

PUBLIC HEALTH SITUATION OF THE ROMA AND NON-ROMA UNEMPLOYED IN A SMALL AREA OF HUNGARY DENSELY POPULATED BY ROMA PEOPLE.¹ SUMMARIZED OBSERVATIONS OF THE RESEARCH PERFORMED IN ÓZD SMALL AREA.

GYÖRGY UNGVÁRY*, ÉVASZAKMÁRY*, IBOLYAHEGEDŰS**, VERONIKAMORVAI***, PÉTER RUDNAI****²

*Fodor József Public Health Centre, Budapest, Hungary

**Work Med Occupational Health Centre, Ózd, Hungary

***Semmelweis University, Faculty of General Medicine, Institute of Public Health, Budapest, Hungary

****National Public Health Institute, Directorate for Environmental Health, Budapest, Hungary

ABSTRACT

The working group of the National Institute of Occupational Health directing the country's occupational health activity, when analysing unemployment appearing at the change of regime, recognized that unemployment besides the well-known social effects may harm the country's public health safety as well. Based on the results of the obligatory pre-employment fitness for work examinations it was supposed that unemployment is accompanied by increased frequency of health impairment. With the constraint-borne extension of the investigations it was also assumed that the deteriorating effect of unemployment on public health safety does not equally afflict the various regions of the country.

Their aim was to get to know whether the continuous subsistence of permanent unemployment and related poverty as well as the worrisome public health safety in the region densely populated by Roma people and most heavily hit by the collapse of socialist heavy industry are influenced and/or exclusively influenced by the high proportion of the Roma unemployed living in this Small Area.

Corresponding author: György Ungváry, MD., PhD., DSc.

2 Nagyváradi tér, Budapest, Hungary, H-1096

E-mail: g.ungvary@omfi.hu or ungvarygy@gmail.com

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² The authors' affiliates listed below are their present or last workplaces.

800 unemployed people according to their ethnic, national and gender distribution were divided into 4 groups (Hungarian men, Hungarian women, Roma men, Roma women). Parameters characteristic of public health safety of the groups were analysed by self-completed questionnaires, interviews, occupational medical examinations and local hygienic inspections. It was concluded that life conditions of unemployed Roma people, especially those living in Roma colonies, indeed disadvantageously influence the public health safety of the Small Area, the risk of which may also be increased by unemployed Hungarians living near to subsistence level.

According to the results of the present and earlier investigations it was established that the reasonable EU and national programmes based on appropriate analyses have not resulted in noticeably advantageous changes in the life conditions of the examined population. In accordance with several other working groups the authors believe that prerequisite of public health and social closing up is the assurance of appropriate learning conditions of the ever so underprivileged Roma and non-Roma population living near to or below subsistence level. Efficiency of integrated education is not a fair expectation without planned closing up training and appropriate indoor conditions for learning. Without these the forced realization of integrated education could even lead to harmful mental hygiene reactions.

KEY WORDS: Small Area densely populated by Roma people, high unemployment rate, education and undereducation of the unemployed

INTRODUCTION

Previously, in collaboration with the National Public Health Service we have explored the characteristics of public health and - first of all - environmental health (outdoor and indoor) and living conditions of the Roma population living in Hungary (Ungváry et al., 2005). During our analyses we have noticed that unemployment rate among Roma population, as it was also described by other authors (Havas és Kemény, 1995, Kertesi, 1995; Tardos, 2005), too, exceeded not only the frequency of non-Roma population but the unemployment rate significantly differed even among small areas of Hungary. We supposed that the cause of this difference may be related to the collapse of the socialist economic system which was accompanied – like in any other crisis situation in the course of history – by turning masses of healthy, fit for work people into unemployed from one day to the other. This mass unemployment was of different origin and led to different consequences. We would like to note that in Hungary before the change of regime due to the obligatory fitness for work medical examinations, the full employment and the consequences of punishable social parasitism the people who became suddenly unemployed were still medically fit for work (NIOH Yearly Reports, 1990; 1991; 1992; 1993; Ungváry, 1993).

