

The Reality of Chronic Diseases in Older Persons in Algeria "Comparative Study in the Light of the Multiple Indicator Cluster Survey 2006 (MICS 3) and the Multiple Indicator Cluster Survey 2012- 2013 (MICS 4)"

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Abstract

Aging is the third age stage of human life, and it is the result of progress in various fields, especially the medical field, which has the credit for changing the epidemiological map from infectious diseases that claim the lives of millions of children to chronic diseases affecting the elderly group. This study came to investigate the reality of chronic diseases in the elderly. In Algeria, a comparative study in the light of the two cluster surveys (MICS3 and MICS4), given that the Algerian society is one of the societies in which the features of aging and the emergence of chronic diseases appeared and became a real problem, as the focus was on the most prevalent chronic diseases such as: blood pressure, Diabetes and heart, based on the data of various national surveys for each of the Directorate of Health, Population and Hospital Reform and the National Bureau of Statistics.

The study concluded a number of results, the most important of which are: The prevalence of diseases among the elderly is due to the large number of pressures and problems that this segment suffers from, resulting from the environment and the social environment, in addition to the bad eating habits practiced by the individual, such as alcohol consumption and smoking. Her role in society between housework and work, in addition to the biological changes that appear with age as a result of entering menopause

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I- Introduction :

The prevalence of ageing varies between developed and growing societies as a result of the relative disparity in health development demographically generated by shifts in fertility rates and the high life expectancy of the population and the consequent change in the size and composition of the population, This is a change that has been reflected in the infrastructure of countries, especially with regard to health care. older persons need treatment and medication as they age, which is a burden for States, especially those on the road to development.

Algeria is one of the countries that have begun to show the characteristics of aging as a result of its demographic and health transformation and the change in the age structure of the population. According to statistics from the National Bureau of Statistics (ONS), the proportion of older persons (60 years and over) is estimated at 9.3% in 2018 as well as the emergence of diseases related to the elderly, especially chronic ones.

This article will therefore address the reality of chronic diseases in older persons from a comparative study of the results of the 2006 Multiple Indicator Cluster Survey (MICS 3) and the 2012-2013 Multiple Indicator Cluster Survey (MICS 4).

I.1. Aging

A normal natural phenomenon that emerges at a specific age and cannot be avoided or exceeded and cannot be delayed. At this stage, every elderly individual undergoes a range of physical changes, such as weakness in muscle strength, sensory physical and sexual energy in general, and psychological impairment of attention, memory, emotional vulnerability and psychological sensitivity.

1- Aging problems

The problems of older persons are one of the most prominent social issues in the developed world and in the developing world alike. They can be regarded as emerging from the transformations that have been caused by social and economic change and the most important problems for older persons are the following:

1-1- Psychological problems

Psychological problems are often associated with failure to adapt to age changes, as older people experience feelings of loneliness, fear of the future, loss of love for others, and loss of children and parents. Psychological problems inevitably exist in old age but range from feelings of boredom, isolation, emptiness, severe mental and mental disorders, and severe psychological depression that sometimes leads to suicide (زينب دهيمي ,p 11)

1-2- Emotional problems

Many elderly people face loneliness either because of divorce, death of a spouse, celibacy, and more emotional problems. Those who have lost their husbands often become depressed because they feel lonely and desperate for life or feel that they have become a heavy burden on their sons

(رزيقة مريحي , 2012 , p47)

1-3- Economic problems

The economic problems are the loss of economic security as a result of the loss of employment status and the loss of part of material income and because the material returns are stable, while the expenses are always high, the inability to compensate for the relative decline in income constitutes a form of anxiety and depression in the elderly and these material effects have a negative impact on the elderly through the inability to provide healthy housing and adequate food (رزينة مريخي، 2012، ص48).

1-4- Social problems

Ageing is characterized by the diminishing social status of the elderly by the loss of one or some of its social components loss of professional role as a result of compulsory retirement, loss of life as a partner as a result of widowhood or loss of the status of a friend, all leading to a loss of social security, which in turn leads to a lack of communication with society and a deterioration in its social participation and these manifestations in the life of the elderly may help him to bring about health and psychological changes (زينب دهيمي، p 11).

