## Original Research

# Social Factors Affecting Chronic Diseases and Health

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**Abstract:**

**Background & Objective:** Maintaining and improving health and eliminating the destructive effect of some social determinants affecting health and chronic diseases, which are the most powerful factors affecting the health of the social conditions in which people live and work, is an individual, national and even international responsibility that requires the joint efforts of all levels of society, i.e. individuals and organizations. This study aims to identify the social determinants of health and chronic diseases.

**Methodology**: This study is a traditional review. Searches were made in reputable databases, Daneshgostar Barakat system, SID, Irandoc, Magiran and using the keywords of social determinants of health, inequality in health, health system reforms, chronic diseases.

**Findings**: In this study, considering the broad scope of research, topics and studies on social determinants of health in these papers are classified into three sections; A) social determinants of health, b) inequalities in health, c) health and income.

**Discussion**: Paying attention to social determinants of health improves the level of health in society, because the development of health care without considering social determinants will not be very effective. Therefore, improving inter-sectoral collaboration in the field of health and emphasizing structural and social determinants play an important role in reducing inequalities in health.

**Keywords**: Chronic Diseases, Social Determinants of Health, Health Inequality, Health and Income

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## Introduction

In today's world, health perspectives have a broader vision and are necessarily affected by environmental, economic and social variables (1). Health is a multidimensional issue. The World Health Organization defines three main dimensions of health, namely physical (the state in which all body actions function properly), mental (the state of successful functioning of mental processes by changing and adapting to adverse conditions, positive thinking and trying to solve problems logically, and etc.), social (includes the social performance and the ability to recognize one's own as a member of a larger community) (2). Therefore, health is not just a biological matter, and social factors also play an important role in maintaining or destroying human health (1). Social determinants such as social class, religion, occupation, social isolation, stress, addiction, food, and social support are far greater and more important than biological factors in causing disease, in human health and well-being, which ignoring them is a one-dimensional view of man and his health. Although the effect of social factors on health has been recognized for centuries, the inherent and real participation on how health and chronic disease relate to social trends has been raised recently (3).

Among the factors affecting health, investigating the role of social determinants of health is very wide so that the share of social factors is greater than the health care system, genetics and biology and physical environment(64). The definite role of social and environmental factors affecting people's health has been identified since ancient times. Evidence suggests that most disease and the major part of health inequalities in the world are often caused by social factors. The health activities of the 19th century and most of the underlying measures of modern public health all reflect an awareness of the interdependence between social status, living conditions and the health consequences of the people (4).

The social dimension of health includes the levels of social skills, social performance, and the ability to recognize one's own as a member of a larger community. Social determinants of health describe the conditions under which people are born, grow up, live, work, and grow old (5).

Today, social factors play a very important role in health and well-being in individual, group and collective dimensions. The social perspective on health has been considered since 1948. According to the definition of health: "complete state of physical, mental and social well-being" and emphasis on inter-sectoral measures to improve health by considering environmental and social factors. Between 1950 and 1960, technology and the fight against certain diseases was the focus of the World Health Organization (WHO) and less attention was paid to the social determinants of health outlined in the Alma-Ata Declaration (6). The Alma-Ata Declaration states that in addition to the health sector, it encompasses all aspects of relevant national and social development and requires concerted efforts in all of these areas. Finally, in the 1990s and early 2000s, some countries took significant steps toward addressing the social dimensions of health. It was because of the spirit of social justice that the Commission on Social Determinants of Health was established in 2005 by the World Health Organization (7). In 2008, the Commission on Social Determinants of Health provided a framework for action by member states. The main purpose of providing the framework of social determinants of health is to prevent the adoption of policies that have a negative impact on health. This report emphasizes that a comprehensive model of social determinants of health should determine the role of social factors that determine inequality in health, and show the relationship and how major social factors affect each other (8). Diderichsen et al. (2001) presented a model of social production of disease. This model provides guidance to policy makers to use it to prevent health inequality by acting on social determinants of health (9).

