Envejecimiento demográfico, discapacidad y vulnerabilidad social en Guanajuato, México

Demographic ageing, disability and social vulnerability in Guanajuato, Mexico

Héctor Daniel Vega Macías
Departamento de Estudios Culturales,
Demográficos y Políticos.
Universidad de Guanajuato, México
vegahd@hotmail.com

Norma Elvira Moreno Pérez
Departamento de Enfermería Clínica
Universidad de Guanajuato, México
normaelvira.seade.gmail.com

Ana Laura Carrillo Cervantes
Programa de Doctorado en Ciencias de Enfermería
Departamento de Enfermería Clínica
Universidad de Guanajuato, México
alcc_73@hotmail.com

Resumen

La dinámica demográfica de Guanajuato está caracterizada por la paulatina reducción de la fecundidad y por el alargamiento de la vida media, la cual tiene entre sus efectos más evidentes el envejecimiento de su población. En la entidad federativa, actualmente 6.1 % de la población es adulto mayor (65 y más años) y se espera que llegue a 16 % en 2050. Lo anterior está acarreando profundas consecuencias relacionadas con la salud pública, entre ellas el aumento de la población con alguna discapacidad. El objetivo de esta investigación es presentar un panorama sociodemográfico de la discapacidad en Guanajuato. Esta investigación es abordada desde el análisis demográfico y estadístico, con base en los

Microdatos del Censo de Población 2010, generados por el Instituto Nacional de Estadística y Geografía. En específico, se analizó una muestra aleatoria de 22 689 adultos mayores residentes en el estado de Guanajuato, de los cuales 8 503 tenían al menos una discapacidad. La vida media en México pasó de 50 años en 1950 a 75 años en la actualidad y se espera que continúe con esta tendencia creciente. Desafortunadamente, un alto porcentaje de esta ganancia en la esperanza de vida transcurre en discapacidad. En Guanajuato cerca de 35 % de los adultos mayores tiene alguna discapacidad; inclusive este valor aumenta rápidamente con la edad: mientras que la tasa de discapacidad es de 22.1 % en el grupo de 65-69 años, en el de mayores a 85 años llega a 62.2 %. En su mayoría, este grupo de población vive en una situación de alta vulnerabilidad social. El cambio en el perfil demográfico y epidemiológico de la población guanajuatense y su consecuente aumento de los niveles de discapacidad tendrá que estar acompañado del replanteamiento de las estrategias preventivas de salud y de su adecuada atención e intervención, incluyendo aquellos padecimientos físicos y mentales propios de las sociedades envejecidas.

Palabras clave: discapacidad, longevidad, transición demográfica.

Abstract

The demographic dynamics of Guanajuato is characterized by the gradual reduction of fertility and the lengthening of the average life, which has among its most obvious effects the aging of its population. In the State, currently 6.1% of the population is elderly (65 and more years) and is expected to reach 16 percent in 2050. This is causing profound consequences related to public health, including the increase of the population with a disability. The objective of this research is to provide a disability socio-demographic picture in Guanajuato. This research is approached from the statistical, and demographic analysis based on micro-data from the 2010 census, generated by the National Institute of Statistics and Geography. Specifically, we examined a random sample of 22,689 older adults residing in Guanajuato, of whom 8 503 had at least one disability. The average life expectancy in Mexico changed from 50 years in 1950 to 75 years today and is expected to continue with this growing trend. Unfortunately, a high percentage of this gain in life expectancy runs through disability. In Guanajuato about 35% of older adults has a disability; even this value increases rapidly with age: while the disability rate is 22.1% in

the 65-69 age group, in the greater than 85 years reaching 62.2%. Mostly, this group of population lives in a situation of high social vulnerability. The change in the demographic and epidemiological profile of the population of Guanajuato and its consequent increase in the levels of disability will have to be accompanied by the rethinking of preventive health and adequate attention and intervention strategies, including those physical and mental conditions of ageing societies.

Key words: disability, longevity, demographic transition.

