

THESES OF Ph D DISSERTATION

Health Survey on the Inhabitants of Roma Settlements

ZSIGMOND KÓSA MD



**UNIVERSITY OF DEBRECEN
MEDICAL AND HEALTH SCIENCE CENTER
SCHOOL OF PUBLIC HEALTH**

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1. Introduction

1.1. Roma people in Hungary and in the enlarged Europe

Roma people – also known as Gypsies – constitute a unique minority group in Europe having no parent state in historical sense. According to historical records they migrated to Europe from North India across Persia and the Caucasus between the ninth and fourteenth centuries. The first notes on presence of Roma population in Middle and Eastern Europe dated back to the 12th century. Their existence in Hungary is first mentioned in a safe-conduct issued by King Zsigmond. Roma people have several sub-groups determined by their language, job or religion.

One can observe significant differences in defining their number as well as their proportion in any country. Based on legally accepted criteria the Roma ethnicity designated to those groups who speak the Roma language and/or having common ethnic identity, culture and past. Based on the last census in Hungary self-identification as Roma and even more acquaintance of Roma as mother tongue is on a low level, therefore estimations of different origins are widely accepted. “Census officers with adequate local knowledge” classify households by way of life, so people living in “Roma life-style households” are considered Roma. The basis of another – ethically controversial – approach is when the non-Roma environment considers the person as Roma. Among sociologists engaged in conducting research in Roma population in Hungary it is generally admitted, that defining somebody as Roma depends on the consideration of the surroundings. Basic criteria are the way of life and the extent of social integration. In official demographic reports the number of Roma population is regularly underestimated because many of them try to avoid stigmatization so they do not identify themselves as Roma. As by estimations, the number of this largest ethnic minority group in Europe ranges from 7-9 million which corresponds, by enlarge, to the total population of Austria. Among the EU member countries, the number of Roma inhabitants is considerably high in Hungary, Slovakia, Spain and France; and of candidate countries in Romania and Bulgaria. In certain countries the 6-9% representativeness of the Roma will significantly rise due to the Roma’s high birth rate as opposed to low fertility that characterises the general population.

By their traditions, culture and language we can distinguish three major groups of Roma in Hungary. Hungarian gypsies (Romungro) speak only Hungarian, they represent the highest proportion with some 70%. Other groups that immigrated into the country later – due to migratory way of life and the tighter personal relationships – preserved their original language but they also speak Hungarian. They are the so called “oláh”gypsies (Romani) and they represent about 21% of all Romas. In the third group linguistic assimilation occurred in Romanian speaking environment, members migrated into Hungary in the 18-20th centuries as a Romanian speaking community. They are called “román”gypsies (Beás) with a proportion of 8-9%, with much higher proportion in the South-Transdanubian communities.

According to the 1990 census 142 683 people identifying themselves as gypsy in Hungary, in the next census (2001) 190 046 people identified themselves as Roma. Due to estimations the number of Roma people in Hungary could be about 4-500 000 or even 800 000. There were surveys based on 2%, 2% and 1% representative samples in 1971, 1993 and 2003 to assess the number of Roma in Hungary. The 1971 survey estimated their number to about 320 000, according to the 1993 study the size of the Roma population were about 456 646 in Hungary (about 5% of the total population of the country). The number of gypsies was estimated 570 000 in 2003. By future predictions their number can reach 700 000 within ten years which - considering the decreasing number of inhabitants of the country – could result 7% representation of the total population of Hungary.

The Roma live unevenly dispersed in Hungary. About 50% of Roma inhabitants live in the northern (Borsod-Abaúj-Zemplén, Heves, Nógrád) and in the eastern (Szabolcs-Szatmár-Bereg, Hajdú-Bihar, Békés) regions. 71% of the Roma is native speaker of Hungarian, 21% of gypsy and 8% of Romanian. A total number of approximately 134 000 Roma live in 758 segregated settlements. 33% of people living in colonies can be found in Northern Great Plain and 32.6% in the North Hungarian region. 76.5% of inhabitants living in colonies identified themselves as Roma.

1.2. Mortality of the Hungarian population

Since 1981 the population of Hungary is decreasing: the number of deaths exceeded the number of live births up to the millennium. Life expectancy at birth for males continuously decreased since the seventies; then from 1993 – when having its lowest value – showed a remarkable increase. Life expectancy at birth for females has been increasing since 1970, but it is significantly lower than those of both socio-economically similar and countries with well established market economy. Comparing to the EU-15 average Hungarian males had 7 and females 5 years deficit in 2005.

