# Bridging the Gap: A Comparative Analysis of Healthcare Quality Perceptions Between the Older People and Healthcare Providers

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#### **Abstract**

In our study aimed at improving the healthcare system for the aging population, we compared healthcare quality evaluations between 96 older individuals and 30 healthcare providers in Split-Dalmatia County (Croatia). Using nonparametric analyses such as the Mann-Whitney and Wilcoxon tests on Likert scale questionnaire scores, we found most participants highlighted challenges such as healthcare affordability, long wait times, reliance on private care, poor public transportation, and insufficient rural healthcare services. Healthcare providers rated these quality indicators even more negatively. Both groups rated healthcare for dementia patients notably lower, while emergency response, treatment quality, and hospitalization ease were generally rated positively. The heightened awareness among healthcare providers raises the question: why is there a significant delay between recognizing these problems and implementing effective solutions to address them?

### **Keywords**

healthcare quality, aging population, healthcare challenges, perceptions disparities

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# Introduction

Mitchell and Walker (2020) highlighted that the growing older population challenges health and social services. This demographic shift has led to the increased prevalence of chronic conditions and acute health problems, requiring a more specialized level of healthcare services. However, health resources are often not optimized to treat the specific needs of older people (Rudnicka et al., 2020). The World Health Organization (WHO) defines healthy aging as maintaining functional ability for wellbeing in old age. The WHO's Global Strategy and Action Plan on Aging and Health 2016-2020 and The Decade of Healthy Aging 2020-2030 aim to address these challenges by enhancing care planning, data collection, research, health system alignment, and creating seniorfriendly environments (Rudnicka et al., 2020; World Health Organization, 2017). The increase in life expectancy brings declines in physical and cognitive functions, affecting health and independence (Anton et al., 2015). Barriers to healthcare for older people include transportation issues, lack of insurance, and insufficient geriatric expertise (Horton & Johnson, 2010). Legal, social, and structural barriers also obstruct the right to health for older people (Baer et al., 2016). There is a need

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 Table I. Demographic Data According to the Group of Respondents.

Variables			Frequency	Percent				
Older people	Gender Male		33	34.38				
		Female	63	65.	.63			
	Education	Incomplete primary	12	12.50				
		Primary school	17	17.	.71			
		Secondary school	41	42.	42.71			
		College	11	11.	.46			
		BSc	10	10.42 2.08				
		MSc	2					
		PhD	3					
		Mean	SD	Minimum	Maximum			
	Age	75.09	6.50	65.00	93.00			
	Length of education in years	11.18	4.24	0.00	23.00			
	Variables		Frequency	Percent				
Healthcare providers	Gender	Male	8	26.67				
·		Female	22	73.33				
	Education	High school	9	30.00				
		College	4	13.	.33			
		University degree	13	43.34				
		Master degree	4	13.33				
		Mean	SD	Minimum	Maximum			
	Age	44.83	13.31	28.00	68.00			

to shift resources toward quality of life, chronic disease management, healthcare provider education, and cultural values (Bennett & Flaherty-Robb, 2003). Common reasons for unmet healthcare needs include treatment costs, facility shortages, lack of time, and mistrust of healthcare providers (Rahman et al., 2022). These unmet needs are higher among the uneducated, economically poor, and uninsured, with significant disparities based on education, health, and economic status (Mohd Rosnu et al., 2022). Older people in rural areas face higher unmet healthcare needs than those in urban areas (Rahman et al., 2022). To address these issues, it is crucial to evaluate the accessibility, affordability, availability, adequacy, and suitability of health and social care for older people. Our research surveyed 96 older people and 30 healthcare providers in Split-Dalmatia County to explore the disparity between the experiences of older people and the viewpoints of those who design and regulate their care. By uniting these voices, we aim to foster a more responsive, equitable, and person-centered approach to healthcare and social services for the aging population.

