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Original research article

Field survey of the health status of residents in excluded localities in the Moravian-Silesian Region

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Abstract
Introduction: Individuals living in socially excluded localities (SEL) generally have worse health compared to the control group. This is caused by a combination of various risk factors.
Goal: The aim of this study was to compare specific health parameters collected during field research focused on a population facing social exclusion.
Methods: The group of 937 individuals consisted of 67% (n = 630) from SEL and 33% (n = 307) from a control area in the Moravian-Silesian Region. During the field work, volunteers filled out a questionnaire and had their blood pressure, body measurements, and total cholesterol levels checked. The data were analysed using non-parametric tests (alpha = 5%) and a binomial regression model with Stata v. 18 software.
Results: The average age of the subjects was 45.4 ± 16.0; 67% were women. Subjective assessment of health status as "very poor" was reported by 6.7% of individuals from SEL compared to 0.7% of controls. Approximately 65% of individuals from SEL suffered from one or more chronic diseases, primarily CVD (35%), musculoskeletal system diseases (25%), and respiratory system diseases (17%). Compared to the control group, individuals from SEL had elevated cholesterol, 27% versus 7% ($p < 0.001$), and 54% of individuals smoked compared to 20% of controls ($p < 0.001$). Statistically significant differences between SEL and the control group were found in education, unemployment, and healthcare accessibility.
Conclusion: Among inhabitants of SEL, there is a higher risk of developing metabolic and cardiovascular diseases due to the more frequent occurrence of risk factors.

Keywords: Cardiovascular diseases; Field research; Health status; Socially excluded locality

Introduction

Social exclusion represents a gradual and cumulative process during which individuals or groups are restricted or even excluded from full participation in the social, economic, and symbolic resources of society that are crucial for dignified living conditions, social inclusion, and health (Dykxhoorn et al., 2023).

To evaluate the overall extent of social exclusion, the so-called Social Exclusion Index is utilized. According to this index, a total of 459 (7.3%) municipalities in the Czech Republic were threatened by social exclusion in 2022, representing a noticeable increase compared to the previous year, when it was 450 (7.2%) municipalities. At the regional level in the Czech Republic (CR), the Ústí nad Labem, Moravian-Silesian, and Karlovy Vary regions have long been among the most burdened (Lang, 2022, 2024).

The health status of inhabitants living in excluded localities represents a long-term and structural public health problem in the Czech Republic and other European countries. These individuals – often members of the Roma minority, persons with low socioeconomic status, seniors, or individuals living in extreme poverty – face an accumulation of risk factors that fundamentally affect their physical and mental health. These include, in particular, unfavourable living and housing conditions, insufficient access to healthcare, low health literacy, and often discrimination by institutions (Hübelová et al., 2021).

Chronic diseases, such as cardiovascular diseases, diabetes mellitus, or respiratory diseases, occur more frequently, as does excessive use of tobacco products and alcohol, and poor lifestyle habits (WHO, 2025b).

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In the Czech Republic, it is estimated that the life expectancy of inhabitants in socially excluded localities is up to 10–15 years shorter than that of the majority population (Svobodova et al., 2021). However, these problems are not specific only to the CR. The European context shows that similar health inequalities exist in a number of other countries, primarily in Central and Southeastern Europe, where the largest proportion of the Roma population resides. For example, according to the European Union Agency for Fundamental Rights (2020), the life expectancy of Roma in Europe is on average 10 years lower than that of the majority population; a similar situation is observed among individuals at risk of social exclusion in Slovakia (Šupínová et al., 2015).

The common denominator of poorer health is socioeconomic disadvantage and structural discrimination, which prevents equal access to healthcare. Barriers include not only the geographic and economic unavailability of services but also language differences and a lack of trust in healthcare institutions (Plavnicka et al., 2025). These factors lead, among other things, to low participation in preventive check-ups, frequent neglect of treatment, and late seeking of professional care.

As stated above, the Moravian-Silesian Region is among the regions of the Czech Republic most burdened by social exclusion. This is one of the reasons why field activities focused on health prevention have been organized here since 2023.

These events allow inhabitants of socially excluded localities to have their blood pressure, cholesterol, and blood glucose levels measured, and to be tested for selected serious infectious diseases. The activities also include examinations by dental hygienists and education focused on health prevention.

