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## THE IMPACT OF INFANT MORTALITY RATE IN THE DEVELOPMENT OF HUMAN CAPITAL

M. Dr. Hasnaa Nasser Ibrahim

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**ABSTRACT:** *Most of the world is interested in follow-up and monitoring of this index periodically and continuously UNICEF is the rate of the most important Almaicrat that reflect the health status of the country. The calculation of this index shows the extent of the State's interest in this segment of the population and the efficiency of the health system in the care of children and to ensure their health and safety and it has a mortality rate of children under five years of age at the level of Iraq, about 38 deaths per 1,000 births in 2011 despite a drop in the rate from the previous mortality rates are still high but not up to the target rate\**

**KEYWORDS:** Infant Mortality Rate, Development, Human Capital

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\* : Central Bureau of Statistics / "national indicators for monitoring the Millennium Development Goals - the second report" / Baghdad / 2009.

Health is one of the cornerstones in the development of human capital , where survival and protection from diseases They represent the essence of the concepts of human well-being and good health enjoyed by which the individual being able to enjoy the freedom and progress , and usually healthy individuals who were more capable of production and the take advantage of the new opportunities in front of them and this in turn enhances economic security index , and the country's social , as well as being an important element for the security of rights.

For the health dimension of natural and essential in the lives of people and represents a mortality rate of children a health indicators that make up the pressure heavily on the development plans and the economic , educational, health , where the low health status helps the spread of diseases , which is influenced by public individuals , including young people , and by the lack of provision of these health services, increasing the intensity of deprivation may lead to death whenever increases the intensity of deprivation may increase the likelihood of death when the intensity of deprivation , which represents the loss of human resources and reflected the amount of losses that are harmful to society , both in the case of population growth or in the form of financial investment is lost. So attached and development of human capital is particularly important in the health aspect if it is collected human capital and invest it effectively through the development of social, health and economic development .

**Research problem** : features of the health system in Iraq centralized and rely on hospitals and government health centers , but witnessing the reality of the health sector of the worsening deficit quantitative and qualitative aspects of the physical and human resources is reflected in turn in determining access to health services , in aResult of this decline in the provision of health services, adverse effects on the health and safety of individuals , which increased cases of illness and injury and deprivation of basic options in the field of human development , and could lead to setbacks catastrophic individuals, including death , and the death of man in general , which means the

erosion and the end of human capital investor in particular, mortality rate of children under five years of age, despite the decline in this rate, but the decline was modest and did not accompany the slow improvement continues as to decrease this rate requires more progress in the health, social and economic and cultural center of the country addition to the decline in the level of service provided in hospitals and health centers

**Popularity:** The importance of index infant mortality rate that

1. The index of the important indicators guess in the mortality rate of children under five years and has been important in the identification of the health status of children under five years of age and causes of premature death.

2. Through this indicator evaluation programs social and economic development and human health (comprehensive development).

3. Through this indicator to identify the progress in the field of health services and preventive and curative as well as a reflection of the nutritional status of children.

**Objectives:** The research aims to achieve the following

Identify the causes leading to the death of children. .1

2. Recognize the reality of health services provided to members of the community, as well as some international comparisons of health indicators.

Propose some solutions to lower this rate.3

**Research Hypothesis :** The research on the premise Mphadaha

“Despite the decline in the mortality rate of children under five years of age, but this rate is still high, and did not reach the level of ambition” .

**Research Methodology :** the difficulty of obtaining detailed data on a uniform period of time convergent mortality rate for children under the age of five, has adopted the research on what is available from the data obtained from the Ministry of Health - Al Yarmouk Teaching Hospital in 2013, and the statistics of the Ministry of Planning - Central Bureau of Statistics for the years different the UN data and previous studies on this subject and, depending on the analytical method of descriptive data available with reference to some of the rates of infant mortality in some Arab countries, worked researcher on the review of statistical tables that have been obtained, which have to do research with reference to the most important conclusions and recommendations for research.

