

Social determinants of health inequalities

Społeczne uwarunkowania nierówności w zdrowiu

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Abstract

According to the definition of the World Health Organization (WHO), health should be considered in multidimensional terms, also taking into account the mental and social aspects of human functioning. With regard to the population, increasing importance is being put on the social determinants of one's health status, because these determinants generate social and health inequalities. The latter may be defined as "potentially avoidable health differences between groups of people who are more or less socially privileged". They occur worldwide and have a universal and persistent character. Health inequalities have recently become a major public health problem. To understand them, it is necessary to analyze the social determinants of health, as well as the perspective going beyond the so-called standard risk factors (i.e., cause of causes). Poverty, level of education, the type of work performed, and the social and political situation of state may shape the health profile of individual populations. The impact of these factors will be palpable in epidemiological factors such as mortality, including infant mortality, and life expectancy. The article discusses the concept of health inequalities. Particular attention has been paid to selected social determinants of health, such as poverty, level of education and work.

Key words: socioeconomic status, health inequality, cause of causes

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Streszczenie

Zgodnie z definicją Światowej Organizacji Zdrowia zdrowie należy rozpatrywać wielowymiarowo, uwzględniając również aspekty psychiczne i społeczne funkcjonowania człowieka. W wymiarze populacyjnym coraz większą wagę przykłada się do społecznych uwarunkowań stanu zdrowia, które generują nierówności społeczne i nierówności w zdrowiu. Te ostatnie można zdefiniować jako „potencjalnie dające się uniknąć różnice w stanie zdrowia pomiędzy grupami osób, które są mniej lub bardziej społecznie uprzywilejowane”. Występują one na całym świecie i mają powszechny oraz trwały charakter. Nierówności w zdrowiu stały się w ostatnim czasie istotnym problemem zdrowia publicznego. Do ich zrozumienia niezbędna jest analiza społecznych determinantów zdrowia, a także perspektywa wykraczająca poza tzw. standardowe czynniki ryzyka (tj. przyczynę przyczyn). Ubóstwo, poziom wykształcenia, wykonywana praca, a także sytuacja społeczno-polityczna państwa mogą kształtować profil zdrowotny poszczególnych populacji. Oddziaływanie tych czynników będzie miało swój namacalny wymiar we współczynnikach epidemiologicznych, takich jak umieralność, w tym umieralność niemowląt, czy przeciętne dalsze trwanie życia. W artykule omówiono koncepcję nierówności w zdrowiu. Szczególną uwagę zwrócono na wybrane społeczne uwarunkowania zdrowia, takie jak ubóstwo, poziom wykształcenia i praca.

Słowa kluczowe: status społeczno-ekonomiczny, nierówności w zdrowiu, przyczyna przyczyn

Introduction

Health is a special resource influencing the social and economic development of a population. The definition of health included in the Constitution of the World Health Organization stresses that it should also be considered in a social and psychological context, in addition to a merely biological one, as the absence of disease or disability.¹

Definitions also include those that emphasize the importance of subjective perceptions of health and the impact of the socio-cultural context. Many describe health as not only the absence of disease, but also the level of well-being and adaptability that can be achieved by an individual under certain social conditions.² The latter are also the result of opportunities offered by the state to its citizens.³ In practice, the existence of multiple social groups and unequal access to generally appreciated goods that stems from individual and external (individual-independent) factors, such as political, economic and socio-cultural circumstances, mean that not every individual is able to take optimal care of their health, protecting it and strengthening it.

This article discusses selected social determinants that may contribute to the emergence of health inequalities.

Health inequalities originate from social inequalities that result from belonging to different groups, social positions and roles. In simple terms, social inequalities mean unequal access (or unequal opportunities for access) to socially valued goods.⁴ It should be noted, however, that they are not the result of diversity in society, but the result of easier or more difficult access to certain socially valued goods. The latter are goods that people want because they satisfy certain important needs and aspirations and bring satisfaction. However, their supply is limited and not every member of society has the chance to use them equally. These are mainly material goods, education, work, power, and prestige. It is stressed that education is an instrumental value, necessary to obtain the rest of the goods, and one of the most important mechanisms of social advancement.