Fecha recepción: Febrero 2015 **Fecha aceptación:** Julio 2015

Introduction

Without a doubt, the fact that people have the possibility of living increasingly longer is one of the more plausible achievements in social history. Although mortality will always have a random and unpredictable component, the improvement in its control and the consequent lengthening of life expectancy has introduced certain order in life processes, to reduce the risk of subversion of the natural and chronological order of death. In other words, a couple of centuries in Europe the probability that a son died before his parents was very high, while nowadays this eventuality is very small (Livi-Bacci, 1999). This achievement that now we witnessed with so naturally is, however, quite notable in individual, family and social terms.

Early mortality reduction has been product of a chained set of scientific advances and improvements in lifestyles conducive to survival. While the medical sciences have played a fundamental role in the longstanding battle against mortality through prevention and treatment of diseases, the development of programs to improve individual and collective habits with a view to improving nutrition and habits of the population have been a matter just as meritorious.

We are far from suggesting that the intensity and the temporality of these advances and their results are widespread around the world. The disparities that arise between different regions -even to the inside of them and of the countries- can be considered as alarming. For example, while in developed countries the current life expectancy is 78 years, in the poorest regions just gets to 61 years. Even in Mozambique and Sierra Leone, for example, life expectancy does not extend beyond age 50 today (Population Reference Bureau, 2013), i.e. more than one century of delay with respect to France or England, countries presenting a similar life expectancy to 1900s.

Life expectancy is in close connection with mortality in the early ages, in particular with the survival of children under one year of age, a temporary point in demography as a critic in the likely to continue living. Today, in developed countries infant mortality has diminished up to 5 deaths per thousand births; however, this indicator poorer regions increases to 66 on average. Similarly, disparities in the chances of survival are even more marked in some countries, especially Africans, which can reach 128 deaths per thousand births as in Sierra Leone or 116 in the Central African Republic, to name one two of them (ibid).

In the case of Mexico, a look at their demographic indicators shows the progress to gain ground on mortality. In 1950, life expectancy was just 50 years from this time derived from physicians and strengthening the public health system of the country progress has been steady progress until reaching 75 years of age today. Meanwhile, the infant mortality rate has dropped to 12 deaths of children under one year per thousand births (National Population Council, 2012).

The consequences of these developments can not be understood apart from the strong decline in fertility in the same period. In Mexico, the fertility rate fell from 7 children per woman in 1950 to 2.2 today (Ibid). Thus, progress in life expectancy, combined with declining fertility, are setting up an advanced stage of demographic transition, understood as the transition from a regime of high mortality and birth to another low and controlled levels.

The consequences of the demographic transition in population structure have been extensively explored for both the Mexican case to other latitudes. It has been observed that in the early stages the main consequence of the transition is that population growth, which ultimately slows down due to the decline in fertility is favored. After increasingly large populations also begin to age gradually bringing economic and social challenges unused. In this regard, as mentioned Joaquín Arango, should distinguish two dimensions of the aging population: on the one hand concerning the generational imbalance, which makes elderly cohorts-considered more or less reason as dependents are increasingly numerous the economically active; and moreover, it is the individual and biological dimension, related to the physical condition and quality of life of this population group, in addition to the costs of health care and social services (Arango, 2000), field work We presented here.

It can be argued that these consequences are not easy to manage anywhere in the world and demographic indicators of mortality in Mexico have many similarities with European countries. However, these similarities are nuanced when we analyze the duration of these changes: for example, while in France the demographic transition lasted 185 years, in Mexico the decline in mortality and fertility lasted just eight decades. Furthermore, in the first country lowering both indicators it was virtually uniform and parallel; not so in Mexico where mortality preceded the decline in mortality resulting in a considerable increase in population and causing, therefore, that the aging population is also being faster (Livi-Bacci, 1998). This situation directly affects the design of public policies related to health: while in some countries the aging warned well in advance of your arrival in Mexico will have just a few decades to face the consequences.