The research was divided into the following;

**First: the conceptual framework for the mortality rate of children under five years of age**

The concept of mortality for children under five, where great importance in which you can see the reality of the health sector and evaluated, and the role of this indicator to identify the rate of growth and the demographic characteristics of the population in the determination of age and sex structure of the population.

**1- The concept of death:** At the start has to be the definition of the concept of death and mortality rate of children under five years of age.

So put all of the United Nations and the World Health Organization international definition of death is ( death (Death) is enforced for each permanent signs of life at any time after birth (1).

While known as the Ministry of Health of death " an accident is inevitable and unavoidable fate for him in spite of all the methods used to prolong life "(1).

The infant mortality rate : The average annual number of deaths of children under five years of age per thousand live births during the past five years , and expresses this rate for the risk of death during the period between birth and the completion of the fifth year of age multiplied by a thousand , and is a UNICEF this rate of the most important indicators that reflect the state of health (2).

It also means the rate of child mortality : is the probability of death of children before birth fifth festival for children and this is expressed in terms of the rate per thousand live births,

**The formula for calculating the index : ( number of deaths of children under five years of age ÷ total number of children under five ) × 1000** (1). Be one of two types of death during pregnancy and the death of an embryo and type II after the birth of a newborn and neonatal death after birth(1).

**Importance of mortality statistics:** to study the mortality statistics of great importance, including knowledge of the movement of people in the past and bring it down in the future and it shows the importance of mortality statistics in the uses of the following:

1 . Know the demographic situation of the population helps to cover the needs of the health authorities to manage or evaluate public health programs and used to develop the sector health.

1. The Ministry of Planning/ Central Statistical Organization/ Tgarirmahrat monitoring the Millennium Development Goals at the provincial / 2012/ Baghdad /p7.

2. Central Bureau of Statistics / in collaboration with the Ministry of Health and the United Nations Children's Fund unicef / " monitoring the situation of women and children - Iraq MICS " / initial report 2011 - mlcs4 / 2012/ p 2.

2. Helps health procedures and decision-making in government institutions for the purpose of achieving the government's programs unhealthy.

3. Uses in the development of plans for housing, education and social security program.

4. Uses in producing and providing goods and services to various populatiy groups

5. Used to obtain information on population changes in the past and which are useful for future population projections and learn about other demographic characteristics of the population (1).

### **Causes of child mortality 3-**

You can browse the main reasons leading to the death of children in general including the reasons leading to the deaths of children under five years of age to Maya;

1. Poor health awareness and ignorance by methods of health care , especially when the family disease pneumonia , blood poisoning and diarrhea.

2. Adoption of traditional methods of some families in Bioremediation Pediatric herbs as a case or treatment of the child without going to the hospital.

3. Decline in the standard of living for some Alosralve makes the family can not provide quantitative and qualitative food for the child , leading to the injury of children's diseases, malnutrition and anemia.

4. Lack of awareness programs sponsored by private health development of the child and the mother by the state , which is working to develop the health status of the family and a few of these programs make the family depends on the bad habits in child health care.

5. Having some crowded places individuals by virtue of the size of the family great which helps to spread diseases and ease of infection among children , and sometimes " forced some families to

bring out the children of the house into the alleys and roads exposing these kids to different events may lead them to death.

6. At this age the child is more movement and activity by virtue of physical and mental development and its tendency. Alaftraaly identify Mahola curiosity and desire for discovery may be exposed through it to accidents and combustion some incendiaries ( gasoline ) or exposure to poisoning or falling from high places.

1. Bayati / Firas Abbas Fadhil " child mortality in Iraq: the numbers and signs of Nineveh province, a model " , Al Mustaqbal Al Arabi number 368 / thirty- second year / 2009 / p 90 - 92.

7. Differences and problems that lead to the relationship between husband and wife to divorce and family disintegration, may contribute indirectly to the high rate of infant mortality, where the separation of a child from a single parent.

And usually have custody of the child when the mother and father to Aatkvl sponsored children, and if the mother was living standard of living is low , which does not help the parent to provide good food and necessary medication , housing health of their stay and this in turn is reflected in the health status of children , leading to illnesses different and sometimes to death <sup>(1)</sup>.