The aim of the study was to evaluate selected outcomes obtained from a field survey focused on persons at risk of social exclusion, specifically (i) self-rated health and its socioeconomic determinants, (ii) results of anthropometric parameters, and (iii) measurements of blood pressure and total cholesterol.

Materials and methods

The study population consists of adults (aged 18+ years) who participated in 15 events titled "Health Day" held in localities of the Moravian-Silesian Region (MSR) between 2023 and 2024. The events were approved by the Regional Public Health Authority and Regional Government of the Moravian-Silesian Region.

Selection of respondents

Respondents were recruited through an open call for participation in "Health Day" preventive-educational events. Information regarding the events was disseminated in socially excluded localities (SEL) primarily through crime prevention assistants, health promotion mediators, and cooperating organizations (e.g., CENTROM), or directly at the event locations. Participation was entirely voluntary and based on the individual decisions of the approached persons. In the SEL environment, non-financial incentives (food packages and small gift items) were offered to participants, aiming to increase the engagement of individuals with disadvantaged socioeconomic status. This procedure corresponds to the standard practice of community health-preventive interventions targeting hard-to-reach populations.

Within the SEL, the events took place at a homeless shelter in Ostrava, at Labor Offices (Karviná, Havířov, Ostrava), and directly within excluded localities – Orlová III, Karviná (Náměstí Budovatelů), and Ostrava (Vítkovice and the Soiva social accommodation).

The control group was recruited at public cultural and gastronomic events (a music festival in Havířov and a Food and Coffee Festival in Orlová), intentionally in the same cities where the monitored SEL are located. The choice of these events was based on the assumption that their visitors would more frequently originate from a population with a higher socioeconomic status, allowing for a comparison of health indicators between different groups within the region.

Participant inclusion and exclusion criteria

Adult participants aged 18 years and older who were able to communicate in the Czech language, understood the study information, and signed the informed consent and consent to the processing of personal and health data in accordance with the principles of the Declaration of Helsinki were included in the study. An additional criterion was the willingness to undergo all planned examinations, i.e., (i) a questionnaire survey, (ii) measurement of blood pressure and selected anthropometric parameters, and (iii) measurement of total cholesterol levels from capillary blood. Individuals younger than 18 years, persons unable to understand the study information or provide informed consent, and participants for whom the planned examinations could not be performed were excluded from the study.

Questionnaire survey

Data collection included a questionnaire survey conducted using an original structured designed for the purposes of this study. The questionnaire contained items focused on basic sociodemographic characteristics (gender, age, marital status, level of education, social status), selected lifestyle factors (smoking, substance use), and participation in preventive medical check-ups (general practitioner, dentist, gynecologist). The questionnaire also included a subjective assessment of health status using a five-point Likert scale.

Given the nature of the target population, the questionnaire was completed in an assisted format, where trained organisers asked the respondents individual questions and recorded their answers. This procedure was chosen particularly with regard to potential limitations in literacy and reading comprehension among a portion of the respondents.

Blood pressure, anthropometric parameters, and total cholesterol level examination

After signing the IC and completing the questionnaire – amounting to 10–15 minutes of resting – respondents' systolic (SBP) and diastolic (DBP) blood pressure were measured using an automatic blood pressure monitor (OMRON M2 Basic new). The measurement was performed three times, with the mean value of the measured values being used for further analysis. Additionally, body height (wall-mounted stadiometer), weight (Sencor SBS 2476BK personal scale; max 180 kg), and waist and hip circumference (tailor's tape measure) were recorded. From the obtained weight and height values, the Body Mass Index (BMI = kg/m^2) was calculated, and from the measured waist and hip circumferences, the Waist-hip ratio (WHR = waist cm / hip cm) was calculated. According to BMI values, respondents were classified into the following groups: underweight (<18.5), optimal weight (18.5–24.9), overweight (25.0–29.9), and obesity (>29.9). A ratio of up to 0.9 for men and up to 0.85 for women was considered a physiological waist-to-hip ratio. Blood pressure values lower than 140 mmHg for

SBP and simultaneously lower than 90 mmHg for DBP were considered physiological.

This was followed by capillary blood sampling and determination of total cholesterol levels (Wellion LUNA trio; range 2.6 to 10.3 mmol/l). A physiological level of total cholesterol is defined as a value up to and including 4.99 mmol/l.