#### **Methods**

# Study and Survey Design

The survey was conducted in Split-Dalmatia County, Croatia, adhering to the International Ethical Guidelines for Health-related Research Involving Humans (The Council for International Organizations of Medical Sciences [CIOMS] & World Health Organization, 2016)

and receiving approval from the IRB at Teaching Institute for Public Health, Split - Dalmatia County. Older participants were informed about the survey's purpose and were guaranteed anonymity, confidentiality, and the right to withdraw. Older participants who completed the questionnaire with the help of an interviewer provided verbal consent, while those who filled out the questionnaire independently provided written consent. Healthcare providers were informed via email, provided written consent, and were assured of confidentiality.

## Participant Sample and Recruitment

The research included two groups: older people aged 65 and above from Split-Dalmatia County, Croatia, selected via cluster-based random sampling based on 2011 census data. The majority were women (65.63%) with an average age of 75 and mostly high school educated (42.71%). The second group included healthcare providers from the County, most of whom had university degrees and an average age of 45. In total, the study included 96 older people and 30 healthcare providers. More detailed demographic characteristics of the respondents are presented in Table 1.

## **Data Collection Procedures**

Data were gathered in April 2021 using an e-questionnaire created with Google Forms and a paper questionnaire designed by SI4CARE experts involved in public health. The questionnaires were tested for clarity with a

pilot sample of healthcare providers and older people in the EU Adrion Regions. Fragkiadaki et al. (2023) described details of the questionnaire design. All the questions were divided into five separate themes: (a) Accessibility, (b) Affordability, (c) Availability, (d) Adequacy, and (e) Suitability. The questionnaire contained two subscales: (a) a 29-item subscale related to the health care system for older people and (b) a 23-item subscale related to the health care system for older people with dementia. Respondents assessed the level of the problem using a 5-point Likert scale (0—not at all, 1 little, 2—moderate, 3—very, 4—extremely). In addition to the above questions, the questionnaire contained demographic data, such as gender, age, and level of education. Older respondents could choose how to complete the questionnaire. Those capable of self-completion used the e-questionnaire, while those needing assistance had an interviewer who recorded their responses on the paper questionnaire. For the second group, the e-questionnaire was sent by e-mail to all relevant healthcare institutions that provide services to older people, and at least one employee from each institution was asked to complete it.

## Data Analysis

The distribution of scores for each answer was checked using the Shapiro-Wilk test, which indicated that the distribution deviated from normality. Therefore, nonparametric statistical analyses were performed. The Mann-Whitney U test was applied to compare the evaluations of healthcare quality indicators between healthcare providers (HP) and older people (OP). Within each group, we used the Wilcoxon Signed-Rank test to compare evaluations of healthcare for older people with dementia versus those without dementia. Additionally, we compared assessments between males and females in each group using the Mann-Whitney U test. We presented the data descriptively using frequencies, percentages and means. Analyses were conducted using IBM SPSS Statistics v22.0, with a statistical significance level set at p < .05. This paper presents only a subset of responses: the first 17 questions from the first subscale and the first 12 questions from the second subscale.

### Results

Based on responses with mean scores higher or lower than 2 (where 2 represents a "moderate" assessment), it can be observed that participants in both groups rated some healthcare quality indicators mostly negatively and others mostly positively, as shown in Table 2. For questions about waiting times and the necessity of using the private sector, a mean score above 2 indicated a negative assessment, while a score below 2 represented a positive assessment. HP and OP both mostly assessed that older people have limited payment capabilities for healthcare expenses, wait too long to schedule healthcare

appointments, and often need to seek healthcare in the private sector. Additionally, respondents in both groups mostly assessed the lack of rehabilitation centers for older people, perceived public transportation to healthcare facilities as unsatisfactory (particularly for those with mobility difficulties), and viewed accessibility to the healthcare system for older people in rural areas as inadequate. HP rated the hospitalization conditions for older people, transportation to healthcare facilities by car, and the availability of home visits by healthcare professionals mostly negatively, whereas OP rated these aspects mostly positively. Both groups mostly positively evaluated the response time of emergency services, the quality of treatment in emergencies, and the ease of hospitalization.