Premature mortality (0-64 yrs) in Hungary was very unfavourable comparing to the EU and neighbouring countries' average between the seventies and the middle of the nineties for both sexes. Particularly, males experienced a severe excess; having been increased since the seventies their mortality peaked in 1993 (830/100 000), whereas at the same time the EU average had been decreasing steadily resulting the increase of relative mortality risk compared to the EU average. Studying the mortality of female we found that it had been stagnating at the beginning, followed by a decrease from the middle of the 90s. Despite the risk compared to the EU average is still remarkable.

In this period premature mortality has been led by death of diseases of circulatory system (36.7%), neoplasm (26.9%), and diseases of digestive system in males. For females the pattern is as follows: neoplasm (36.5%), diseases of circulatory system (31.4%), and diseases of digestive system (13.7%).

Behind the unfavourable mortality figures of the Hungarian population in international comparison there are significant regional differences of premature mortality in both sexes. Within Hungary both total mortality and the major cause specific mortality figures indicate that the most affected populations are in counties in the North-Hungarian and North Great Plain regions (mostly Szabolcs-Szatmár-Bereg, Borsod-Abaúj-Zemplén). In this area in the case of certain age groups and causes mortality rate is higher by 50-100% compared to the country average.

1.3. Health monitoring, health survey

Health monitoring is a systematic and ongoing data collection that collects information on the health status of the population and its determinants. It analyzes and explains the data

collected and provides information to support health policy decisions. Health problems, their geographical differences and their presence in different social groups can be surveyed and traced by means of health monitoring. The latter is very important when the characteristics of the health problems of the given group are significantly different; determination of the public health priorities is of great importance among them and on this base interventions and their impact become measurable.

Part of health monitoring is built on registration based data collection; e.g. mortality, morbidity, cancer registry. Data collection based on surveys can considerably supplement the information gathered in registries. Registers do not identify clearly those indicators that characterize the health status of the ethnic groups in Hungary. For that reason we can not collect and analyze data on gypsies using registries.

In the history of health surveys in Hungary the National Health Interview Survey (NHIS) carried out in 2000 and 2003 could be considered both internationally and scientifically acceptable based on its method and data content. During both surveys a random sample of 7000 individuals aged 18 and over, from 447 settlements, was selected from the registry of the national census and visited by interviewers at their home with a 72% and 78% response rate.

2. Objectives

- Testing an adopted version of the NHIS questionnaire as well as developing the methodology of data collection and data entry in inhabitants living in colonies in Hajdú-Bihar, Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg counties.
- Processing data recorded in questionnaires, comparing the results to those of the health survey carried out in 2003 among the average Hungarian inhabitants.
- Making a proposal for a systematic health survey in inhabitants living in colonies on a national level on the basis of the health survey carried out.
- Presenting the results to health professionals and policy makers with the aim of working out effective and efficient preventive programs for people living in colonies in order to guarantee equal opportunities defined in the National Public Health Program

3. Data and methods

In 2004 we performed a survey among inhabitants of colonies and segregated habitats in three counties of North East Hungary applying questionnaires. The School of Public Health of the University of Debrecen carried out a health survey in the above mentioned three counties in 2001-2002 focusing on the location of colonies, the number of the inhabitants, and their public health conditions. Colonies were defined as clearly distinguishable parts of human settlements which consist of at least four dwelling units and are characterized by lower quality (absence of electricity, piped water, gas, drainage; next to illegal waste deposit, etc.), higher population density, and unfavourable environmental conditions compared to other dwelling units of the same settlement. In implementation of the survey mainly field workers of Roma identity who are active members of civil organizations were involved.

3.1. Target population, sampling method

The data analyzed in this study were obtained from two health surveys that were conducted only six months apart.

The first, focusing on the general Hungarian non-institutionalized adult population, is the National Health Interview Survey. The second is a specific survey of the adult population living in colonies in the three counties. The target populations of our survey were Hungarian citizens aged 18 or over living in colonies or segregated habitats in Hajdú-Bihar, Borsod-Abaúj-Zemplén and Szabolcs-Szatmár-Bereg counties. The sampling frame was about 62,000 persons fulfilling the abovementioned criteria.