The epidemiological transition phenomenon has made chronic diseases more and more important and today, not only in developed countries, but even in many developing countries, chronic and non-communicable diseases account for a large proportion of health problems. Today, chronic diseases such as cardiovascular disease, hypertension,



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diabetes, obesity, and metabolic syndrome are the leading causes of death and disability worldwide. Health and disease are two words that are not separate from each other and perhaps the term "social factors affecting disease" can be used synonymously with "social factors affecting health" (10). With the advancement of science and technology and the change of lifestyle, the image of health has changed in terms of the cause of illness and death, so that chronic and metabolic diseases have replaced infectious and contagious diseases. In the medical sciences, chronic illnesses are diseases that are inherently long-term, such as asthma, hypertension, and diabetes. What medical sociology deals with is to answer these questions: Why has the diversity of diseases been so low in the past? Why are new diseases emerging with technological advances? Why are poor people more prone to diseases than the rich? Thinking about these questions leads us, inevitably, to the social roots of disease, that is, even physical illnesses are often rooted in society. A sedentary life, all kinds of social, economic, political and cultural pressures all play an important role in the development of chronic diseases (11).

There are many scientific studies that show that the social determinants of health include social class, social exclusion, slum settlement, stress, childhood development, unemployment, social support, working environment conditions, food, transportation, addiction, immigration, urbanization and globalization have a great effect on health. Evidence shows that the lower a person is in socioeconomic status, the worse his/her health will be (12). It can be said that in fact there is a social gradient in health that moves from the top to the bottom of the socio-economic spectrum and each class has a better health status than its lower class. The social conditions in which people live have a profound effect on their health. Situations such as poverty, malnutrition, inadequate housing, unemployment, insecure income, low education, social discrimination, living in deprived environments are the main determinants of health and health inequalities (13). It is true that medical care can prolong the life or cure a serious illness, but what is important for the health of the population is the socio-economic conditions that make people sick or in need of medical care. Given the position of social determinants in health and chronic diseases in this regard, this study aimed to investigate the factors affecting social health and chronic diseases.

## Methodology

This study was a review. Searches were made in reputable databases, Magiran, Irandoc and SID systems. Using the keywords social determinant of health, health, inequality in health, health system reforms, articles were included in the study. Data were extracted from the articles using a checklist and finally the results were summarized by the research group and presented in four axes.

## Results

Health is formed in the place where people live, at home, at school, at work, in the neighborhood and in the community.

Social determinants of health are the environmental and social conditions in which individuals grow, live and work and play a decisive role in their health status, functions and quality of life outcomes (14).

Considering the dispersion and breadth of studies on social determinants of health in this article, research topics are classified and shown in three sections.

A) Social determinants of health

In this section of the article, we mention some of the most important social factors affecting health from the perspective of the Commission on Social Factors Affecting Health (Figure 1):

Early life conditions

Childhood development includes various areas of physical, mental, emotional, cognitive, verbal and social up to the age of eight. The effects of a good start in life, that is, proper support for mothers and children, will last a lifetime (15). Studies show that the foundation of adult health is rooted in childhood, and investing in childhood health has the greatest effect on reducing health inequalities. Failure to provide proper conditions during pregnancy and childbirth can lead to adverse fetal growth



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and this adverse fetal growth is a risk to the person's future health (16).

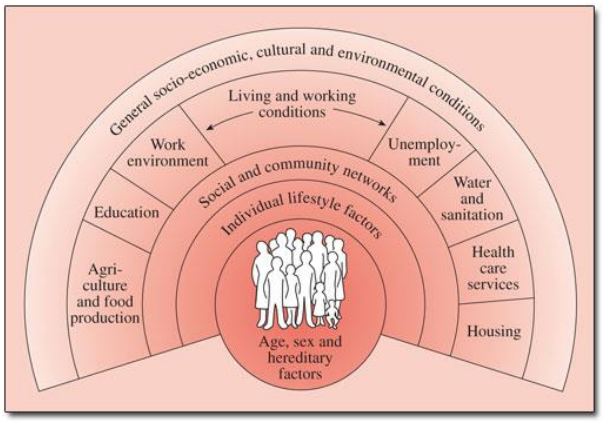


Fig1. Factors that influence health:

## Social gradient

Socio-economic conditions affect health. People in the lower social classes run at least twice the risk of serious illness and premature death (17). Fair distribution of health services among people can also be considered as one of the high goals of health systems and affecting the people's health. Justice can be considered as fairness or social impartiality. Health justice means making sure that people in a society receive the necessary health care fairly and according to their needs (18). Certainly, the poor distribution of health services is one of the determinants of human health, but the situations in which people are born, grow up, live and work, and grow old can also affect their health. Living in individual and his or her unequal situations are the result of deeper structural situations, including weak policies and programs, unfair economic programs, and bad diplomacy. The longer people live in stressful socio-economic conditions, the more they will suffer physically and the less healthy they will be in old age (19).

The underprivileged around the world have less access to health services, are more ill, and have shorter lives than the affluent (20). In chronic and complicating diseases such as diabetes and heart disease, they are in dire need of health-related services. Chronic disease like diabetes is a public health challenge. This disease is a progressive endocrinopathy with microvascular and macrovascular complications. These complications affect the number of hospital admissions, the costs of the health care system, the individual's potential in the daily activities of patients and the patient's quality of life (21). The role of high quality health care in preventing the reduction of diabetes outcomes over the last decade is quite evident that this factor may itself be due to a social inequality (22). Cohort and population-based studies in the UK have suggested a strong socioeconomic difference in the mortality of diabetic patients (23). The results of a descriptive-analytical study conducted by Larenge et al. in 2000 on 65,000 people over the age of 24 with the aim of determining the relationship between socioeconomic status and the prevalence of type 2 diabetes, cardiovascular factors and chronic outcomes of diabetes in Spain showed that the prevalence of type 2 diabetes in people with lower socioeconomic status was 17.2 times higher than other people (24).

Governments can provide the conditions for good and equitable health through the careful use of comprehensive facilities in policies and laws. Justice in health appears to be achievable through the actions of all governments, actions supported by international food policies that focus on social development and public economic growth. Although sometimes it is necessary to provide governments with foreign technical and financial assistance, and sometimes public participation may be a solution. Achieving health justice, participation with the health sector by organizations that seem to be effective and necessary on social factors that determine health, for example, financial resources play a vital role in the success of programs. From this perspective, the effect of the Ministry of Economy on implementing a justice program in health can be even more pronounced than that of the Ministry of Health (21).

## Social isolation

Decreased health and, more importantly, the risk of premature death are consequences of social isolation. Social isolation can also be caused by poverty, relative deprivation, racism, discrimination, notoriety, hostility, and unemployment. Poverty, relative deprivation and social isolation have important effects on health as well as premature death. Poverty



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prevents poor people and their families from enjoying achievable living standards. Research shows that there is a strong relationship between income and chronic diseases and mortality using different indicators of income and health (25-26) (Figure 2). Loneliness, social isolation, anxiety, depression and social insecurity lead to the spread of cardiovascular disease, type 2 diabetes and premature death. Reducing vulnerability due to poverty and income inequality requires appropriate policy, design and implementation of support programs in the economic, social and welfare sectors, insurance employment, nutrition, including health care (27-28).

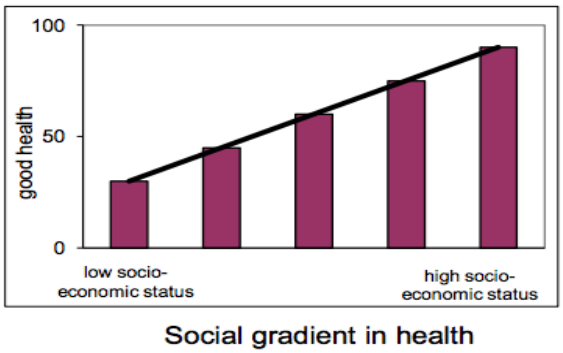


**Fig. Social Gradient In Health**

**Work and work environment:**

In today's complicated world, stress is a pervasive phenomenon that almost everyone is dealing with and has a variety of effects on different physical, psychological and social levels. Job stress is one of the most important sources of pressure and stress in the present age and has been introduced as the most fundamental issue (30). Job stress is the result of work processes or work environment factors that are a risk factor for heart disease and increase the risk of coronary heart disease. Stress increases adrenaline, noradrenaline, cortisol, blood pressure, skin temperature, fibrinogen, etc. These factors play a role in the development of heart disease. Some evidence suggests that chronic psychological stress causes hyperglycemia and a pre-diabetic condition. Therefore, people who have more control over their work have better health. Creating a suitable environment for employment, fair working conditions and security of the work environment is one of the important social components on health in physical, psychological and social dimensions (31).