Definitions of health inequalities indicate that they are primarily caused by social factors.⁵ The World Health Organization (WHO) defines them as “potentially avoidable differences in health status between groups of people who are more or less socially privileged”.⁶ A more extensive definition of health inequalities refers to them where “[t]he disadvantaged groups are systematically less healthy and are at greater risk of losing their health than the more privileged groups, in particular concerning those differences in health which should be considered avoidable, harmful and unfair”.⁶ Publications on the subject indicate 3 characteristics of the phenomenon: universality, social genesis and injustice.⁷

Health inequalities exist worldwide; moreover, they are persistent. They are primarily the result of social inequalities and are in opposition to justice and equality, and are therefore also inconsistent with the Declaration of Human Rights.⁷ Certain terminological issues exist in the English literature, such as the distinction between ‘health inequalities’ and ‘health inequities’. A direct translation will point to health inequalities resulting from various factors, including unmodifiable ones, and injustices in health which should be eliminated as soon as possible because they violate human rights. In practice, however, it has been assumed that these 2 terms are used interchangeably and treated as synonyms.⁷

Health inequalities are an important public health issue and have been mentioned in many documents. They were first highlighted at the WHO International Conference in Alma-Ata in 1978, pointing out that “[t]he existing inequality in the health status of the people is politically, socially and economically unacceptable”.⁸ However, one of the more significant documents on health inequalities is the report drafted by Sir Douglas Black in 1980, who, together with a group of experts, noted that the health status and mortality rates of the lowest social class in the UK were significantly different from those of the privileged class. The idea of the impact of social factors on health was not new, but the report provided indisputable evidence that poverty and material deprivation are the main

determinants of disease, malaise and even premature death. In addition, the report indicated that inequalities in the UK had worsened not as a result of a dysfunctional healthcare system, but as a result of the impact of social inequalities on health.⁹ The issue of health inequalities was also addressed in 2005 at the 6th Global Conference on Health Promotion in Bangkok, during which social inequalities were identified as one of the main determinants of health.¹⁰

In Poland, health inequalities are included in the current National Health Program for 2016–2020, whose main objective is to “extend lifespan, improve health and the related quality of life among the population and reduce health inequalities”.¹¹ The idea of equality is also included in the Declaration of Human Rights of 1948 and can be indirectly applied to the right to equality in health. Art. 25 Sec. 1 of that act stipulates that “[e]veryone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control”.¹²

As already highlighted, health inequalities are the result of a complex interaction between individual, social, economic, and environmental factors. It is important, however, that biological and social conditions interact and may boost one another. In order to understand how to properly assess and reduce social inequalities in health, it is therefore necessary to know the mechanisms that lead to them. The starting point here is the social determinants of health (i.e., the overall living conditions of people), which is the basic factor of health equality.

One of the models presenting the interconnectedness and interaction between macro- and micro-social factors is the model developed by Dahlgren and Whitehead.¹³ It is a graphical representation of particular zones of human life by means of symbolic semi-circles. The most extreme field is constituted by the socio-economic, cultural and environmental conditions that determine other spheres of human activity and existence. The next sphere, i.e., living and working conditions, takes into account one's social position, their employment and opportunities to care for and strengthen their own health, which depend on education, employment, income, medical care, and living conditions. Social support measured by means of support networks, i.e., the number of people that an individual can count on in difficult and pivotal life moments, is of extreme importance in the social functioning of a human being. Social exclusion, stigma and finally discrimination are also important determinants of health. The abovementioned groups of factors influence one's lifestyle and shape their health behaviors. It is therefore stressed that individual choices and behaviors should also be analyzed from a socio-cultural

perspective and take into account macro-social factors. At the very bottom of the model, non-modifiable factors which also cause inequalities in health, such as age, gender and genetic predisposition, are identified.

The lifecycle concept and the cause of causes

Socio-economic determinants are cited as the main causes of mechanisms that lead to health inequalities. Poverty and low level of education are the greatest threats to the health of a population. These 2 factors also give rise to social and health inequalities. Recent concepts make reference to a lifecycle perspective, indicating that events and the accumulation of various factors that occur during prenatal life, early childhood and adolescence can affect later health status.^{14,15} An example is the long-term research conducted between 1995 and 2013 by the Institute of Mother and Child in Warsaw, Poland, which showed that social and economic conditions in early childhood have an impact on later health and quality of life.¹⁵ Worrying results have also been presented by the project titled Strengthening Opportunities and Weakening the Transmission of Poverty Among Inhabitants of the Towns in the Łódź voivodeship (Polish: Wzmocnić szansę i osłabić transmisję biedy wśród mieszkańców miast województwa łódzkiego – WZLOT) implemented in 2007–2013.¹⁶ The authors of the report point to the creation of so-called poverty ghettos and the inheritance of poverty by successive generations. They also stress that the inhabitants of enclaves of poverty in Łódź rarely become beneficiaries of social services and rarely benefit from health and social prevention programs. As a result, differences in health between the poorer and the wealthier inhabitants of the Łódź voivodeship are becoming more pronounced.