In the survey we collected information by means of the questionnaire on 1000 people representing the target population. This sample size has already contained the loss due to non-response that had been estimated of between 20-25%.

Sampling was performed using the central Data Processing, Registration and Election Office's registry of citizens aged 18 or over living in colonies or segregated habitats in the three counties. In randomly selected settlements one or more – depending on the number of inhabitants – groups of ten aged 18 or over persons of both genders (random, proportional, group sampling method) were selected. This type of sampling made it possible to the settlements to be represented according to their number of population living in colonies or segregated habitats.

In the selected settlements respondents were selected using the random walk method. By this method the interviewers chose the house in the colony, and filled in the questionnaires about each person aged 18 or over living in the house. If some of the persons aged 18 or over didn't dwell in the house at the time of the interview the interviewer made a further attempt to fill in the questionnaire about the absentees.

Due to the sampling protocol after randomly rating settlements with citizens living in colonies or segregated habitats in the three counties we determined – depending on the number of inhabitants – the number of households to choose and the number of questionnaires to fill in.

3.2. Implementation

The questionnaire applied for the abovementioned household based sampling was the slightly modified version of NHIS carried out in 2003. The questionnaire can be divided into two parts: most questions were interviewer-administered; some sensitive areas were included in a self administered section of the questionnaire. The questionnaires used in the two surveys were almost identical, allowing direct comparison of the results with the data captured on 7000 individuals' sample of NHIS 2003. This comparison reveals the differences between the general population and of those living in the worst social conditions and colonies. The use of the same questionnaires in both surveys, performing interviews at the same time, the same statistical methods and survey questions that used ensures comparability.

The most important topics of the survey:

- demographic, socio-economic conditions
- quality of life, self perceived health status
- diseases, injuries, complaints
- functionality restriction
- health behaviour, health culture
- health service utilization

Research questions

- what are the differences between the social-economical indicators?
- what is the prevalence of categories of self-perceived health by age and gender?
- prevalence by age and gender of the different stage functionality restriction?
- prevalence by age and gender of the different illnesses?
- prevalence by age groups of the following health behaviour factors for males and females?
 - special diet, bodyweight (abnormal thinness/obesity)
 - addiction to substances (smoking/alcohol consumption)
- level of utilization of state-financed health services?

Performing interviews and its quality assurance

Interviews were performed from May till August 2004 by field workers, who were all Roma people and had undergone training in survey methods and interview techniques.

All the field workers got detailed documentation on the selected settlements and the number of the households involved into the survey prior to the interviews. Arriving at the spot they showed their identity authorization document. If nobody stayed in the house at the time of the interview the interviewer made a further attempt to fill in the questionnaires. Interviewees signed an informed consent before data collection. Field workers helped them read the questions of the self administered section if they needed. Work of the field workers was inspected by two instructors attending 10% of the data collection and auditing the questionnaires.

3.3. Data processing and analysis

The paper-based data sheets were recorded in a database by a company. The database, the questionnaires and the consent forms are archived at School of Public Health of the University of Debrecen.

Analysis was carried out using the statistical program Stata 6.0. During interval estimations standard errors were corrected considering the sampling method (stratification, group sampling).

Different categories of income, education and economic activity were applied for characterizing the socio-economic status. Measuring the income of the households we used equivalent household income as a constant key variable as it is recommended by the World Health Organization. In our study monthly equivalent income (monthly net income of the household/the square root of the number of persons in the household) is represented in Euro. Different key variables in the general population are categorized. It makes the different indicators for the lowest equivalent monthly income quartile in the general population comparable to those characteristic of the people living in colonies.

Level of education - as a very important tool of measuring the socio-economic status - is measurable by the number of completed classes or the highest qualification. In our survey we used the four category scale recommended by the World Health Organization and for the analysis we took the category of "primary education or less" into account.

Examining economic activity we compared the rate of the active workers in general population and among people living in colonies. Motives for economic activity were analyzed separately by the categories in the questionnaires as they are used in sociological surveys, too.

The use of functional model is increasing in characterizing the health status of the population. Using this model we can determine the health status of the person by the level of proceeding activities and participating in social life. Categories “severe” and “moderate” were used to present the extent of functional limitation. We can imply severe limitation when people need help to get out of bed and moderate limitation when they are able to get out of bed but they require help in self-care or in taking part in social activities. An individual’s perception of her/his health is considered as one of the best indicators of his/her health status. In the analysis categories good and very good were combined, as were bad and very bad.