Data analysis

Information from the questionnaires and examination results were entered into an MS Excel database. To describe the results, basic descriptive statistics were processed according to variable type (frequency tables, arithmetic mean, standard deviation). Tests were applied for the comparison of areas based on variable type – the chi-square test, Fisher's exact test, the Mann–Whitney test, and the Spearman correlation coefficient (r_s). Data normality was assessed using the Shapiro–Wilk test. To evaluate factors influencing self-rated health, a binary logistic regression model was used (OR – odds ratio with 95% confidence intervals [CI]). Self-rated health was divided into two categories (0: very good and good health / 1: satisfactory to very poor health). The following factors entered the fully adjusted model: gender, age (in 5-year increments), marital status, education (three categories – university, secondary school diploma, and lower), unemployment, BMI, smoking, and substance use. Statistical tests were evaluated at a significance level of 5% using Stata version 17 software.

Results

Sample characteristics

The sample (n = 937) consisted of 67.2% individuals from socially excluded localities (SEL) and 32.8% individuals from the control group (non-SEL). The average age of the participants was 45.4 ± 16.0 years. Two-thirds of the sample were women (67.0%). Approximately half of the individuals in both groups lived without a partner. In the SEL group, Elementary education predominated (40.4%), while in the control population, individuals with secondary school diploma were most frequent (41.0%) (p < 0.001). A statistically significant difference (p < 0.001) was found in the representation of the unemployed – in SEL, it was 32.5% vs. 3.9% in the control group. In the excluded localities, more than half (53.5%) were active smokers, compared to 19.5% in the control group (p < 0.001). Regarding access to healthcare, the greatest problem in SEL was dental care, with more than 32.0% of the respondents not having a dentist; in the control group, this was 2.9%. A statistically significant difference (p < 0.001) was also found between the areas for general practitioners and gynecologists, in favour of the control group (Table 1).

Self-rated health

A statistically significant difference between locations was found in both self-rated health and the prevalence of chronic diseases (excluding diabetes), with a higher prevalence observed in socially excluded localities (SEL). A total of 6.7% of respondents from excluded localities and 0.7% from the control area rated their health status as "very poor" (p < 0.001). In the excluded localities, 64.8% of individuals reported at least one chronic disease, compared to 51.1% in the control population (p < 0.001). The most frequently reported chronic diseases in the excluded localities were cardiovascular diseases (34.9%), musculoskeletal disorders (24.9%), and respiratory diseases (17.1%). While these conditions also occurred in the control population, their prevalence was lower than in the SEL (Table 2).

Results of measurement of anthropometric parameters, blood pressure, and cholesterol

Measurement results are available in Table 3. A statistically significantly higher proportion (p = 0.002) of individuals from the SEL compared to the control group (23.8%, resp. 7.5%) had elevated total cholesterol levels (≥5.00 mmol/l). Elevated blood pressure was also statistically significantly more prevalent (p < 0.001) among SEL residents (27.0%, resp. 7.2%). No statistically significant difference was observed between the groups according to BMI and WHR.

Analysis of factors influencing self-rated health

Self-rated health, evaluated on a five-point Likert scale, correlates with the number of chronic diseases (r_s = 0.491; p < 0.001). Among individuals who rated their health as "very good" and "good", chronic disease occurred in 27.6% and 50% of cases, respectively; for those who rated their health as "satisfactory" to "very poor", chronic disease occurrence ranged from 77.4% to 93.2%, with 23.5% to 54.6% of individuals in these groups reporting three or more diseases. Selected factors that may influence poorer self-rated health (categories "satisfactory" to "very poor") were evaluated using a binary logistic regression model. The results for crude OR and adjusted OR are presented in Table 4. Based on the fully adjusted model, the odds of poorer health increase statistically significantly with age (OR = 1.22; p < 0.001). Lower education is a significant risk factor – Secondary Vocational school individuals have up to a five times higher probability of poorer health than those with a university education (OR = 5.00; p < 0.001); for those with a high school diploma, the probability is 3.49 times higher. After adjustment, unemployment no longer had a statistically significant effect on self-rated health. Obesity (OR = 2.01; p = 0.005) and active smoking (OR = 2.06; p = 0.005) had a negative effect on health.