Another direction is to investigate the causes of traditional risk factors, i.e., to look for the causes of causes. This method consists in going beyond the so-called traditional risk factors and addressing the causes of disease in a broader context that also takes into account the social, economic and political circumstances and their impact on the choices and behavior of the individual. In cardiovascular diseases, traditional risk factors such as smoking, overweight and obesity, lipid disorders, etc. will be analyzed from the macro-social level (general relations between people, social situation in the country, social status), meso-social level (support networks, relations at work and in the local community) and micro-social level (individual behaviors).¹⁵ Economic uncertainty in the country may affect employment opportunities, inter-worker relations, development of chronic stress, and increased unemployment. This often results in the emergence of compulsive and harmful behaviors, such as smoking, which is already mentioned as a tradi-

tional risk factor for cardiovascular disease. In conclusion, the 2 abovementioned perspectives must be taken into account in order to fully understand the mechanisms of emergence and exacerbation of health inequalities.

Poverty

The multifaceted nature of the issue of health inequalities means that they should exist as a domain of multiple policies whose primary task would be to reduce inequalities in education, employment and income. One of the main causes of this phenomenon is poverty. Material deprivation is associated with other factors that also contribute to or result from health inequalities. Poverty usually means a low level of education, lack of opportunities to purchase specific goods, use of all social services or participation in cultural life. It also includes stigmatization and discrimination, as well as social exclusion. In terms of health, we should mention limited access to health services and remaining at the back of the queue of beneficiaries of prevention programs.

According to the Millennium Development Goals report, the world population living in extreme poverty has declined significantly: from 36% in 1990 to 15% in 2011.¹⁷ The data indicates that at the end of 2015, the number of world inhabitants living on less than 1\$ a day has decreased to 12%. However, significant differences can be seen from a regional perspective. The lowest ratio of people living in extreme poverty in developing countries is found in North Africa (1%), West Asia (3%) and Central Asia (2%). However, in the countries of sub-Saharan Africa, 41% of the population still suffer from extreme poverty. It should be noted it is the only region in which the first of the Millennium Development Goals (eradication of extreme poverty and hunger) has not been achieved. In addition, it is concerning that in 2011, almost 60% of the population living in extreme poverty lived in 5 countries of the world, i.e., India, Nigeria, China, Bangladesh, and the Democratic Republic of Congo (formerly Zaire).¹⁷ This state of affairs is also influenced by political and economic conditions. For example, in the 1960s, the Democratic Republic of Congo was one of the most economically prosperous countries in Africa. However, the First (1996–1997) and Second (1998–2003) Congo War contributed to the weakening of the economy, the country's debt and famine. Another problematic aspect are the wars with Rwanda and the attacks of the Lord's Resistance Army (LRA), which operates in Uganda but also runs assaults on Congolese territory.

Poverty very often becomes the driving force behind a chain of events and behaviors that have a negative impact on health. In addition, the detrimental circumstances of the most disadvantaged social groups may be exacerbated by specific actions and decisions at state level. For example, the prolonged drought that struck Zambia in 2000 caused a series of events affecting the epidemiol-

ogy of HIV infections in that region.¹⁸ President of Zambia Levy Patrick Mwanawasa did not accept the USA offer of humanitarian aid to a country threatened by famine. As a result, people migrated from rural regions to big cities to seek employment and food. One of the destinations was the city of Chirundu, located on the main transit route in the southern part of Africa. Transit traffic, hunger and lack of employment opportunities have made prostitution the only viable and fastest way for women to earn a living. The risk of HIV infection in the face of actual hunger death did not influence the decision to stop prostitution. The presented situation of Zambia is a model example illustrating the influence of political, social and cultural conditions on the health of the population.

Poverty is one of the basic factors affecting the health status of a population. The richer parts of the world are also facing this problem and the health inequalities that follow. In the European Union countries, approx. 17% of the population live in poverty and almost a quarter of the population are at risk of poverty and social exclusion.¹⁹ The inequalities caused by poverty can be discussed by comparing the situation between the Member States. Although such a comparison does not take into account differences in standards of living, a less wealthy person in a country with a high standard of living and a rich social program will experience deprivation to a lesser extent than a person living in a poorer country. In such a situation, a comparison of the scale of poverty between countries will be more indicative of the social inequalities that result in health inequalities.

