

Article

Perceived Inequalities in Access to Healthcare in Hungary: A Population-Based Analysis by Socioeconomic and Demographic Factors

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Abstract

This study examined perceived inequalities in access to healthcare in Hungary using data from the 2021 International Social Survey Programme Health and Health Care II module (ISSP; N = 1008). The aim was to identify sociodemographic, behavioral, health-related, and attitudinal factors associated with perceived healthcare-access disparities and expectations of receiving the best available treatment if seriously ill. Cross-sectional analyses were performed using chi-squared tests, Fisher's exact tests, multivariable ordinal logistic regression, and binary logistic regression. In adjusted ordinal models, urban residence was associated with the rich–poor healthcare-access comparison (OR = 1.72, 95% CI: 1.04–2.83, $p = 0.033$), while daily fruit and vegetable consumption showed an inverse association in the same model (OR = 0.40, 95% CI: 0.22–0.75, $p = 0.004$). Neutral trust in doctors was associated with the citizens–non-citizens access comparison (OR = 1.86, 95% CI: 1.26–2.77, $p = 0.002$). Expectation of receiving the best available treatment was positively associated with secondary education compared with primary education (OR = 2.47, 95% CI: 1.44–4.24, $p = 0.001$) and daily fruit and vegetable consumption (OR = 2.18, 95% CI: 1.10–4.31, $p = 0.025$), and negatively associated with low confidence in the healthcare system (OR = 0.11, 95% CI: 0.04–0.27, $p < 0.001$) and disagreement that doctors can be trusted (OR = 0.17, 95% CI: 0.04–0.66, $p = 0.010$). These findings suggest that perceived healthcare-access inequalities in Hungary are shaped not only by structural socioeconomic position but also by institutional trust and health-related behaviors.



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Keywords: healthcare access; health inequalities; perceived inequality; trust in healthcare; socioeconomic factors; health behavior; Hungary

1. Introduction

Significant differences can be observed in the extent of life expectancy inequalities across European countries. While disparities are present in all nations, the most pronounced health inequalities are found in Central and Eastern European countries. These associations are not of recent origin; evidence of health disparities generated by socioeconomic differences can be traced back to earlier centuries ([Mackenbach 2012](#)).

In Hungary, life expectancy at birth (76.7 years in 2023) falls below the EU average (81.4 years). Compared to Switzerland, which has one of the highest life expectancies in Europe (84.3 years), Hungarian citizens live nearly eight years less. The number of healthy life years corresponds to the EU average (62.6 years in 2022), yet falls approximately eight years short of Malta, the country with the most favorable indicator (70.2 years) ([Eurostat n.d.](#)).

Health inequalities between various social groups are influenced by multiple factors, including structural characteristics, immediate risk factors, and the functioning of the healthcare system ([World Health Organization 2010](#)). Expenditures dedicated to the operation and development of the healthcare system form a critical foundation for health preservation, early disease detection, and timely treatment. However, these efforts must be accompanied by equitable access to high-quality care ([Éva 2024](#)). Inequalities in access to care result in systematic health disparities that are both unnecessary and preventable ([Marmot et al. 2012](#)). It is now well established that socioeconomic status and sociodemographic characteristics significantly determine health status and life expectancy, including the number of healthy life years. Among social groups with lower educational attainment, disadvantaged occupational positions, and lower income, life expectancy at birth can differ by as much as 10 years. Disparities are also observed between men and women, between married and unmarried individuals, and across different types of settlements. [Fitzpatrick et al. \(2015\)](#) highlight that socioeconomic status and residence in socially disadvantaged neighborhoods increase the likelihood of poor health outcomes ([Fitzpatrick et al. 2015](#)).

[Muka et al. \(2015\)](#) identified a correlation between poor health status and high healthcare-related costs ([Muka et al. 2015](#)). According to findings from the [Social Determinants and Science Integration Directorate, Public Health Agency of Canada \(2016\)](#), healthcare costs are generally highest among individuals in the lowest income quintile, for both men and women. In other words, socioeconomic inequalities are directly reflected as financial burdens in healthcare expenditures ([Social Determinants and Science Integration Directorate, Public Health Agency of Canada 2016](#)).

The individual's position within the social structure greatly influences their health status, as supported by numerous academic studies. A particularly important document in this context is the Black Report (1982), in which Townsend and Davidson analyzed in detail how social inequalities and individual societal positions impact health outcomes ([Gray 1982](#)). Their findings indicate that social groups with lower prestige tend to have poorer health status compared to those in more advantageous positions within the social hierarchy, which in turn affects the disease burden and the likelihood of developing various health conditions.

The positive relationship between socioeconomic status (SES) and health has been emphasized by several scholars ([Marmot 2001, 2005; Clouston and Link 2021](#)). Their findings suggest that higher parental education, individual educational attainment, and income levels are associated with better subjective and objective health outcomes. Similar

patterns were observed by Siddiq and Najand (2022) when analyzing self-rated health among migrant-affected social groups (Siddiq and Najand 2022).

These stratification variables also justify the measurement of the effects of certain “soft” variables, based on the findings of previous research. For example, income level influences dietary habits and access to healthy foods, such as fruits and vegetables, which are predictors of health-conscious behavior and may therefore be associated with a more controlled lifestyle (Guillaumie et al. 2010; Pechey et al. 2015; Mauramo et al. 2023). Although studies examining health inequalities primarily apply traditional sociodemographic variables such as age, gender, or income, religion may capture additional social and psychological dimensions. Previous research suggests that religious communities can provide emotional and social support, which may influence perceptions of access to healthcare services (Schiller and Levin 1988). In addition, religiosity may also be associated with health behavior and the utilization of preventive healthcare services (Benjamins and Brown 2004). According to the study by Tuczyńska et al. (2025), religious affiliation was associated with more favorable perceptions of healthcare access during and after the COVID-19 pandemic (Tuczyńska et al. 2025). These findings suggest that religion may primarily exert its influence through subjective perceptions and social support mechanisms. Therefore, the inclusion of religious affiliation may contribute to a broader interpretation of the factors shaping perceptions of health inequalities. Based on the literature, the inclusion of religious affiliation as an explanatory variable can therefore be considered theoretically justified.

From a sociological perspective, health and healthcare inequalities should be analyzed using two complex variables: sociodemographic status (SDS) and socioeconomic status (SES). The former typically includes age, gender, marital status, and ethnic background, while the latter encompasses stratifying variables that describe one’s socio-economic situation, such as employment status, educational attainment, income level, and place of residence, which all influence an individual’s social mobility and living conditions (Daly et al. 2002). These two dimensions are complemented by additional variables influenced by the hard variables, including fruit and vegetable consumption, as well as spiritual and religious factors.

Hungarian statistical trends reveal distinct territorial disparities based on the above dimensions. Hence, access inequalities can be interpreted not only through social structural positioning but also geographically (Uzzoli et al. 2019). The focus of this paper is to examine the perceived inequalities in access to healthcare in Hungary. Our aim was to examine which factors most strongly determine access to healthcare services.