Table 1. Sample characteristics

Observed characteristics	Control group (n = 307)		Socially excluded localities (n = 630)		p-value*
	n	%	n	%	
Sex					
Male	108	35.1	201	31.9	0.317
Female	199	64.8	429	68.1	
Age [years] (mean ± SD)	44.1 ± 17.2		46.1 ± 15.4		0.058
Marital status					
Living alone	165	53.8	297	47.1	0.058
Living with someone	142	46.3	333	52.9	
Education					
Elementary school	28	9.1	254	40.4	<0.001
Secondary vocational school	80	26.1	168	26.7	
Secondary school diploma	126	41.0	114	18.1	
College/University	73	23.8	93	14.8	
Socioeconomic status					
Employed	168	54.7	211	33.5	<0.001
Self-employed	18	5.9	9	1.4	
Housewife/househusband	7	2.3	54	8.6	
Full-time caregiver	2	0.7	18	2.9	
Retired	58	18.9	111	17.6	
Unemployed	12	3.9	205	32.5	
Student	42	13.7	18	2.9	
Other	0	0.0	4	0.6	
Smoking status					
Regular smoker	60	19.5	335	53.2	<0.001
Occasional smoker	25	8.1	42	6.7	
Non-smoker	183	59.6	182	28.9	
Ex-smoker	39	12.7	71	11.3	
General practitioner					
Does not have one	0	0.0	40	6.4	<0.001
Has one – attends regularly	260	84.7	420	66.7	
attends irregularly	39	12.7	115	18.3	
does not attend at all	8	2.6	55	8.7	
Dentist					
Does not have one	9	2.9	205	32.5	<0.001
Has one – attends regularly	254	82.7	281	44.6	
attends irregularly	25	8.1	65	10.3	
does not attend at all	19	6.2	79	12.5	
Gynecologist					
Does not have one	1	0.50	16	3.7	<0.001
Has one – attends regularly	177	88.94	321	75.0	
attends irregularly	14	7.04	45	10.5	
does not attend at all	7	3.52	46	10.8	
History of substance use	22	7.2	79	12.5	0.013

Note: SD – standard deviation; * χ^2 test / Fisher's exact test; non-parametric Mann–Whitney test

Table 2. Subjectively reported chronic diseases

Observed characteristics / Group	Control group (n = 307)		Socially excluded localities (n = 630)		p-value*
	n	%	n	%	
Health status					
Very good	73	23.8	90	14.3	
Good	123	40.1	209	33.2	
Satisfactory	96	31.3	240	38.1	<0.001
Poor	13	4.2	49	7.8	
Very poor	2	0.7	42	6.7	
Chronic diseases	157	51.1	408	64.8	<0.001
CVD	69	22.5	220	34.9	<0.001
Musculoskeletal system	40	13.0	157	24.9	<0.001
Respiratory system diseases	27	8.8	108	17.1	0.001
Thyroid gland (n = 78/468)	21	26.9	48	10.3	<0.001
Diabetes	21	6.8	65	10.3	0.084
Mental health problems	18	5.9	82	13.0	0.001
Gastrointestinal diseases	19	6.2	68	10.8	0.022
Injury with consequences	3	1.0	52	8.3	<0.001

Note: CVD – cardiovascular diseases; * χ^2 test / Fisher's exact test

Table 3. Measurement results

	Control group (n = 307)		Socially excluded localities (n = 630)		p-value*
	n	%	n	%	
Elevated blood pressure*	22	7.2	170	27.0	<0.001
Cholesterol ≥5.0 mmol	5	7.5	142	23.8	0.002
BMI					
BMI (kg.m^{-2}) min – 18.49	1	1.5	27	5.9	
18.5–24.9	17	25.8	161	35.4	0.115
25.0–29.9	25	37.9	127	27.9	
30 – max	23	34.9	140	30.8	
WHR					
Normal (M; W)	27	40.9	185	40.8	0.991
Above normal (M > 0.90; W > 0.85)	39	59.1	268	59.2	

Note: BMI – Body Mass Index; WHR – waist-to-hip ratio; * SBP ≥140 mmHg nebo DBP ≥90 mmHg; * χ^2 test / Fisher's exact test