According to Eurostat data, a risk of poverty and social exclusion in Bulgaria and Romania may concern up to 40% of the population, while in countries such as Luxembourg, the Netherlands, Austria, and Sweden this percentage is much lower at 15–18%. In Poland, these circumstances occur in 24.5% of the population.²⁰ Inequalities are also noticeable between individual groups. The group affected by the highest risk of poverty are children and young people under the age of 18 (27%), followed by adults under 64 years of age (24.3%), while the least affected group is the elderly (20.5%). Significant differences can also be seen between countries. In Romania, Bulgaria and Latvia, 40–52% of children and young people are at risk of poverty and social exclusion compared to 13–17% of children in the Scandinavian countries.²⁰ However, these figures do not include the most vulnerable groups, such as immigrants, including illegal immigrants, ethnic minorities and people living in social care institutions. Given the current situation in Europe, with the influx of economic migrants and refugees, the proportion of people living in and at risk of poverty will increase, and thus health inequalities may become more extensive and more noticeable. The latest meta-analysis shows a clear correlation between the level of deprivation and the state of health.²¹ The authors of this paper point out that it is children, rather than adults,

who are financially disadvantaged and have a higher risk of developing gastrointestinal infections than their better situated peers.

In Poland, there is also a visible regional variation in the levels of poverty. In 2014, the highest rate of extreme poverty was recorded in Warmian-Masurian (14.8%) and Świętokrzyskie (12.2%) voivodeships, and the lowest in Silesian (4.7%) and Lower Silesian (5.6%) voivodeships.²² The extreme poverty rate in Poland was 7.4% in the said year. One concerning phenomenon is the fact that the risk of poverty increases with the number of children in a family. In 2014, the extreme poverty rate in large families (with at least 4 children) was 26.9%, while in one-child families it was 2.7%. These indicators indirectly inform us about the possibilities of development and providing all socially valued goods to children. In this case, poverty can mean a lower level of education due to limited funding opportunities for education, poorer working conditions and worse paid work. Often such a situation leads to the perpetuation of certain patterns and behaviors, and the so-called intergenerational transmission of poverty. Among the groups at risk of poverty in Poland, there are also people with disabilities, rural residents and young people (below the age of 18).

Education

The risk of poverty is inextricably connected to education. Low levels of education often mean poorer employment conditions, unemployment, poverty, and increased risk of reckless behavior. It also constitutes an obstacle to personal development and is mentioned as one of the causes of social inequality.^{23,24}

On a global scale, the problem assumes a broader dimension and should be considered in the light of the political situation, socio-cultural conditions, as well as the social perceptions of gender roles. Nevertheless, there has been an increase in the number of children in primary education in every region of the world; the number of children failing to attend primary school decreased from 100 million in 2000 to 57 million in 2015. In the region of sub-Saharan Africa, the primary school enrollment rate also increased from 52% in 1990 to 78% in 2012; however, it is estimated that even 43% of children in the world who do not attend any school will never attend one.¹⁷ In some parts of the world, this percentage may be even higher. For example, it may be as high as 57% in South Asia and 50% in sub-Saharan Africa.¹⁷ Social perceptions of gender are also crucial in this matter. In developing countries, it is obtaining at least primary education that gives a chance for better living conditions and employment. Education of mothers also has a positive impact on the health of their children. Unfortunately, it is very often the case that the roles of women as wives, mothers, caretakers of the household, or the ones responsible for supplying it with water

are determined by the adopted role models. In this case, culture and tradition will contribute to the exacerbation of gender inequalities, which will then become apparent through inequalities in the health status. It is estimated that as many as 48% of girls in developing countries who do not attend any school will never attend one. A similar situation applies to a lower percentage of boys, i.e., 37%.¹⁷ On the other hand, it is pointed out that it is boys who drop out of school more often than girls.

Wars in many regions of the world are also a hindrance to education. In North Africa, the number of children not attending school has increased significantly: from 28% in 1999 to 49% in 2012. The same number in South Asia grew from 21% to 42%, respectively. The critical situation is also occurring in the Syrian Arab Republic. In 2013, the enrollment rate decreased from 34% to 12%.¹⁷ However, these data do not reflect the current situation associated with Syrian migrations to Europe. Given the size of the migrations, social inequalities are expected to widen, including those related to low levels of education and inability to find suitable employment.