These findings may contribute to a better understanding of perceived barriers to equitable healthcare access in Hungary.

2. Materials and Methods

2.1. Data Source and Study Population

Data for this study were obtained from the International Social Survey Programme (ISSP) “Health and Health Care II” module (ZA8000, Version 2.0.0), coordinated by the GESIS Leibniz Institute for the Social Sciences (ISSP Research Group 2024). The ISSP is a cross-national, continuous programme that conducts annual surveys on key social science topics. The 2021 wave included Hungary as one of the participating countries, with national fieldwork conducted between April and May 2021 and a final sample size of 1008 adult respondents aged 18 years and older. The Hungarian data were collected using a combination of face-to-face interviews (both paper-and-pencil and computer-assisted), self-administered questionnaires (paper and web-based), and computer-assisted telephone interviews, employing a probability-based sampling design (simple random, multistage, or systematic random sampling, as applicable). The ISSP dataset enables cross-sectional

analysis at the individual level. Further details on the overall ISSP methodology, sampling procedures, and questionnaire structure are available in the study codebook (ISSP Research Group 2024).

2.2. Outcome Variables

The outcome variables were derived from single items in the Hungarian ISSP 2021 Health and Health Care II questionnaire. Perceived healthcare-access differences between social groups were assessed using Question 7, which asked respondents: “Mit gondol, Magyarországon könnyebb vagy nehezebb az egészségügyi ellátáshoz való hozzáférés. . .” [“In your opinion, in Hungary, is access to healthcare easier or harder. . .”] for selected groups. The item included four comparisons: access for rich people compared with poor people, older people compared with younger people, women compared with men, and Hungarian citizens compared with people without Hungarian citizenship. Response options were ordered as follows: “sokkal könnyebb” [much easier], “inkább könnyebb” [somewhat easier], “körülbelül ugyanolyan” [about the same], “inkább nehezebb” [somewhat harder], and “sokkal nehezebb” [much harder], with “NT/NV” [don’t know/no answer] treated as missing. For analysis, these responses were collapsed into three ordered categories: easier, same, and harder.

Expected receipt of the best available treatment was assessed using Question 19, which asked respondents how likely it would be that, if they became seriously ill, they would receive the best treatment available in Hungary. The response options were: definitely would receive it, probably would receive it, equally likely to receive or not receive it, probably would not receive it, and definitely would not receive it, with don’t know/no answer treated as missing. For the binary logistic regression model, this variable was dichotomized into expecting to receive the best available treatment versus not expecting to receive it.

Each outcome was therefore based on a single questionnaire item rather than a multi-item scale or composite index. Consequently, the findings should be interpreted as perceived healthcare-access inequality and expected treatment access, not as objective measures of healthcare utilization, waiting time, geographic availability, quality of care, or realized access.

2.3. Variable Definitions and Categorization

All variables were recoded into categorical groups for descriptive and inferential analysis. Gender was classified as male or female. Age was categorized into three groups: 18–34, 35–64, and 65 years or older. Education level was divided into primary, secondary, and tertiary. Employment status was grouped as retired or unable to work, employed, unemployed, or student. Relationship status distinguished single from in-relationship participants. Religious affiliation was coded as Catholic, atheist, or other. Place of living was categorized as rural or urban. Happiness was dichotomized to distinguish respondents reporting generally positive subjective well-being from those reporting neutral or negative well-being. Although retaining the original response categories would have preserved more information, the complete-case multivariable models using the original categories showed sparse outcome-by-category combinations and did not converge meaningfully, producing unstable estimates with inflated standard errors and unreliable confidence intervals. Therefore, dichotomization was used as a pragmatic modeling decision to reduce sparsity and improve model stability. This approach was not intended to imply that intermediate levels of happiness are substantively unimportant, and the potential loss of information due to dichotomization is acknowledged as a limitation. Confidence in the healthcare system was grouped as high, moderate, or low. Perceived fairness in healthcare was classified

as fair or not fair. Trust in doctors was grouped as agree, neither agree nor disagree, or disagree. Smoking status included never smoked, former smoker, ≤ 10 cigarettes daily, and >10 cigarettes daily. Alcohol consumption was categorized as never, rarely, or regularly. Physical activity was grouped as rarely/never or regularly. Frequency of fruit and vegetable consumption was classified as rarely/never, several times a week, or daily. Fruit and vegetable consumption was included as a health-behavior indicator and as a potential marker of health-conscious lifestyle and socioeconomic resources. Previous studies have shown that fruit and vegetable intake is socially patterned and may reflect affordability, access to healthy foods, health literacy, and broader lifestyle orientation. Therefore, this variable was not interpreted as a direct causal determinant of perceived healthcare access, but as a behavioral and socioeconomic correlate of health-related perceptions. Health status was grouped as good, average, or poor. Presence of long-standing illness was coded as yes or no. BMI was categorized as normal or overweight/obese. Income was categorized into three groups: Low, Middle, and High. The thresholds were set at 50% and 150% of the national average net monthly income for Hungary in 2021, based on methodologies used by the OECD and Eurostat (Eurostat n.d.; Zwijnenburg et al. 2021). The national average net monthly income was 375,305 HUF, resulting in a Low income category ($<187,653$ HUF), a Middle income category (187,653–562,958 HUF), and a High income category ($>562,958$ HUF). Respondents who did not disclose income were treated as missing and excluded from income-based analyses.

Covariates were selected a priori based on their theoretical relevance to perceived healthcare access and health inequality. The model included sociodemographic variables (gender, age, relationship status), socioeconomic indicators (education, employment, income, and place of residence), health-related variables (self-rated health, long-standing illness, BMI), behavioral indicators (smoking, alcohol consumption, physical activity, and fruit/vegetable consumption), and attitudinal variables related to the healthcare system (confidence in the healthcare system, perceived fairness, and trust in doctors). This structure reflects a social determinants of health approach in which perceptions of healthcare access may be shaped not only by socioeconomic position but also by health behavior, health status, and institutional trust. Religion was included as a social and cultural variable potentially related to social support, moral sensitivity to inequality, and healthcare-related perceptions.

The explanatory variables applied in the study were selected based on previous empirical findings and relevant international literature. In addition to the widely used and well-established sociodemographic variables, healthy nutrition and fruit and vegetable consumption variables were included in the analysis based on the findings of Guillaumie et al. (2010), Pechey et al. (2015), and Mauramo et al. (2023). The role of religiosity and religious affiliation was incorporated into the model based on previous studies (Schiller and Levin 1988; Benjamins and Brown 2004; Musick et al. 2004; Tuczyńska et al. 2025; Jóna and Fedor 2025), as these studies highlighted the relationship between religion, social support, health behavior, and perceptions of healthcare access.