**Food**

A good and appropriate diet to promote health and well-being in all walks of life is essential for individuals and family members. Poor nutrition and unhealthy diet and lack of physical activity play a role in cardiovascular disease, diabetes, cancer, eye diseases, obesity and dental care. People with a healthy eating pattern will be more immune to heart disease, and conversely, a tendency to eat unhealthily can lead to heart disease (32). Nutritional pattern can lead to a variety of cardiac risk factors through its effect on body mass volume. Inactivity and improper diet are associated with increased indicators and the occurrence of cardiovascular events and premature death (33).

Some support policies in healthy nutrition include providing healthy and nutritious food for different age groups, improving, strengthening and encouraging healthy nutritional behavior in society, monitoring and controlling food imports, setting rules and regulations to guarantee the implementation of programs, ensuring the health of food from farm to fork, monitoring the use of pesticides and pest control in food production, strengthening healthy and environmentally friendly agriculture (34).

**Social support**

Social support is a multidimensional concept that has been defined in different ways. For example, it can be defined as a resource provided by others, as a means of coping with stress, or an exchange of resources. Some researchers have defined social support as the amount of love, companionship, care, respect, attention, and help received by an individual from other individuals or groups, such as family members, friends, and others (35). Social support helps to meet the real and emotional needs of people. Belonging to a social network of society and mutual demands makes people feel love, friendship, respect and value. This has a strong protective effect on health. There is strong and consistent research evidence that social isolation or lack of social



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support is an independent risk factor for coronary heart disease (35). Social support can reduce the adverse effects of chronic disease and help patients better adapt to their illness (36).

**Training, awareness, education**

Literacy and education is one of the important social and economic indicators of societies (Figure 3). Increasing the level of education provides the capacity to find suitable jobs, earn more income, improve living standards, and develop health behaviors, and ultimately improve health status. Low levels of study, not seeing a doctor regularly, and having a diet rich in fast food and fatty and sugary foods all can lead to a variety of diseases and chronic diseases, including heart disease and diabetes. Conversely, educated people, due to the higher per capita reading, take more care of their health and pay attention to diet and regular exercise, and as a result, suffer less from chronic pain and various diseases (37). Increasing the level of education and training, especially for women, is one of the effective factors in the ability of individuals to improve family health. A child's survival chance is closely associated with the mother's education. In all countries, the worst survival rate is for children born to illiterate mothers. Mosley and Chen (38) found that family income and wealth, parental education and access to health services determine the health and survival of children (38). In a study by Schnittker in the United States, using two large national datasets, it was found that the relationship between income and health and education levels changed significantly. A study by Hurd et al. In the United States also showed that education is a more important predictor than income at the onset of a health problem, but income is more strongly associated with the progression of health problems than education. (39).

**Addiction**

One of the definitions of social health is the quality of engagement and interaction of the individual with society in order to promote the quantity and well-being of individuals in society and the end result of this interaction is the promotion of social capital, social security, reduction of poverty and reduction of injustice, but the opposite point is the increase of social harms. Drug addiction as a biological, psychological and a social problem is a phenomenon with which the ability of society to organize and form the existing order is destroyed and the normal functioning of social life is disrupted (40).