8. Affect the educational level of the mother to the infant mortality rate mothers uneducated increased exposure of their children to die before reaching the age of five , was the infant mortality rate for mothers uneducated 42 deaths compared to 33 deaths per thousand live births when mothers who become pregnant school diploma medium <sup>(2)</sup>.

## **Second: The mortality rate of children under five in Iraq – Overview**

Element represents the survival of children alive from the important elements that affect the human development index , so the

**1. Mortality rate of children under five years of age :** will take care of the following ; A . Infant mortality rate in the global arena : it can find the infant mortality rate in general, and on a global level through below:

In 2011 the death rate of children under the age of five in the world 55 deaths per 1000 live births , but this rate varies between the groups Human Development Index , it ranges from 110 deaths per 1000 live births in countries with low development and 42 deaths in the country development of medium and 18 deaths in countries with high human development and 6 deaths in countries with very high human development <sup>(3)</sup>.

B . Infant mortality rate in Iraq : The infant mortality rate 62 deaths per 1,000 live births in 1990 and became the 122 deaths in 1999 and attributed the rise to the economic blockade Atheraly health situation for Iraqis in general and Atherkzlk on the health and safety of children <sup>(4)</sup> , and then fell to 41.35 , 34, 38 cases and deaths for the years 2006.2007 , 2008, 2011 , respectively, and as reflected in table 1 and Figure 1 following two 1 .

1. Bayati / Firas Abbas Fadhil " the children of Iraq : past frightening and uncertain future " / Al Mustaqbal Al Arabi / number 362 year Thirty-first / 2009/p125 .

2. Ministry of Planning / Central Bureau of Statistics / statistics department of human development / "Women and men in Iraq - Baghdad statistics developmental / 2012 / p18.

3. UNDP / " Human Development Report in 2013 - the rise of the South: mortal progression in a diverse world " / UNDP / Newyork / 2013/ p27..

4. Iraqi Association for Human Rights / " eighth quarterly report on human rights " / Iraqi Journal of Human Rights / GS 7/2003 /p14.

**Table 1**

Mortality rate of children under five in Iraq for the period 1990 - 2015

The mortality rate per 1000 live births	Years	T
62 <sup>(1)</sup>	1990	1
122 <sup>(2)</sup>	1999	2
41 <sup>(3)</sup>	2006	3
35 <sup>(3)</sup>	2007	4
34 <sup>(3)</sup>	2008	5
38 <sup>(2)</sup>	2011	6
21 <sup>(1)</sup>	2015	7

Table of action researcher based on data contained in the below:

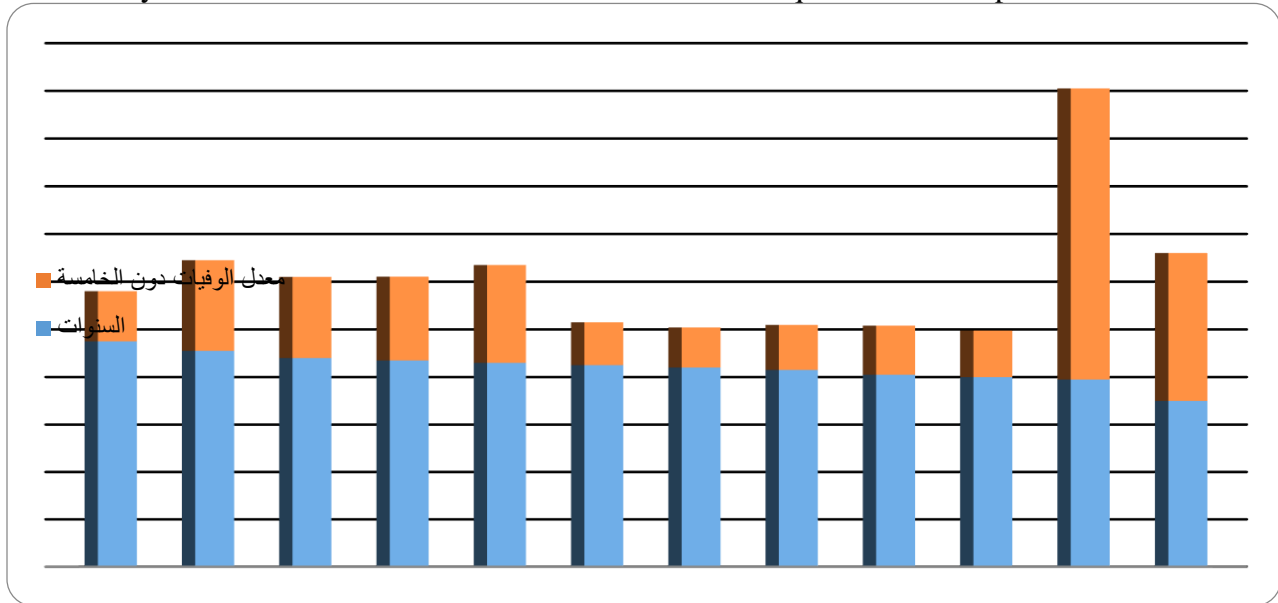
1.The Ministry of Planning and Development Cooperation / Central Ahsatknologia information / " national development indicators for monitoring the Millennium Development Goals - Altqiralthani / Baghdad/ 2009 / p 4.

2.Ministry of Planning / Central Bureau of Statistics / statistics department of human development / "Women and men in Iraq - statistics developmental / Baghdad / 2012 /p18.

3.Ministry of Planning / " National Development Plan for the years 2010-2014 " / Baghdad / 2009/p 21.

**Figure 1**

mortality rate of children under five in Iraq for the period 1990-2015



The shape of the building on the work of the researcher Table 1.

**2. Mortality of children under the age of five in Baghdad by sex for the period 2010 - 2012:**

We will try to clarify in this index and mortality among children under the age of five in Baghdad as presented in Table 2 and Figure 2 below:

1.Amounted to mortality of children under five years of age during the year 2010 about 365 deaths , deaths accounted for 71% of baby girls, while the mortality rate of only 29% of male children.

2.Amounted to mortality of children under five years of age for the year 2011 about 273 deaths , the mortality rate for children Alamatt 51 % , while the mortality rate for male children 49%.

3.While the mortality of children under five in 2012 to about 330 deaths , deaths accounted for 54% of baby girls and child mortality 46% male children.

**Table 2**

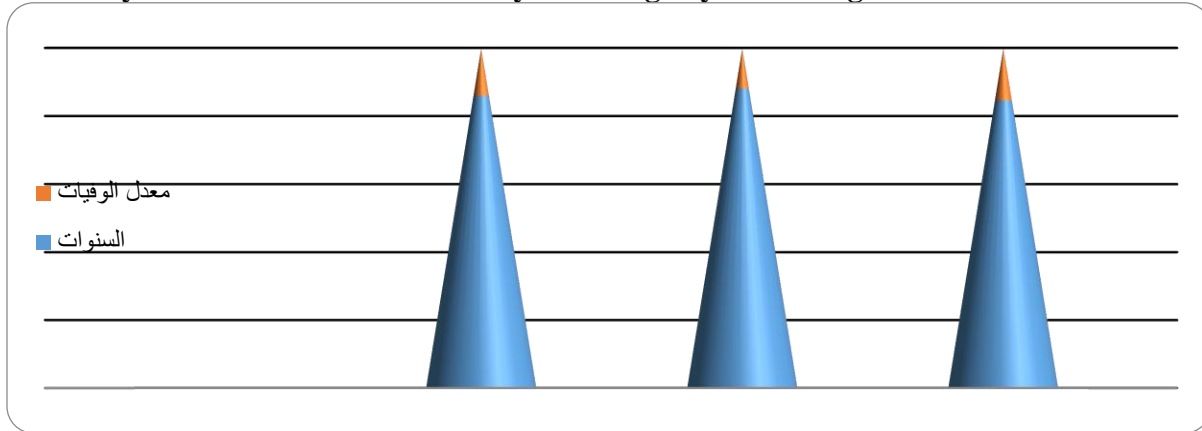
)Mortality rate of children under the age of five in Baghdad by sex ( 2010 - 2012

Total	% Per.	Girls	Per.%	Male	Year
365	71	258	29	107	2010
273	49	133	51	140	2011
330	54	178	46	152	2012

Sour: Table of relying on the work of the researcher and the Ministry of Health / statistics Yarmouk Hospital / 2013 / Baghdad.