In the light of all these we wanted to get an answer to the question whether the supposed public health endangering and direct health damaging effects of unemployment (Ungváry, 1993) are different from those found in the Small Areas where only working or almost exclusively working people and non Roma unemployed live. In our present paper we are going to report

about the results related only to the first half of the question. The analysis of this issue has been based by our examinations in which we collected data characteristic of public health and environmental health safety of unemployed applying for a job abroad living in county towns inhabited in a relatively large number of Roma people or in districts of the capital with no Roma population (NIOH Yearly Reports, 1991; 1992; 1993; Morvai et al., 1999; Felszeghi ,2001; Grónai et al., 2004; Hegedűs 2003; Hegedűs et al. 2003).

METHODS AND STUDY POPULATION

We examined fitness for work of ~800 unemployed females and males presenting themselves at the obligatory pre-employment occupational health examination in the Ózd Labour Centre. The applicants for the examinations were divided into four groups (Hungarian men, Hungarian women, Roma men, Roma women) in the order of their arrival time. Accordingly, “occasional, appearance randomization” was used to compose the groups according to ethnicity, gender and address. By this means the various data (e.g. public health, ethnic, age) of the unemployed living in the Small Area were analysed in a version similar to the natural distribution of the unemployed of the Small Area. (NB: in our previous analyses we used groups with equal numbers of individuals to meet the relevant requirements [Hegedűs et al., 2011, 2012, 2013, 2014; Hegedűs, 2015])

Besides self-completed questionnaires and interview methods occupational medical examinations were used to decide fitness for physical work. The anonymous questionnaires contained questions about demographic characteristics as well as those to determine public health and epidemiological safety, hygienic conditions of the outdoor and indoor living environment, somatic and psychic health status and fitness for work (Morvai et al., 1999; Ungváry et al., 2005), though the mental and health status of the study groups is not subject of the present paper. Besides the indicators of the hygienic conditions the questions also asked about personal, family and work anamnestic data as well as education, professional training and ethnicity of the participants. Prior to data collection the study participants were provided with detailed oral and written information and the data only of those were recorded who volunteered to fill in the questionnaire and agreed to the local hygienic inspection of their dwelling. Previously we called their attention to their rights not to answer any of the questions. Vast majority of the recruited unemployed were ready to answer and if they did not understand the question they could turn for help to the doctor or occupational health assistant being also the interviewers. (Unfortunately the proportion of the unemployed inexperienced in understanding the text was high).

Data recording, management and protection.

The study was in compliance with the domestic ethical regulations and the Helsinki Declaration.

Statistical methods.

Distribution of the discrete variables in the Hungarian and Roma population groups was determined by two way tabulation and the difference between them was evaluated by Pearson's chi-square test. Arithmetic mean values of the continuous variables were compared by Student's t-test (in case of normal distribution) or by Mann-Whitney non-parametric test (in case of non-normal distribution) using STATA/SE 10.0 and EPINFO 6.0 programme.

RESULTS

Demographic data. 41.4% of the examined participating unemployed declared themselves Hungarians and 36.8% of Roma origin. Out of the total 785 subjects there were 257 Hungarian men, 192 Hungarian women, 182 Roma men and 154 Roma women. Although besides Hungarian and Roma other ethnic groups (e.g. Slovakian) were also mentioned in the questionnaire, the respondents indicated only Hungarian and Roma ethnicity. Mean age of the Hungarian male and female unemployed (together) significantly exceeded that of the Roma participants (41.4 years vs. 36.8 years, $P < 0.001$). The proportion of the various age groups of men was significantly different between the two ethnicities. The Hungarian younger age group was substantially smaller and the older one larger than those of the Roma study groups where the distribution of the three age-groups was 1/3-1/3-1/3.

