The Health Status of the Population of Sellye District, a Disadvantaged Micro-Region, in the Light of Sociodemographic Factors- Literature Review

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ABSTRACT

Tackling health inequalities is a global goal also set by the WHO and is in the common interest of all societies. Keeping in mind the extremely close correlation between socio-economic status and health outcomes is of particular importance in planning health promotion and making health policy decisions. The research aimed at assessing the health status of the population of Sellye district, one of the most disadvantaged micro-regions according to available statistics, to examine the relationship between socio-economic status and health conditions, and to compare health status internationally with populations living in other disadvantaged regions. Research questions: How does the impact of sociodemographic factors on health prevail? Through what mechanisms does race/ethnicity affect health? Our present study is a literature review, the first stage of a comprehensive investigation, in which we examine the Hungarian and international literature. Health status is largely determined by sociodemographic characteristics, it is also influenced by the wider social, economic, political, and cultural environment. Health must always be considered in the context of the environment. Ethnicity is strongly connected to social class, but it can still be important in terms of social cohesion and the resources available to the Roma.

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INTRODUCTION

The level of development, the extent of welfare, and the culture of different societies and social groups in humanity are varied, due to adaptations to geographical and climatic processes, random phenomena, and complex socioeconomic processes. Over time, the differences formed in this way, linked to the concepts of power, access, and possession, led to inequalities experienced in societies, and between societies. The collective benefits accumulated over generations are not shared equally (Stiglitz, 2013).

Inequalities are also present in the field of healthcare, manifested in differences between certain social groups in terms of health status, exposure to risk factors, or access to healthcare resources. Starfield (2001) defines inequity in health as “the presence of systematic differences in one or more aspects of health across socially, demographically, or geographically defined population groups”. According to the WHO report (1986), “equity in health implies that ideally, everyone should have a fair opportunity to attain their full health potential and, more pragmatically, that no one should be disadvantaged from achieving this potential if it can be avoided.” Health inequalities are “...not only unnecessary and avoidable but, in addition, are considered unfair and unjust” (Whitehead, 1990). The concept of health inequalities therefore goes beyond differences caused by biological endowment. It refers to unfair and unjust differences in a given society that are related to societal determinants and could be avoided. As a result of health inequalities, differences in opportunities arise, such as the benefits of scientific and technological development, the extent of exposure to the determinants of health and disease, and the risks of illness and death. However, social inequalities are present in all countries, regardless of their level of development, and so are health inequalities (Marmot, 2015).

Since 1985, when the WHO set the goal in its health strategy (“Health for All”) to reduce inequalities by improving the conditions of disadvantaged groups, it has continuously focused on the issue. This is also confirmed by the fact that in 2005 Commission on Social Determinants of Health was set up to examine the social factors that contribute to health inequalities. Although tackling health inequalities worldwide is a major public health priority, interventions can be considered more or less successful.

Based on Link and Phelan (1995), the key to the failure of interventions to tackle inequalities is that they expect disadvantaged groups to be active and compliant, which is not possible in the absence of the appropriate skills, motivation, and supportive environment. The authors advocate interventions based on regulations, rather than interventions targeting changes in health behaviour. Therefore, instead of interventions based on the activity and responsibility of the individual, this theory about the fundamental social causes of health inequalities suggests that the possibility of mitigating inequalities depends on modifying the activities of societal stakeholders who are responsible for the environment and living conditions of the individual (Csizmadia, 2017).

In Hungary, Józan drew attention to the phenomenon of health inequalities in the 1980s, examining inter-district differences in mortality among the male population in Budapest and the correlation between education, occupation, housing conditions, health status, healthcare, and environmental pollution (Józan, 1986). Over thirty years since the first papers were published, numerous studies have been conducted on the subject, approaching it from different aspects. Research has focused not only on the fact of inequalities but also on exploring their possible causes and the opportunities for reducing them.

For many years, Hungary has had a high rate of unskilled, permanently unemployed, and severely
deprived population, which has a significant influence on health inequalities (Kolosi & Pósch, 2014). Today, every third person in Hungary (about 3 million) lives below the poverty line, 1.2 million of them in deep poverty. People living in disadvantaged areas are especially affected by the risk of poverty (Cserti & Orsós, 2013). There are considerable inequalities between the various regions of our country, which continued to increase in parallel with the general improvement of the state of health in the 2000s (Hablicsek, 2007; Juhász et al. 2010). Territorial inequalities are not only the result of the social structure of different regions but also of local risk factors (e.g. access to healthcare, environmental pollution, drinking water quality) (Orosz & Kollányi, 2016).