By comparing the answers between OP and HP (Table 2), it was determined that there is a statistically significant difference in a certain aspect (p < .05). Healthcare providers perceived a higher level of problems in areas such as public transportation to the healthcare facilities, the need for older people with dementia to use the private sector, hospitalization conditions for older people, waiting times to book healthcare appointments, and overall accessibility to the healthcare system (see Graphs 1, 2, 3, 4, and 5).

Wilcoxon Signed-Rank test for paired samples of responses (Table 3) showed that both groups of respondents assessed significantly lower healthcare quality for the older people with dementia (p < .05) in a few aspects: transportation to healthcare facilities, covering the healthcare expenses, obtaining adequate quality of the healthcare services, availability of secondary healthcare services for those who live in rural areas, and general accessibility to the healthcare system. The greatest differences in the group of older people were observed regarding the abilities of older individuals with dementia to use a car (z=-5.605) or public transportation to healthcare facilities (z=-5.168). Similarly, within the group of healthcare providers, the largest differences were observed about the abilities of older individuals with dementia to use a car (z=-3.851) or public transportation to reach healthcare facilities (z=-3.603). However, based on the z-values in the Wilcoxon test, it can be noticed that older people perceive significant discrepancies in this regard compared to healthcare providers. Additionally, older people mostly believe that older people with dementia have lower accessibility to rehabilitation centers and that it is more difficult for them to receive home visits from doctors. However, it is interesting that OP in our study mostly think that older people with dementia have shorter wait times for doctor's appointments and do not require services from the private sector to the same extent as older people without dementia. A similar level of problem was assessed for older people with dementia and those without dementia regarding rehabilitation expenses and accessibility to primary healthcare services for those who live in rural

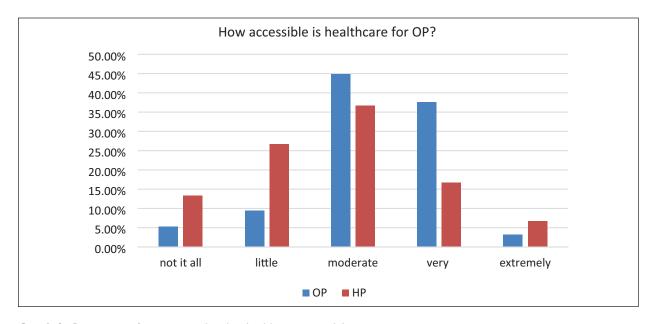
**Table 2.** Comparison of Responses to the Survey Questions on Accessibility, Affordability and Availability of the Healthcare System Between the Older People and Healthcare Providers.