In addition to the temporary elements, there are other reasons to hold substantive differences with the more developed countries. The particular difficulties in the case of Mexico and other developing countries derive the socioeconomic context in which the demographic transition proceeds. In terms of health, although the country are noted with increasing intensity own ailments of aging societies, these coexist with other inherited diseases of the past corresponding to incipient stages of demographic transition and often related situations marginalization and poverty. The presence of communicable diseases,

nutrition, maternal and perinatal diseases is still a considerable magnitude in some sectors of the Mexican population economically far behind (Cardenas, 2014).

In any country, the lengthening of life and the consequent aging of societies have between tricky increasing number of older adults likely to live with their diminished physical capacities. However, in developing countries such as Mexico, is the difficulty that health systems and social assistance are unprepared for this type of age structure and top with the very limited time to react. In addition to the efforts and resources on public health to resolve chronic degenerative problems still being shared with the solution to age-old diseases related to infectious causes.

The state of Guanajuato is no stranger to the demographic and epidemiological trends at facing the country. In 2015, life expectancy is located around 75 years old; infant mortality by 11 deaths per 1,000 live births; and the fertility rate is 2.2 children per woman; ie is in an advanced stage of demographic transition. This is reflected in an aging population: 6.1% of its population is 65 or more years and is expected to reach 16% in 2050 (National Population Council, 2012).

Thus, one of the main concerns about the aging population is increasing the population with disabilities. In Guanajuato, currently about one in three older adults aged 65 and over have one or more disabilities. However, with increasing age the incidence of disability is greater disability and even accumulate at the individual level. So, we have that at age 85 are two of the three people facing this situation.

The research presented aims to provide a quantitative picture of disability in older adults in Guanajuato. We believe that from the social point of view the work is relevant to the extent that provides both reactive and proactive elements necessary for planning on public health policies. Because multidisciplinary profile of the authors, one of the major contributions of this work is to address disability issues from the point of view of medical-biological model in which it is interpreted as a departure from the normal level of structure or function to which requires medical care and treatment of a therapeutic nature; but also does from the social model, which explains disability as a disadvantage that individuals experience to

participate on equal terms in everyday life. That is, to reflect on both models proposed in the literature, addresses both individually and as a collective problem (Garcia, 2005).

Also, work is important from the social point of view as it explores a field sparsely explored for the state of Guanajuato, where population health research is quite limited.

Material and methods

This research is approached from a quantitative perspective, based on the Microdata Sample Census 2010, published by the National Institute of Statistics and Geography (INEGI) of Mexico. In the state of Guanajuato they were surveyed 331,702 adults 65 and older. In the research presented a sample of 22 689 of them, of which 8503 had at least one disability was analyzed. The design of the 2010 census sample was stratified cluster and performed in a single stage of selection, ie full geographical areas, either group homes or localities were selected. The sample considered a confidence of 90.0%, maximum relative error of 0.2, a design effect of 1.44 and non-response rate of 10.0% (INEGI, 2011).