In the questionnaire at answers for the question: „How much do you think you can do for your own health?” much and very much were combined.

Health was assessed using a standard five-item question recommended by WHO to measure perceived health. For this analysis the categories good and very good were combined, as were bad and very bad.

Height and weight were self-reported and body mass index (BMI) was calculated as the body weight (kg) divided by the square of the height (m²); BMI=kg/m². BMI was categorised as:

abnormally thin	BMI<18.5 kg/m ²
normal	BMI 18.5-24.99 kg/m ² ,
overweight	BMI 25-29.99 kg/m ²
obese	BMI ≥ 30 kg/m ²

Alcohol consumption habits were derived from answers given to self-administered questions. Consumption was categorized by frequency and quantity as: heavy drinker, moderate drinker, occasional drinker and abstinent.

According to WHO recommendations tobacco smoking population patterns are as follows:

- heavy smokers (smoke more than 20 cigarettes per day)
- regular daily users (smoke less than 20 cigarettes per day)

- former smokers (gave up smoking)
- have never smoked

Concerning the use of available health services our data collection is valid for the year prior to the survey. For certain interventions/services the time interval is fixed in two or five years.

Our survey on morbidity was aimed to get information on the frequency of the diseases having great public health importance. In the questionnaire we asked about diagnosed diseases that were known to the interviewees irrespective of the fact they were under treatment or not. We did not ask about cancer as the majority of them had no information about suffering from it. We estimated prevalence of the key variables for people living in colonies and for the general population.

In the NHIS we studied the socio-economic determinants in the lowest equivalent income quartile group separately. Population estimates of the frequency of the different key variables (with 95 percent confidence intervals) were used for the comparative analyses. All analyses were stratified by age and gender. The age categories were defined as 18-29, 30-44, 45-64 years. Data on persons 65 years or older were not included in the analysis due to their small numbers (33).

4. Results

5,072 of the planned 7,000 interviews were completed in the National Health Interview Survey. Fifteen per cent of participants selected could not be located during the period of field work, 8% refused to participate, and 4% were unable to participate for other reasons. Data from the 4,121 persons younger than 65 years were included in the analysis.

969 interviews were completed successfully in the Roma Health Survey, 12 persons refused to participate, 19 interviews were incomplete (96.9% response rate). Data from 936 persons younger than 65 years were included in the analysis.

Indicators of education, economic activity, equivalent household income, and housing conditions were applied for characterizing the socio-economic status.

The rate of participants with only low grade of education in the Roma survey is considerably high. It is twice as much as that of people in the lowest income quartile in the general population and is three times higher than it is in the general population itself.

High rate of low educated people is conspicuous mainly in older age categories. It converges to 90% in contrast to 50% and 29% of the two other populations. Only 27% of the 18-29 year old people living in colonies have higher education.

Being low educated makes them less likely to be employed as we can see in low rate of active workers among people living in colonies. From the most advantageous age group of 30-44 years merely every fifth is an active worker. In the two other target groups this rate is twice or four times higher. There was practically no difference between the mean household equivalent of Roma people and of that in the lowest income quartile in the general population, and it was twice lower than in the general population.

Low rate of unemployed men is conspicuous, while the rate of people living on disability and social security benefit is high compared to the general population. In case of women living in colonies there is a high rate of housewives and many of them live on maternity or social care benefit. Accordingly, rating of the economic status is different in the three target groups. About 40% of people living in segregated habitats estimated it as very bad. At the same time 30% of people in the lowest income quartile in the general population and 20% of the general population thought that it was very bad.

Probably it is the consequence of low income and high economic inactivity that housing conditions are worse in the colonies and rate of people living in one-room flats exceeds the indicators of those in the general population. Most of people – mainly women and younger inhabitants - living in colonies are not satisfied with their housing conditions and living quarters.

The combined extent of functional limitation for men was similar in the two studied populations, whereas for women living in colonies the extent of the two functional limitations – except to the 18-29 years age group – was significantly higher (45-64 years males 42%; females 52%). Frequency of severe functional limitation is more conspicuous in people living in colonies for both genders. Every third person in the 45-64 years age group need help to get out of bed.

