

Health Development and its Repercussions on Population Growth Reality and Hopes

TOUMI Houcine*

Lecturer Classe A, Algiers 2 University, Department of Sociology and Demography

Email: hctoumi@yahoo.fr

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Abstract :

This study falls within the field of future studies and prospective research, aiming to draw the attention of experts in the field of population and demography to the silent transformations currently underway, which are predicted to raise life expectancy to a high level in the future. This is attributable to efforts in the field of health and the search for appropriate treatments and medications for intractable diseases, known as “urbanization and aging,” where I anticipate an extension of human lifespan similar to what occurred in past centuries when epidemics were eradicated, and later when the treatment of poverty-related and endemic diseases was brought under control. This is because health research and health policies implemented across the globe are likely to lead to an extension of human life expectancy in the foreseeable future to nearly a century and, in the long term, even beyond that. In light of these developments, what will the demographic situation be, and what will the characteristics of future populations be? And what will be the implications of this for social, economic, demographic, and environmental aspects?

Keywords: population, health, diseases, life expectancy, life expectancy.

Introduction :

In this research study, which includes discussion of the topic of “Population and Health” in general, and the topic of “**Health Development and its Repercussions on Population Growth: Reality and Prospects**” in particular, this is because one of man’s obsessions since ancient times has been his pursuit of the specter of death, which has continued to plague his livelihood and disturb his life. Some of them say: “There is no happiness in life as long as the specter of death pursues us,” so he seeks immortality to escape it, or as the legend narrates, that Gilgamesh, who possessed the plant of immortality, lost it in a moment of relaxation, and with the loss of this precious treasure, it is inevitable that members of his kind will face the inevitable fate...it is...death.

Thus, the dream of Gilgamesh’s descendants diminished, from the fact that eternal life for their grandfather turned to the dream of living for as long as possible with the best of their mental faculties and with the lowest level of pain that accompanies a person in the vilest age. Is the tireless search since ancient times for a sorcery, amulet, ruqyah, herb, medicine, or drug to ward off the danger of disease and the imminent specter of death, except an overwhelming desire for a longer and blissful life in the confines of well-being and prosperity? And what

development has health and continuous research witnessed? In laboratories and universities to find medicines for ordinary and incurable diseases, unless we cling to this beautiful dream that still haunts man.

This prompted me to write and research this topic, including motives and reasons :

1 - I specialize in the subject of population and the changes that have occurred and are still occurring in the population in terms of structure (composition), size, distribution and characteristics, including the life span that a person can live, affected by several social, economic and environmental factors, especially biological and health. This is because health change throughout history, the development of the field of public health and medicine of both its curative and preventive types, the progress of medical technology, the pharmaceutical industry and scientific research in the field of medicine and biology, all of this had a clear and certain impact on the changes that Population numbers have changed over the ages, coinciding with the changes and developments that have occurred in the field of health and medicine.

This relationship between development in public health and medicine, both therapeutic and preventive, and its impact on population increase, has been studied and analyzed by a large number of researchers. From these researches and studies emerged theories whose scientific reputation in the field of population and demographic studies continues to this day. Will the continuation of medical conquests and future discoveries in the field of health lead to a further extension of human life?

2- Besides this. My interest in Islamic religious thought and historical demography made me notice that religious and historical writings that talk about the ancient history of humanity and ancient peoples, especially talking about the story of creation, and the lives of the prophets and messengers, often refer to the lives of these prophets and messengers, which lasted for a few centuries for some of them, such as Adam and his sons, and Noah, who the Holy Qur'an told us that he lived more than 950 years in the Almighty's words "ولبث في قومه ألف سنة إلا" : Likewise, the lives of some of us at the present time vary from one person to another and from one place to another, until there has become a phenomenon of centenarians whose ages exceed a century.