1-5- Health problems

Associated with the weakness of important organs such as the brain, heart and kidney, there is also a relation between aging, general vision decay and reduced eye response capacity in the dark, impaired hearing sense and reduced mental activity of memory, imagination and cognition, as well as psychological disorders and various chronic diseases (أمزيان نعيمة، 2005، pp 57-58).

I. 2. Chronic diseases

Chronic disease is a type of disease, but it is characterized by continuity. Doctors distinguish it from acute disease, which occurs suddenly and is rapidly cured. The chronic disease represents a large number of diseases that vary in origin, cause, symptoms, treatment and money. It grows slowly and prolongs its treatment (رمضان زعطوط، 2005، p15).

Algerian society has experienced an epidemiological shift from infectious to chronic diseases as a result of a variety of factors. (Changing age structure, urbanization and industrialization, stressors and psychological problems...) Chronic diseases are only the leading causes of death in our society. WHO classification of causes of death topped the causes of death in Algeria in 2011 with 53.3% and 55% in 2012 (MSPRH, INSP, 2014, p5) and health surveys carried out by the Ministry of Health, Population and Hospital Reform have confirmed that the incidence of blood pressure diseases, heart disease and diabetes is at the forefront and is constantly rising, as shown in table 01

Table 01: Prevalence of chronic diseases by type of disease in 2006 and 2012 surveys

Disease	2006 survey(*)	2012 survey(**)
Blood Pressure	4.4	5.6
Diabetes	2.1	2.9
Heart Disease	1.1	0.9
Asthma	1.2	1.3
Joint Diseases	1.7	1.2
Other Chronic Diseases	2.4	1.7

The source:

(*):-Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₃2006", Algérie 2008 p55.

(**):Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₄2012-2013", Algérie 2015,p233.

1- High blood pressure

Blood pressure disease is one of the most important cardiovascular risk factors, a 140 mm/Hg elevation in systolic arterial pressure or relaxing arterial pressure with a value greater than or equal to 90 mm/Hg. One of the most important symptoms is head pain, especially in the second half of the night, loss of balance when standing and walking, fatigue, tinnitus and heart-level symptoms. (Yves Morin, 2002, pp446, 447). The disease of blood pressure has spread dramatically in Algeria and in the future, there will be a significant increase as a result of the increased prevalence of factors such as stress and psychological problems, as evidenced by investigations or surveys carried out by the Ministry of Health, Population and Hospital Reform.

Table 2: The proportion of people who stated that they had blood pressure disease by region, gender, place of residence, age and wealth index in the 2006 and 2012 surveys

blood pressure disease characteristics		2006 survey(*)	2012 survey (**)	
Regions	Regions of 2006 survey	center	4.8	-
		east	4.1	-
		west	4.5	-
		south	3.5	-
	Regions of 2012 survey	North-Central	-	5.6
		north-east	-	5.8
		North west	-	6.6
		Hauts Plateaux center	-	5
		Hauts Plateaux east	-	4.7
		Hauts Plateaux west	-	5.8
	gender	Male	2.8	3.7
		female	6	7.5
place of residence	urban	4.9	6.1	
	rural	3.7	4.7	
age groups	groups of 2006 survey	0-18 years	0.1	-
		19-24	0.1	-
		25-34	0.6	-
		34-59	7.8	-
		60 years and above	31.2	-
	groups of 2012 survey	15-24 years	-	0.1
		25-39	-	0.6
		40-49	-	4.6
		50-59	-	13.5
		60-69	-	24.9
	70 years and above	-	32.4	
wealth index	Poorer	3.1	4.2	
	Poor	3.9	5.2	
	Average	4.3	5.5	
	Rich	5	6	
	Richer	5.6	6.7	
Total		5.6	4.4	

The source:

(*):-Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₃2006", Algérie 2008 p55.