There is no significant difference in the self-reported health status of 18-29 year old men and women in the two populations. In age groups 30-44 and mainly 45-64 years we found high rate of categories bad and very bad (45-64 years male 42%; female 58%) for those living in colonies. These rates are only the half of it for the same age and gender groups of the general population. Only every 7th in the 45-64 year old age group of men and 14th of women living in colonies thought their health status as good or very good. There are great differences in the self-rating health results between men and women. It shows much worse

subjective self-health status among women.

Both genders in all age groups in the general population thought in an especially remarkable proportion that they could do much or very much to promote their own health; nearly 90% of the age group 18-29 years thought so. Among people living in colonies the prevalence of such answers is much lower and is decreasing with age; only 40% of 45-64 year old men and women think they can do much for their own health.

Analyzing smoking habits we can see that even among 18-29 years age group – except the general population – the rate of regular daily smokers is above 50%. The prevalence of smoking was the highest for both genders in the age group 30-44 years. In this age group every second person living in colonies smoked at least 20 cigarettes per day. In this population 66% of women and 75% of men aged 30-44 is smokes regularly. Roma persons were younger in all age groups when they started smoking with the mean age at initiation 15.9 years (95% CI 15.7-16.2) among aged 18-34 years; 16.2 years (95% CI 15.8-16.5) in the age group 35-44 years, and 16.6 years (95% CI 14.3-19.0) in persons aged 45-64 years. The corresponding figures were 17.3 years (95% CI 17.1-17.5); 19.0 years (95% CI 18.7-19.3); and 21.0 years (20.0-21.9) in the general population.

According to the responses on alcohol consumption habits prevalence of abstinent women is very high, of moderate and heavy drinkers is low contrary to the general population and the lowest income quartile in the general population. As for men living in colonies in the 18-29 years age group the prevalence of heavy drinkers is a bit higher, but in the other age groups is lower. Rate of abstinent men – similarly to the women – is higher among the people living in colonies.

Analyzing nutrition we can see that ¼ of people living in colonies, ½ of the lowest income quartile in the general population and 2/3 of the general population use vegetable oil to cook with. In the month prior to the survey the proportion of persons who eat fresh fruits and vegetable daily was above 50% in general population contrary to the 30% among the people living in colonies. 20% of women and 29% of men living in colonies ate fresh fruits and vegetable less than once a week contrary to those of in the general population with 5% of women and 8% of men.

By the same predominating tendencies there were no remarkable differences in the prevalence of body mass index in all three populations. Prevalence of overweight or obesity in women has risen with age.

Proportion of overweight or obesity in young men was higher than that of women of the same age category. Abnormal thinness is more frequent among young women than young

men.

In the prevalence of health service utilization we found significant differences between the general population and the people living in segregated habitats. There are differences according to gender, too which are similar in both populations. Prevalence of utilization of health services is increasing with age for both genders, but it is less frequent for men, and the difference is more significant for younger age groups. In general population there are higher prevalence rates than in those living in segregated habitats for both genders, especially for men and for younger age groups. Contact with family physician was a dominant way of health service utilization among people living in colonies. To solve their health problem socially handicapped groups contact their GP-s as well. Rate of health service utilization at specialists or outpatient care centres is significantly lower. There is a low rate of use of dental services in general population; even in the best scenario only every second person used this type of care within a year. With age less and less people of both genders visit their dentist in the general population; among men the prevalence (30-42%) is much lower than among women (39-61%). Use of dental services is decreasing with age among people living in colonies. Only every fifth man aged 45-64 living in segregated habitats visited his dentist in a year. The use of this service is much lower comparing to the general population in both genders.

The proportion of women - except the 45-64 years age group of women living in colonies - who visited gynaecologist was almost the same; but there was significant difference in the prevalence of taking part in mammography within two years prior to the survey, especially in the target group – 45-64 years – of the public health screening program.

In this age group only every 4th woman attended screening within two years prior to the survey. This is very low compared to the 70% attendance rate of the general population.

25-29% of age group 18-29 yrs; 28-37% of age group 30-44 yrs; 44-50% of age group 44-50 yrs; persons living in segregated habitats reported some kind of discrimination related to health service use. These prevalence rates are 2-6% for both genders in different age groups of the general population. Comparing the motives for discrimination there are significant differences between the two populations. In the background of discrimination age, shortage of money, and other alleged reasons have got the same importance, while Roma persons who reported discrimination attributed it to their ethnicity, shortage of money or dressing. We have to emphasize, that almost 2/3 of the respondents reported ethnic discrimination. Shortage of money as a motive for discrimination related to health service use was reported in a bit lower rate among people living in colonies.