Trust in healthcare was also included as an important explanatory variable, as it is considered a fundamental element of clinical care, based on the assumption that the healthcare system acts in the best interests of patients. Previous research suggests that mistrust may contribute to increasing health inequalities. Accordingly, the trust/mistrust variable was examined based on the studies of (Richmond et al. 2022; TK Szociológiai Intézet n.d.; Croker et al. 2013; Birkhäuser et al. 2017).

The measurement of self-rated health is widely applied in international literature, where respondents provide an overall evaluation of their own health status (Martos and Kopp 2011). Previous studies have demonstrated that subjective health perception not only

reflects objective health status relatively well (Hamplová et al. 2022), but is also closely associated with psychological well-being and subjective happiness (Steptoe 2019).

2.4. Statistical Methods

All statistical analyses were performed using Stata version 19 (StataCorp 2025, College Station, TX, USA). Descriptive statistics were generated for categorical variables, with absolute frequencies and corresponding proportions reported for each category. Bivariate associations between categorical predictors and outcome variables were assessed using Pearson's chi-squared and Fisher's exact tests, with both frequency counts and column percentages presented. Multivariable analyses were conducted using ordinal logistic regression for three-category ordered perceived-access outcomes and binary logistic regression for the dichotomous outcome concerning expected receipt of the best available treatment. For the ordinal models, the proportional odds assumption was assessed using post-estimation diagnostic testing. Where evidence suggested possible violation of the proportional odds assumption, the results were interpreted cautiously and compared with alternative model specifications, including generalized or partial proportional odds models as sensitivity analyses. The final interpretation was based on the consistency, direction, and stability of associations across model specifications. Statistical significance was defined as a two-sided p -value less than 0.05.

Model robustness and validity were rigorously assessed. Sensitivity analyses were conducted to examine the stability of the multivariable models under alternative model specifications and exclusion criteria. Model fit was evaluated using the Hosmer–Lemeshow goodness-of-fit test for binary logistic models, and multicollinearity was assessed by calculating variance inflation factors for all covariates. Discriminative performance was quantified by constructing confusion matrices and calculating sensitivity, specificity, positive predictive value, and negative predictive value for each model. Due to small cell counts in some categorical variables, categories were collapsed where methodologically appropriate to minimize sparsity and reduce the risk of unstable parameter estimates. In instances where sparse cells or zero counts persisted, we interpreted results cautiously and highlighted these issues in the reporting. For all regression analyses, we monitored for potential separation, and models were reviewed for inestimable coefficients or inflated standard errors due to empty or nearly empty cells. No imputation was performed, and complete case analysis was used throughout.

3. Results

3.1. Sociodemographic and Behavioral Correlates of Perceived Health Care Access: Chi-Squared and Fisher's Exact Analyses

Bivariate analyses were conducted to examine unadjusted associations between respondent characteristics and perceived healthcare access differences across social groups. Because several variables included sparse categories, particularly high income, student status, unemployment, and selected "Harder" response categories, these findings should be interpreted descriptively and used primarily to contextualize the multivariable analyses.

Perceived healthcare access differences between rich and poor people were significantly associated with age category ($p = 0.045$), employment status ($p < 0.001$), religious affiliation ($p = 0.006$), place of living ($p < 0.001$), happiness ($p = 0.022$), trust in doctors ($p = 0.019$), physical activity ($p = 0.037$), and fresh fruit/vegetable consumption ($p = 0.002$). Among respondents reporting that access was easier for rich than poor people, 61% were aged 35–64 years, 66% were employed, 56% were Catholic, 69% lived in urban areas, 59% were happy, 70% agreed that doctors can be trusted, 67% rarely or never engaged in physical activity, and 45% consumed fresh fruits/vegetables several times per week. No statistically significant

bivariate association was observed for gender, education level, relationship status, confidence in healthcare, perceived fairness in healthcare, smoking, alcohol consumption, health status, long-standing illness, BMI category, or income category. Full bivariate distributions for the rich–poor comparison are provided in Supplementary Table S1.

Perceived healthcare access differences between citizens and non-citizens were significantly associated with happiness ($p = 0.005$), trust in doctors ($p < 0.001$), health status ($p = 0.015$), and income category ($p = 0.044$). Among respondents reporting that access was easier for citizens than non-citizens, 62% were happy, 80% agreed that doctors can be trusted, 56% reported good health, and 67% were in the low-income category. However, the high-income category contained very few respondents across response categories; therefore, the bivariate association involving income should be interpreted cautiously. No statistically significant bivariate associations were observed for gender, age category, education level, employment status, relationship status, religion, place of living, confidence in healthcare, perceived fairness in healthcare, smoking, alcohol consumption, physical activity, fruit/vegetable consumption, long-standing illness, or BMI category. Full bivariate distributions for the citizens–non-citizens comparison are provided in Supplementary Table S1.

Perceived healthcare access differences between older and younger people were significantly associated with health status ($p < 0.001$) and long-standing illness ($p < 0.001$). Among respondents reporting that access was easier for older than younger people, 66% reported good health and 78% reported no long-standing illness. Conversely, among respondents reporting that access was harder for older people, 21% reported poor health and 46% reported a long-standing illness. No statistically significant bivariate associations were observed for gender, age category, education level, employment status, relationship status, religion, place of living, happiness, confidence in healthcare, perceived fairness in healthcare, trust in doctors, smoking, alcohol consumption, physical activity, fruit/vegetable consumption, BMI category, or income category. Full bivariate distributions for the older–younger comparison are provided in Supplementary Table S2.

Perceived healthcare access differences between women and men were significantly associated with perceived fairness in healthcare ($p = 0.005$), trust in doctors ($p = 0.004$), alcohol consumption ($p = 0.001$), and health status ($p = 0.038$). Among respondents reporting that access was easier for women than men, 23% perceived healthcare as fair, 79% agreed that doctors can be trusted, 48% reported never consuming alcohol, and 65% reported good health. No statistically significant bivariate associations were observed for gender, age category, education level, employment status, relationship status, religion, place of living, happiness, confidence in healthcare, smoking, physical activity, fruit/vegetable consumption, long-standing illness, BMI category, or income category. Full bivariate distributions for the women–men comparison are provided in Supplementary Table S2.

Expected receipt of the best available treatment if seriously ill was significantly associated with education level ($p = 0.016$), happiness ($p = 0.012$), confidence in the healthcare system ($p < 0.001$), trust in doctors ($p < 0.001$), physical activity ($p = 0.005$), fresh fruit/vegetable consumption ($p < 0.001$), health status ($p = 0.002$), and BMI category ($p = 0.015$). Among respondents who believed they would receive the best available treatment, 39% had secondary education, 61% were happy, 42% reported high confidence in the healthcare system, 75% agreed that doctors can be trusted, 35% engaged in regular physical activity, 34% consumed fresh fruits/vegetables daily, 55% reported good health, and 47% had normal BMI. No statistically significant bivariate associations were observed for gender, age category, employment status, relationship status, religion, place of living, perceived fairness in healthcare, smoking, alcohol consumption, long-standing illness, or income category (Table 1).