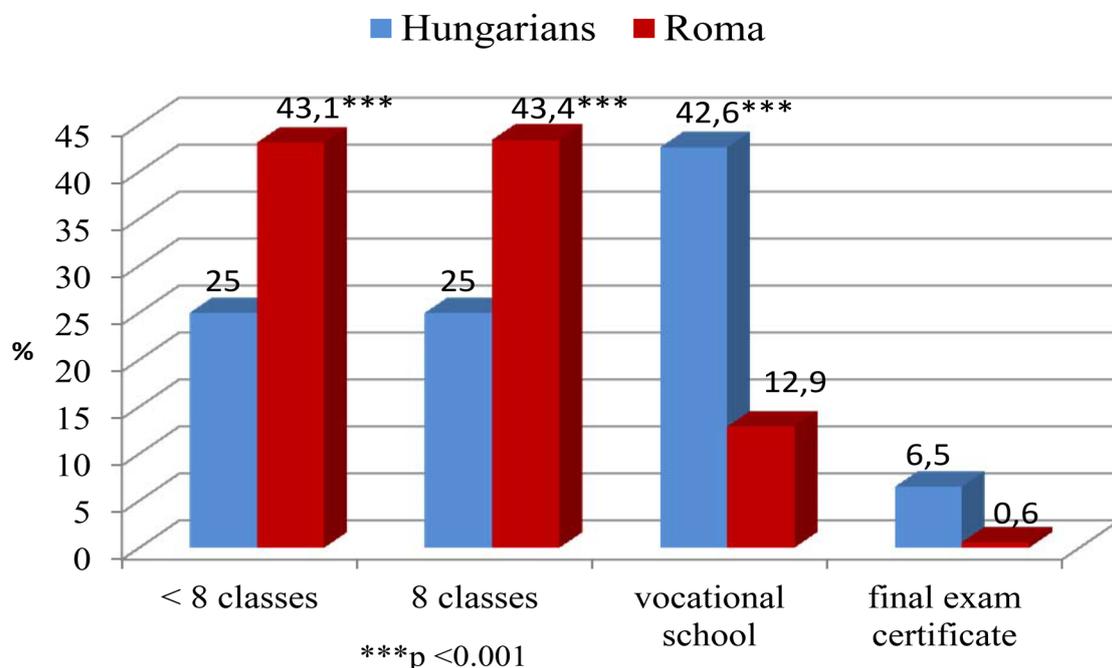


Fig. 1. Highest educational level of the participating Hungarian and Roma unemployed. Education level of the unemployed (both Hungarian men and women and Roma men and women) was very low. 43.1% of the Roma participants did not finish even 8 classes of elementary school. Compared to the Roma unemployed significantly ($P < 0.001$) higher proportion of the Hungarians finished vocational school the precondition of which was accomplishment of the 8 classes of elementary school.

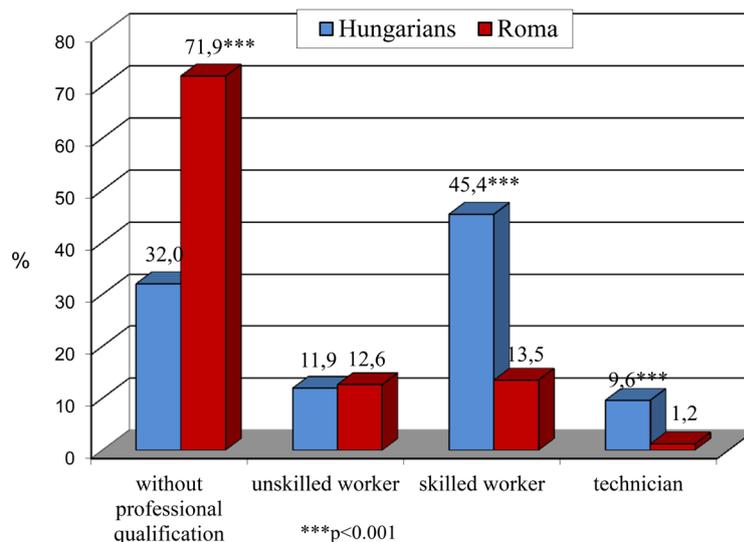


Fig. 2. Highest professional qualification of the participating Hungarian and Roma unemployed. Professional qualification level of Roma unemployed was significantly lower than that of the Hungarians.

EDUCATION

Education of the unemployed in the Small Area was of a very low level both among Hungarian and Roma men and women, too. (Fig. 1). It is noticeable that 22.3% of Hungarian men, 28.7% of Hungarian women and 38.9% of Roma men and 48.1% of Roma women did not finish even 8 classes of elementary school. The proportion of the Roma group without completing primary education was significantly higher in both genders than that of the Hungarians ($P < 0.001$ in both comparisons). Although Hungarian unemployed with final examination were significantly larger in number in both genders than the Roma ones, even the proportion of Hungarian men with final examination was only 7.4% and women 5.2% and none of them had higher education degree.

PROFESSIONAL QUALIFICATIONS

Proportion of lacking professional qualification among both Hungarian men and women was $1/3 - 1/3$, while it was nearly $2/3$ among Roma men and $4/5$ among Roma women. Taking both genders together the proportion of Roma unemployed without professional qualification was significantly higher than that of the Hungarians (71.9% vs. 32.0%, $P < 0.001$). There was a significant difference in the proportion of skilled workers and those with completed vocational school in favour of the Hungarians (Figure 2).