Of those who used any health services 45% of Roma men aged 18-44 yrs and 60% of Roma women had its blood pressure measured in the year prior to the survey. The corresponding figure was 70% for men and more than 70% of women at the same age group of the general population. There was no significant difference between the two populations in the age group of 45-64 yrs. Prevalence of having blood pressure measured more than five years ago was 5-10% for all age groups in both populations.

50-85% of the people living in segregated habitats had its cholesterol checked using health services more than five years prior to the survey. The corresponding figure was much lower (34-62%) for the general population whereas prevalence of check for cholesterol 12 month prior to the survey is much higher compared to the data of people living in segregated habitats.

Analyzing the prevalence of myocardial infarcts, stroke or chronic liver disease out of chronic conditions of major public health impact we can see higher prevalence rates among people living in segregated habitats. Among 45-64 yrs men living in colonies prevalence rate of myocardial infarcts is almost 15%. For stroke it is higher in both genders in the general population (45-64 yrs men: 4.4% women: 2.4%). Prevalence of chronic liver diseases is higher for all age groups in the socially handicapped groups. It is remarkable, that there is no difference between the two genders (45-64 yrs men: 9% women: 9.9%) among them.

5. Discussion

More and more surveys are conducted recently on the situation and problems of the Roma population especially in Central Eastern European countries. Grievously falling socio-economic conditions in Roma communities, increase of inequality attracted the attention of international organizations like the World Bank, Open Society Institute, the United Nations Development Programme (UNDP) and the different organizations of the European Union. Along with that many Roma non-governmental organisations show signs of increased activity resulting in the establishment of the Decade of Roma Inclusion. The largest minority of Europe with its population of about 5-7 million exceeds the population number of Austria or Sweden. The aims of the surveys are unravelling the problems of the Roma, the hindrances of development and the possibility of integration as

well as promoting them with searching effective methods.

Accession of Hungary to the European Union necessitated commitments to the Copenhagen Criteria one of them stipulating assurance of stability of institutions guaranteeing the protection and respect of the minorities. Number of the Roma belonging to minorities is an estimated 600-700 000, making up 6-7% of the total population. This ratio of the Roma will be expectedly risen due to their high live birth rate and the decreasing proportion of it in the total population. Governmental program for improving the situation of the Roma population gives priority to education, employment, and agrarian tasks as well as to social, healthcare and housing programs. In the framework of it the main objectives are to launch researches on the health status of the gypsy population and the utilization of health services as well as to extend the range of screening-nursing services, and the elimination or remodelling of settlements. Prior to surveys it is very important to specify the definitions on the selection of the subjects; that is who can be called Roma. In the survey conducted by the Sociological Department of the Hungarian Academy of Sciences in 1993-94 they defined Roma those people who were considered Roma by the non-roma population. But this is ethically unacceptable. Numerous surveys prove the fact that we have no valid knowledge on the health of the Roma groups. A significant proportion of the surveys concern the Spanish, Czech, Slovak minorities, while for the other countries 30% of the surveys. A great part of the studies concentrate on communicable diseases and reproductivity, and relatively few deals with the higher morbidity rate due to non-communicable diseases. We have evidences of low rate of use of health services and prevention. A general study was conducted on the researches published in health bibliographies between 1980 and 2001 on the health status of the Roma in Hungary. In the analysis it has been found that the number of surveys relating the health status of the Roma communities is relatively low, a significant part of them reflects status one or two decades before. They identified serious methodological problems of the surveys, and made a proposal to the future researches.

School of Public Health of the University of Debrecen in the health survey carried out in 2001-2002 in Hajdú-Bihar, Szabolcs-Szatmár-Bereg, and Borsod-Abaúj-Zemplén counties identified the colonies of the Roma communities, where they surveyed the aggregation of the unfavourable facilities, the number of inhabitants living in colonies, and their ethnic basis. In 2004 in these colonies – with a six month postponement – we carried out a survey involving Roma field workers and applied the questionnaire used in NHIS 2003 with minor changes. A very high, almost 97% respondent rate is due to the

well prepared interviewers and the instructors inspecting the quality insurance of the data collection. The survey provided opportunity to compare the results representing the characteristics of the Roma population of the three counties with those of the general population and the lowest income quartile in the general population. In both surveys we analyzed the data by the same methodology, and defined prevalence rates for three age groups of the adult population owing to the younger age profile of the inhabitants living in colonies. Persons 65 years or older living in colonies were excluded from the analysis due to their small numbers. Our survey covered socio-economic conditions, quality of life, functionality restriction, self perceived health status, health behaviour, certain diseases and health service utilization.