These and other reasons prompted me to research and investigate by saying: Is it not possible to extend the hope of life for man in the present and in the future to more than a century and more, especially since the lifespan of man after his relative increase over the past thousands of years, and the emergence of infectious diseases and epidemics has made hope in life short, hardly reaching about 25 years as the average expected lifespan, but his continuous efforts over the past centuries to improve his living conditions and develop his surroundings and living environment, made him overcome. There are many reasons, factors and illnesses that hastened his departure from the face of this worldly life

Health development and its impact on population growth:

The victorious efforts and actions in the field of improving health and developing medicine, both preventive and therapeutic, especially in the last five centuries and especially in the wake of the Renaissance in Europe, were crowned with success and victory in eliminating many epidemics that claimed many human lives of all ages.

The disappearance of some serious epidemics and infectious diseases from the space of human life led to a jump in the human lifespan to about 50 years as a hope of survival. Then, with the continued improvement and progress in the field of public health and medicine, both therapeutic and preventive, the emergence of medical technology and the pharmaceutical industry, and the spread of hospital institutions that provide health care services, all of this eliminated infectious and endemic diseases and various diseases of poverty, within the procession of civilization and progress that touched all areas of human life to exceed, as a result, hope for life in countries. Advanced 80 years. While this hope is experiencing huge leaps upward and in all parts of the Earth, which has led to a huge increase in the size of the population of our planet.

With a quick review of the development of population growth on our planet, which was presented by one of the prominent Russian researchers who completed a study on population estimates in the past to predict their number at the verge of the twenty-first century, by which I mean researcher Solomon Brouk, in his article titled: "World Population at the Verge of the Twenty-First Century," he presented a good presentation of the development of population growth throughout history.

It stated that global population growth was characterized by extreme slowness over the past thousands of years, due to the weak development of the productive forces and man's excessive subordination to nature in the beginning of history. During ancient times and the Middle Ages, the birth rate was almost everywhere approaching its peak. However, the low average lifespan among women and the high death rate due to unhealthy living conditions, devastating pandemics, chronic malnutrition, and wars led to a very clear decline in the indicators of natural population growth, and these indicators did not witness an improvement until the beginning of The sixteenth century, with the development of capitalism in many European countries, then the pace of population growth accelerated since the second half of the eighteenth century following the emergence of the industrial revolution in these countries.

By the second half of the nineteenth century, the average annual population increase had reached a rate of 0.6%, meaning that it exceeded the danger of its counterparts three times in each of the sixteenth, seventeenth, and eighteenth centuries. This phenomenon was attributed to the decline in the death rate, especially among children, and to the stability of the birth rate in industrialized countries. (Brook, S., 1988).

At the beginning of the twentieth century, the world population was approximately 1,630 million people. Thus, during 19 centuries (and according to expert data, the population of planet Earth ranged between 150 and 250 million people, meaning that the acceptable average number is around 170 million people), humanity increased at a rate of 9.6 times, 2.5 times during fifteen centuries, and 3.8 times during the last four centuries.

With a quick glance at the development of human numbers in the world, we see that their number at the birth of Christ - peace be upon him - ranged from 100 million to 400 million people, and the average number that many researchers tend to is in the range of 200 million people. It took more than sixteen centuries, that is, around the year 1650, for their number to reach about half a billion people. About 300 million people will be added to them

during the next 100 years, so that their number will reach about 800 million people. In the year 1750, then after 80 years the number jumped to about one billion people by the year 1830, and at the beginning of the twentieth century and in the year 1900 the world population moved to 1.7 billion people. While humanity achieved its second billion in the year 1927, meaning that the second billion took about a century of time, and 33 years after that, humanity added half a billion people, bringing the total size to 2.5 billion people by the middle of the twentieth century. Ansley J (1974), Coale).