Table 4. Determinants influencing subjective health assessment

Variables	Model 1			Model 2		
	ORcrude	95% CI	p-value	ORadj	95% CI	p-value
Sex						
Female	0.90	0.69–1.19	0.466	1.05	0.69–1.61	0.808
Age (per 5-year increase)	**1.21**	1.16–1.27	<0.001	**1.22**	1.13–1.32	<0.001
Living						
Alone	0.86	0.66–1.11	0.235	1.01	0.67–1.53	0.951
Education						
Secondary school diploma	**2.58**	1.65–4.04	<0.001	**3.49**	1.62–7.51	0.001
Elementary school	**4.90**	3.26–7.36	<0.001	**5.00**	2.44–10.28	<0.001
Unemployed	**2.33**	1.70–3.19	<0.001	1.55	0.96–2.34	0.076
BMI [kg.m^{-2}]						
25.0–29.9	1.16	0.46–1.77	0.487	0.79	0.48–1.29	0.345
≥30	**2.69**	1.75–4.14	<0.001	**2.01**	1.23–3.28	0.005
Smoking						
Ex-smoker	1.49	0.97–2.30	0.067	1.43	0.73–2.79	0.297
Smoker	**1.88**	1.42–2.48	<0.001	**2.06**	1.23–3.43	0.005
Substance use	1.21	0.80–1.83	0.358	1.09	0.60–2.00	0.759

Note: Self-rated health – 0 = very good, good / 1 = satisfactory, poor, very poor; OR – odds ratio; CI confidence interval. Ref. categories – Male, living with a partner, University, non-smoker, employed/retiree, no substance history; Model 2 – fully adjusted model (gender, age, family status, education, unemployed, BMI, smoking, substance history); n = 936, p < 0,001, Pseudo R^2 = 0,131

Discussion

The presented study focused on the analysis of the health status of the population in socially excluded localities (SEL) in comparison with a control group. The research sample was assembled based on the principle of voluntary participation. It is necessary to take into account the data collection method and the specific composition of the sample, which bring certain limitations. Gender asymmetry is evident in the overall sample, with women accounting for 67% of respondents. This dominance of female representation corresponds to a phenomenon repeatedly described in the professional literature, where women generally demonstrate a greater willingness to engage in preventive activities and care for their health than men. At the same time, men more frequently succumb to risk factors for the development of cardiovascular and metabolic diseases, such as smoking and alcohol consumption. This distribution may influence the interpretation of data for the entire population of excluded localities, particularly regarding parameters of subjective health perception (Bird et al., 2018; OECD, 2025).

Lower socioeconomic status leads to higher mortality rates and poorer self-rated health status in almost all 19 European countries in which the relationship between health status, risk factors, and socioeconomic status was analysed (Mackenbach et al., 2008). In terms of perceiving one's own health, the residents of SEL in our sample rated their subjective health status significantly more often as poor or very poor. The issue of poorer health status conditioned by lifestyle in SEL is discussed by the authors Valenzuela et al. (2024). Hypertension is a significant and frequently occurring risk factor for a range of diseases, primarily CVDs, which are currently the leading cause of death (WHO, 2024). This affected 27% of SEL residents; compared to the control population (7.2%), this represented a three-fold higher prevalence. Simultaneously, the overall prevalence of CVDs was significantly higher in SEL (34.9%) than in the control group (22.5%). According to Prof. Souček (2025), blood pressure control remains insufficient and the risk is underestimated – every fourth person is unaware of their hypertension (Cífková et al., 2020), with an estimated 10% increase in hypertensive patients over the next ten years (Souček, 2025). Blood pressure measurements were performed under field conditions, which may influence the measured values. However, this study sought to minimise potential bias by using a standardised procedure, which included a resting phase before measurement (10–15 minutes of sitting) and repeated blood pressure measurements (3×). Although this procedure increases the reliability of the measured values, the results must be interpreted with caution, as it was a one-time examination. In accordance with WHO recommendations, a diagnosis of hypertension is established based on repeated measurements performed on two different days (WHO, 2025a). The measured values, therefore, cannot be understood as a clinical diagnosis, but rather as indicative screening data that may highlight increased cardiovascular risk in the monitored population. A higher risk of myocardial infarction and stroke is also associated with high levels of total blood cholesterol, the prevalence of which was 3× higher among SEL residents (23.8%) than among representatives of the control population (7.5%). Contributing to higher total cholesterol levels are, among other things, ultra-processed and high-calorie foods, which, according to Mosaad Pěničková et al. (2017), prevail in the diet of the Roma community.