The population in peripheral rural areas shows worse health indicators, particularly in areas with small villages (Pál, 2017). According to data from the Central Statistical Office (KSH, 2016), one-third of Hungary's settlements are small villages (fewer than 500 inhabitants), but only 3% of the population live in them. These areas are characterized by low economic performance, low education, poor income, and difficulties in accessing healthcare. The territorial units used in analyses can hide the specificities, and problems of certain micro-regions, and smaller units within micro-regions.

When classifying micro-regions according to their territorial development, it is necessary to consider a complex index of five indicators: economic, infrastructural, societal, social, and employment indicators. Micro-regions with a complex index lower than the average of all micro-region’s complex index should be classified as disadvantaged. Those micro-regions with the lowest complex index among the disadvantaged micro-regions, where 15% of the country's population live, should be classified as the most disadvantaged micro-regions (KSH, 2008).

Sellye district is one of the most disadvantaged areas of the South Transdanubian region in Hungary. It comprises 38 settlements, an area with small villages, with dense settlement structure and with numerous dead-end settlements. According to Pál's research in the Sellye micro-region, the health status of people living in peripheral areas is not only worse than the national/rural average, but also has a specific local characteristic, which is most pronounced among people living in extreme poverty. The health of these people is embedded in a specific socio-economic-cultural context, where poor health contributes to the perpetuation of deprivation. The author suggests that once the spatial identification of the population with poor health status has been made, it is worth focusing on local mechanisms that highlight opportunities for interventions (Pál, 2013). Despite the fact that social catching-up and tackling health inequalities are supported by several national strategies, the situation of the lagging regions is not improving. Our aim is to assess the health status of the population of Sellye micro-region, and to examine it in relation to socio-economic status, thus providing a starting point for planning interventions to facilitate the regional catching-up. In this study, we review the spatial factors that appear to be relevant to health inequalities in the area, without claiming to be exhaustive, to establish the basis for the comprehensive research. Our aim is to analyse the impact of socio-economic factors on health status through international, and Hungarian literature. Taking into account the high proportion of the Roma population in the region, the impact of ethnicity on health status will be given special attention. Following our stated objectives, we examine the literature along two research questions:

Q1: How does the impact of sociodemographic factors on health prevail?

Q2: Through what mechanisms does race/ethnicity affect health?

MATERIAL AND METHOD

The studies were searched in two databases. Studies in Hungarian were looked up in Google Scholar, while international studies were searched in PubMed, using search terms according to the research questions. For the first question, we searched for 'health determinants', 'health inequity', and 'social-economic status'. When examining the issue of ethnicity, our search terms
were 'health state' and 'ethnicity', along with 'Roma', however, we found a limited number of studies in the international literature. We did not attempt completeness in our search for studies but tried to go along a historical, chronological curve when selecting the studies, thus presenting the development. Accordingly, the literature includes both older and quite recent sources.

RESULTS

Studies on the association between socioeconomic factors and the state of health, and the health of the Roma minority groups, are discussed following the research questions presented earlier.

How Does the Impact of Sociodemographic Factors on Health Prevail?

Correlations Between Socio-Economic Status and Health

The relationship between sociodemographic factors (gender, education, occupation, living environment) and health has been examined in the national literature since the 1980s (Józan, 1986; Orosz, 1990; Hablicsek, 2007; Kovács, 2007; Juhász et al., 2010; Bíró et al., 2020). We know that socio-economic disadvantage results in poorer health. Place of residence, education, economic activity, living conditions, lifestyle, culture, politics, social capital, healthcare, etc., all together creates an unfavourable environment for the lower strata of society, which is responsible for the deteriorating state of health. The issue of social groups at the lowest end of the social stratification is what the literature calls the health gap. However, the relationship between socioeconomic status and health can be interpreted for the whole society. Marmot et al. defined the concept of a health-gradient based on a follow-up study of British civil servants (Whitehall research) (Marmot et al., 1991). Even though the population at the lower end of the societal hierarchy was not represented in the study, the chances of health deterioration increase, and mortality becomes more unfavourable, as people move down the societal ladder. Thus, inequality depends much more on relative than absolute deprivation.

Determinants of Health

In 1974, Lalonde, Canadian Minister of Health and Welfare described the following four groups of factors determining individual health: lifestyle (43%), genetics (27%), environment (19%), healthcare system (11%) - which factors influence the health of individuals and communities to varying degrees. Which factors influence health, and to what extent, may vary somewhat from one society to another, as lifestyle itself is socially, economically, and culturally determined, but the order is undeniable (Barcsi et al., 2022).