By the middle of the twentieth century (1950), it was an important pivotal year that represented the starting point for the tremendous acceleration in the pace of growth of the world's population, which terrified experts and specialists. Within ten years, the number rose to three billion people, and that was in the year 1960. After that, the increase continued at a faster pace, and within 14 years, humanity reached its fourth billion years. The United Nations declared the year 1974, for the first time, as the "International Year of Population." On this occasion, all member states called for the "Development and Population" conference, which was held in Bucharest, the capital of Romania, in the presence of heads of state or their representatives. At this conference, the alarm bell sounded warning of dire consequences for the future of humanity, especially the group of Third World countries that represent the source of the enormous increase in the world's population. Despite the many recommendations that the conferees concluded, especially those related to urging developing countries to adopt population policies that control and specify population growth in them, with the support of Western capitalist countries, the conferees should not forget to renew the meeting after ten years in Mexico City, Mexico, to evaluate what was agreed upon in Bucharest and take the necessary recommendations and measures in order to limit the pace of population growth experienced by most developing countries. However, the growth of the world's population was not affected by these recommendations or by UN measures, and the population of developing countries did not care about them. Unleashing their reproductive behaviors, global population growth rates achieved a new record, with the human population reaching 5 billion people within thirteen years. This was in the year 1987, where the symbolic celebration was held, supervised by the Secretary-General of the United Nations, in the city of "Zagreb", former Yugoslavia (currently the capital of Croatia). And population projections issued by United Nations bodies Population statistics indicate that the sixth billion will be before the end of the twentieth century, but that did not happen and the announcement of humanity's arrival to the sixth billion was delayed until the celebration of World Population Census Day, which falls on October 22, 2000, which took place in a hospital in the city of Sarajevo in Bosnia and Herzegovina and in the presence of the Secretary-General of the United Nations, who handed one of those born on that day a symbolic gift because he was the newborn who completed the sixth billion of the human population.

Based on the above, 4.3 billion people were added at a rate of 3.5 times during the twentieth century. This century also witnessed the fastest increase in the world's population, especially the second half of it. While the population was 2.5 billion people in 1950, it doubled to 5 billion people in just 38 years. This represented the fastest doubling in human history, and this happened in 1987. On another reading, another doubling occurred, but it is

less. It accelerated, which is the doubling that occurred between the years 1960 and 2000, with the size of the world's population moving from three billion to six billion people. The last four decades of the twentieth century also witnessed a massive demographic shift, with the fourth billion taking only fourteen years, which was unprecedented in history, while the fifth and sixth billion took a shorter period of time, not exceeding thirteen years each. The seventh and eighth billion achieved a shorter period of time, eleven years each, within two years. 2011 and 2022, respectively. Thus, global population growth rates have achieved high levels unprecedented in human history.

In the midst of the processes of great civilizational development and in all social, economic, political, environmental, health, and other fields, which led to a new way of life amidst massive population accumulation the likes of which the world has never known during its long history, this new situation has produced diseases and illnesses that were neither expected nor expected by the supporters of industrial and technological progress and development.

This new type of disease that emerged from the process of development and progress, which came in the opposite direction to man's desire for a healthy life free of diseases and epidemics, which was preached by the supporters of optimism in previous centuries in Europe, and which was called the type of "diseases of urbanization," "diseases of aging," or "man-made diseases," are those chronic diseases that afflict humans at an advanced age, and were like "degenerative diseases" similar to ancient epidemic diseases in their spread, because they have begun to affect They affect large sectors of the population, especially the elderly, but they are not contagious in the sense that they are non-viral diseases, and most of the deaths that occur in the world today are attributed to them, which has affected the human lifespan with a slowdown in expansion after it witnessed huge leaps during the last centuries.

Hence, it cannot be said that through research and continued scientific efforts in the field of human health, it is possible to diagnose these diseases and find appropriate solutions to eliminate them or mitigate their impact, as happened previously with epidemic and infectious diseases and other diseases of poverty, some of which were completely eliminated and have become a thing of the past and nothing more.

Achieving advanced medicines and treatment methods for these chronic diseases and other diseases in the future, in addition to improving the quality of life, developing the diet and lifestyle, changing the lifestyle, and strengthening our preparations to bear environmental pollution and other stresses caused by our contemporary civilization, which led to the production of these diseases. All of this would allow life expectancy to continue to expand and rise upward, as happened in the recent past when living and health conditions were improved with the discovery of serums and medicines that eliminated epidemics and diseases of poverty and reduced the severity and seriousness of many diseases.

Therefore, through some signs and indicators, we can hope that the efforts and scientific and laboratory work will be crowned with the elimination of diseases and illnesses that have prevented human lifespans from expanding and continuing to hope for life to increase by finding appropriate treatments in accordance with the words of the Messenger of God - may

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Before discussing the current health and medical developments and their repercussions and effects on the future of the population in terms of increasing the average life expectancy of a person, that is, expanding the average lifespan of an individual, as well as the size and composition. We have to take a quick look at the developments that the population has witnessed in the past, accompanied by health developments, through a brief review of the stages of the epidemiological transition that humanity has gone through.

