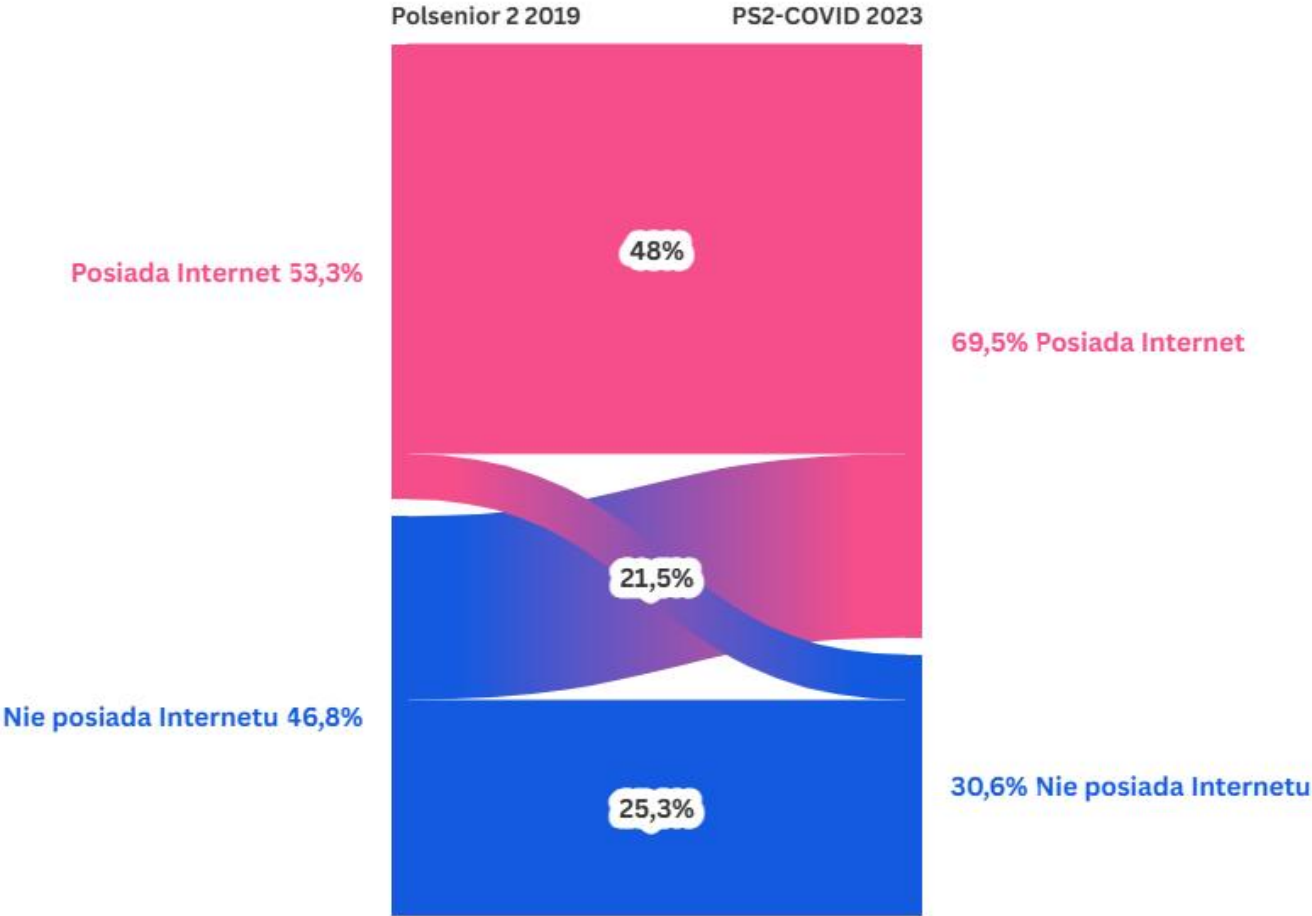
N = 1001 dla PolSenior2 2019

N = 694 dla PS2-COVID 2023

Tabela 2. Access to internet in households in 2019 and in PS2-COVID 2023.

Cecha	PolSenior2 2019 n (%)	PS2-COVID 2023 n (%)	%	p (McNemar)
Ogółem	523 (53,3)	682 (69,5)	+16,2	<0,001
Wiek				
60–69 lat	276 (71,7)	314 (81,6)	+9,9	<0,001
70–79 lat	172 (49,7)	250 (72,3)	+22,6	<0,001
≥80 lat	75 (32,1)	118 (49,1)	+17,0	<0,001
Płeć				
Kobiety	283 (51,2)	384 (69,5)	+18,3	<0,001
Mężczyźni	240 (55,7)	298 (69,4)	+13,7	<0,001

N = 982



Use of internet by respondents (%): PolSenior2 (2019) vs. PS2-COVID (2023).

Grupa	PolSenior2 2019 n (%)	PS2-COVID 2023 n (%)	OR zmiany	p (McNemar)
Ogółem	375 (54.7%)	460 (67.2%)	4.15	<0.001
60–69 lat	72.3%	85.0%	4.6	<0.001
70–79 lat	49.4%	63.4%	3.3	<0.001
80+ lat	24.4%	33.3%	2.1	0.01
Kobiety	51.2%	66.8%	4.8	<0.001
Mężczyźni	59.0%	67.6%	2.4	0.002

Deklaracja respondentów – jeśli posiadam Internet w gospodarstwie domowym to czy z niego korzystam.