(**):-Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₄2012-2013", Algérie 2015,p235.

1-1- by regions

According to the table, blood pressure disease in the northern regions is higher than in the south. The 2006 survey was estimated at 4.8% in the central region, while in the southern region it was 3.5%. The 2012 survey showed the same, with 5.8% in the northeastern region and 4.9% in southern Algeria.

1-2- By gender

Gender is one of the most important determinants of the disease, with higher rates of infection among females than males, as confirmed in Table 02. Gender differential values were recorded in the 2006 survey of 6% for females and 2.8% for males. This disparity persisted in the 2012 survey, and was higher than in the previous survey, at 7.5% for females and 3.7% for males.

1-3- By the place of residence

It is well known that man prefers to live in places where there are different life facilities. But the most luxurious places may have a negative impact on his life and especially on his health, from the previous table, blood pressure disease was found to be more prevalent in urban areas than in rural areas. This discrepancy was also observed in the 2012 survey, with incidence rates of 6.1% and 4.7% in urban and rural areas respectively, an increase between the two surveys of 1.2% in urban and 1% in rural areas.

1-4- By age groups

Age is the first determinant of the prevalence of chronic diseases in general and blood pressure in particular. The 60-year-old and older group was found to be 31.2% more likely to develop hypertension in MICS 32006, while in MICS 42012 "the age groups [60-69] and 70 years and over were 24.9% and 32.4%, respectively.

1-5- By the wealth index

By nature, people like to own wealth. Money is an important factor in determining the richness and poverty of individuals. It also plays a significant role in determining the prevalence levels of the disease. Through the table above, blood pressure is widely prevalent in the wealthiest individuals in both surveys, reaching 5.6% in the 2006 survey and 6.7% in the 2012 survey, a rise of 1.1%.

2- Diabetes

It is a disease that occurs when the pancreas fails to produce insulin sufficiently, or when the body is unable to use it effectively. Insulin is a hormone that regulates blood sugar levels. High blood sugar is a common effect of uncontrolled diabetes, which over

time leads to severe damage to many parts of the body, especially in nerves and blood vessels (منظمة الصحة العالمية).

Diabetes is a disease that poses a threat to public health in Algeria because it is one of the most prominent causes of death or disability and the number of people infected continues to increase. Given the results of the survey 2006 diabetes has been estimated to be 2.1% for both sexes, as indicated in the multiple indicator cluster survey 2012 "MICS 4" has a 2.9% prevalence rate and is second among chronic diseases counted.

Table 3: The proportion of people who stated that they had diabetes by region, sex, place of residence, tooth and wealth index in the 2006 and 2012 surveys

Diabetes characteristics		2006 survey	2012 survey	
Regions	Regions of 2006 survey	center	2.3	-
		east	2	-
		west	2.1	-
		south	1.8	-
	Regions of 2012 survey	North-Central	-	3.1
		north-east	-	3
		North west	-	2.9
		Hauts Plateaux center	-	2.4
		Hauts Plateaux east	-	2.8
		Hauts Plateaux west	-	2.2
gender	Male	1.9	2.8	
	female	2.3	3	
place of residence	urban	2.6	3.2	
	rural	1.5	2.2	
age groups	groups of 2006 survey	0-18 years	0.2	-
		19-24	0.2	-
		25-34	0.4	-
		34-59	4.1	-
	groups of 2012 survey	60 years and above	12.5	-
		15-24 years	-	0.3
		25-39	-	0.7
		40-49	-	3.4
	50-59	-	8.1	

		60-69	-	10.7
		70 years and above	-	9.7
wealth index		Poorer	1	1.8
		Poor	1.5	2.3
		Average	2	2.8
		Rich	2.5	3.5
		Richer	3.5	4
Total			2.1	2.9

The source:

- Ministry of Health, Population and Hospital Reform, National Statistics Office, Monitoring the situation of children and women, National Multiple Indicator Survey "MICS32006," Algeria 2008 p55.
- Ministry of Health, Population and Hospital Reform, National Statistics Office, Monitoring the situation of children and women, National Multiple Indicator Survey "MICS42012-2013", Algeria 2015 p235.