**Form 2**

**Mortality rate of children under five years of age by sex in Baghdad from 2010-2012**



Depending on the form of the Table 2 which offer the following observations can be drawn

A . Shows the decline in the infant mortality rate over the past 2010.2011 , 2012.

B . The high rate of infant mortality than females for the years 2010.2012 and so was the female infant mortality for the year 2010 more than two-thirds of child deaths males of the same year.

T . While the proportion of child mortality for male and female infant mortality for the year 2011.

**3.Contrast age of death for children under the age of Vah in Baghdad for the years 2010-2012:**

Can be illustrated by the contrast age of the infant mortality rate in the province of Baghdad, according to age groups through Table 3 as follows:

1.Were 507 deaths among the children of the three age groups (under the age of five and under the age of ten and 10 - under the age of ten ) for the year 2010 in the Yarmouk Teaching Hospital

2.Amounted to 72% mortality rate for children under five years of age and 21 % mortality rate for children under the age of ten and 7% mortality rate of children 10 - under 15 years in 2010 .

3. Shaped 338 total mortality for age groups in the three mentioned above for 2011.
4. Reflect the data in Table 3 decline in total mortality for 2011 by age three, as the percentage of 80% and child mortality for the age group under age five and 39% mortality age group below the age of ten, while 26% mortality rate for children of the age group 10 - under 15 years of age.
5. Became total mortality for age groups three 452 deaths in 2012, Azbulg 73% mortality rate for children of the age group under age five and 20% mortality rate for children of the age group under the age of ten and a 6% mortality rate for children of the age group of 10 - below 15 years for the same year mentioned.
6. Table reflects the decline in infant mortality for the years 2011.2012 for infant mortality for the year 2010.
7. Azarmen table increased mortality with 114 deaths in 2012 for the deaths of children in 2011.
8. Table shows the high infant mortality for the age group under five years 2011.2010, 2012 due to lack of immunity to this age group, where they are more vulnerable to disease and more exposure to the deaths of two age groups remaining, while decreased child mortality rates for the age group under the age of ten and Category age group of 10 - under the age of 15 years for the three years listed in the table 3.

**Table 3**

Omari contrast to the mortality rate of children under five in Baghdad for the years 2010 - 2012

Total mortality of Children from 1-14 years	Per. %	10 –under 15 years	per %	Under 10 years	Per. %	Under 5 years	Years
507	7	35	21	107	72	365	2010
338	8	26	12	39	80	273	2011
452	6	29	20	93	73	330	2012

Table of relying on the work of the researcher and the Ministry of Health, Al-Yarmouk Teaching Hospital statistics / 2013 BAGHDAD /p 13.

**Third : the reality of health services in Iraq** - is the provision of medical and health services for all social Achareh becomes a good indicator of which members of the community more sustainable and vibrant economic activity and enjoy the good, can recognize the reality of health services in Iraq through the following:

1. Vary the rate of household spending on health services where families spend in the Kurdistan region almost twice the tunnels captivity in Baghdad and other provinces on health, spends about 36% in Kurdistan compared to 20% in Baghdad and 21% household spending in the rest of the provinces <sup>(1)</sup>.
2. Suffer health system from a shortage in the number of health centers, where there is one health center per 31800 of the population at the level of Iraq, and this increases to include more than 40,000 of the population in the province of Baghdad Karbala, Najaf and Dhi Qar, while you must supply unit primary health care per 10,000 population <sup>(2)</sup>.