Stages of epidemiological transmission:

The stages of epidemiological transmission included in the theory of epidemiological transmission of population by its author, the demographer Abdul Rahim Omran, who registered it in 1987 at the United Nations as a new theory that attempts to explain the nature of the population changes that humanity has experienced in recent centuries. I wanted to preface it with a quick overview of the population situation in the modern period and its relationship to the changing pattern of diseases.

Population situation in the modern period:

The pattern of development in population size in modern times is significantly different from the pattern in ancient times. For the first time in human history, it was possible to accumulate population growth, generation after generation. This is due to the continuous and continuous decline in death rates, while birth rates remain high at the beginning of the demographic transition, only to decline later in harmony with and affected by the social, economic, and cultural transformations that help in this.

It is noted that the change towards a decline in death levels is the main factor or locomotive that led to the phenomenon of "population explosion," as the decline in death rates allowed for an increase in the average hope of life, which led to the accumulation of the largest number of population in a single generation. The decrease in death came as an inevitable result of gradual but regular changes in the nature of the causes leading to death, especially the patterns of diseases prevailing in society, as the changes and transformations witnessed by epidemics and diseases passed through stages and patterns that have advantages and characteristics that vary according to the standard of living and lifestyle of society.

Stages and periods of development of prevalent diseases:

The theory of population epidemic transmission explains that the diseases prevailing in society in the modern period (i.e. since the seventeenth century) with the beginning of the Renaissance in Europe pass through three eras:

1 - The era of deadly epidemics and deadly famines:

It is a stage that is considered an extension of the patterns that occurred in ancient times and is dominated by epidemics and endemic diseases resulting from infection, lack of nutrition, and diseases related to reproduction, childhood diseases, and adulthood. It is accompanied by a decline in the standard of living and the absence or insufficiency of health services. This results in a rise in death levels that fluctuate between an extreme increase in years of famines, epidemics, and wars, and then return to their high level in other years. As

for births, their levels are high during most of this stage in order to compensate for the loss of the population through death.

Since the dominant pattern is infectious diseases - diseases that usually lead to death at an early age - the hope of life at birth is usually no more than 30-40 years. This stage occurred in Europe in the Middle Ages and continued until the eighteenth or nineteenth century, and it occurred in the rest of the Third World countries since the first centuries and continued until close to the twentieth century. The rate of population increase in this stage is very low and unstable, and deaths may exceed births in some years and population decline occurs.

2- The era of declining epidemics:

It is a stage in which disease patterns begin to change such that epidemics decrease relatively, living and food conditions improve, famines decrease, and death rates begin to decline, while birth rates remain high until the end of this stage. It is clear from this that the differences between birth rates and death rates increase directly for most of this stage, and this explains the phenomenon of population explosion that occurs during it. At the end of this stage, birth rates may decrease relatively, and as epidemics subside, other diseases begin to increase and appear, such as degenerative diseases and diseases of old age. Accordingly, life expectancy increases at this stage to between 50 and 60 years. Epidemics began to decline in Europe in the eighteenth and nineteenth centuries, and this stage almost ended in the late nineteenth century. As for the countries of the Third World, the beginning of this stage was delayed until the middle of the twentieth century, and most of these countries are still experiencing this stage, including the Arab countries.

3 - The era of degenerative diseases and man-made diseases (or diseases of aging and urbanization):

In this third stage of epidemiological transition in population societies, infectious and nutritional diseases and diseases related to reproduction and childhood increase (as a result of low fertility) and take their place on the list of prevalent diseases, "relapsing diseases" such as heart disease, cancer, diseases of aging such as atherosclerosis, brain hemorrhage diseases or stroke, urbanization diseases such as diabetes, obesity, and respiratory diseases resulting from social and individual pressures, and man-made diseases such as radiation diseases, transportation accidents, industrial diseases, and diseases resulting from environmental pollution, and there is a distinctive character to these. Diseases. It usually does not lead to death except at a later age, and thus life expectancy increases to 70 years or more, and women's life expectancy is higher than men's in this socially advanced period due to the improvement of their social condition and their initiative to seek treatment more than men, and also due to the presence of risks that lead to death in men more than women, by virtue of the roles and jobs that men occupy in society.