According to Čapková and Lustigová (2022) and the results of the Health status of the Czech population – EHES 2019 study (European Health Examination Survey), which focused on the health status of the population in the Czech Republic, the average BMI for men was 28.3 (±4.7) kg/m^2 and for women 26.8 (±6.0) kg/m^2. In our sample, the average BMI for men was 29.2 ± 5.5 kg/m^2 in the control group and 26.8 ± 5.8 kg/m^2 in the excluded localities. For women in the control group, the average BMI was 27.6 ± 5.4 kg/m^2 and for women in the group from excluded localities 28.7 ± 7.9 kg/m^2. However, it is necessary to take into account the fact that our field health survey also took place in localities with a higher concentration of persons (mainly males) who may suffer from malnutrition, e.g., a homeless shelter. Therefore, the group of men from excluded localities has the lowest average BMI. Nevertheless, the average BMI of all groups and genders corresponded to being overweight (Čapková and Lustigová, 2022). The aforementioned fact that individuals from SEL consume more high-calorie and ultra-processed foods also certainly contributes to this (Mosaad Pěničková et al., 2017).

The higher prevalence of CVD risk factors in this population group may lead to earlier mortality – the National Institute of Public Health states that, in connection with these and other unfavorable health conditions, premature death occurs 10–15 years earlier (Svobodova et al., 2021; SZÚ, 2019b).The results of Piko et al. (2021) in Hungary point to an increased risk of developing CVD in a 10-year period for Roma citizens compared to the control population.

Persons from excluded localities significantly more often reported elementary education as their maximum attainment (40.4%), and unemployment was several times more prevalent among them compared to the control population (32.5% vs. 3.9%). Meanwhile, unemployment and low educational attainment are factors influencing low health literacy (Zhao et al., 2023). The abysmal difference in education between SEL residents and the control group is also highlighted by the authors Toušek et al. (2018), who recommend that questionnaire surveys in SEL determine whether persons reporting unemployment are truly non-working, or whether they merely do not disclose work (so-called "black market" labour), and thus no records exist of this fact that would serve as a data source for potential studies.

The differences in the accessibility of health care were also alarming, where 32.0% of respondents from SEL stated that they do not have a dentist compared to 2.9% from the control group. A similar situation was observed for general practitioners (6.4% vs. 0.0%) and gynecologists (3.7% vs. 0.5%). A significant role in the differences in access to health care may also be played by the differing levels of health literacy between SEL residents and the population with higher socioeconomic status. Research focused on the health literacy of the Roma minority in the Czech Republic shows that a significant portion of respondents exhibits a low to problematic level of health literacy, which is associated with difficulties in understanding health information and navigating the health care system (Rolantová et al., 2019). Low health literacy also limits the ability of SEL residents (including Roma communities) to understand prevention. According to a concept-mapping study focused on the health care of Roma living in social exclusion, increasing health literacy appears to be a key measure to improve access to health care (Svobodova et al., 2021). In SEL, financial costs associated with overcoming barriers to reaching health care (e.g., transport costs) also represent a problem, leading to the postponement of health issues, subsequent overloading of the

emergency system, and the detection of diseases only in advanced stages (Tulupova et al., 2020). According to research from marginalised Roma communities in Slovakia, in addition to low health literacy, poverty, and discrimination, a lack of trust toward care providers is also a significant factor, which together represent major barriers to accessing health care and lead to the postponement of seeking help until advanced stages of the disease (Plavnicka et al., 2025).

In response to deep structural barriers in access to health care for persons from socially excluded localities, new intervention roles focused on mediating contact between the health care system and marginalised groups have been created in the Czech Republic in recent years. Within the long-term project "Effective Health Promotion for Persons at Risk of Poverty and Social Exclusion", Regional Health Promotion Centers were established along with the new position of Health Promotion Mediator (HPM), which was primarily intended for individuals originating from SEL or those with profound knowledge of these communities and their needs. Health promotion mediators facilitated the provision of key information regarding the functioning of the health care system, patient rights, and disease prevention; they also assisted with navigation within the primary care system and registration with general practitioners, gynecologists, or dentists (SZÚ, 2019a).