3. Suffer health system from a deficit in human resources, as classified by the World Health Organization Iraq is located within the middle-income countries the minimum, so there is a big gap in the preparation of physicians, with a number of women, about 50% of the preparation of male physicians<sup>(3)</sup>,

Central Bureau of Statistics / MAP deprivation / 2011 / Musdersabak / p 172.. 1

2. Ministry of planning / development plan Aloutnaha for a five-year (2010-2014) . / Aldzoualoul / and Tikhalkhth / 2009/ 65 p. 3. Ministry of Health / Statistical Manual / Baghdad / 2009/p 42. shows a large deficit in prepare nurses and midwives females where the rate is 2.4 per 10,000 of the population<sup>(4)</sup>, this figure reflects the needs of women in the field of reproductive health in Iraq.

4. Despite spending the Ministry of Health for more than half of its budget on curative services that rely hospitals despite the increase in the budget for the financial disciplines to import drugs but there is still a shortage of medicines in hospitals and health institutions<sup>(1)</sup>.

5. Reflects the Human Development Report in Iraq, said five Iraqi families are deprived of the satisfaction of the basic needs of health<sup>(2)</sup>.

6. And the same regard, there are over half a maternity hospitals in Iraq can provide emergency care for the generation, while the rest of the hospitals can not provide emergency care for complications of childbirth life-threatening<sup>(3)</sup>.

7. Seen the budget of the Ministry of Health structural abnormalities, it has accounted for the salaries and wages of most budget allocations and by 93% on average for the years (2004-2006) and this in turn reflects the limited development of health services provided to the population.

8. Resulting poor security and the state of chaos in some areas to the increasing disintegration of the health services in primary health care centers, in addition to the interruption of some of the staff, including doctors and nurses for enrollment to their workplace, as well as the decline in health services in the regions and governorates of hot addition to the weakness of operations follow-up and supervision and control in those areas<sup>(3)</sup>.

9. Because of poor security conditions exposed many of the Angels medical to the threat, which led to the transfer of some of them to places not fit with its competence, where the study showed the Ministry of Health that 40% of doctors consultants and specialists, nurses Gadora one of the largest hospitals Altalimbh in Baghdad, also left 16 hospital doctor childbirth and children in Diwanayah province<sup>(4)</sup>. The World Health Organization / World Health Statistics / 2010/ p77.1

UNDP / Analysis CCA / basic services / Iraq / 2009/p18. .2

3. Ministry of Planning and Development Cooperation / Human Development Report in Iraq / 2008 p.51.

4. Central Bureau of Statistics in collaboration with the Ministry of Health and the United Nations Children's Fund (Unicef) / monitor the situation of women and children - Iraq " MICS Mlcs4 - 2011 / initial report / 2012 /p 50.

#### **Fourth: Private health indicators of human development**

The provision of medical and health care for all social strata is a good indicator, in turn members of the community over the sustainability and vitality and enjoy economic activity is good, and it represents a healthy side one of the pillars of human development through which reflected the elements of paper and Ttoralmojtma, and from the index of infant mortality rate, which is severe



pressure on plans development , including health and human resources and education which constitute the demographics of pressure on the developmental aspects because the age groups of less than 15 years do not participate in the production process and in the composition of income<sup>(1)</sup> , and in this part of a mortality rate of children under the age of five fourth goal of the Millennium Development Goals Goals is to " reduce the mortality rate of children under five by two-thirds in the period 1990-2015 "<sup>(2)</sup> any of the 122 deaths per 1,000 live births in 1990 to become 21 deaths target rate in 2015 for children under the age of five Almrkme are shown in Table ( 1) Figure (1) , and in this regard, as much as the rate of under-five mortality for the period ( 2007-2011 ) with 38 deaths per thousand live births , and this means that one child dies before his arrival the age of five out of every 26 live births in Iraq , it is estimated that 87% of deaths in children under five occur in the first year of their lives , and shows the results of a survey by the Central Bureau of Statistics that the mortality rate of children under five years of age , amounting to 38 deaths per thousand live births include the rate of 41 deaths for children male and 34 deaths per thousand live births when the baby girls<sup>(3)</sup>.