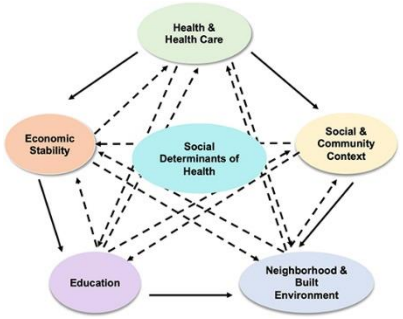


**Figure 3. The five domains of social determinants of health (SDOH).**

Meanwhile, substance abuse, including alcohol as a social problem, is a phenomenon that destroys the ability of society to organize and maintain order, disrupts the normal functioning of social life and causes structural changes in the economic, and social, political and cultural system of a society. Alcohol dependence, drug use and smoking are closely related to defective socioeconomic symptoms. Social deprivations such as poor living, low income, single parenthood, unemployment and lack of housing are all associated with high smoking rates and low smoking cessation rates. There is many evidence to support the link between alcohol consumption and physical harm to the body. Numerous studies have shown that alcohol abuse leads to a variety of violent and anti-social behaviors in adolescents and young people. Hence, high-risk and abnormal behaviors such as alcohol consumption have many destructive effects on both society and the individual, and are considered a social chronic, progressive, and potentially fatal disease (41).

Traffic transport

Today, transportation is one of the most important structural elements that affects the development of cities, and on the other hand, the expansion of cities also affects transport networks and systems. Traffic and



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transportation are an important part of the range of social, economic and environmental factors outside the health sector that have been identified as affecting health. This effect can harm or promote health (42). As an example of the positive effect of transportation and traffic on health promotion, we can mention the facilitation of access to health services and the acceleration of social communication. Unfortunately, what is most evident in developing countries is the damage that traffic and transportation do to human health. Frequent urban accidents every day, pedestrians killed, injured in urban accidents, emissions, deaths due to air pollution are some of the effects that transportation and traffic have on the health of residents directly and indirectly. One of the important and invisible effects of traffic in urban areas is its harmful effect on mental health and society health (43). In addition to physical adverse effects such as lead poisoning, the transportation industry causes neurobehavioral disorders, irritability, anxiety and even social isolation. According to recent studies, children are the most vulnerable to traffic complications. This phenomenon can lead to impaired brain function in children, poor growth and development, decreased IQ and academic failure. Lack of attention to psychological effects of transportation has caused the harmful aspects of traffic in human health to not be properly recognized. Therefore, the development and expansion of transportation methods that have more physical mobility will cause a fundamental change in human health (44). This confirms the findings of the study on the effect of urban traffic on the development of cardiovascular disease. In addition to air pollution, stress fluctuation level, high noise pollution and inhalation of harmful gases have a negative effect on cardiovascular health over time. Dealing with hasty and law-breaking drivers increases stress, and cardiovascular health is endangered, if someone interferes with a person's driving and therefore makes them angry. According to the American Heart Association, people with a heart attack are more likely to have been exposed to traffic shortly before the onset of symptoms (45).

**B) Inequalities in health**

Justice is a moral principle and is seriously related to human rights. Justice can be considered as social equity or impartiality. Some experts define health justice as the absence of systematic differences in health (or major social determinants of health) between groups that differ in terms of power welfare or social turnover. Justice in health means making sure that people in a society receive the health care they need fairly and according to their needs (46). Reducing injustice in health is a moral imperative. The right to have the highest standard of health available to human beings is enshrined in the World Health Organization charter and numerous international treaties, but the extent to which people enjoy these rights varies considerably from place to place in the world so it can be said that social injustice is killing people on a large scale right now. Absence or lack of social and welfare advantages such as inadequate housing conditions, low income, false jobs, poor nutrition, social disorders such as addiction, delinquency, etc. have adverse effects on health (Table 1) To achieve justice in health, cooperation with the health sector by organizations that affect the social factors determining health seems necessary (47).

**C) Health and income**

Income inequality is one of the most important factors affecting people's health. Studies show that high levels of inequality undermine social capital (48). In this way, income inequality increases suspicion and stress among people in society and reduces social participation, and also causes angry reactions of people to the events around them. The combination of these behaviors damages public health. When there is a huge difference between the income groups in society, the public welfare is damaged and Pareto optimality becomes unstable. The distribution of income and poverty in societies has a negative effect on health. Poverty prevents poor people and their families from enjoying achievable living standards.