Table 1. Bivariate associations between respondent characteristics and expected receipt of the best available treatment if seriously ill.

Variable	Category	Not Get n	Not Get %	Get n	Get %	p-Value
Gender	Male	89	38	138	40	0.704
	Female	144	62	209	60	
Age category	18–34	36	15	51	15	0.657
	35–64	145	62	207	60	
	65+	52	22	89	26	
Education level	Primary	137	59	162	47	0.016
	Secondary	70	30	137	39	
	Tertiary	26	11	48	14	
Employment status	Retired/unable to work	63	28	96	28	0.985
	Employed	153	67	231	67	
	Unemployed	10	4	13	4	
	Student	3	1	4	1	
Relationship status	Single	102	44	153	44	0.976
	In relationship	130	56	194	56	
Religion	Catholic	127	56	203	61	0.06
	Atheist	33	14	60	18	
	Other	68	30	71	21	
Place of living	Rural	61	26	96	28	0.693
	Urban	172	74	251	72	
Happiness	Unhappy	116	50	136	39	0.012
	Happy	117	50	211	61	
Confidence in healthcare	High	47	20	146	42	<0.001
	Moderate	125	54	184	53	
	Low	59	26	16	5	
Fairness in healthcare	Fair	30	13	52	15	0.658
	Not fair	200	87	292	85	
Doctors can be trusted	Agree	123	53	261	75	<0.001
	Neither agree nor disagree	92	40	80	23	
	Disagree	15	7	5	1	
Smoking	Never smoked	130	56	216	62	0.41
	Former smoker	26	11	37	11	
	≤10 cigarettes daily	38	16	47	14	
	>10 cigarettes daily	39	17	46	13	
Alcohol consumption	Never	139	60	219	63	0.674
	Rarely	58	25	82	24	
	Regularly	35	15	45	13	
Physical activity	Rarely/never	178	76	227	65	0.005
	Regularly	55	24	120	35	
Fresh fruits/vegetables	Rarely/never	87	38	77	22	<0.001
	Several times/week	97	42	153	44	
	Daily	48	21	117	34	

Table 1. Cont.

Variable	Category	Not Get n	Not Get %	Get n	Get %	p-Value
Health status	Good	101	43	191	55	0.002
	Average	95	41	129	37	
	Poor	37	16	27	8	
Long-standing illness	No	149	64	240	69	0.174
	Yes	84	36	106	31	
BMI category	Normal	85	36	162	47	0.015
	Overweight/obese	148	64	185	53	
Income category	Low	117	65	155	57	0.3
	Middle	62	34	112	41	
	High	2	1	3	1	

Footnote: Values are frequencies and column percentages. Percentages were rounded to the nearest whole number. *p*-values were calculated using Pearson's chi-squared tests or Fisher's exact tests where expected cell counts were small. The outcome compares respondents who expected to receive the best available treatment if seriously ill with those who did not. Analytic sample size was *N* = 580. Bolded rows indicate statistically significant bivariate associations at *p* < 0.05. Sparse cells were present in selected categories, particularly student status, high income, and disagreement that doctors can be trusted.

3.2. Multivariable Regression Models of Perceived Healthcare Accessibility

Multivariable ordinal logistic regression models were used to examine adjusted associations with perceived healthcare access differences. The ordered outcomes were coded as 0 = Easier, 1 = Same, and 2 = Harder for the first-named group relative to the second-named group. Accordingly, odds ratios above 1 indicate higher cumulative odds of reporting greater perceived difficulty for the first-named group, whereas odds ratios below 1 indicate lower cumulative odds of reporting greater perceived difficulty.

In the model examining perceived access differences between rich and poor people, urban residents had higher cumulative odds of reporting greater perceived difficulty compared with rural residents (OR = 1.72, 95% CI: 1.04–2.83, *p* = 0.033). Respondents categorized under “Other” religious affiliation had lower cumulative odds compared with Catholic respondents (OR = 0.54, 95% CI: 0.32–0.92, *p* = 0.024). Fresh fruit/vegetable consumption was also significantly associated with the outcome. Compared with respondents who rarely or never consumed fresh fruits/vegetables, those consuming them several times per week had lower cumulative odds (OR = 0.52, 95% CI: 0.31–0.86, *p* = 0.011), as did those consuming them daily (OR = 0.40, 95% CI: 0.22–0.75, *p* = 0.004). The high-income estimate was not reliably estimable because of sparse cells and probable quasi-separation; therefore, it was not interpreted substantively.

In the model examining perceived access differences between citizens and non-citizens, respondents who neither agreed nor disagreed that doctors can be trusted had higher cumulative odds of reporting greater perceived difficulty compared with those who agreed that doctors can be trusted (OR = 1.86, 95% CI: 1.26–2.77, *p* = 0.002). Compared with respondents who rarely or never consumed fresh fruits/vegetables, those consuming them several times per week also had higher cumulative odds (OR = 1.54, 95% CI: 1.00–2.36, *p* = 0.048). Respondents with average self-rated health had higher cumulative odds compared with those reporting good health (OR = 1.63, 95% CI: 1.05–2.51, *p* = 0.030). Poor self-rated health showed a borderline association (OR = 2.03, 95% CI: 0.98–4.18, *p* = 0.058) and was interpreted cautiously (Table 2).

Table 2. Ordinal logistic regression models for perceived healthcare access differences by wealth and citizenship status.