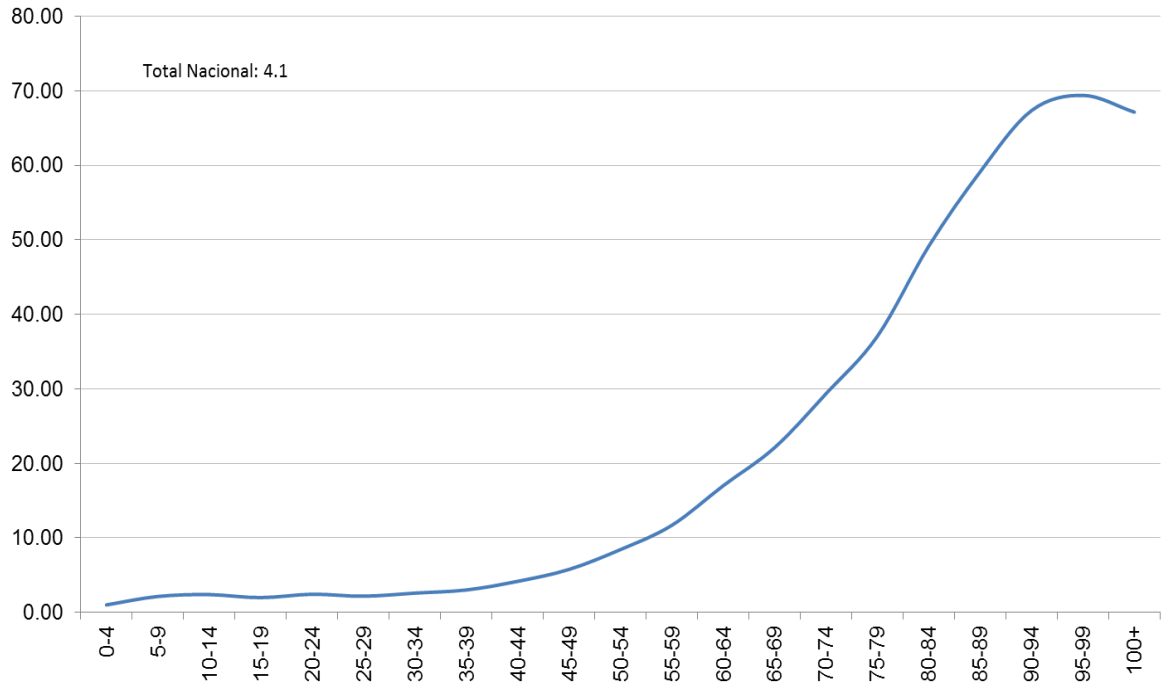
The research instrument -Questionnaire Expanded Census of Population and Housing 2010-investigated by the disability of people across the question: In your daily life, (NAME) have difficulty performing the following activities? With the following range of responses to) walk, move, up or down; b) see, even using glasses; c) speak, communicate or chat; d) hearing, even when using hearing aids; e) dressing, bathing or eating; f) pay attention or learn simple things; g) mental limitation; h) not specified. In addition, he asked for the cause of disability with the question "(NAME) have difficulty (answer to the previous question) ...", which had the following response) because he was born so; b) sickness; c) by accident; d) advanced age; e) for other reasons; f) unspecified (INEGI, 2011b).

Finally, it is clear that the public nature of the bases of the Census Microdata Sample (available electronically on the portal www.inegi.org.mx) coupled to statistical and demographic methods are standard, enables playback and validation external of the results of this research.

Results

Although disability is not an exclusive status of the elderly, the natural deterioration of the body by the passage of these conditions causes increase with age time. In Guanajuato, while the disability rate for the general population is 5.5% of the total, gradually increases with age, as can be seen in Figure 1. In fact, it is interesting to note that after forty years age increased disability occurs almost exponential manner.

Figura 1. Guanajuato: porcentaje de población que padece al menos una discapacidad según grupo de edad 2010



Fuente: estimaciones propias con base en Instituto Nacional de Estadística y Geografía, Microdatos de la Muestra Censal 2010.

The data show that the motor difficulties are by far the main type of disability in the elderly population of Guanajuato; to which followed the difficulty to see and hear. To a lesser extent, attention deficit disorder and mental limitations appear (see Table 1). With respect to the last two it has been argued that it is likely that disability rates are higher because, on the one hand, to mistakes of census information as the informant may ignore some of the

census questions or it may also be due to mental disability it is hidden by the social stigma that can represent this disability (National Population Council, 2011).