On the other hand , and can recognize the reality of health indicators that are directly related to the development of human capital through the following:

- 1.Public spending on health: the proportion of public sector spending on health 3% in 2011, this figure represents less proportions of spending on the health sector when compared with the rates of spending for some of the neighboring countries has reached proportions of public spending 5 % in Kuwait and 6% in Syria , 7 % in Egypt and 9 % in Saudi Arabia and 10% in Jordan.
- 1.Central Bureau of Statistics / Indicators environment and sustainable development priority in Iraq / Baghdad / 2012 /p 23 .
- 2.Central Statistical Organization / in collaboration with the Ministry of Health and the United Nations Children's Fund UNICEF / initial report / 2012 /p 19.
- 3.Ministry of Planning / Central Bureau of Statistics / map " deprivation and living standards in Iraq" / UNDP / 2011 / pp. 63-65.

2.Capita share of government spending on health per capita spending on health for the year 2006 is about \$ 90 in Iraq , while the per capita in Egypt \$ 129 In Jordan, \$ 257 in Kuwait, 422 dollars in Saudi Arabia 468 dollars , and with respect to government spending on health is less than the share of spending compared with the share of spending per capita in the State of Egypt , Jordan , Kuwait , Saudi Arabia<sup>(1)</sup>.

3.Nutritional status of children under five years of age , this indicator is intended developmental rate of low-weight to the child's age , the percentage of malnourished children under five years of age in 2011 to about 8.4 % includes the proportion of male children , including 9.2 % , either the proportion of malnourished baby girls were 7.6 % <sup>(2)</sup> , and the index includes malnutrition, about 46 % of Iraqi families<sup>(2)</sup> , despite a drop in the proportion of deprivation index malnourished children in 2011 the percentage of denying this indicator for 2006 amounting to 9%<sup>(3)</sup> , but are still high proportion of deprived nutritional status amounting to 8.4 % in 2011 when compared with some developing countries,has reached deprivation index malnutrition 6 % in both Egypt and Qatar and 4% in Jordan<sup>(1)</sup>.

4. Rates by deprivation guide the economic situation : The percentages of disadvantaged families, according to guide the economic situation in Baghdad include 24.3 % 20.4 % urban and 14.1 % in rural areas , while the rates of deprivation by general guide to the standard of living . Amounted to families in the province of Baghdad, 9 % , and shows that the lowest rates of deprivation of families in the province of Baghdad, attributed the decline rates of deprivation in Baghdad from the rest of the provinces the fact that the province of Baghdad is the center of political, economic, so less than the rates of deprivation, according to guide the economic situation and the general guide to the standard of living<sup>(3)</sup>.

5. Proportion of the population who do not use improved water sources : the ratio in Iraq, which is 23% higher than the ratio in both Egypt and Jordan, amounting to 2 % and 10% in Saudi Arabia and 11 % in Syria in 2006<sup>(1)</sup>.

1. Central Bureau of Statistics / indicators of environment and sustainable development priority in Iraq / Baghdad / 2012 / p 23.

2. Central Statistical Organization / in collaboration with the Ministry of Health and the United Nations Children's Fund UNICEF initial report / 2012 / p 19.

3. Ministry of Planning / Central Bureau of Statistics / map " deprivation and living standards in Iraq" / UNDP / 2011 / pp. 63-65.

## CONCLUSIONS

The research found a number of conclusions and most important

1. Despite the decline in the mortality rate of children under five years of age , but this decline , which amounted to 38 deaths in 2011 did not reach the target rate of 21 deaths in 2015.

2. Mortality rate was male children under the age of five higher than the female and child mortality , and the mortality rate of children under five years of age in rural areas of the highest infant mortality in urban areas up to the year 2011.

3. Reason for the weakness of the security situation of the threat and the kidnapping of the migration and the relocation of several medical staffs in the hospital and health centers to other locations in Iraq.