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**Table 1. Explanations for the relationship between income inequality and health**

| Explanation S | Synopsis of the Argument |
|---|---|
| **Psychosocial (micro): Social statu** | Income inequality results in "invidious processes of social comparison" that enforce social hierarchies causing chronic stress leading to poorer health outcomes for those at the bottom |
| **Psychosocial (macro): Social cohesion** | Income inequality erodes social bonds that allow people to work together, decreases social resources, and results in less trust and civic participation, greater crime and other unhealthy conditions. |
| **Neo-material (micro): Individual income** | Income inequality means fewer economic resources among the poorest, resulting in lessened ability to avoid risks, cure injury or disease, and/or prevent illness. |
| **Neo-material (macro): Social disinvestment** | Income inequality results in less investment in social and environmental conditions (safe housing, good schools, etc.) necessary for promoting health among the poorest. |
| **Statistical artifact** | The poorest in any society are usually the sickest. A society with high levels of income inequality has high numbers of poor and, consequently, will have more people who are sick. |
| **Health selection** | People are not sick because they are poor. Rather, poor health lowers one's income and limits one's earning potential. |

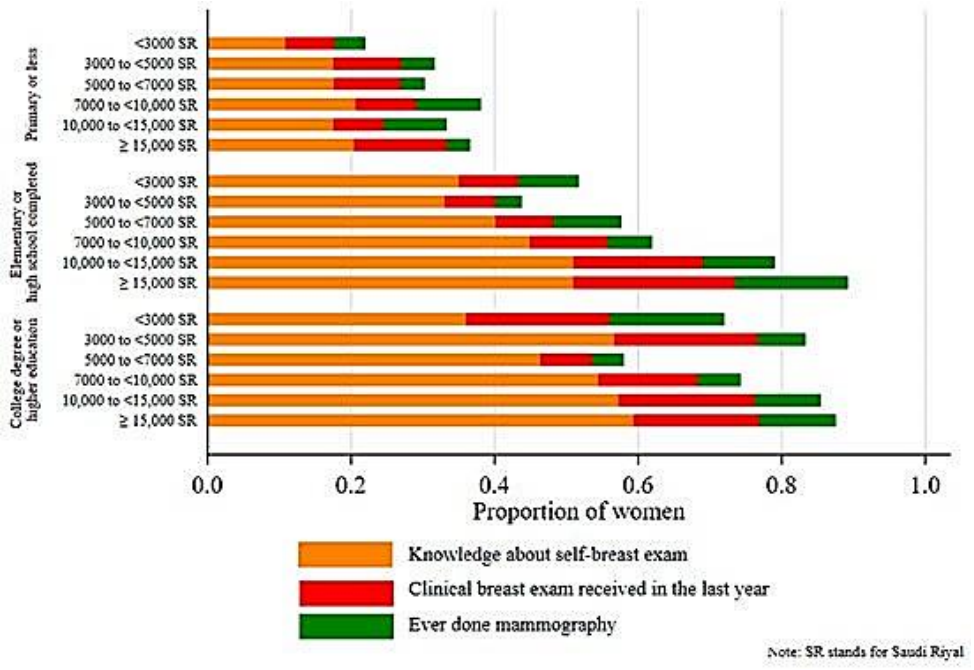


**Figure 4. Distribution of breast cancer screening uptake by education and income.**

There is a strong association between poverty and infectious diseases, non-communicable diseases, mortality, poor nutrition, poor living environment, access to health care for different age groups (49). As shown in Figure 4, women with low incomes and low education are more likely to get breast cancer.

Unemployment and job insecurity cause physical and mental disorders, anxiety, depression, social insecurity, the spread of chronic diseases such as cardiovascular diseases, etc. and premature death (31). Therefore, suitable job opportunities, creating a suitable environment for employment, fair working conditions, security of the work environment is one of the important social



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components on health in physical, mental and social dimensions.

**Discussion**

There is strong scientific evidence today that the social factors of health including social class, social exclusion, slum settlement, stress, early childhood development, unemployment, work environment conditions, social support, addiction, food, transportation, urbanization, immigration, and globalization have many effects on health (14). If we do not pay attention to the concept of social factors determining health, we cannot expect to achieve the improvement and promotion of health in society only by providing health care.