Variable	Category	Rich vs. Poor: OR [95% CI]	p-Value	Citizens vs. Non-Citizens: OR [95% CI]	p-Value
Gender	Male	Ref		Ref	
	Female	1.17 [0.71–1.93]	0.525	1.38 [0.94–2.01]	0.102
Age category	18–34	Ref		Ref	
	35–64	0.60 [0.33–1.09]	0.097	0.83 [0.51–1.35]	0.451
	65+	1.22 [0.41–3.56]	0.718	0.46 [0.21–1.02]	0.056
Education level	Primary	Ref		Ref	
	Secondary	1.14 [0.70–1.84]	0.59	1.01 [0.70–1.45]	0.978
	Tertiary	1.17 [0.61–2.29]	0.634	0.90 [0.54–1.49]	0.69
Employment status	Retired/unable to work	Ref		Ref	
	Employed	2.10 [0.83–5.31]	0.121	0.80 [0.42–1.55]	0.518
	Unemployed	2.56 [0.68–9.78]	0.165	1.55 [0.55–4.31]	0.403
	Student	5.87 [0.42–81.45]	0.186	0.14 [0.01–1.88]	0.137
Relationship status	Single	Ref		Ref	
	In relationship	1.32 [0.85–2.03]	0.215	0.96 [0.68–1.34]	0.812
Religion	Catholic	Ref		Ref	
	Atheist	0.65 [0.35–1.21]	0.175	0.95 [0.61–1.48]	0.811
	Other	0.54 [0.32–0.92]	0.024	0.79 [0.54–1.16]	0.23
Place of living	Urban	1.72 [1.04–2.83]	0.033	1.15 [0.81–1.65]	0.427
	Rural	Ref		Ref	
Happiness	Unhappy	Ref		Ref	
	Happy	0.76 [0.47–1.23]	0.269	1.09 [0.75–1.60]	0.644
Confidence in healthcare	High	Ref		Ref	
	Moderate	1.15 [0.70–1.90]	0.565	0.97 [0.66–1.42]	0.873
	Low	1.08 [0.49–2.41]	0.836	1.40 [0.77–2.59]	0.265
Fairness in healthcare	Fair	Ref		Ref	
	Not fair	0.82 [0.63–1.07]	0.139	0.93 [0.76–1.15]	0.497
Doctors can be trusted	Agree	Ref		Ref	
	Neither agree nor disagree	1.02 [0.62–1.68]	0.931	1.86 [1.26–2.77]	0.002
	Disagree	1.48 [0.53–4.14]	0.453	0.61 [0.25–1.46]	0.266
Smoking	Never smoked	Ref		Ref	
	Former smoker	0.78 [0.40–1.52]	0.466	0.76 [0.45–1.28]	0.305
	≤10 cigarettes daily	0.61 [0.31–1.19]	0.144	0.93 [0.58–1.51]	0.778
	>10 cigarettes daily	0.88 [0.47–1.62]	0.671	1.38 [0.86–2.18]	0.181
Alcohol consumption	Never	Ref		Ref	
	Rarely	0.79 [0.46–1.35]	0.388	0.74 [0.50–1.09]	0.131
	Regularly	1.08 [0.55–2.12]	0.811	0.84 [0.51–1.42]	0.525
Physical activity	Rarely/never	Ref		Ref	
	Regularly	0.75 [0.46–1.22]	0.25	0.93 [0.65–1.34]	0.697
Fresh fruits/vegetables	Rarely/never	Ref		Ref	
	Several times/week	0.52 [0.31–0.86]	0.011	1.54 [1.00–2.36]	0.048
	Daily	0.40 [0.22–0.75]	0.004	1.39 [0.84–2.27]	0.193
Health status	Good	Ref		Ref	
	Average	0.97 [0.55–1.70]	0.92	1.63 [1.05–2.51]	0.03
	Poor	0.58 [0.23–1.51]	0.262	2.03 [0.98–4.18]	0.058

Table 2. *Cont.*

Variable	Category	Rich vs. Poor: OR [95% CI]	<i>p</i> -Value	Citizens vs. Non-Citizens: OR [95% CI]	<i>p</i> -Value
Long-standing illness	No	Ref		Ref	
	Yes	1.31 [0.73–2.36]	0.372	0.90 [0.57–1.43]	0.665
BMI category	Normal	Ref		Ref	
	Overweight/obese	0.79 [0.52–1.22]	0.296	1.09 [0.78–1.52]	0.617
Income category	Low	Ref		Ref	
	Middle	1.03 [0.64–1.68]	0.901	1.19 [0.80–1.73]	0.394
	High	Not reliably estimable	0.983	3.67 [0.46–28.79]	0.219

Footnote: Results are adjusted odds ratios from multivariable ordinal logistic regression models. The original ordered response categories were coded as 0 = Easier, 1 = Same, and 2 = Harder for the first-named group relative to the second-named group. Accordingly, OR > 1 indicates higher cumulative odds of reporting greater perceived difficulty for the first-named group, while OR < 1 indicates lower cumulative odds of reporting greater perceived difficulty. Reference categories are shown as Ref. The models used complete-case analysis. The high-income estimate in the rich–poor model was not reliably estimable because of sparse cells and probable quasi-separation. Bolded rows/cells indicate $p < 0.05$. Model 1: Perceived access difference between rich and poor individuals. Model 2: Perceived access difference between citizens and non-citizens. Higher outcome values indicate greater perceived difficulty for the traditionally advantaged group (rich or citizens).

In the model examining perceived access differences between older and younger people, being in a relationship was associated with higher cumulative odds of reporting greater perceived difficulty compared with being single (OR = 1.43, 95% CI: 1.03–1.99, $p = 0.035$). Former smokers had higher cumulative odds compared with respondents who had never smoked (OR = 1.67, 95% CI: 1.00–2.75, $p = 0.049$), although the lower confidence limit was exactly 1.00; therefore, this result should be interpreted cautiously. No other covariates were statistically significant at $p < 0.05$ in this model.

In the model examining perceived access differences between women and men, being in a relationship was associated with higher cumulative odds of reporting greater perceived difficulty compared with being single (OR = 1.86, 95% CI: 1.22–2.80, $p = 0.003$). Student status showed a large but borderline association compared with retired respondents or those unable to work (OR = 11.94, 95% CI: 0.99–144.03, $p = 0.051$), but this estimate was imprecise and likely affected by sparse data. No other covariates were statistically significant at $p < 0.05$ (Table 3).

Table 3. Ordinal logistic regression models for perceived healthcare access differences by age and gender.

Variable	Category	Older vs. Younger: OR [95% CI]	<i>p</i> -Value	Women vs. Men: OR [95% CI]	<i>p</i> -Value
Gender	Male	Ref		Ref	
	Female	1.20 [0.82–1.75]	0.365	1.54 [0.96–2.46]	0.074
Age category	18–34	Ref		Ref	
	35–64	0.88 [0.54–1.43]	0.605	1.05 [0.59–1.90]	0.86
	65+	0.92 [0.41–2.08]	0.854	1.36 [0.51–3.63]	0.542
Education level	Primary	Ref		Ref	
	Secondary	0.83 [0.57–1.19]	0.305	0.90 [0.57–1.40]	0.639
	Tertiary	1.22 [0.73–2.05]	0.439	1.38 [0.73–2.61]	0.33
Employment status	Retired/unable to work	Ref		Ref	
	Employed	0.83 [0.42–1.62]	0.586	0.80 [0.36–1.80]	0.597
	Unemployed	1.01 [0.38–2.75]	0.981	0.99 [0.28–3.46]	0.983
	Student	1.54 [0.16–14.44]	0.709	11.94 [0.99–144.03]	0.051

Table 3. Cont.