The spread of public health methods and preventive and curative medicine in most Third World countries during recent decades has led to the disappearance of the most important diseases of poverty and epidemics and the beginning of the emergence of urbanization and degenerative diseases. This epidemiological transformation has resulted in a significant extension of human lifespans, as data indicate that the hope for life of newborns has exceeded

80 years in developed countries and even in some developing countries, while it continues to rise in the rest of the countries, exceeding 70 years in most of them. (Imran, p. 1988) .

Epidemiological transformations and the change in the pattern of diseases had their repercussions and repercussions on population growth, especially in countries that witnessed a delay in these transformations, by which we mean third world countries, as they resulted in an unprecedented population increase, as international statistics indicate that the size of the global population has exceeded 8.3 billion people by the middle of the year 2026 and may reach about 10 billion people by the middle of the current century, that is, the year 2050. This is a huge number that humanity has never known before in its entire history.

Can we be optimistic about achieving a leap in lifespan in the future? :

The growing interest in health care and the efforts made by governments to improve the health status of the population, and to develop health policies aimed at improving health care services and delivering them to various segments of society, as well as the research efforts made by laboratories and universities, and behind them a significant number of researchers and specialists in the field of health.

All of this is considered indicators and signs that make us optimistic about the future, which is undoubtedly coming and will surprise us with pleasant surprises by enabling scientists and researchers to find solutions to current health problems, or those that will appear in the future. Serious diseases are now causing many deaths and standing in the way of extending human life hope. For example, 90 percent of deaths every year in the United States of America die from urban diseases (cardiovascular disease, arterial hypertension, diabetes, and cancer). In Algeria, more than 12,000 deaths due to cancer and more than 50,000 new infections are recorded every year, making it the second cause of death in the country. At the same time, about a tenth of the Algerian population suffers from diabetes, and urbanization diseases are witnessing a widespread and rapid spread among the population in the absence of the necessary care to confront this new wave of diseases. Likewise, in the same context, the World Health Organization announced the occasion of "World Heart Day," which falls on September 29 of each year, on the same date in 2016. The number of deaths due to cardiovascular diseases reached 15.8 million deaths in 2015 after the number was 3.7 million deaths in 2001, and it is expected that the number will reach about 23 million deaths by the year 2030, if people do not take the preventive advice suggested by the World Health Organization, which specifically states the importance of changing the current lifestyle to a lifestyle that relies on a healthy diet and staying away from practicing and abusing some bad behaviors such as smoking, in addition to exercising and doing With early examinations. Something similar happens with cancer, diabetes, heart and arterial diseases, and other diseases of urbanization and aging.

What makes us more optimistic is that there are significant efforts currently being made to overcome these diseases and find appropriate solutions for them in various parts of the world. Almost every day dawns, announcing the amazing conquests and achievements in the field of health, medicine, and medical technology that push us - impellingly - to regain optimism with both the Marquis de Condorcet and William Godwin before the end of the eighteenth century,

when Europe was living its most prosperous days and years, raising the banners of renaissance and the lights of optimism and hope for humanity.

The French researcher and social philosopher (M. de Condorcet) “Marquis De Condorcet” and the English social philosopher (W. Godwin) “W; Godwin “simultaneously published two books in 1793 promising humanity a bright future filled with pleasant surprises, many of which occurred, especially in the field of health, medicine, and the quality of human life.