European data also point to differences between groups characterized by different levels of education. For example, a cohort study in Denmark showed that people with basic education were more likely to be affected by obesity, anti-health behavior (smoking), poor self-assessment of health, and a higher death rate. A low level of education was also associated with a worse material situation or a need to use institutional aid.²⁵ Significant differences in the risk of poverty relative to education also occur in Poland. According to data from Statistics Poland from 2014, the extreme poverty rate in households whose members had at most lower-secondary education was 18%, while if the head of the family had completed higher education, it was less than 1%.²²

Unfortunately, the unfavorable socio-economic situation related to the low level of education is often passed down from generation to generation, leading to the so-called intergenerational transmission of poverty.²³ This is also highlighted by the authors of the WZLOT project who point out that poverty becomes a kind of “capital” that is passed on to the next generations.¹⁶ A low level of education also limits development and opportunities to fully take advantage of all social benefits one is entitled to. Paradoxical situations in which people with better education benefit from lifelong learning and further training are not uncommon. The results of the Strengthening Transversal Competences of Low Educated Employees Concerning Their Health Choices in the Context of Changing Labor Market (LEECH) project show that people with a lower level of education are less likely to use preventive care.^{23,27} This can be observed in the use of dental care and mammography.^{23,27} As the analysis of data from the LEECH project shows, people with lower education are less likely to analyse their lifestyle in terms of health, which may explain their reluctance to use pre-

vention care programs. This group is also not interested in health education in its traditional form (leaflets, lectures). Health issues are often not addressed due to material problems, but only surface in the event of disease.²⁶ This situation results in increasing social differences, and thus health inequalities.

Work

Work is another socially valued good that, unfortunately, is not available to everyone. In the context of health inequalities, the aspect of work can be considered multidimensionally: employment or lack thereof, losing job, as well as the impact of the working environment. All these dimensions determine the health status of individual populations in different manners, and also influence the emergence of health inequalities.

The inclusion of work as a health determinant has had a long tradition. During the Industrial Revolution, attention started to be paid to the health of workers employed in mines and industrial plants, pointing out the unfavorable health indices among these groups.²⁷ Employment is also directly linked to education and income. Level of education will have an impact on employment opportunities, which in turn will affect income. Employment is therefore a determinant of socioeconomic position and an indispensable factor in the analysis of the health status of a population. It is at work that one spends a large part of their life.

Conducted among different professions in the USA, the Oregon Sudden Unexpected Death Study showed that the highest risk of sudden death due to cardiovascular disease affects the so-called white-collar workers, i.e., those who do not perform physical work.^{28,29} This risk is also borne by public servants, including firefighters and police officers.^{28,29} Perhaps it is partly due to stress and the release of mechanisms that cause the accumulation of stress events. It has been proven that people who experience stress demonstrate certain physiological reactions: accelerated heart rate, increased systolic and diastolic blood pressure, increased blood flow, and thus increased oxygen consumption by the heart.

A link between work and respiratory disease was also demonstrated in a clinical control study by The Stockholm Heart Epidemiology Program (SHEEP).³⁰ A group of more than 1,300 people with myocardial infarction was compared with a control group of 1,697 people selected from the register of residents. It was shown that conflict situations at work are one of the biggest factors increasing the risk of myocardial infarction, especially among men. Situations such as a very urgent deadline, receiving praise from the boss or competitive pressure also increased the risk of myocardial infarction.

The results of the Health, Alcohol and Psychological Factors in Eastern Europe (HAPIEE) cohort study

show unemployed and economically deprived people are at higher risk of cardiovascular diseases.³¹

Not only does the working environment have a direct impact on health, but it also creates health inequalities. For example, the mortality rate for top jobs in the UK is as much as 70% lower than for the lowest occupational classes.³² However, it is not entirely clear whether this link can be explained by the direct impact of occupation on health. Other circumstances that would determine this state of affairs should also be taken into account. After all, it is a well-known fact that socio-demographic factors, education and health status are strong aspects (e.g., the healthy worker effect) which also affect employment opportunities. This situation highlights existing social and health inequalities. A lower economic level may have an impact on education opportunities, with education in turn affecting employment opportunities. Health inequalities at the occupational level therefore reflect inequalities at other levels of society.³³

Conclusions

Health inequalities are the resultant of social inequalities, and their minimization is now becoming a public health priority. In trying to explain the causes of health inequalities, one should take into account not only traditional social health risk factors, but also the concept of the cause of causes. Such permeation of social sciences into medical sciences, public health or epidemiology is a positive phenomenon and a need of the present time. It is also a return to a holistic approach to human environment that includes the social aspect, which also affects the health status of a population.

A reference to social determinants of health and social inequalities in prevention programs is also a factor that decides the success of a program. As the Millennium Development Goals Report shows, complete elimination of health inequalities seems a distant goal, but consistent and integrated action at the international level gradually leads to their minimization.

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