With regard to its prevalence by some characteristics between the 2006 and 2012 surveys, it is distributed as follows:

2-1- By regions

Diabetes, like blood pressure, is more common in the north than in the south. 2.3% in the Central and 2.1%-Western Regions, while in the Southern Region it was estimated to be 1.8% in the 2006 survey, The 2012 survey showed a slight increase of 0.9% in the Southern Province, or 2.7%, and 3.1% in the North Central Region.

2-2- By gender

As noted earlier, females are more likely to be ill than males and the same applies to diabetes. Female and male 2.3% have been 1.9% in the 2006 survey and remained at the same gender disparity in the 2012 survey of 3% for females and 2.8% for males, an increase of 0.7% and 0.9% for females and males respectively.

2-3- By the place of residence

As long as the place of residence plays a role in the presence of diseases, it implies its effect on the spread of diabetes. By browsing Table 03, it was found that this disease is more spread in urban than rural areas in both surveys, where urban and rural 2.6% were estimated to be 1.5% in the 2006 survey, as indicated by the multiple indicator cluster survey 2012 "MICS 4 that its prevalence is 3.2% in urban and rural 2.2%.

2-4- By age groups

Although all ages are susceptible to diabetes, the older an individual becomes more susceptible. This is seen from the above table, where prevalence in the age group 60 years and over is 12.15% in the multiple indicator cluster survey 2006 "MICS 3, while it was 10.7% and 9.7% in the age groups [60-69] and 70 years and over respectively in the 2012 survey.

2-5- By wealth index

There are a number of factors that contribute to the emergence of diseases in society. Among these factors is money. Whenever a person possesses wealth, he or she is susceptible to diabetes. Table 03 shows that the wealthiest group was estimated to be 3.5% in the 2006 survey, while in the 2012 survey was 4%, an increase 0.5%.

3- Heart disease

Heart disease is closely related to blood pressure and diabetes. Most patients with these diseases have complications and vice versa. Heart disease is one of the most prevalent diseases in Algeria. According to the International Classification of Causes of Death, the cardiovascular disease took the lead by 22% in 2011 and 22.6% in 2012. (MSPRH, INSP, 2014, p5) This can be further illustrated by surveys and investigations carried out by the Ministry of Health, Population and Hospital Reform in this field.

In general, heart disease records lower prevalence rates than the previous two diseases, on the one hand because it is caused by complications of these diseases sometimes. On the other hand, according to the 2006 survey, the prevalence of heart disease for both genders was estimated at 1.1%, while the 2012 survey showed a decrease to 0.9%.

With regard to the spread of this disease according to a number of characteristics explained in the following table:

Table 4: The proportion of persons declared to be suffering from heart disease by region, gender, place of residence, age and wealth index in the 2006 and 2012 surveys

Heart disease characteristics			2006 survey(*)	2012 survey(**)
Regions	Regions of 2006 survey	center	1.2	-
		east	1.4	-
		west	0.9	-
		south	0.5	-
	Regions of 2012 survey	North-Central	-	1
		north-east	-	1
		North west	-	0.9
		Hauts Plateaux center	-	0.5
		Hauts Plateaux east	-	1
	Gender	Hauts Plateaux west	-	0.6
		south	-	0.4
	place of residence	Male	0.9	0.8
		female	1.3	1
age groups of	urban	1.3	1	
	rural	0.9	0.7	
	0-18 years	0.2	-	

groups	2006 survey	19-24	0.3	-
		25-34	0.3	-
		34-59	1.7	-
		60 years and above	7	-
	groups of 2012 survey	15-24 years	-	0.2
		25-39	-	0.2
		40-49	-	0.9
		50-59	-	1.5
		60-69	-	2.7
		70 years and above	-	5.4
wealth index	Poorer	0.9	0.7	
	Poor	1	0.7	
	Average	1	1	
	Rich	1.3	1	
	Richer	1.4	1.1	
Total		1.1	0.9	

The source:

(*):-Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₃2006", Algérie 2008 p55.