Tabla 1. Guanajuato: adultos mayores discapacidados por grupo de edad según tipo de discapacidad 2010 (porcentajes*)

	Tipo de discapacidad						
	Caminar, moverse, subir o bajar	*Ver, aun usando lentes*	*Hablar, comunicarse o conversar*	*Oír, aun usando aparato auditivo*	*Vertirse, bañarse o comer*	*Poner atención o aprender cosas sencillas*	*Tiene alguna limitación mental*
65+	75.8	26.7	3.6	18.0	6.8	2.4	2.3
65-69	75.4	26.3	1.7	8.8	3.1	0.9	1.6
70-74	74.1	25.7	3.9	14.5	4.5	2.3	1.9
75-79	74.7	25.7	3.1	16.4	5.1	1.1	2.5
80-84	76.7	27.5	2.8	20.6	6.0	2.2	2.8
85-89	78.9	26.4	4.8	24.5	10.0	3.5	2.2
90-94	73.3	30.2	8.7	36.5	18.8	6.2	4.0
95-99	85.5	32.0	10.7	41.4	29.3	10.8	4.0
100+	78.7	41.8	12.7	49.1	39.7	17.5	2.8

*Nota: los porcentajes no suman 100% debido a que hay casos que presentan más de una discapacidad.

Fuente: estimaciones propias con base en Instituto Nacional de Estadística y Geografía, Microdatos de la Muestra Censal 2010.

The disability has the peculiarity of their combined scathing character. The fact that the risk of disability is present throughout life, plus the fact that is accentuated among the elderly since they live longer, causing ever more common the presence of more than one

simultaneous disability. Among older adults with disabilities at age 65, just over 75% have only one disability; however, this percentage decreases with age in favor of a combination of two or more disabilities (see Table 2).

Tabla 2. Guanajuato: adultos mayores con alguna discapacidad por grupo de edad según número de discapacidades acumuladas 2010 (porcentaje)

	Número de discapacidades				
	1	*2*	*3*	*4+*	*TOTAL*
65+	75.6	16.7	5.5	2.2	100.0
65-69	84.8	13.3	1.6	0.4	100.0
70-74	80.2	14.3	4.6	0.9	100.0
75-79	77.4	17.4	4.6	0.7	100.0
80-84	72.2	20.2	5.5	2.2	100.0
85-89	68.3	18.5	9.0	4.2	100.0
90-94	57.6	19.6	16.3	6.5	100.0
95-99	51.0	18.2	10.2	20.7	100.0
100+	47.4	20.7	6.5	25.4	100.0

Fuente: estimaciones propias con base en Instituto Nacional de Estadística y Geografía, Microdatos de la Muestra Censal 2010.

Disability can be caused by many things in life, including those that are innate, those caused by accidents or diseases, and those derived or accentuated with aging. At age 65, 36.6% of disabilities arising from aging and diseases (47.0%) or accidents (13.2%). However, with increasing age, disability originate increasingly in the natural deterioration of the body. At 85 years of age, for example, 66.5% of disabilities starting with the elderly (see Table 3).

Tabla 3. Guanajuato: distribución de las discapacidades por grupo de edad según causa 2010 (porcentaje)

	Porque nació así	*Por una enfermedad*	*Por un accidente*	*Por edad avanzada*	*Por otra causa*	*Total*
65+	1.1	32.1	9.2	56.1	1.5	100.0
65-69	1.5	47.0	13.2	36.6	1.7	100.0
70-74	1.7	39.9	9.4	47.1	1.9	100.0
75-79	0.8	35.6	10.8	51.4	1.3	100.0
80-84	1.3	23.1	7.2	67.6	0.8	100.0
85-89	0.4	22.7	7.5	66.5	2.8	100.0
90-94	0.1	21.7	5.8	71.9	0.5	100.0
95-99	0.9	7.9	4.9	85.7	0.5	100.0
100+	0.0	5.6	0.6	93.8	0.0	100.0

Fuente: estimaciones propias con base en Instituto Nacional de Estadística y Geografía, Microdatos de la Muestra Censal 2010.

Finally, in Table 4 some sociodemographic variables of seniors with disabilities are presented. In terms of gender, it is noteworthy that although differences in disability rates in the total population between men and women are barely noticeable (34.0% and 35.8%, respectively) among the elderly are the ones who have rates higher. Women 65 and older have higher rates of 54.8%, nearly ten percentage points above men.