Living environment, environmental health conditions (settlement situation, residential buildings, quality of dwellings, supply with public utilities, hygienic conditions).

54.4% of the Hungarian, 65.3% of the Roma unemployed lived in towns while 39.0% and 20.9%, respectively, in villages, the difference in both cases was significant ($P < 0.01$ and $P <$

0.001, respectively). It must be emphasized that 13.9% of the Roma participants lived in Roma colonies (*Figures 3 and 4*) and according to the answers given to the questionnaires a fraction of the Hungarian unemployed also lived in colonies. Areas within towns or villages permanently inhabited by Roma people are considered colony-like communities (Ungváry et al., 2005). Members of Roma population in the studied Small Area lived together with the Hungarians in an “integrated” way, mixing with them in each other’s neighbourhood. In most of the so-called “integrated” communities there were significant differences between the buildings and dwellings inhabited by Roma or Hungarian people, this difference was significantly greater in the other two settlement types to the disadvantage of the Roma participants. This was especially striking in the colonies. 26.1% of the Hungarian and 9.1% of the Roma unemployed lived in storeyed houses ($P < 0.001$). 16.1% of the Hungarians lived in cottages (among them in so-called peasant houses) while 31.4% of Roma people lived in similar buildings ($P < 0.001$). Building materials also differed: 18.5% of the Hungarian and 8.4% of the Roma unemployed lived in prefabricated concrete buildings ($P < 0.001$) while 9.2% of the Hungarian and 14.7% of the Roma participants lived in sun-dried brick or mud wall houses ($P < 0.05$). Being familiar with the distribution of building materials of the houses in the Small Area we were surprised to see the high proportion of both Hungarian and Roma unemployed living in brick buildings (72.2% vs. 76.9%).

TABLE I.

Public health safety of the Hungarian and Roma unemployed – Living environment

Compared parameters	Hungarian unemployed	Roma unemployed	Significance
Proportion of urban inhabitants	54.4%	65.3%	$P < 0.01$
Proportion of rural inhabitants	39.0%	20.9%	$P < 0.001$
Proportion of those living in colonies*	6.6%	13.9%	$P < 0.001$
Proportion of dwellings in concrete buildings	18.5%	8.4%	$P < 0.05$
Proportion of dwellings built from sun-dried bricks and mud walls	9.2%	14.7%	$P < 0.01$
Average floor area of dwellings (m ²)	60.7 ± 22.5	48.1 ± 20.8	$P < 0.001$
Proportion of one-room dwellings	12.9%	48.1%	$P < 0.001$
Proportion of dwellings with bedroom and kitchen in the same room	6.9%	20.6%	$P < 0.001$
Average number of dwellers per dwelling	3.1 ± 0.08	4.3 ± 20.8	$P < 0.001$
Average per capita floor area (m ²)	26.0 ± 17.9	11.2 ± 2.2	$P < 0.001$
Average number of per capita seats	1.97 ± 2.10	1.25 ± 1.25	$P < 0.001$
Average number of per capita beds	1.50 ± 1.0	1.07 ± 0.6	$P < 0.001$
Proportion of dwellings without appropriate ventilation	2.7%	6.3%	$P < 0.05$
Proportion of dwellings with bugs and rodents	12.1%	48.2%	$P < 0.001$
Proportion of mouldy and damp dwellings	25.8%	42.3%	$P < 0.001$
Percentage of indoor smokers	46.6%	75.3%	$P < 0.001$

*:A part of the Hungarian unemployed also lived in colonies, which – according to an earlier definition of our Working Group (Ungváry et al., 2014A; 2014B) - are not considered similar to the Roma colonies, but these are considered colony-like arrangements.

Vast majority of the unemployed thought that condition of their dwellings was at least acceptable, but this requires some comments. On the one hand 46.1% of Roma and 29.8% of Hungarian unemployed considered their dwellings to be hardly acceptable or bad, the difference was significant. On the other hand from public health point of view 35.8% of the Roma and 24.3% of the Hungarian dwellings were regarded hardly acceptable or bad, this difference was also significant. We would like to emphasize that during inspection of premises (in case of ~15% of dwellings) we found more than 50% of the Roma and ~10% of the Hungarian dwellings strongly objectionable. Considering the flooring of rooms (wood, parquet, stone blocks, stamped) in every case it was disadvantageous to the Roma people. The same was true in relation to heating, lighting, insulation, moisture of walls, leaks, moulding, lack of ventilation and also frequent occurrence of insects, rodents and pets kept indoors. The proportion of indoor smokers was very high (*Table I*).