The Marquis de Condorcet revealed in his book that history reveals a natural order in social phenomena to bring man to perfection, and he detailed the progress of the human species in ten eras, the tenth of which extends after the French Revolution (1789) until mankind reaches the degree of perfection. He predicted that in that era of populist and nationalist animosities, the poor distribution of wealth, inequality between the sexes and unequal opportunities in education, and that the law and other systems will always tend to make the individual harmonize. With common interests, that the earth’s production will continually increase, that food will increase, that disease will disappear, and that human capabilities will reach perfection. (De Condorcet, M. 1793). And a person's life will be so long that it will almost never come to an end

As for William Godwin, he predicted in his book a golden age, the coming of which there is no doubt, and that in that era man will reach the level of perfection. He also declared that man has no inclination towards evil, and that through education, political justice, quiet and free research, and the removal of all restrictions that can be removed, man will enjoy the greatest degree of freedom in his work. Human beings will inevitably reach a state of perfection, and then there will be no need for a judicial or governmental administration to establish justice among people, because justice will and will prevail. Every human being passionately seeks the good of all.

Such were the hopes of De Condorcet and Godwin in an era in which poverty and misery were widespread among the people, thus reviving their hopes .

The dream of returning to the ages of the first generations:

The books of ancient history and the holy books that dealt with the lives of the prophets and messengers and their peoples tell us about the lives of these people, and perhaps what catches our attention as those interested in population science and demography is the ages of these first prophets and messengers from the time of Adam to Abraham and his sons - peace be upon them -. In the book titled “Stories of the Prophets” by its author, the famous historian and commentator Abu al-Fida Ismail Ibn Katheer, we briefly mention in this context:

Adam - the father of humanity - extended his lifespan to more than nine hundred and thirty years (930), and Seth was born to him when he was one hundred and thirty years old. The age of Seth when Enosh was born to him was one hundred and sixty-five, and he lived eight hundred and seven years after that, and sons and daughters other than Enosh were born to him, meaning that Seth, the son of Adam, lived about nine hundred and seventy-two years. Then Enosh begot “Caenan” when he was ninety years old, and he lived after that for eight hundred and fifteen years and begot sons and daughters. When Cainan was seventy years old, he begot “Mahalael” and he lived after that eight hundred and forty years and begot sons and

daughters. When "Mahalael" was sixty-five years old, "Jard" was born to him, and he lived after that eight hundred and thirty years and begot sons and daughters.

When he was one hundred and sixty-two years old, "Enoch," who is the Prophet "Idris," was born to him, and he lived eight hundred years after that, and sons and daughters were born to him. When Enoch was sixty-five years old, "Methuselah" was born to him, and he lived eight hundred years after that, and sons and daughters were born to him. When Methuselah was one hundred and eighty-seven years old, "Lamech" was born to him, and he lived seven hundred and eighty-two years after that, and he had sons. He has sons and daughters.

When Lamech was one hundred and eighty-two years old, Noah was born to him. He lived after that for five hundred and ninety-five years, and sons and daughters were born to him. When Noah was five hundred years old, sons were born to him (Shem, Ham, and Japheth). This is what was stated in the books of the children of Israel, and there is some consideration in it.

Abu Jaafar bin Jarir al-Tabari mentioned in his history on the authority of some of them: Eve gave birth to Adam forty children in twenty wombs, and it was said that there were one hundred and twenty wombs in each one, male and female, the first of whom was "Cain" and his sister "Qalima," and the last of whom was Abd al-Mughith and his sister Ummah al-Mughith. Historians have mentioned that Adam did not die until he saw four hundred thousand people among his descendants and his children's children.

And I say: This is what historians mentioned, that Adam saw about 400 thousand people among his descendants, including his children and grandchildren. It is not strange if it is true that Adam, his children, and his grandchildren lived more than eight or nine centuries, meaning that the average lifespan was long, exceeding eight centuries, which makes the accumulation of their numbers to this size, generation after generation, very possible, and even more than this. This is because the increase and multiplication of the population is due to the long average lifespan, or what is known as the average life expectancy, as the longer the average lifespan, the more the population will gather and accumulate in one time.

Then Noah - peace be upon him - was born one hundred and twenty-six years after the death of Adam. As mentioned by Ibn Jarir al-Tabari and others, and according to the history of the People of the Book, there are one hundred and forty-six years between the birth of Noah and the death of Adam. Noah lived for more than a thousand years, of which he spent nine hundred and fifty years calling his people to worship God alone - the Almighty - in accordance with the words of God Almighty **ولقد أرسلنا نوحا إلى قومه فلبث فيهم ألف سنة إلا خمسين عاما فأخذهم الطوفان وهم ظالمون** (العنكبوت : 14).