Experts have developed various health models to illustrate the relationship between health and its determinants (non-exhaustive: Dahlgren & Whitehead, 1991; Diderichsen et al., 2001; Adány, 2011), here we review some of them.

Figure 1: Dahlgren and Whitehead's model of health determinants
The advantage of Dahlgren and Whitehead’s rainbow model is that it provides a simple, easy-to-understand illustration of the extent of the factors that affect health. It highlights that beyond individual lifestyles, social relationships, living and working conditions, socioeconomic, cultural, and environmental conditions also influence health (Figure 1).

The model developed by WHO experts that summarises the effects of social determinants of health is much more complex. This model divides health determinants into two groups, structural and so-called intermediary determinants of health. The number and thickness of the arrows in the figure indicate the direction and weight of the factors affecting health. The authors highlight the decisive role of socio-economic factors. One of the structural components includes governance, macroeconomic policies, social policies, public policies, and the cultural patterns, values, and norms that characterise a given society. The other component is the socioeconomic position, which covers social class, ethnicity, education, occupation, and income. Social cohesion and social capital influence risk factors that directly affect health, such as psychosocial factors, material circumstances, and behaviour. Nevertheless, illness can also have an impact on social position, e.g. by reducing labour market opportunities (Solar & Irwin, 2010; Blas & Kurup, 2010). The model also includes the health system as an intermediate determinant (Figure 2).

![WHO Model for Social Determinants of Health](https://example.com/who-model.png)

**Source:** Solar, O. & Irwin, A. (2010)

According to the Meikirch model, health is a state of well-being that is the result of interactions between individual capabilities, life course challenges, and social and environmental determinants (Csizmadia, 2018; Bircher, 2005). This model approaches the concept of health in a fundamentally different way since it does not consider it as a property of the person, but as a product of a complex system that includes the individual. In the view of the author, health means that individual abilities, social and environmental factors are in balance with the challenges (physiological, psychosocial, and environmental) that arise during the life course. Disruption of balance leads to deterioration of health and illness. The resources available to meet the needs essential to an individual's life are the sum of biologically given and personally acquired potential. Health is determined by the balance of needs and resources available at a particular time.
Furthermore, needs and demands interact with the individual’s environment, hence health is understood in terms of the interaction with the individual’s environment. Consequently, when planning interventions, it is necessary to manage the system of the individual and the environment together (Vitrai, 2022). Figure 3 shows a graphical representation of the model presented.

**Figure 3: The Meikirch model of health**

![Image of the Meikirch model of health](source_of_the_graphic)

**Source:** Bircher, J. & Wehkamp, K.H. (2011)

**Through What Mechanisms Does Race/Ethnicity Affect Health?**

The social dimensions that most determine inequalities are usually described by the acronym PROGRESS (Place of residence, Race/ethnicity, Occupation, Gender, Religion, Education, Socioeconomic status, and Social capital/resources) (Evans & Brown, 2003). The impact of ethnicity on health is widely accepted, although it is not clear how this is applied.

Even though the Roma population is the largest minority in the European Union (Bulgaria, Romania, Hungary, Slovakia, Czech Republic), data on their health status and its determinants are limited. In fact, the health status of the Roma population is far below the reference values for the non-Roma population, their health behaviour is much worse and their living environment is poorer compared to the general population (Hajioff & McKee, 2000; Kósa et al. 2002; Sepkowitz, 2006; Kósa et al. 2007; Masseria et al., 2010; Simko & Ginter, 2010). In national terms, the life expectancy of the Roma population is 10 years less than the population average, and they are affected by a higher proportion of diseases.

Most of the studies look for the causes of inequalities in the context of income, education, place of residence, labour market status, deprivation, social capital, and ethnicity. The most researched area is the relationship between deep poverty as a social class and ethnicity. Another important area of research is the role of social capital in the health status of Roma. High-income inequalities in society are already working against social cohesion and permanent stress reactions can lead to various diseases among the population with limited resources (Wilkinson, 1996; Kawachi & Kennedy, 1997). The gypsy position implies disadvantage in all the dimensions of inequality (place of residence, education, income, etc.), and these are mutually reinforcing and accumulative. Ethnic discrimination in society reduces solidarity and perpetuates institutional and interpersonal exclusion. All these processes entail the fixation of an unfavourable class position and its adverse effect on health (Kovai, 2017).