Water supply of dwellings, being a determinant parameter of public health safety itself, requires more detailed analysis. Network of water supply was not installed in 100% of the Small Area. In case of the unemployed this situation was explicitly worse than the average of the Small Area. Water supply network with potable drinking water was introduced in the dwellings of 64.4% of the Hungarian and 46.7% of the Roma unemployed ($P < 0.001$). In the dwellings of 17.7% of the Hungarian and 11.6% of the Roma unemployed ($P < 0.05$) so-called domestic water system was installed providing controlled but not guaranteed potable drinking water. There was no running water system in the dwellings of 7.6% of the Hungarian and 15.2% of the Roma unemployed ($P < 0.001$). It should be particularly mentioned that 9.4% of the Hungarian and 26.5% of the Roma unemployed ($P < 0.001$) were provided with drinking water from public outlets. It is very important to note that inhabitants of Roma colonies could obtain potable drinking water only from public outlets (*Figure 3*).³ Drinking water supply from public outlets means that the water source was at a distance of at least 50-150 meters from the nearest house of the colony. Inhabitants of the colony carried the drinking water home in winter or summer where they stored it and used the sometimes stagnant water for drinking, washing, washing fruits and dishes, etc. This condition can be considered an epidemiological risk in itself, e.g. may become source of hepatitis A infection (*Table II*).

Where a network supply of potable drinking water is lacking usually there is no bathroom, either, which also means lack of cold or warm running water, flush toilet and sewage system and the toilet is situated outdoors (*Table II*, *Figure 5*). The unfavourable hygienic conditions, afflicting Roma unemployed, and among them especially those living in Roma colonies, are usually associated with strongly questionable personal hygienic habits, which have been described in details by Ungváry et al. (2016).

³ N.B.: Two small settlements of the Small Area did not have water supply network. In these settlements both the working and the unemployed Roma or Hungarian people used public outlets or got drinking water in any other way.

TABLE II.

Public health safety of the Hungarian and Roma unemployed – Water supply

Compared parameters	Hungarian unemployed n=449	Roma unemployed n=336	Significance
Proportion of dwellings supplied with drinking water network	65.4%	46.7%	P < 0.001
Proportion of dwellings without drinking water supply (use of public outlets)	9.4%	26.5%	P < 0.001
Proportion of dwellings with domestic water system	17.1%	11.6%	P < 0.05
Proportion of dwellings with warm running water	29.2%	11.3%	P < 0.001
Proportion of dwellings with only cold water supply	15.8%	26.0%	P < 0.001
Proportion of dwellings without bathroom	21.0%	49.3%	P < 0.001
Proportion of dwellings with flush toilet	79.8%	46.4%	P < 0.001
Proportion of dwellings with outdoor toilet	24.9%	53.9%	P < 0.001



Figure 3. Roma colonies were separated from the settlement and its inhabitants lived in sun-dried brick or mud wall houses with mostly one-room of small floor area. There was no running water in the colonies. Water supply was provided from public outlets situated at the edge of the colony at a distance of about 50-200 meters from the house. Drinking water had to be carried home in winter or summer where it was stored and the sometimes stagnant water was used for drinking, washing, and washing-up dishes, etc. (Source: Szakmáry et al., 2017)



Figure 4. Architectural, public health and epidemiological state of the dwellings were unacceptable. Buildings leaked, the walls were damp and mouldy. Hygienic facilities (running water, bathroom), proper ventilation and modern heating possibilities were all lacking. Dogs and cats were also kept in some of the dwellings thereby increasing possible risk of infections.



Figure 5. Bathroom or a similar room suitable for washing was also missing in most of the dwellings. Toilet with or without flush water was situated mostly outdoors sometimes used by more than one family.