Regarding marital status, which may indicate some degree of family support networks in the disability faces, but in the whole of the elderly about half of them live as a couple, with advancing people age rates unbound increase gradually, mostly derived from widowhood.

One of the main challenges of the Mexican health system is the territorial distribution of population. Although from the forties of last century, rural areas in Mexico began to

witness the gradual decline of its population, now over 23% of the population lives in just over 188,000 locations under 2500 inhabitants. That is, Mexico has a very large population (nearly 26 million) residing in thousands of small towns, which makes a very significant way health coverage. In the case of seniors with disabilities, as shown in Table 4, just over 43% reside in rural areas. To this it is added a quarter of older adults who have a disability are not entitled to health services, a situation that is accentuated with increasing age.

Finally, with regard to economic issues, Table 4 shows that while most older adults who have disabilities do not work (85.1%), is also emphasized that a similar percentage has no right to retirement or pension economic and nearly half of them do not receive any other help from the government.

Tabla 4. Adultos mayores con discapacidad según variable socioeconómica seleccionada 2010 (porcentajes)

Variable	65+	65-69	70-74	75-79	80-84	85-89	90-94	95-99	100+
Sexo									
Hombres	45.4	46.0	50.1	43.4	43.0	43.6	45.4	39.5	52.2
Mujeres	54.6	54.0	49.9	56.6	57.0	56.4	54.6	60.5	47.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Situación Conyugal									
Unidos	52.4	69.2	59.5	55.2	46.0	34.8	30.6	21.8	13.4
No unidos	47.6	30.8	40.5	44.8	54.0	65.2	69.4	78.2	86.6
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Loalidad de residencia									
Menos de 2,500 habitantes	43.1	40.8	41.6	44.5	44.9	42.8	41.8	51.1	64.0
2,500 a 14,999 habitantes	10.3	9.7	10.6	10.7	10.1	10.2	9.5	15.2	11.6
15,000 a 99,999 habitantes	18.8	19.7	19.1	18.7	17.7	18.8	18.0	19.6	16.8
100,000 y más habitantes	27.8	29.8	28.7	26.1	27.4	28.1	30.8	14.0	7.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Derecho a servicios de salud									
Público	74.7	79.7	79.0	77.2	72.7	68.5	64.0	51.0	42.7
Privado	1.1	0.7	0.9	0.6	1.6	1.0	3.6	2.2	5.2
Sin derecho	24.1	19.6	20.1	22.2	25.7	30.6	32.4	46.8	52.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Condición de actividad									
Trabaja	14.3	23.2	19.3	14.0	8.3	8.2	4.9	1.3	0.0
No trabaja	85.1	75.3	80.2	85.7	91.5	91.6	95.1	98.4	100.0
Busca trabajo	0.6	1.6	0.5	0.4	0.2	0.2	0.0	0.3	0.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Derecho a pensíon o jubilación									
Recibe	17.4	17.1	20.1	17.6	17.4	14.1	18.9	7.0	3.1
No recibe	82.6	82.9	79.9	82.4	82.6	85.9	81.1	93.0	96.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ayuda de programas de gobierno									
Recibe	44.4	16.8	44.9	54.5	54.9	52.5	47.8	52.1	59.5
No recibe	55.6	83.2	55.1	45.5	45.1	47.5	52.2	47.9	40.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Fuente: estimaciones propias con base en Instituto Nacional de Estadística y Geografía, Microdatos de la Muestra Censal 2010.

Discussion

The gradual increase in the number of older adults with severe disabilities and who need daily care will represent an increasingly important for families and the state challenge. Add to this the increase in survival is short, which means, tautologically, the risk of disability during the life also increases. For this reason, increased limitations in physical and mental performance will be closely associated with increasing demands for social services and health.