						Mann-	
		No.	Mean	SD	Mean Rank	Whitney <i>U</i>	Þ
How easy is it for OP to access	ОР	96	2.24	0.867	67.66	1040.500	.015
healthcare?	HP	30	1.77	1.104	50.18		
To what extent do OP receive	OP	96	2.35	0.808	65.33	1264.000	.277
adequate healthcare?	HP	30	2.23	0.898	57.63		
How long do OP wait to book a	OP	96	2.28	0.981	59.31	1038.000	.016
healthcare appointment?	HP	30	2.80	0.925	76.90		
How timely can the ambulance	OP	96	2.89	0.832	65.17	1280.000	.328
arrive to OP?	HP	30	2.73	0.944	58.17		
How satisfactory is emergency	OP	96	2.52	0.929	65.07	1289.500	.366
room for OP?	HP	30	2.30	1.119	58.48		
How easy is hospital admission for	OP	96	2.39	0.887	65.29	1268.000	.300
OP?	HP	30	2.17	1.234	57.77		
How satisfied are you with	OP	96	2.28	0.914	68.05	1003.000	.008
hospitalization conditions for OP?	HP	30	1.80	0.997	48.93		
How comfortably can OP cover	OP	96	1.41	0.841	61.89	1285.000	.352
their healthcare expenses?	HP	30	1.63	1.217	68.67		
How necessary is private	OP	96	2.29	1.004	64.94	1302.000	.406
healthcare sector for OP?	HP	30	2.13	1.008	58.90		
How easy is it to provide	OP	96	1.66	0.916	64.85	1310.000	.433
rehabilitation services to OP?	HP	30	1.50	0.974	59.17		
How easily can OP afford	OP	96	1.06	0.904	61.78	1274.500	.317
rehabilitation costs on their own?	HP	30	1.23	0.898	69.02		
How easy is it for OP to visit	OP	96	2.4	0.946	70.67	751.500	.000
health facilities by car?	HP	30	1.70	0.794	40.55		
How easy is it for OP to use public	OP	96	1.79	1.213	67.85	1022.500	.013
transportation to visit a health facility?	HP	30	1.2	1.064	49.58		
How easy is it for OP with	OP	96	1.41	0.98	65.90	1210.000	.170
mobility problems to visit a healthcare service?	HP	30	1.13	1.042	55.83		
How easy is it for OP to have	OP	96	2.05	1.118	66.45	1157.000	.093
health professional visit at home?	HP	30	1.70	1.088	54.07		
How accessible are primary	OP	96	1.85	0.846	65.04	1292.500	.369
healthcare services for OP in rural areas?	HP	30	1.73	1.081	58.58		
How accessible are secondary	OP	96	1.19	0.91	64.40	1354.000	.605
healthcare services for OP in rural areas?	HP	30	1.13	1.074	60.63		
How accessible is healthcare for	OP	96	1.27	1.041	67.84	1023.000	.012
OP with dementia?	HP	30	0.73	0.944	49.60		
To what extent do OP with	OP	96	1.71	0.882	63.60	1430.500	.953
dementia receive adequate healthcare?	HP	30	1.80	1.031	63.18		
How long do OP with	OP	96	2.08	0.97	61.29	1227.500	.199
dementia wait for healthcare appointments?	HP	30	2.37	1.129	70.58		
How comfortably can OP with	OP	96	1.05	0.813	62.17	1312.000	.437
dementia cover their healthcare expenses?	HP	30	1.20	0.925	67.77		
How necessary is private sector	OP	96	1.88	1.078	59.84	1089.000	.037
healthcare for OP with dementia?	HP	30	2.33	1.093	75.20		
How easy is it to provide	OP	96	1.34	0.982	63.09	1400.500	.811
rehabilitation for OP with dementia?	HP	30	1.33	0.758	64.82		

(continued)

Table 2. (continued)

		No.	Mean	SD	Maan Dank	Mann-	
		INO.	Mean	30	Mean Rank	Whitney U	Þ
How easily can OP with dementia	OP	96	0.91	0.796	62.78	1370.500	.671
cover the cost of rehabilitation?	HP	30	0.97	0.809	65.82		
How easy is it for OP with	OP	96	1.47	1.056	67.26	1079.500	.031
dementia to visit health facilities by car?	HP	30	1.00	0.91	51.48		
How easy is it for OP with	OP	96	1.07	1.028	66.45	1157.000	.085
dementia to visit health facilities by public transportation?	HP	30	0.70	0.877	54.07		
How easy is it for OP with	OP	96	1.75	1.066	63.03	1395.000	.788
dementia to have health professional visit at home?	HP	30	1.80	1.031	65.00		
How easy is it for OP with	OP	96	1.71	1.004	64.72	1323.000	.485
dementia in rural areas to have access to primary healthcare services?	HP	30	1.57	1.104	59.60		
How easy is it for OP with	OP	96	0.97	0.923	62.77	1369.500	.671
dementia in rural areas to have access to secondary healthcare services?	HP	30	1.17	1.262	65.85		