CROWDEDNESS OF DWELLINGS

We partly refer to the situation previously described in the subchapter “Living environment – environmental health conditions” and the data of *Table I*, and partly we would like to highlight the following: in 93.1% of Hungarian dwellings kitchen and bedroom were separated while in 20.6% of Roma dwellings these two rooms were the same ($P < 0.001$). Number of rooms was small, 49.8% of the Hungarian unemployed lived in dwellings of one room but in case of the Roma unemployed this proportion was 77.3% (sic!) ($P < 0.01$). Average floor area of the Hungarian dwellings was 60.7 m² and in case of Roma ones it was only 48.1 m² ($P < 0.001$). In Hungarian households the average number of dwellers was 3.13 ± 0.08 and in the Roma ones 4.25 ± 0.11 ($P < 0.001$). Accordingly, per capita floor area was 26.0 and 11.2 m², respectively, ($P < 0.001$) but according to our local inspection experience it was even much smaller in the Roma colonies (less than 5 m²) (*Table V*, *Figure 5*). Number of per capita seats was 1.97 in Hungarian dwellings and 1.25 in Roma ones. (During our local inspection it turned out that in many cases not only chairs but sitting places at the edge of beds were also counted as seats). Average number of per capita beds was 1.50 ± 0.96 in the Hungarian and 1.07 ± 0.59 in the Roma dwellings ($P < 0.001$). (*Table I*)

SOCIAL SITUATION

A questionnaire survey can only give information of rough estimate about financial situation of the unemployed living in the Small Area. Distribution of the income of the unemployed certainly depends on the sum of total monthly income of the household members and the number of people to be taken care of. According to our data, average total monthly income of the 420 Hungarian households was HUF $96,827 \pm 56,182$ and that of the 331 Roma households was HUF $94,206 \pm 42,621$. Per capita income of the Hungarian households was HUF $35,695 \pm 17,575$ while it was HUF $26,166 \pm 13,495$ in case of the Roma households, taking all active (adult men and women, being spouses or partners) and inactive members (pensioners, economically not active adults, children, any other family members) of the families into consideration. This amount of money contained only the known benefits substituting earned income (substituting allowance, regular welfare payments, employment substitution support, child care benefit (GYES), child care allowance (GYED), child care support (GYET), child benefit, maternity benefit and other benefits). It is to be underlined that 74.2% of the Hungarian and 84.1% of the Roma unemployed specified some kind of income source while 25.8% of the Hungarian and 15.9% of the Roma unemployed denied getting any kind of financial support. To the question “How much do you spend monthly on yourself?” the Hungarian unemployed indicated HUF $10,143 \pm 17,056$ and the Roma ones HUF $3,504 \pm 7,826$.

DISCUSSION

As it was already mentioned in the Introduction, during the years of the change of regime and the years thereafter it became clear that the unemployment following the collapse of the so-called socialist economic system of the Soviet block countries is different in many characteris-

tics from the unemployment of smaller or greater degree accompanying the known crises of the history (NIOH reports 1990; 1991; 1992; 1993; Ungváry, 1993; Morvai et al., 1999; Hegedűs, 2003; Hegedűs et al., 2003; Felszeghi, 2004; Grónai et al., 2004). This unemployment – in contrast to its history of several centuries - is characterized by mass unemployment of a new nature, which is different from the earlier known but by today already ceased or subsided characteristics like machine wrecking, revolts, luddism, civil wars, strikes, worker organizations, counter-reactions backed up by laws of a capitalist society, and also from the features characteristic even today like dismissal of the dispensable workers of poor health, job loss of unskilled workers, poverty, misery and social exclusion.

In this process healthy people, capable of work and constrained to work by law, more or less independently from their education lost their jobs from one day to the other and the frequency of unfitness for work for health reasons was increased among people newly applying for a job. Taking all these into consideration we hypothesized that unemployment in itself has a direct health damaging effect and it would almost naturally harm public health safety (Ungváry, 1993). In the Hungarian Institute of Occupational Health with the contribution of colleagues of the newly organized National Public Health Service and those newly joining us from the Occupational Health Service we started partly to work on the justification or the rejection of the outlined hypothesis as well as on other investigations related to unemployment in order to promote public health, mental hygiene and fitness for work.

As a result of all these a new aspect arose according to which – besides comprehensive analysis of the whole problem – our investigations had to be extended to small areas hit to different extent by consequences of unemployment due to various reasons, as building up of the “country of iron and steel” (during the 1950-ies) did not affect all parts of the country in the same way and the full employment masked drawbacks due to the rather insufficient education of some ethnic groups.