Regarding education there is a remarkable gap between people living in colonies and the general population. It is worthy of note that $\frac{3}{4}$ of the 18-29 yrs age group of people living in colonies has only primary education. Other surveys reported similar results, emphasizing, that the interval between the education level of the Roma and non-Roma population has risen comparing to those in the previous years, though in a smaller degree. Being low educated determines their chances of being employed. This is apparent from the fact that rate of active workers is much lower in people living in segregated habitats. At the same time the mean household equivalent income of Roma people is a bit higher than that in the lowest income quartile in the general population, but it comes mainly from social care and family allowance system. The rate of people living on disability benefit in the age group 45-64 yrs is significant supposedly due to their poorer health status.

There is no difference between the self-perceived health status of the two populations in the younger age group among people living in colonies, and this is confirmed by other surveys, too. But decrease of functionality and poorer self-perceived health status is characteristic for the older age groups

Regarding health behaviour habits one should emphasize the very high rate of regular daily smokers living in colonies both for men and women. Domestic survey similar to this on the prevalence of smoking has been conducted only for school children, where – both for girls and boys – rate of regular daily smokers was higher. As our survey has confirmed Roma persons were much younger when they started smoking.

There were no significant differences in alcohol consumption habits, but it can be only partly explained with the lower income rate of the people living in colonies. Regarding nutrition habits we should emphasize the lower prevalence in consumption of vegetable and fruit and the use of vegetable oil in the target population. Social conditions, the taking

responsibility of the society can assure the needed framework for sustaining adequate health status, but taking a self-conscious and active part of the individual in it with correct health behaviour is a must. The latter is not closely related to the educational standards, relating health damaging risks, of the individuals, as the majority of the population in spite of being aware of the health damaging effects of certain habits do not give them up.

The utilization of health services with the members of the majority society is significantly more restricted. The only exception is the use of primary health care among women. Outpatient and specialist care is on the much lower rate. The possible reasons for that: lack of referring to higher healthcare level; limited willingness for utilization of higher healthcare level. The proportion of women - except the 45-64 years age group of women living in colonies - who visited her gynaecologist, was almost the same as in the general population; which is probably connected with the higher fertility rate of this population.

The very low attendance rate in mammography - recommended by the targeted residential screening of the National Public Health Program -, raised severe communication and contact problems. There are similar problems in other screenings as well (eg. blood pressure). The segregated community besides its worse health status often experienced some kind of discrimination regarded as of ethnic character during utilization of lower level health service. Probably due to the above mentioned obstructive factors hidden morbidity rate is often might be higher, that is why except myocardial infarct and chronic liver disease the worst morbidity conditions of people living in colonies have not been proven.

Results of our survey point out, that to formulate the objectives aiming to improve living conditions of people living in segregated habitats we can not go without the results of the professionally established research programs. Considering these results a complex intersectoral program can be planned. In the future systematic health surveys can provide facilities for assessment of the changes due to (and maybe independent of) targeted intervention programs. By the evidences available, in the background of the unfavourable health condition of the segregated group of inhabitants we can find their poor socio-economic status and lifestyle. With full knowledge of these facts economic potentials should be improved by the enlargement of employment. This can promote employment and improve income-gaining ability. Available and discrimination free public education and public health by the improvement of the human capital can contribute to breaking off this vicious circle. But the outcomes also indicate that providing the basic social resources

for health is probably insufficient in itself, as certain indicators of Roma communities are worse even of the poorest quartile of the general population. That is why we should build the development of Roma communities on the cognition of the different conditions and needs of the members of the group as well as the increasing participation and investment with power of the Roma.

Publications related to the thesis:

Kosa Z., Szeles G, Kardos L, Kosa K, Nemeth R, Orszagh S, Fesus G, M. Mc Kee, Adany R, Voko Z. Health of the inhabitants of Roma settlements in Hungary - a comparative health survey. Am. J. Public Health (accepted for publication)

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