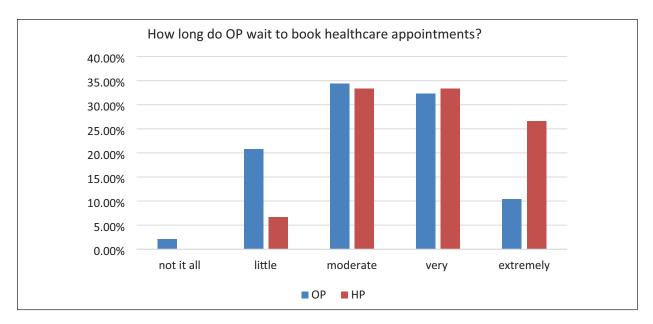


**Graph 1.** Percentage of responses related to healthcare accessibility.

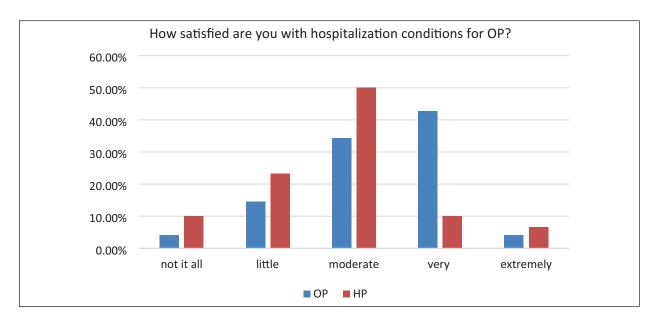
To determine whether there were gender differences among the groups of older people (Supplemental Table 1) or among healthcare providers (Supplemental Table 2), we performed the Mann-Whitney U test. According to our results, there were no gender differences in the answers either in the group of older respondents or in the group of healthcare providers.

## **Discussion**

We identified significant disparities in perceptions between older people (OP) and healthcare providers (HP) regarding various aspects of healthcare services. Notably, HP perceived greater challenges in accessing the healthcare system than older people, as shown in Graph 1. This suggests that OP may not fully realize how easy their access to healthcare should be. Difficulties in accessing healthcare have been identified in other countries as well. Auchincloss et al. (2001) reported that low-income families and those without insurance coverage experienced increased access problems. Likewise, Osborn et al. (2014) found that older people in the US, Canada, and Sweden faced barriers in accessing primary care services, which led to increased



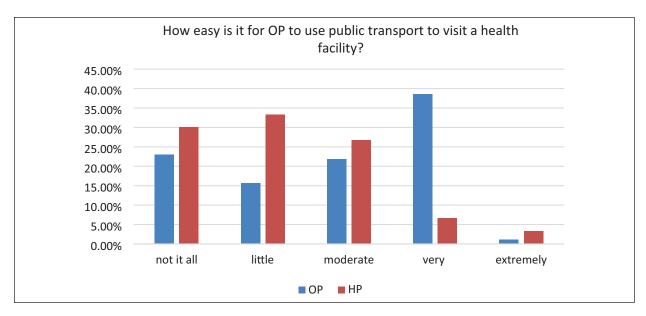
Graph 2. Percentage of responses related to waiting time for health appointment.



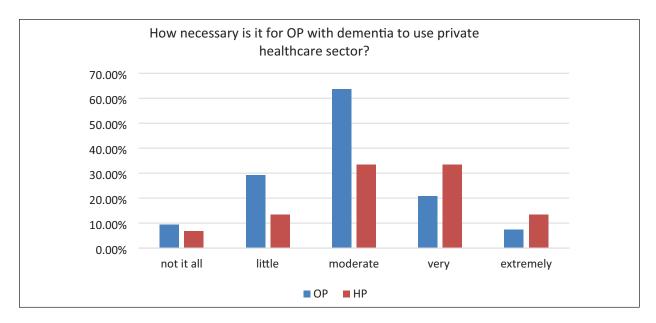
**Graph 3.** Percentage of responses related to hospitalization conditions.

reliance on emergency departments. The second gap perception in our study pertains to waiting times for health appointments. Namely, HP were more concerned than OP about this issue, as shown in Graph 2. There are at least two serious consequences of this problem: delayed intervention reduces the likelihood of successful treatment, and prolonged waiting for further strains of emergency departments, as observed in Canada and the US (Schoen et al., 2013). Additionally, HP in our study reported significantly higher dissatisfaction with hospitalization conditions than OP, as shown in Graph 3. This disparity may stem from healthcare providers' deeper understanding of ideal hospital standards compared to current realities. Also, it is possible that OP and