Among the answers to our question of the present paper we consider the most important one exploration of health damaging risks caused by environmental health problems and looking for the possible most effective ways of their management from public health point of view. Uncontrolled handling of the known environmental health risks and drawbacks (*Table I, Figures 3,4,5*) would inevitably increase the frequency of health impairments and diseases of the unemployed, among them especially those exposed to the greatest risk (e.g. the unemployed living in public health conditions of Roma colonies or colony-like areas.)

In the first half of our study/analysis performed on only about 400 subjects adjusted for ethnicity and gender (identical groups of 100-100 Hungarian men, Hungarian women, Roma men, Roma women) we established that the cause of poorer public health safety of the unemployed in Ózd Small Area compared to those in other parts of the country is first of all the presence of vast number of Roma unemployed in this Small Area (Hegedűs et al., 2014 A, Hegedűs, 2014 B; Hegedűs, 2015). In the present study of twice as many (~800) subjects with four study groups the composition of the groups was formed differently, in the order of arrival time; in our estimation this procedure more satisfactorily described the ethnical, gender and residential dis-

tribution of the unemployed in the Small Area. When comparing the parameters characteristic of public health safety of the two series of study we predominantly detected effects of similar directions and differences mainly only in extent. Similarly to our previous studies we found significant differences in vast majority of parameters characteristic of environmental health to the disadvantage of the Roma unemployed. On the basis of all this we concluded that public health safety of the Roma unemployed was worse than that of the Hungarian unemployed and this had a significant impact on the public health safety of the Small Area. However we have to note that vast majority of the Hungarian unemployed can be characterized by parameters of similarly poor public health safety (water supply from public outlets, domestic water system, crowded flats, buildings of bad quality, sun-dried brick and mud wall houses, mouldy and moist walls, bad isolation, lack of bathroom and warm water, outside toilet, etc.) I.e., situation of the Small Area is significantly influenced by the presence of vast number of Roma unemployed but the poverty is also shared to a great extent by a certain part of the Hungarian unemployed. Consequently, the large scale Roma population cannot be considered exclusively responsible for the poverty of the Small Area. Cause of the tangibly perceived poverty is not solely the ethnic composition of the unemployed population, but more detailed analysis of the poverty is not subject of our present paper.

As poverty in itself is health damaging and it increases the frequency of not only the infectious but also the non-infectious (e.g. malignant) diseases (Tomatis, 1997; Gwatkin et al., 1999; Blakley et al., 2004) and as unemployment, which is largely responsible for the poverty and health damaging in itself, too, (Ungváry, 1993; Ungváry et al., 1997; 1999; 2002; 2016; Martikainen and Valkonen, 1996; Mathers and Schocfield, 1998; Morvai et al., 1999; Inoue et al., 2007; Brit. Med. J. Editorials; 2009) presumably further increases the number of people unfit for work due to health reasons. I.e., a vicious circle develops and its interruption is a fundamental public health duty, which the population groups with particularly disadvantageous situation (e.g. members of Roma colonies and other ethnic groups living in extreme poverty) cannot solve by themselves. Following a detailed analysis we did not only raise but also proved by describing etiopathogenesis of the vicious circle that it is related to unemployment, increases the frequency of diseases and crucially decreases public health safety producing continuous reproduction and conservation of problems (Ungváry, 1993; Ungváry and Hegedűs, 2014 Ungváry et al., 1997; 2014A, 2014B; 2015; Morvai et al., 1999; 2016; Hegedűs et al., 2014, 2015).

Considering our data related to the social conditions and public health safety (*Table I*) we have no doubt about justification of our conclusions although hardness of the data maybe questionable. This also means that it is not enough to solve only the problems of the Roma population but a comprehensive and efficiently controlled programme should also be elaborated against poverty and unemployment. This programme should provide conditions of employment offering possibility for the above mentioned Roma and all other ethnic groups of Hungary to achieve at least the level of life quality of active workers and later catch up with that of the middle class. I.e., it is of public health interest that the possibility of appropriate level of work is offered to employees with appropriate education, work ability, mental and somatic health condition. The question is: how? The task is: elaboration of the programme by competent experts and its controlled realization based on appropriate state and civil solidarity. There are several known