Variable	Category	Older vs. Younger: OR [95% CI]	<i>p</i> -Value	Women vs. Men: OR [95% CI]	<i>p</i> -Value
Relationship status	Single	Ref		Ref	
	In relationship	1.43 [1.03–1.99]	0.035	1.86 [1.22–2.80]	0.003
Religion	Catholic	Ref		Ref	
	Atheist	0.97 [0.63–1.52]	0.897	1.36 [0.77–2.39]	0.289
	Other	0.71 [0.49–1.03]	0.075	0.69 [0.44–1.07]	0.102
Place of living	Rural	Ref		Ref	
	Urban	0.72 [0.51–1.03]	0.069	1.20 [0.77–1.84]	0.42
Happiness	Unhappy	Ref		Ref	
	Happy	0.84 [0.57–1.23]	0.377	1.04 [0.64–1.67]	0.883
Confidence in healthcare	High	Ref		Ref	
	Moderate	0.80 [0.55–1.17]	0.253	0.93 [0.59–1.48]	0.77
	Low	1.17 [0.64–2.14]	0.617	1.86 [0.87–3.97]	0.111
Fairness in healthcare	Fair	Ref		Ref	
	Not fair	1.12 [0.90–1.38]	0.32	1.01 [0.79–1.31]	0.914
Doctors can be trusted	Agree	Ref		Ref	
	Neither agree nor disagree	1.12 [0.76–1.67]	0.579	1.32 [0.80–2.16]	0.277
	Disagree	1.49 [0.65–3.39]	0.349	0.78 [0.29–2.14]	0.633
Smoking	Never smoked	Ref		Ref	
	Former smoker	1.67 [1.00–2.75]	0.049	1.34 [0.70–2.53]	0.37
	≤10 cigarettes daily	0.95 [0.58–1.55]	0.833	1.25 [0.68–2.27]	0.48
	>10 cigarettes daily	1.48 [0.92–2.36]	0.103	1.00 [0.57–1.77]	0.998
Alcohol consumption	Never	Ref		Ref	
	Rarely	0.96 [0.64–1.42]	0.837	0.81 [0.50–1.31]	0.387
	Regularly	0.65 [0.39–1.08]	0.099	0.98 [0.52–1.86]	0.951
Physical activity	Rarely/never	Ref		Ref	
	Regularly	1.11 [0.77–1.58]	0.582	1.30 [0.84–2.01]	0.246
Fresh fruits/vegetables	Rarely/never	Ref		Ref	
	Several times/week	1.06 [0.70–1.62]	0.789	1.05 [0.63–1.79]	0.843
	Daily	0.76 [0.47–1.25]	0.282	0.63 [0.34–1.15]	0.13
Health status	Good	Ref		Ref	
	Average	0.92 [0.59–1.43]	0.712	1.11 [0.64–1.92]	0.711
	Poor	1.70 [0.83–3.46]	0.149	0.78 [0.32–1.88]	0.571
Long-standing illness	No	Ref		Ref	
	Yes	1.31 [0.84–2.05]	0.244	1.38 [0.78–2.44]	0.275
BMI category	Normal	Ref		Ref	
	Overweight/obese	1.23 [0.88–1.72]	0.221	1.26 [0.84–1.90]	0.278
Income category	Low	Ref		Ref	
	Middle	1.23 [0.84–1.80]	0.29	1.14 [0.71–1.80]	0.599
	High	1.07 [0.13–8.67]	0.947	0.73 [0.07–7.32]	0.789

Footnote: Results are adjusted odds ratios from multivariable ordinal logistic regression models. The ordered response categories were coded as 0 = Easier, 1 = Same, and 2 = Harder for the first-named group relative to the second-named group. Accordingly, OR > 1 indicates higher cumulative odds of reporting greater perceived difficulty for the first-named group, while OR < 1 indicates lower cumulative odds of reporting greater perceived difficulty. Reference categories are shown as Ref. The models used complete-case analysis. Estimates for student status and high income have wide confidence intervals and should be interpreted cautiously. Bolded cells indicate $p < 0.05$. Model 1: Perceived healthcare access for older versus younger individuals. Model 2: Perceived healthcare access for women versus men. In both models, higher outcome values reflect greater perceived difficulty for the reference group (older adults or women, respectively).

Higher education was positively associated with believing in access to the best treatment, with respondents having a secondary education (OR = 2.47, 95% CI [1.44, 4.24], $p = 0.001$) reporting significantly higher odds compared to those with primary education. Confidence in the healthcare system was a significant predictor, as respondents with moderate (OR = 0.51, 95% CI [0.30, 0.88], $p = 0.016$) or low confidence (OR = 0.11, 95% CI [0.04, 0.27], $p < 0.001$) were less likely to believe they would receive the best treatment. Trust in doctors also influenced perceptions, with those who neither agreed nor disagreed that doctors can be trusted (OR = 0.51, 95% CI [0.29, 0.89], $p = 0.018$) and those who disagreed (OR = 0.17, 95% CI [0.04, 0.66], $p = 0.01$) being significantly less likely to expect the best available care. Daily consumption of fresh fruits and vegetables was associated with higher odds of believing in access to the best treatment (OR = 2.18, 95% CI [1.10, 4.31], $p = 0.025$). No significant associations were found for gender, age, employment status, relationship status, religion, place of living, happiness, fairness in healthcare, smoking, alcohol consumption, physical activity, health status, long-standing illness, BMI category, or income level (all $p > 0.05$) (Table 4).

Table 4. Binary logistic regression predicting perceived likelihood of receiving the best treatment if seriously ill in Hungary.

Variable	Category	If Seriously Ill: Get or Not Get Best Treatment Available	
		Odds Ratio [95% CI]	<i>p</i> -Value
Gender	Male	Ref	
	Female	0.66 [0.37–1.16]	0.147
Age Category	18–34	Ref	
	35–64	0.90 [0.43–1.87]	0.78
	65+	1.52 [0.50–4.64]	0.461
Education Level	Primary	Ref	
	Secondary	2.47 [1.44–4.24]	0.001
	Tertiary	2.05 [0.93–4.56]	0.077
Employment Status	Retired or unable to work	Ref	
	Employed	1.18 [0.47–2.94]	0.719
	Unemployed	2.17 [0.42–11.11]	0.354
	Student	1.07 [0.05–23.30]	0.965
Relationship Status	Single	Ref	
	In Relation	0.93 [0.56–1.53]	0.772
Religion	Catholic	Ref	
	Atheist	1.08 [0.55–2.13]	0.82
	Other	0.87 [0.50–1.51]	0.613
Place of Living	Rural	Ref	
	Urban	0.95 [0.56–1.61]	0.846
Happiness	Unhappy	Ref	
	Happy	1.04 [0.60–1.79]	0.901
Confidence in Healthcare	High	Ref	
	Moderate	0.51 [0.30–0.88]	0.016
	Low	0.11 [0.04–0.27]	<0.001

Table 4. Cont.