Thus, Noah became the father of humanity after its first father, Adam, and all people are descendants of Noah's three sons: Shem, Ham, and Japheth. It is from them and from them that this human race that exists today branched out, as stated in the Holy Qur'an, the Almighty's saying: **وجعلنا ذريته هم الباقين** (الصافات : 77).

Historical sources confirm that the lives of the three sons of Noah extended to several centuries, but that the peoples who came after them began to shrink in their lives generation after generation. They mentioned that Abraham - peace be upon him - died at the age of one

hundred and seventy-five years, and it was said that he was one hundred and ninety years old, and it was said that he was two hundred years old.

As for his son Ishmael, he was one hundred and thirty-seven years old when he died, and Isaac died when he was one hundred and eighty years old. According to the People of the Book, the age of Jacob on the day he entered Egypt was one hundred and thirty years, and that he resided in its land for seventeen years and then died there, while the age of his son Joseph was one hundred and ten years, and it was said that he died when he was one hundred and twenty years old.

As for the Prophet Ayoub, Ibn Jarir and other historical scholars mentioned that when he died, he was ninety-three years old, and it was said that he lived longer than that, and his son Dhu al-Kifl, who was a prophet, died at the age of seventy-five years.

While the Prophet Moses, the People of the Book and others mentioned that he died when he was one hundred and twenty years old, and the Prophet Joshua died when he was one hundred and twenty-seven years old, so the duration of his life after Moses was twenty-seven years, and that the Prophet David lived a hundred years, and it was said that he was seventy-seven years old, and as for his son, the Prophet Solomon, he lived fifty-two years and had a reign for forty years. (Ibn Kathir, I. 2011).

From what was previously mentioned, it is clear to us that the lifespan of people began long with Adam - the father of humanity - and with his first children and grandchildren, and then began to decrease with the passage of generations in an inverse relationship with the increase in their number, until it reached its lowest level just before the Renaissance in Europe and continued until the middle of the twentieth century in third world countries, but with the emergence of the Renaissance in Western Europe in the sixteenth century and the transformations and changes it brought about affected various aspects of social, economic and intellectual life, especially the fields of public health and what medicine knew of its two types. Therapeutic and preventive developments and discoveries, all of which were reflected positively on the health conditions of people, leading to the elimination of various epidemics and infectious, endemic and other diseases, which were precipitating the premature departure of much of the population.

If we can cite examples, which are many in the history of medicine that Europe experienced, there is nothing better than the example of combating the smallpox epidemic, which was claiming the lives of huge segments of the population in Europe. Credit goes to the researcher Edward Jenner, who was able to discover the first vaccine against smallpox in 1796. On that date, he injected an eight-year-old child with a vaccine taken from the scrofula of a cow infected with cowpox, and it later became clear that the child had immunity to the disease.

Vaccination attempts on a large scale did not begin until after E. Jenner published the results of his experiment in 1798. Human smallpox inoculation, or intentionally injecting a person with a substance taken from a person with a mild smallpox infection, became common throughout much of Europe in the nineteenth century. This discovery led to the saving of many lives, as deaths due to the smallpox vaccine decreased to one person for every 96 infected people, compared to one death for every five infected people. Thus, smallpox deaths

decreased during the nineteenth century after the spread of cowpox vaccine injection after 1800 to low levels, after smallpox was responsible for about 10 percent of general deaths.

Once the year 1850 came, the death rate resulting from smallpox decreased to 22 per thousand in England, and by the twentieth century, death from smallpox had become a rare matter in the West. (Bates, M. 1966).

The same thing happened with epidemics and other deadly diseases such as typhoid, cholera, plague, tuberculosis, and others, which completely disappeared in developed countries early before the twentieth century, and became a thing of the past after the development of discoveries and inventions in the field of curative and preventive medicine with Louis Pasteur, Koch, and others. Vaccination has become a generalized and desired process among a wide segment of the population, not only in Western countries, but this has extended, especially after World War II, to all other parts of the world and with the support of international and regional organizations, and a number of vaccinations have even become compulsory and free in most countries, starting from the first moments of an individual's birth, and even before he is born, meaning that the mother receives special vaccinations while she is pregnant with her child in the context of what is known as maternity and child care.