4. The impact of nutritional status on the health and safety of children in Baghdad and other provinces in the country.

5. Characterize the health system deteriorating in Iraq, some of the indicators of human development such as public spending on the health sector and low per capita share of that spending , and the high mortality rate of children under five years of age , the higher the proportion of the population who Aistkhaddmon improved water sources , compared to some neighboring countries.

6. Shows high index of deprivation of health care services , including reproductive health services.

7. Despite the increase in financial allocations in the budget of the Ministry of Health but is still experiencing limited health sector in the provision of health services , including the limited import of medicines, the reason being that most of the increase in budget allocations go to raise the salaries of medical personnel.

## RECOMMENDATIONS

The most important recommendations that came out of the following search

1. Quest to reach the mortality rate of children under five years of age to the target rate , a rate reduction by two-thirds in the period ( 1990-2015).
2. Expansion in the provision of health care services of all kinds and try to be distributed on the basis of justice and equality for all members of the community , and this will be the start of distribution to the disadvantaged have access to those services.
3. Medical human capacity development through ongoing sessions in the side at the level of health centers and hospitals in Baghdad and other provinces.
4. Increase the number of specialized medical centers and expansion in the provision of health services.
5. Reduce the lack of nutritional status through the mother to take care of feeding and care at pregnancy and after birth , in addition to the interest in feeding the child and promote breastfeeding , especially for the first year of the child's age , where breastfeeding protects the baby from diseases.
6. Encourage female involvement in health education, in addition to the graduation of thousands of women's nursing staffs in the coming years.
7. Provide a database for the mortality rate of infants and children less than five years of age to their importance in human development indicators.
8. Prepare analytical studies by researchers and health and educational institutions for this matter in order to evaluate the results and positive identification of most diseases in children injured by the device , including Allnevsa diseases and congenital anomalies, and try to prevent their occurrence.

## REFERENCES

- .Bayati/ Firas Abbas Fadhil , " Child mortality in Iraq: the numbers and signs of Nineveh province, a model , "Journal of the future of the Arab / number 368 / sophomore Thirty / 2009.
- Bayati/ Firas Abbas Fadel / " the children of Iraq : a terrifying past and an uncertain future " / Al Mustaqbal Al Arabi / number 362 / Thirty-first Year / 2009.
- The World Health Organization / World Health Statistics 2010
- Ministry of Health / Statistical Manual / Baghdad / 2009
- Ministry of Health / statistics Yarmouk Hospital / 2010 to 2012 / Baghdad/2013.
- The Ministry of Planning / Central Bureau of Statistics / map " deprivation and living standards in Iraq" / UNDP / Baghdad / 2011.
- The Ministry of Planning / Central Bureau of Statistics / statistics department of human development/ "Women and men in Iraq - statistics developmental / Baghdad 2012.
- The Ministry of Planning and Development Cooperation / Human Development Report in Iraq - -2,008 / Baghdad / 2008.
- The Ministry of Planning and Development Cooperation / Development Plan Aloutnaha for a five-year (2010-2014 ) / Aldzoualol plan document / Baghdad / 2009.
- The Ministry of Planning / Central Statistical Organization / Tgarirmahrat monitoring the Millennium Development Goals at the provincial level / Baghdad / 2012.

UNDP / " Human Development Report in 2013 - the rise of the South: mortal progression in a diverse world " / UNDP / Newyork / 2013.

.UNDP / Analysis CCA / basic services / Iraq / 2009

Central Statistical Organization in collaboration with the Ministry of Health and the United Nations Children's Fund (Unicef) / " monitor the situation of women and children - Iraq " MICS Mlcs4 -2011 "/ preliminary report / Baghdad / 2012.

Central Statistical Organization / " national indicators for monitoring the Millennium Development Goals - Altqriralthani " / Baghdad / 2009.

Central Statistical Organization / "indicators of environment and sustainable development priority in Iraq" / Baghdad / 2012.

Iraqi Association for Human Right /" eighth quarterly report on human rights" Iraqi Journal of Human Rights / Issue 7/2003.