Variable	Category	If Seriously Ill: Get or Not Get Best Treatment Available	
		Odds Ratio [95% CI]	p-Value
Fairness in Healthcare	Fair	Ref	
	Neither fair nor unfair	1.35 [0.98–1.88]	0.07
Doctors Can Be Trusted	Agree	Ref	
	Neither agree nor disagree	0.51 [0.29–0.89]	0.018
	Disagree	0.17 [0.04–0.66]	0.01
Smoking	Do not smoke and never did	Ref	
	Former smoker	1.03 [0.49–2.17]	0.939
	≤10 cigarettes daily	0.85 [0.43–1.67]	0.638
	>10 cigarettes daily	1.13 [0.58–2.21]	0.727
Alcohol Consumption	Never	Ref	
	Rarely	0.76 [0.43–1.36]	0.358
	Regularly	0.96 [0.45–2.05]	0.922
Physical Activity	Rarely or never	Ref	
	Regularly	1.46 [0.87–2.47]	0.154
Fresh Fruits/Veggies	Rarely or never	Ref	
	Several times a week	1.35 [0.77–2.39]	0.299
	Daily	2.18 [1.10–4.31]	0.025
Health Status	Good	Ref	
	Average	1.37 [0.74–2.54]	0.322
	Poor	1.33 [0.48–3.65]	0.58
Long-standing Illness	No	Ref	
	Yes	0.65 [0.35–1.24]	0.194
BMI Category	Normal	Ref	
	Overweight/Obese	0.87 [0.54–1.42]	0.581
Income Categories	Low	Ref	
	Middle	1.04 [0.59–1.84]	0.882
	High	0.26 [0.02–2.82]	0.271

Footnote: Results are presented as adjusted odds ratios with 95% confidence intervals in brackets. Bolded values indicate statistical significance at $p < 0.05$. The outcome variable was whether respondents believed they would receive the best available treatment in Hungary if seriously ill (0 = No, 1 = Yes).

4. Discussion

4.1. Perceived Health Inequality: The Rich and Poor

Statistical data indicate that urban residents are more likely to perceive the presence of health inequalities—specifically, that socially disadvantaged groups and individuals in poorer income brackets face greater difficulties in accessing healthcare services. Our findings suggest that social differences are more strongly articulated in urban environments, where the disadvantages associated with different levels of social stratification, such as access to services, are more visible. This aligns with Uzzoli et al.'s (2019) conclusion that inequalities in access can be interpreted not only in terms of one's position within the social structure but also in geographical and territorial terms (Uzzoli et al. 2019).

Our results also reinforce the claim by Fitzpatrick et al. (2015) that living in a disadvantaged area increases the likelihood of poor health status (Fitzpatrick et al. 2015). In

urban areas, public healthcare services often coexist with a wide array of private healthcare providers and hospitals, unlike rural areas, where residents typically rely solely on locally available public healthcare services. In these settings, the selective impact of social differences manifests differently or less visibly. In connection with this, [Chen et al. \(2019\)](#) found that rural residents with lower levels of health literacy face qualitatively different challenges in accessing and utilizing health information ([Chen et al. 2019](#)).

Access to healthcare in rural regions is also heavily influenced by transportation options ([Uzzoli et al. 2019](#); [Chen et al. 2019](#)). [Wolfe et al. \(2020\)](#) emphasized that the situation is further exacerbated when rural residence is coupled with social and economic disadvantage. According to [Silver et al. \(2012\)](#), 25% of missed medical appointments were due to transportation barriers; [Sarnquist et al. \(2011\)](#) found a similar rate of 37%, while [Syed et al. \(2013\)](#) reported 55% ([Syed et al. 2013](#); [Wolfe et al. 2020](#); [Silver et al. 2012](#); [Sarnquist et al. 2011](#)). These findings point to systemic obstacles that are closely tied to what is known as the “spatial gradient” in healthcare access. At the same time, urban respondents are more likely to encounter bureaucratic barriers in the healthcare system, such as long waiting lists.

Compared with Catholic respondents, those categorized as ‘Other’ religious affiliation had lower odds of reporting greater perceived inequality in the rich–poor comparison. This may partly be explained by the values and teachings associated with certain religious denominations and the resulting differences in social sensitivity, especially in the case of Catholicism, which has strong historical roots in charitable actions toward the poor. In contrast, other religious groups—particularly smaller or more individualistic denominations—tend to emphasize personal responsibility and self-help over institutionalized solidarity ([Bibguru n.d.](#)). Additionally, the fact that several healthcare providers and hospitals in Hungary are operated by church organizations may also influence perceptions. We do not aim to draw generalized conclusions from these findings, as we believe that the observed relationships warrant further, in-depth analysis. Prior studies in this field have produced mixed results. For instance, a recent Polish study by [Tuczyńska et al. \(2025\)](#) found no statistical relationship between religious affiliation and actual access to healthcare ([Tuczyńska et al. 2025](#)). Their conclusion was that religion serves primarily as a source of emotional support, and does not directly influence either access to healthcare or perceptions thereof. In contrast, [Benjamins and Brown \(2004\)](#), in their study of older adults, found that religious seniors were more likely to participate in screening programs than their non-religious counterparts ([Benjamins and Brown 2004](#)). [Musick et al. \(2004\)](#) identified a positive correlation between religious community involvement and health behaviors ([Musick et al. 2004](#)).

An interesting result emerged in relation to fruit and vegetable consumption and perceptions of healthcare access among the rich and poor. Individuals who consumed fruits and vegetables daily perceived the inequality in healthcare access between social groups as less pronounced. Frequent fruit and vegetable consumption, which we associate with a healthy lifestyle, tends to be more common among individuals in higher social strata, who also enjoy more favorable income levels. In this social category, behaviors that might represent a significant financial burden for others—such as frequent consumption of fruits and vegetables—appear as normalized, everyday practices. As a result, these individuals are less likely to perceive health inequalities because they themselves experience relatively unhindered access. Additionally, it is well known that a more favorable socioeconomic status is typically associated with more conscious health behaviors, which may further explain the higher frequency of fruit and vegetable consumption. This is supported by findings from ([Haynes-Maslow et al. 2013, 2021](#)). Moreover, at higher levels of the social hierarchy, there may be a stronger emphasis on individual responsibility for health and

healthy living, which could overshadow the role of structural determinants in shaping health outcomes.

4.2. *Perceived Health Inequality: Older and Younger Populations*

When examining respondents by marital status, we found that individuals in a relationship were more likely to perceive greater difficulties in elderly people's access to healthcare services compared to those who were single at the time of the survey. This finding may be explained by the broader social and familial roles assumed by partnered individuals. The caregiving and support functions traditionally associated with family structures are reflected in our results: it is typically the younger family members who arrange healthcare visits, assist elderly relatives in reaching healthcare institutions, and monitor their health status.

These caregiving responsibilities are often carried out alongside individuals' everyday obligations and require them to reorganize their schedules. This added burden tends to affect those in partnerships more significantly—particularly members of the so-called “sandwich generation,” who are socially entangled through both their own families and those of their partners (e.g., parents, older relatives). As a result, they often have direct, personal experiences with the difficulties associated with elderly care, and are therefore more sensitive and empathetic toward the problems faced by older adults.

In partnered households, this caregiving role is often duplicated—individuals may be involved in supporting both their own and their partner's elderly relatives. In contrast, individuals living alone are typically responsible only for their own immediate relatives, which may be easier to manage and therefore less burdensome. Those in relationships also tend to share caregiving duties, which increases their awareness of how the healthcare system operates and where its deficiencies lie, especially in relation to elderly care (e.g., difficulty accessing specialist care, long waiting lists, or transport issues).