What happens after extending human life beyond a century?

Research and achievements in the field of public health and curative and preventive medicine that humanity has known during recent centuries have led to a decline in general mortality rates, especially infant and child mortality, to their lowest levels, allowing the average life expectancy to jump to the verge of 85 years in some developed countries, and it recently reached 90 years in the "Principle of Monaco."

I am certain that the continued development and progress in the health field promises many pleasant surprises in the foreseeable future, those surprises emanating from the enormous research efforts and investments in the health sector, scientific research and medical technology, and the growing interest in all countries and at many levels in the health aspect of peoples, through the development of health policies and programs to provide various health care and awareness services, aiming to achieve a dignified living free of diseases and ills that disturb and distress a person's life as much as possible. .

The ongoing and ongoing research, in many ways and methods, ranging from modern and technological methods, alternative medicine, and even traditional medical practices, in the search for therapeutic and preventive medicines, all of this struggle in order to search for solutions to current health problems such as cancer, cardiovascular diseases, diabetes, allergic diseases, malaria, AIDS, traffic accidents, and other causes that hasten the departure of humans to the afterlife.

Finding medicines and treatments for these diseases and for other diseases that may appear in the future, while improving the quality of life and changing the lifestyle for the better and appropriate, would reduce the number of deaths among people suffering from such diseases. History may repeat itself, and these diseases will be completely and finally eliminated, just as epidemics and deadly diseases were eliminated in past centuries.

Eliminating “degenerative diseases,” that is, diseases of urbanization, or reducing their current severity and intensity, will inevitably lead to extending the average human lifespan on this earth to more than a century.

In the face of these expected developments, we can ask about the great changes and transformations that will accompany the rise in hope in life. From a demographic standpoint, what effects will occur on the size of the population, its composition, distribution, and overall characteristics, and what are the repercussions of this on the social, economic, environmental, and other aspects.

There is no doubt that the population size will increase and that the population structure will witness changes in favor of the elderly group, after this structure was dominated by the youth element during the stage of population explosion, and that we will be facing a new demographic pattern in addition to the patterns that resulted from historical population developments. There is also no doubt that the economy will increase its suffering from the consequences, burden and pressure of the requirements of the elderly group if this is not accompanied by the ability of these people to work and the expansion of giving, after the economy had previously suffered from the pressure and pressure of the young people, where it has reached Their percentage in some Third World countries during the period of demographic transition reached about half 50 percent of the total population.

This is of course if it leads to prolonging human life while keeping the concept of aging in its current state, but the hope is placed on gerontologists that they will develop the concept of aging so that extending human life goes hand in hand with preserving strength and the ability to work and give, because one of the goals of science is limited to preserving the ability to work in humans for a much longer period than what was previously thought. (Velinchik, M. 2014). The technology of organ transplantation, its development and spread is considered a mechanism for developing the health of individuals and providing them with the ability and strength to work and give more .

Conclusion:

After this quick and brief overview of shedding light on the population reality and what it will be like in the future from a demographic-health point of view, because of the extremely important effects that health and its developments have on population transformations (in the past, in the present, and in the future).

The extension and prolongation of human life will inevitably produce the features of a new population society, which will produce a new population pattern in addition to the population patterns produced by past centuries. Regarding what will happen in the future, can we wonder or imagine the features of this new arrival, as its structure and population composition is dominated by the third age group, and perhaps we will talk about a new category, the fourth category, whose signs have begun to form and appear with the passage of time, especially in the population societies of developed countries, where the percentage of the population over the age of 60 has exceeded 20 percent, and the matter is likely to develop. What will the situation be like when the percentage of this group is on the rise and may exceed 30 or 40 percent of the total population?

In light of this situation, we have to wonder about the repercussions of these expected population changes on the social, economic and environmental aspects, as well as on social relations, family structure and relations between its members? In addition to its repercussions on population phenomena in terms of size, composition, and distribution, as well as fertility, marriage, death, migration, and social mobility, and other concerns and questions that the topic may raise in the future.

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