programmes with this objective. Solution of the Roma problems was already envisaged by the so-called socialist Hungary in its governmental decisions of 1961 and 1979. The result naturally (?) was not successful despite (?) the obligatory full employment (of autocratic nature) and the entire groundlessness became evident at the change of regime (Komlósi et al., 1985; Kertesi, 1995; Andorka, 1996; Havas and Kemény, 1996). The programmes worked out after the change of regime have been based on wide-ranging analyses, for their list see Ungváry et al. (2016). We consider the programme formulated during the Hungarian EU Presidency in Gödöllő in 2011 of high priority; its adaptation to Hungary published by KIM (2011) correctly indicates even in its title that solution of the problem is “National Inclusion Strategy – Extreme poverty, child poverty, -2011-2020”. I.e., solution of the Roma problem is very important, but unfortunately not the only one. Without questioning scientific grounding of the domestic analyses, the multiplicity and significance of the EU and national decisions aiming at adequate solutions, based on the results of our public health studies on unemployment and the Roma problems during the past 20 and 10 years, respectively, (Ungváry, 1993; Ungváry et al., 1997, 1999; 2005; 2015, 2016; Morvai et al., 1999; 2016; Felszeghi, 2001; Hegedűs, 2000; 2003; 2015; Grónai et al., 2004; Hegedűs et al., 2003; 2010; 2011; 2012; 2014; 2015; Szakmáry et al., 2007; 2012; 2016; Ungváry and Hegedűs, 2015) we think that realization of the programmes in spite of the available financial resources is rather poor. Our earlier recommendations and statements have been confirmed by the results of the present study.

Namely:

- According to the national census carried out in 2011 by Central Statistical Office (KSH) the Roma ethnicity amounted 315,000, but OECD estimated it at least 7% of the total population. The groups living in Roma colonies (by our definition) should be provided with dwellings, worthy of human beings and citizens of an EU member country. Liquidation of the Roma colonies allows no delay;
- Providing living conditions worthy of Hungarian and EU citizens for every Roma and non-Roma individuals living in extreme poverty in Hungary is urgently needed. Justification of this was presented in our earlier analyses related to individual and social health damaging effects of unemployment⁴ (Ungváry et al., 1997, 1999; 20013; 2014A, 2014B; 2016; Morvai et al., 1999; 2016; Szakmáry et al., 2007; 2012; Hegedűs et al., 2010; 2011; 2014; Hegedűs, 2015);
- elimination of unemployment is of our elemental interest. It is most accurately supported by David Cameron’s (former UK Prime Minister) words cited in the Editorials of Br. J. Med.: “Unemployment can never be the price worth paying”, in which he referred to the recently reported mortality increasing effect of unemployment and the 9.5-25-fold increased suicide rate among young unemployed people.

⁴ *A significant part of the data collection took place in the years prior to the nation-wide implementation of the so-called public work; we have no knowledge of any studies on the health-enhancing effect of public work for the population groups presented in this population. We also don't know of any similar studies carried out following the global financial-economic crisis (economic recovery period).*

Our question is: how can Hungarian and Roma unemployed be closed up to employees doing reasonable work? In our opinion attention should be paid to the fact that lack of education and qualification is health damaging by itself (Faragó, 2007; Bacikova-Sleskova et al., 2007).

According to the results demonstrated in the present paper significant part of the study population did not even complete 8 classes of elementary school, many of them lacked professional qualification and only some individuals had final examination certificate. We share the opinion of Kertesi (1995) that principal preconditions of social closing up of the majority of Roma population (we think that also members of any other ethnicities living below subsistence level) and the 21st century job requirements include at least secondary grammar or vocational school certificate but even more higher education (college, university) degree. Analysis of the feasibility of this goal is not subject of our paper but our public health, mental hygiene and fitness for work examinations prove that the otherwise attractive conception of integrated education widely suggested as a solution is unreal (Ungváry, 1993; Ungváry et al., 1997; 1999; Morvai et al., 1999; Szakmáry et al., 2007; 2012; Hegedűs et al., 2010; 2011; Ungváry and Hegedűs, 2014; Hegedűs 2015). The indoor public health conditions reported in our paper do not ensure basic knowledge taken from home and the learning conditions, necessary for successful further education. Lagging behind the average cultural background of common Hungarian families and also the expected school performance may cause frustration, aggressiveness, unsociableness, dropping out of school and does not facilitate social closing up. (Hegedűs et al., 2015; Ungváry et al., 2015; 2016 A; 2016 B).

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