Family caregivers—most of whom are women—frequently experience heightened stress, sleep disturbances, career disruptions, and a range of personal sacrifices as a result of these caregiving demands (Goodwin et al. 2005).

4.3. *Perceived Health Inequality: Women vs. Men*

Among partnered respondents, not only was access to healthcare for the elderly perceived as problematic, but gender-based health inequalities—particularly those affecting women—were also seen as significant. We interpret this as a reflection of the fact that individuals in relationships are more frequently exposed to the healthcare-related experiences of others, especially their partners.

Women's health behavior generally appears more favorable compared to that of men (Györfy et al. 2024). According to Goodwin et al. (2005) and Macias (2023), women often act as the “health managers” of their families, dedicating considerable time to caregiving tasks and health-related responsibilities within the household. These include scheduling appointments, monitoring chronic illnesses, and promoting healthy behaviors such as balanced nutrition and physical activity (Goodwin et al. 2005; Macias 2023). However, this expanded caregiving role contributes to women becoming overburdened, ultimately to the detriment of their own health status (Hernández-Padilla et al. 2021).

Women's involvement in multi-pillar roles, which combine both paid labor and unpaid domestic work, exacerbates this burden. A key aspect of these domestic responsibilities includes childcare and meeting the caregiving needs of elderly relatives. Fulfilling both professional and family-related expectations can result in health deficits, a conclusion that is also supported by our empirical findings.

In this context, the perception of gendered health inequalities by individuals in relationships can be interpreted through the lens of traditional family models. It reflects role conflicts arising from tasks historically assigned to women, whereby their own health needs are often deprioritized. Although we do not elaborate on the psychological strain associated with work–life imbalance here, it is widely recognized that such strain disproportionately affects women (Hernández-Padilla et al. 2021). Gaur et al. (2024) examined the relationship between caregiving responsibilities and access to healthcare among disadvantaged women. Similar to Birkhäuser et al., their study found that 54.5% of women who delayed or skipped healthcare services cited childcare responsibilities as the primary reason for doing so (Gaur et al. 2024).

4.4. Access to the Best Available Treatment

Previous research by Clouston et al. (2017), and Raghupathi and Raghupathi (2020) has highlighted the strong association between structural characteristics—such as educational attainment—and access to healthcare services, which ultimately influences long-term health outcomes (Clouston et al. 2017; Raghupathi and Raghupathi 2020). Therefore, educational level is considered a key factor in the study of health inequalities (Goodwin et al. 2005). Our findings are consistent with these earlier results. We observed that individuals with higher levels of education are more likely to believe that, in the case of a serious illness, they would receive the best available treatment. This opinion gap was most pronounced between those with upper-secondary and those with lower educational qualifications. This result can be explained by the relationship between educational attainment and health-related knowledge, as well as by greater health literacy, which facilitates more effective navigation of the healthcare system. Additionally, higher education is associated with better labor market opportunities, which in turn lead to more favorable financial conditions. Income disparities are crucial not only for accessing private healthcare services but also for covering travel costs when public care is not available locally.

Trust in healthcare professionals is fundamental to receiving effective treatment (TK Szociológiai Intézet n.d.). The importance of the trust relationship with the healthcare system and medical personnel lies in the fact that those who have confidence in healthcare are more likely to follow medical advice (Crocker et al. 2013). Birkhäuser et al. (2017), using a systematic review methodology, examined the presumed links between trust and health outcomes. Their results show that patients who trust healthcare professionals are more satisfied with their treatment, demonstrate better preventive and health-promoting behaviors, and report higher quality of life (Birkhäuser et al. 2017).

In our study, trust in the healthcare system and physicians also emerged as a significant predictor. Respondents with lower levels of trust were more likely to believe that they would not receive the best possible care in case of need.

Regular fruit and vegetable consumption was also found to be statistically significant in shaping belief in access to the best available treatment. As previously discussed, regular consumers of fruits and vegetables likely possess more favorable and health-conscious behaviors and higher health literacy, which may enable them to navigate the healthcare system more effectively.

4.5. Strengths and Limitations

A notable limitation of this study stems from the underlying data collection methodology, which, despite rigorous national sampling procedures, resulted in very small sample sizes for certain subgroups (e.g., high income, specific employment categories, tertiary education). These limited subgroup counts are a function of the population structure and sampling frame, not the analytic approach. As a consequence, some categorical cross-

tabulations contain sparse cells, including cells with zero observations, which may yield unstable estimates and reduced statistical power, potentially compromising the validity of inferential statistics in these strata. This also introduces the possibility of separation in regression models, where categories with no events (or no non-events) can lead to inestimable or infinitely large coefficients, thus affecting the reliability and interpretability of regression outputs for those predictors. While categories were collapsed when methodologically justified to address these issues, some residual sparsity and risk of separation remained. The interpretation of findings in these subgroups should therefore be approached with caution, and we recommend that future data collection efforts aim for sufficient representation across all key sociodemographic categories. Wherever relevant, exact statistical tests were employed, and the limitations of sparse or zero cells are fully acknowledged in both analysis and reporting.

Alcohol consumption was self-reported and may therefore be affected by recall bias and social desirability bias. Underreporting of alcohol intake is possible, especially among respondents who perceive regular drinking as socially undesirable. Consequently, associations involving alcohol consumption should be interpreted cautiously.

5. Conclusions

The novelty of our study lies in its multidimensional approach to perceived inequalities in access to healthcare, simultaneously examining socioeconomic, demographic, lifestyle, and trust-related dimensions. Our findings highlight that perceptions of healthcare opportunities in Hungarian society are shaped not only by objective social status but also by health behaviors, religious affiliations, and trust in medical professionals.

Daily fruit and vegetable consumption appears to reflect not only health consciousness but also a privileged social position, which may attenuate the perception of disparities in healthcare access. Trust in the healthcare system, especially in healthcare professionals, plays a decisive role in shaping beliefs about the availability of the best possible treatment. Religious affiliation, particularly Catholic values, may be associated with heightened sensitivity to social injustices.

Opinions on access to care also show spatial differentiation: urban residents are more likely to perceive inequalities, while rural respondents face structurally different challenges. Importantly, caregiving responsibilities linked to family and gender roles contribute to increased awareness of barriers in access to healthcare for older adults and women.

Our results draw attention to the complex interplay between social structure, lifestyle, and trust, underscoring the need for their integrated examination in order to effectively reduce health inequalities.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/socsci15070432/s1>, Table S1: Bivariate associations between respondent characteristics and perceived healthcare access differences by wealth and citizenship status. Table S2: Bivariate associations between respondent characteristics and perceived healthcare access differences by age and gender.

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Informed Consent Statement: Informed consent was obtained from all subjects involved in the original data collection by the International Social Survey Programme (ISSP). No additional consent was required for this secondary analysis of anonymized data.

Data Availability Statement: Publicly available datasets were analyzed in this study. Data can be accessed and downloaded using the following link: https://search.gesis.org/research_data/ZA8000 (accessed on 9 June 2025).

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