Inequality in health is a specific type of difference in health in which vulnerable social groups or groups that have consistently experienced unfavorable social conditions and discrimination have worse health status than groups with more favorable social status. The presence of inequality in society increases the feeling of relative deprivation in individuals and affects the mental health of society (47). Employment, psychological support and society support, urbanization and ruralization, socio-economic variables and social status and culture are the most important determinants of inequality in health. Therefore, it can be concluded that many inequalities in health are rooted in the social determinants of health (31).

The concept of justice is one of the fundamental concepts in societies. Inequalities in achieving opportunities can affect the economy, society, family, and physical and mental health of individuals. Macroeconomic policies are one of the factors affecting health inequality in the country, which plays a role by affecting many other factors such as access to health care, healthy nutrition, education and housing. These themes were also important determinants in the World Health Organization's model. Numerous studies such as Muntaner et al. (50) as well as the study of Scott et al. (51) have clearly identified the effect of these factors on health inequality. Inequality in the distribution of income, occupation, education, facilities, and inequality of social classes in terms of color, race, and nationality can reduce health indicators.

In the approach of social determinants of health, the major part of health care is provided outside the health sector. Education, housing, urban planning, and social security and welfare are among the sectors whose contribution to health is significant. To reduce inequality, a new paradigm must be introduced through the integration of science, practice and politics (52). To the extent that economic status and quality of life have a great effect on health within family and marital health of children (53). According to James Wilson, if the social determinants of health are not taken into consideration, the provision of health care cannot have much effect on promoting the health of people in society. To eradicate health inequalities, the relationship between social factors and its effect on health must be identified (54).

The stability and consistency of the health system is exposed to increasing threats due to the increasing demand and rapid changes in medical technologies and innovations. Meanwhile, making the right decisions and lack of sufficient evidence has made the conditions difficult for policymakers. Participatory planning in the health system requires specific frameworks in the absence of which sufficient information and knowledge to make decisions and decision-making is associated with fundamental challenges. These challenges increase when we want to join the global movement towards a healthy society. According to McKinnon and Ilyich, medical care alone does not improve living conditions (55-56). Black's report showed how recognizing and paying attention to social conditions leads to health inequality. To eliminate inequality in health, Black et al. suggested that interventions in education and literacy levels and the improvement of economic conditions in socio-economic groups lead to a reduction in health inequality (57-58). Most studies also evaluated income inequality as a major determinant of health (47).

Most of the factors causing health inequality are scattered in different social sectors. It is necessary to consider a cross-sectoral approach in policy-making and to evaluate the possible effects of their policies on health, especially on the health of the most vulnerable groups in



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society. Sometimes policymakers in developing countries have a perception of health that is largely limited to medical services. Therefore, they do not find much connection between their responsibilities and health. It is the duty of the health sector to inform them. Lack of comprehensive understanding of social determinants in developing countries is one of the most important problems in this field. It is suggested that health should be determined as a fundamental pillar in all policies by developing research and promoting the dimensions of social determinants of health in the country (59).

**Conclusion:**

Providing effective health interventions requires society-based approaches such as the approach of social determinants of health. There is strong scientific evidence today that the social determinants of health have a great effect on health and chronic diseases. Providing medical care alone cannot improve health and prevent chronic diseases in individuals. The International Human Rights Framework emphasizes the move towards health through attention to the social factors affecting health. Under the Universal Declaration of Human Rights (UDHR), everyone has the right to a standard of living adequate for the health and wellbeing of himself and of his family, including food, housing, medical care and social services (60-61). Today, there is strong scientific evidence that social factors of health and chronic diseases including social class, social deprivation, slum settlement, stress, early childhood development, unemployment, work environment conditions, social support, addiction, food, transportation, urbanization, immigration and globalization have many effects on health (62) and if we do not pay attention to the concept of social factors determining health, we cannot expect to achieve the improvement and promotion of health in society only by providing health care.

In order to promote health in society, more attention should be paid to the social factors determining health in the country, because the development of health care without considering social factors will not be very effective. In this research, it is suggested that the role of these factors on the health of individuals for managers and policy makers be determined by providing training and collecting scientific evidence. In this research, it is suggested that the role of these factors on the health of individuals for managers and policy makers be determined by providing training and collecting scientific evidence.



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