(**):Ministère de la santé, de la population et de la réforme hospitalière, Office national des statistiques, Suivi de la situation des enfants et des femmes, Enquête nationale a indicateurs multiples "MICS₄2012-2013", Algérie 2015,p235.

3-1- By regions

Geographic location has a significant impact on the incidence of a disease exclusively, through table (04) the northern provinces are more likely to have heart disease, with the Central and Eastern regions having a convergent ratio of 1.2% and 1.4% respectively, while the Southern Region had 0.5%, and 2012 the survey had an equal ratio of 1% in the North Central and Northeast Region, while the lowest in the Southern Region 0.4% down 0.1% from the 2006 Survey.

3-2- By gender

The incidence is generally higher among females than among males, with an estimated 6% and 2.8% for males according to "MICS 3," and MICS 4 showed the same results as 7.5% for females as 3.7% for males, i.e. a 1.5% increase for females and 0.9% for males.

3-3- by place of residence

As noted earlier, heart disease is associated with blood pressure and diabetes, taking the same distribution in urban than rural areas, with an estimated 1.3% in rural

areas of 0.9% in the 2006 survey, while a slight decrease was experienced in the 2012 survey of 1% in urban areas and 0.7% in rural areas of 0.3% and 0.2% in urban and rural areas respectively.

3-4- By wealth index

Since chronic diseases are associated with urbanization and poor eating habits, they are found to be high among the wealthiest individuals. According to this indicator, heart disease was recorded at 1.4% in the 2006 survey and a slight decline was experienced in the 2012 survey, reaching 1.1% 0.3%.

II- Results and discussion :

The geographical location contributes significantly to the emergence and disappearance of the disease. From what has been previously exposed, it has become clear that the population of the north of the country is more vulnerable to chronic diseases due to high life expectancy, large populations, lack of space and associated problems. (overcrowding, pollution, housing, employment, urbanization, changing food behaviour) All these and other problems cause psychological stress, especially for the elderly, who find themselves a burden to others in various fields.

Chronic diseases also spread among the elderly as a result of the onset of aging in Algerian society as a result of the demographic transition on one hand. On the other hand, the many pressures and problems faced by this group in Algeria resulting from the surroundings and the social environment, such as urbanization and the welfare it causes, the abundance of food in the cities and the lack of mobility with psychological pressure, lack of physical and motor activity has contributed significantly to chronic disease, with physical inactivity in Algeria in 2011 reaching 39.2% (منظمة الصحة العالمية، 2011). Obesity is considered as one of the main causes of chronic diseases, especially blood pressure and diabetes. In 2010, the incidence rate was estimated at 21.24% and in 2011 at 16%, in addition to the poor dietary habits practiced by individuals in their lifetime, such as alcohol consumption, which amounted to 6.5% of the TAHINA sample survey 2007 (MSPRH, TAHINA 2010, p. 34) in addition to smoking, whose consumption went from 7.7% in 1978 to 20.6% in 1998 (ZIDOON.N, 2007 2011, also recorded a 12.5% percentage in the TAHINA survey".

In addition, these diseases are widely known among females because women are more likely to endure problems and are emotional for trivial reasons. The duplication of their role in society between domestic and functional work and the biological changes that occur with age as a result of their entry into menopause play a significant role in the emergence of these diseases.

II- Conclusion:

In conclusion, it can be said that in the face of the high number of older persons, Algeria will find itself faced with the challenges posed by aging in the coming years in terms of social welfare by meeting their needs, solving their problems and providing them with social security. With the rise of diseases associated with this age group,

especially chronic ones, other challenges will be faced, namely, the provision of health care and prevention through the launch of health feeding bras and early detection and intensification of the disease in urban and northern areas through private institutions and medical personnel in the field of geriatrics, all of which require additional economic expenditures.

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