The setting of care to seniors change profoundly in the coming decades. The demographic transition leads to new challenges and demands increase care are changed at all stages of the life cycle. From the care of children currently they remain important will be reduced, but not cease to have a very important role; the working age population will remain very substantial and demanding specific health services; while the old-age dependency and people with care needs increase for health reasons. In short, it is a scenario that should be understood from the lens of complexity

However, trying to predict how the overall health status due to changes in the age structure of the population and progressive aging is a difficult task. While increases in longevity can influence the health of the population, several hypotheses can be considered; the two ends are expansion of morbidity and mortality compression, amid hypothesis left with mixed situations in terms of disease and disability (Chande et.al., 2010). In the present case, that of Guanajuato, is expected to expand this mortality and are living longer, but that a significant proportion of those years living with illness or disability. This could represent a higher cost associated with health in the elderly population, both from the collective point of view as in the household and individual level.

In this sense, the aging population means that the percentage of households with elderly increase. This implies an increasingly common with old coexistence in the home; which must necessarily involve the strengthening of family and social support networks for this sector of the population. In addition, it is increasing the coexistence of several generations cause young adults to address the situation faced simultaneously support their children and their ancestors (Vega, 2005). At the same time, reducing the average size of households in Mexico-which is at 4.3 today-members means having fewer members to contribute financially and help care for those who are disadvantaged.

A look inside the family worth noting, is the role of women within care to other household members. The gradual change in the social role of women, whose incorporation into productive paid employment continues to grow, which often leads to their extra-domestic economic activity has to be made compatible, not without a few juggling, with its traditional role in caring for the family, overload condition that makes them more vulnerable, leading to potential physical and mental wear.

In short, planning gerontology and social policies should encourage the development of individual and collective capacities to address the risks of an aging society as it will be more intensely Guanajuato. Social and individual behaviors are crucial to reduce the degree of social vulnerability in old age and prolong our existence with reasonable levels of well-being (Sanchez & Egea, 2011). While it is true that population aging is inevitable, creating the conditions to face it in the best conditions it is an urgent task.

Bibliography

Arango, Joaquín (2000). Vidas más largas, sociedades más envejecidas. Diario el País. 23 de abril.

Cárdenas, Rosario (2014). "Desigualdad en la salud, escenarios y acciones". En Cecilia Rabell Romero (coord.) Los mexicanos. Un balance del cambio demográfico. México, Fondo de Cultura Económica, pp. 143-199.

Chande, Roberto; César González; María del Carmen García; Raquel Pêgo; José Alberto Valencia; Mariana Ortega y Víctor Vilchis (2010). "Envejecimiento de la población: Implicaciones sociales y políticas, impacto en la salud y desafíos para los sistemas". En Perspectivas para el desarrollo de la investigación sobre el envejecimiento y la gerontecnología en México. México, Instituto Nacional de Geriatría, 2010, pp. 128-139.

Consejo Nacional de Población (2012). Proyecciones de la Población de México 2010-2050. México, CONAPO.

Consejo Nacional de Población (2011). Diagnóstico sociodemográfico del envejecimiento en México. Serie Documentos Técnicos. México, CONAPO.

García, José María (2015). La discapacidad hoy. Psychosocial Intervention 2005 (14) 245-253.

INEGI (2011). Diseño de la Muestra Censal 2010, 13 páginas.

INEGI (2011b). Instrumentos de Captación del Censo de Población y Vivienda 2010. Cuestionario Ampliado. 12 páginas.

Livi-Bacci, Massimo (1999). Historia Mínima de la Población Mundial. España, Ariel.

Population Reference Bureau (2013). World Population Data Sheet 2013

Sanchez, Diego. y Carmen Egea (2011). Enfoque de vulnerabilidad social para investigar las desventajas socioambientales: Su aplicación en el estudio de los adultos mayores. Pap. poblac [online]. 2011, vol.17, (69) pp. 151-185.

Vega, Daniel (2004). "Arreglos residenciales de los adultos mayores" en La Situación demográfica de México 2004. México, Consejo Nacional de Población 2005, pp. 43-51.