In the Moravian-Silesian Region, the number of health promotion mediators was among the highest in the Czech Republic (8 mediators), reflecting the increased need for field support in selected localities with a cumulative concentration of social and health risks (SZÚ, 2022). Based on personal experience from collaboration during the planning and implementation of our community events, the study's authorial collective confirms that mediators represent a vital link between health care professionals and persons living in SEL: for many individuals, they increase trust in the system, facilitate communication, and motivate the seeking and regular utilisation of health care. At the same time, however, it must be emphasised that the effective improvement of health status and the permanent reduction of health inequalities cannot be based solely on the existence of multi-year projects. The implementation of intervention programs and the roles of mediators were tied to projects with limited temporal and financial sustainability; following their conclusion, most of these positions were gradually abolished or significantly reduced, which limits the continuity of field services and long-term engagement within communities. If society aims to achieve long-term improvements in health access and outcomes for persons from socially excluded localities, it is essential to anchor these roles and intervention structures into systemic, stably funded public health and social policy measures that will provide long-term support for education, the availability of primary care, and trust in the health care system.

Study limitations

The study has several methodological limitations that must be taken into account when interpreting the results. Primarily, this is not a representative sample of respondents, but rather an open population recruitment based on voluntary participation within community preventive events implemented in the field. This approach may be associated with selection bias, where the survey is more likely to be attended by individuals with an increased interest in their health or persons currently available at the location of the event.

A specific limitation is the method of selecting the control group. While respondents from socially excluded localities were approached directly in environments defined as SEL, the control group consisted of visitors to public cultural and gastronomic events. These participants may represent a population that is more active in their leisure time and potentially possesses a higher socioeconomic status, which may be reflected in more favorable subjective health ratings and health indicators. However, the chosen approach allows for a comparison between the socially excluded population and the general majority population.

Respondents from the SEL group represent a population burdened by a cumulative concentration of risk factors, which is reflected in their overall poorer health status. This status is further influenced by lower levels of educational attainment, poorer accessibility of health care, and limited opportunities for long-term prevention compared to the control group (Hübelová et al., 2021). In contrast, the control group approached in the context of leisure activities serves as a reference sample of a population that has a wider spectrum of resources available, enabling the active fulfillment of needs beyond basic survival.

Another limitation is the use of an author-designed questionnaire without formal psychometric validation. Although individual items were based on commonly used questions in the field of population health research, bias resulting from respondents' self-assessment and the assisted method of data collection cannot be ruled out. Assisted completion of the questionnaire was intentionally chosen to increase the accessibility of the survey for persons with lower levels of health and reading literacy, particularly in the environment of socially excluded localities.

Due to the voluntary nature of participation, it also cannot be ruled out that the survey was attended by individuals with a relatively better health status, or conversely, by individuals who are unaware of their health status due to limited contact with the health care system – for example, due to a lack of registration with a general practitioner. This fact may lead to an underestimation of the prevalence of certain diagnosed diseases. Furthermore, the subjective assessment of health status is based on the individual perception of respondents, which may not always fully correspond to objective health indicators.

Conclusion

The results indicate that SEL residents have lower levels of education – 67% of them do not have a Secondary Vocational school education – and more than a third are unemployed. The accessibility of health care is poorer for them; the most critical situation is in the area of dental prevention, where one-third do not have their own dentist.

A higher prevalence of chronic diseases is present among SEL residents, particularly cardiovascular diseases (35%), musculoskeletal disorders (25%), respiratory system diseases (17%), and psychological difficulties, the prevalence of which is more than double compared to the control group. The poorer health status is evident not only from the subjective health assessment, which correlates with the number of reported chronic diseases, but also from objectively measured parameters – 27% of individuals had elevated blood pressure and 24% had higher cholesterol levels.

The analysis of risk factors shows that the poorer health status of SEL residents is closely related to lower education, obesity, and smoking – factors that are largely modifiable through targeted preventive interventions.

The results emphasise the need to strengthen the availability of preventive and screening services directly within the SEL

environment. Field health-prevention programs, implemented in cooperation with municipalities and non-profit organisations, can represent an effective tool for the early identification of health risks and the mediation of contact with the health care system.

At the same time, it is desirable to focus interventions not only on individual behaviour change but also on broader social determinants of health, particularly the promotion of health literacy, improving the accessibility of primary health care, and reducing barriers to accessing stomatological and preventive care. The study results can serve as a basis for creating targeted public health programs and social policies that reflect the specific needs of residents of socially excluded localities, and contribute to the reduction of health inequalities.

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Ethical aspects and conflict of interest
The authors have no conflict of interest to declare. The project was approved by the Ethics Committee of the Faculty of Medicine, University of Ostrava (No. 2/2024).

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