HP do not share the same semantic meaning about satisfaction with hospitalization. For older people, satisfaction might be measured by treatment success, pain reduction, and kindness of the staff, whereas for health-care providers, it could be assessed by the quality of beds, quality of meals, the number of nurses employed, the number of patients in one room, etc. However, the discovery that HP generally assess a lower quality of hospitalization conditions than patients themselves is not entirely new. Willems and Ingerfurth (2018) have found that HP rated hospital quality lower than patients. Furthermore, age influences perceptions of hospitalization conditions, as older patients tend to be more satisfied overall, but may have less knowledge and be less



Graph 4. Percentage of responses related to public transportation.



**Graph 5.** Percentage of responses related to use of private healthcare sector.

active during hospital stays (Breemhaar et al., 1990; Huckstadt, 2002; Takahashi & Okugawa, 1991). We must always remember that improving hospital conditions is crucial for the well-being of older patients, ensuring both high-quality medical care and comfort during hospitalization. In our study, when comparing the assessments of OP and HP, we also see that OP reported fewer issues with accessing healthcare facilities via public transportation, as illustrated in Graph 4. This difference may be attributed to OP's mobility and support from family members. Conversely, HP's overall beliefs about public transport might lead them to view it as less suitable for older people, potentially

affecting their assessment of the accessibility issues reported by OP. The final significant gap in perceptions, as depicted in Graph 5, relates to the necessity for demented OP to use private healthcare institutions. HP believe that demented older people need to rely on private sector services more than OP without dementia. This disparity may stem from healthcare providers' better understanding of the specific needs of dementia patients. Previous research, such as Schwarzkopf et al. (2013) on cost-saving community-based dementia care, and Zimmer et al. (1990) on team-based case management, supports alternatives to institutional care. However, Granbo et al. (2019) highlighted current

**Table 3.** Wilcoxon Signed-Rank Test for Paired Samples of Responses About Healthcare System for the Older People With Dementia and for the Older People Without Dementia.

			ОР					HP		
	Mdn					Mdn				
	n	d	r	z	Þ	n	d	r	z	Þ
How easy is it for an OP/OP with dementia to have access to the healthcare system?	2	I	7	-6.2	.001	2	0	8	-3.889	.000
To what extent do the OP/OP with dementia receive adequate quality of healthcare services?	2	2	8	-6.187	.001	2	2	7	-2.954	.003
How long does an OP/OP with dementia have to wait to book an appointment with the healthcare system?	2	2	3	-2.136	.033	3	2	4	−I.908	.056
How comfortably can an OP/OP with dementia cover on their own healthcare expenses?	I	I	5	-3.616	.000	2	I	5	-2.359	.018
How necessary is it for an OP/OP with dementia to resort to the private sector for their healthcare needs?	2	2	4	-3.467	.000	2	2	.2	0.935	.350
How easy is it for an OP/OP with dementia to have access to the rehabilitation center?	2	I	4	-2.924	.003	1,5	I	3	-0.998	.318
How easily can an OP/OP with dementia cover the cost of rehabilitation on their own?	1	I	3	−I.736	.083	I	I	4	−I.483	.138
How easy is it for an OP/OP with dementia to visit a health facility by car?	3	2	7	-5.605	.000	2	I	9	−3.85 I	.000
How easy is it for an OP/OP with dementia to visit a health facility using public transportation?	2	I	6	-5.168	.000	I	0	-I	-3.603	.000
How easy is it for an OP/OP with dementia to have health professional visit them at home?	2	2	5	-3.552	.000	I	2	.2	0.693	.488
How easy is it for the OP/OP with dementia in rural areas to have access to primary healthcare services?	2	2	2	−I.643	.100	2	2	4	−I.347	.178
How easy is it for the OP/OP with dementia in rural areas to have access to secondary healthcare services?	I	I	3	-2.409	.016	2	I	6	-2.585	.010

n=responses to answers regarding older person with no dementia; d=responses to answers regarding older people with dementia; Mdn=median.

healthcare services' shortcomings in meeting the needs of dementia patients and their caregivers. The preference for private healthcare among dementia patients suggests that private institutions may offer more specialized and personalized care in Split-Dalmatia County.