However, another approach contrasts structure with culture. The ethnic factor is explained by the ethnicisation of social class and, in this context, by the negative impact of discrimination on health, while the cultural approach emphasizes the cultural traditions of the Roma (Kovai, 2017). Since several studies have found that Roma and non-Roma populations living in the same level of deprivation have similar health indicators, the role of cultural tradition is pushed into the background. Instead, ‘culture of poverty’ is the concept in which habitus, lifestyle, attitudes to health, and healthcare of communities adapted to marginal structural position can be understood. Vokó et al. (2009) found that socio-economic status (income, education, occupation, employment) is a significant determinant of the health status of the Hungarian Roma population. It completely explains poor health, although less so for health behaviour. In this case, ethnicity is also considered as an explanation factor. Vincze et al.
(2019) concluded that Roma ethnicity, independent of socioeconomic status, is an additional risk factor for the prevalence of chronic disease, and for perceived difficulties in daily living, learning-working, family life, and transport. Therefore, the issue of ethnicity cannot be neglected, several authors have pointed out that being poor as a Gypsy is different from being poor without ethnic stigmatisation (Kovai, 2016; Durst, 2015). Ethnic differentiation indicates the resources that can be mobilised, the social capital available, and the solidarity.

Overall, there are three aspects to consider when examining the health of the Roma population. First, structural position, determines the dimensions of inequality that most affect health statuses, such as place of residence, education, labour market position, and income. Second, the connection between ethnicity and social class, as social exclusion resulting from ethnic differentiation stabilises or increases inequalities and weakens social cohesion, thus having a negative impact on health. Finally, the issue of adaptation to the structural position, which is also determined by ethnicity, and the impact of the strategies adopted on health status and attitudes to healthcare (Kovai, 2017).

The issue of disadvantaged groups is very difficult to deal with, as the accumulation of social, economic, and health problems predicts marginalisation, which even passes through generations, thus significantly reducing the chances of catching up (Libicki & Fedor, 2022).

CONCLUSIONS

The state of an individual’s health not only depends largely on their sociodemographic characteristics but is also influenced by the wider social, economic, political, and cultural environment. Health changes in a dynamic way due to the continuous interactions between individuals and their environment, and should therefore be examined in the context of the environment. Ethnicity is strongly connected to social class (deep poverty), but it can still be important in terms of social cohesion and the resources available to the Roma. A recurring question in research on Gypsies is who do we consider to be Roma? Is it enough to examine the population who identify themselves as Gypsies, or would it be important to include assimilated Gypsies in research examining the health status of the minority?

When developing health promotion strategies to tackle health inequalities, it is essential to examine areas at the smallest possible unit (district/micro-region), in order to ensure that sometimes very substantial differences between sub-regions do not remain hidden. In many cases, available data for smaller territorial units are incomplete or difficult to obtain from the different health systems. The involvement of local experts is essential to identify problems and develop possible solutions, as well as to implement them. It is particularly important for the lower strata of society to know and trust the professional who is trying to improve their health. Mapping local characteristics can be one of the most important steps in planning health policy and the most effective in reducing health inequalities at a territorial level. In the most disadvantaged micro-regions of the country, the problems of low education, unemployment, isolation, a high proportion of Roma in the population, settlement structures with small villages, poor health are so multifaceted that they can only be solved through a complex, multi-sectoral approach. The only possible way to tackle health inequalities, and help disadvantaged areas to catch up, could not be better formulated than the way Orosz and Kollányi have done: “...improving health status and sustainably reducing the social inequalities underlying health inequalities can only be achieved through the coordinated, considered work of highly committed decision-makers across many disciplines, protected from and independent of political cycles...” (Orosz & Kollányi, 2016).

Despite continuous efforts, the development of the most disadvantaged areas seems to be only partially successful. The resources invested are not always repaid, and in many cases, inadequate planning is assumed to be the reason for this. Although most of the available statistical data on the health status of the population are based on the
19 counties of Hungary, limited information is available on the territorial differences within counties, which are sometimes very substantial. In order to develop health promotion strategies for micro-regions, it is essential to identify the health status of the population and to understand the functioning of the local health system. It would be important to involve local professionals in the formulation of problems and the planning of solutions, as they are more sensitive to local issues and have a better understanding of local specificities thanks to their everyday experience. In the absence of all these, the resulting action plans may not be well adapted to the specific area, maybe unrealistic, unfeasible in certain circumstances, or simply not deliver the expected benefits and effectiveness.

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