In our study, both OP and HP largely agreed that older individuals face financial challenges in covering healthcare expenses. The average rating of payment ability by OP was 1.41, while the average rating by HP was 1.63, as shown in Table 2. Undoubtedly, these difficulties are influenced by the healthcare policy in various countries. McCarthy (2014) highlighted financial struggles among older people in the United States compared to peers in other developed nations, despite Medicare coverage. Similarly, Osborn et al. (2017) emphasized that US seniors still encounter financial barriers, despite having universal healthcare coverage.

Moreover, our research found no gender differences in identifying healthcare system issues among older people in Split-Dalmatia County. This aligns with similar studies showing that perceptions of challenges in the healthcare system are consistent across both genders and among different groups, such as older individuals and healthcare providers. (Hirst & Lane, 2015; Keene & Li, 2005; Stoppe et al., 1999). This conclusion is consistent with our survey results in the context of Split-Dalmatia County, Croatia.

Further research is needed to understand the differences in perceptions between older people (OP) and healthcare providers (HP). We recommend studies on semantic differences in healthcare quality concepts, especially regarding hospitalization and transportation. Additionally, perceptions of family members or caregivers of dementia patients should be considered. HP's lower perception of transportation quality highlights the need for improvements in the transportation of older people to healthcare facilities. It is important to recognize that barriers such as traffic, public transport issues, economic factors, and mobility limitations can impede older people's access to healthcare services (Li et al., 2022). We should also consider that locating medical services closer to older people' residences could optimize using of healthcare resources. HP's concerns about long waiting times for medical appointments signal a

need for action to reduce these times. By learning about older patients' perspectives on scheduling and wait times, we can implement improvements to optimize these procedures. The healthcare system's failure to meet the specialized needs of dementia patients, as noted by all respondents, calls for improved care options. Exploring collaborations between private and public healthcare systems could yield innovative solutions for dementia care. Lastly, the gap between problem awareness and action underscores the need for multidisciplinary studies to address healthcare providers' challenges in improving the healthcare system.

However, this study faced some limitations. First, HP respondents were not randomly selected and we cannot consider them as a representative for all healthcare providers. As a consequence, it reduces the validity of the Mann-Whitney U Test. Furthermore, in our survey not all older participants filled out the questionnaire in the same circumstances—some of them did it with the help of an interviewer, which could influence the results.

# **Conclusion**

Analyzing disparities in perceptions between healthcare providers and older people can be a valuable tool for pinpointing areas that need improvement. This approach aims to create a more inclusive, efficient, and effective healthcare system tailored to the needs of older people. In Split-Dalmatia County, urgent needs include: improving transportation quality, increasing local medical services for older people, forging new collaborations with the private sector, and developing services tailored to the needs of older people with dementia. Our survey results should alert policymakers and healthcare providers in our region and serve as a foundation for further research on disparities in perceptions among all healthcare stakeholders. Considering that healthcare providers are more aware of health-related challenges than older people themselves, we must pose a question: why is there such a prolonged delay between recognizing problems and taking concrete actions to address them? How can we shorten this timeframe? What are the true barriers preventing change? Are the healthcare system's weaknesses primarily due to economic and political stagnation, or do they stem from a broader ethical crisis in our society?

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#### **Ethical Approval**

Approval of the Ethics Committee of the Teaching Institute for Public Health of Split-Dalmatia County (Klasa:500-01/21-01/15, Reg.No. 2181-103-01-21-1).

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## **Supplemental Material**

Supplemental material for this article is available online.

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