Aging in Cuba and Its Response

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Abstract: As the only socialist country in the Western Hemisphere, Cuba enjoys a global reputation for its high-quality and efficient universal health care. Despite Cuba's slow economic development and material shortage due to the impact of the U.S. embargo, its national health indicators are far higher than those of developing countries and comparable to those of developed countries. However, everything is a double-edged sword. Cuba's medical and health policy guarantee has also significantly accelerated its population transformation. The population growth rate has changed from low growth to zero growth. Cuba has become one of the countries with the most severe population decline globally and the only developing country at the end of the population transformation in the world. At the same time, Cuba was one of the first developing countries to face the problem of an aging population, with the increasing trend of population aging, its response and policy renewal reforms also provide important references and insights for developing countries experiencing aging in the future.

Keywords: Population Aging, Cuba, Social Security, Latin American Studies

1. Historical Background of Aging in Cuba due to Medical Achievement

The history of Cuba began with the discovery of the island by Columbus in 1492. In 1510, the Spanish expeditionary army conquered Cuba and colonized it. Two wars of independence broke out in 1868 and 1895. US intervention during the Spanish-American War in 1898 assisted the Cubans in overthrowing Spanish rule. The Treaty of Paris established Cuban independence from Spain in 1898 and, following three-and-a-half years of subsequent US military rule, Cuba became an independent republic in 1902 after which the island experienced a string of governments mostly dominated by the military and corrupt politicians. Fidel CASTRO led a rebel army to victory in 1959^[1]. In 1961, Castro announced Cuba entered the socialist period. And in 1962, the United States announced an economic, trade, and financial embargo against Cuba.

Therefore, in this turbulent historical torrent, Cuba's medical and health level has always been in a marginal field. Before the revolution, there was a huge gap in medical and health resource distribution throughout Cuba. The vast rural economy was backward, and there were neither enough doctors nor drugs to deal with diseases. At the beginning of the victorious revolution, medical reform became imminent. However, the double economic blockade led to the flight of many doctors and the interruption of the source of medicine and medical equipment, which made the already difficult economic situation worse. Facing such a dire medical dilemma, the birth of Cuba's medical security system is so urgent and logical. It is precisely because of the various problems arising from the evolution of history that the Cuban government made medical and health care a priority area of national development at the beginning of the establishment of the regime, just as the revolutionist Che Guevara even put forward that revolution and medical treatment are equally important in his speech on "On Revolutionary Medicine", "I began to travel throughout America, and I became acquainted with all of it. I came into close contact with poverty, hunger, and disease; with the inability to treat a child because of lack of money, as occurs often in the downtrodden classes of our American homeland. I wanted to help those people with my own personal efforts. I began to investigate what was needed to be a revolutionary doctor" [2].

Thus, in the view of Cuban leaders, the establishment of a universal free medical security system in Cuban society is not only a superior embodiment of the socialist system but also a unshirkable responsibility and obligation. The guarantee of Constitution provides an important legal and institutional guarantee for the national medical and health care system. In 1976, Cuba incorporated the content of medical care into the Cuban constitution, Article 50 of which clearly stipulates that "Everyone has the right to have his health attended to and protected. The State guarantees this right." Such as "with the provision of free medical and hospital assistance, by means of the installations of the rural medical service network, polyclinics, hospitals, and preventive and specialized treatment centers." [3] In the

establishment of the medical security system, Cuba adheres to the Marxist historical materialism that socialist countries have always adhered to, that is, the goal and direction of social construction are to achieve the all-round development of people and society, and health services are regarded as a human right enjoyed by everyone equally and should not be determined by the market according to purchasing power. Through the reform of business mode, the government rationalizes the medical resource market, nationalizes pharmaceutical companies, uniformly reduces drug prices, and brings regional medical and health services and all hospitals into the national public service system. Under the guarantee of such a system, Cuba eliminated polio in 1962, malaria in 1967, neonatal tetanus in 1972, diphtheria in 1979, congenital rubella syndrome in 1989, post-mumps meningitis in 1989, measles in 1993, rubella in 1995, and tuberculosis meningitis in 1997 [4]. These medical achievements are utterly comparable to those of developed countries in the same period.

It is the aforementioned achievements in health care that make Cuba stand out in the Human Development Index (HDI). As United Nations Development Program report in 2020, Cuba's HDI was 0.783 which is higher than the World Average of 0.737. The Rank in 2020 was 70 and has long been at the forefront of developing countries. Among them, Life expectancy at birth (years) is 78.8 which is almost equal to the United States' 78.9 [5]. It is precisely because Cuba is prioritizing the development of health care and social security in conditions of extremely limited GNI per capita that it has resulted in many demographic transformations similar to those of developed countries.

2. Ageing of the Cuban Population

Cuba is one of the first developing countries to face the problem of population aging. Cuba has the hemisphere's oldest population. The average age is 47, and nearly 24% of the population is above age 55, according to CIA data ^[6]. The proportion of this aging population is comparable to that of developed countries in the world. The continuous decline of population fertility and mortality is the main reason for Cuba's aging population.

Since 1978, Cuba's population fertility rate has been lower than the population substitution rate, and some new trends in population development have emerged throughout Cuba. Two-hundred and sixty-six thousand children were born in Cuba in 1966. At that time, there were one million less women of childbearing age than there are now. In 2017, a total of 117,000 babies were born on the island ^[7]. Since the 1990s, the death rate of Cuba's population has continued to decline, and the aging trend has further intensified. In 2016, Cuba added only 220 new inhabitants, that is to say there was no growth ^[7]. With the decline of the birth rate and the increase of life expectancy, Cuba's population aged 14 and under continues to decline, and the population aged 65 and over continues to increase. In 2020, Cuba's elderly(65 and older)population accounted for 22.8% of the total population, an increase of nearly 50% over the proportion in 1990 (13.3%) ^[8]. At the same time, the Median Age of the Cuban has risen to 42.2, making Cuba the fastest aging country in Latin America, surpassing Uruguay (35.8) and Argentina (31.5) ^[9]. It is estimated that by 2025, Cuba will become the country with the highest proportion of the elderly population in Latin American countries. Older adults are expected to account for 30% of the population in 2030 and 36.2% by 2050, at which point Cuba will be one of the countries with the oldest populations in the world ^[7].

3. The Impact of Aging on Cuban Society

3.1. Intergenerational Conflicts and Contradictions in Families due to Population Aging

In the process of Cuba's demographic transition, many significant changes have taken place in Cuba's family structure and relations due to the changes in material conditions, education levels, and the role of family members. The average household size in Cuba decreased from 4.9 to 2.9 persons per household in almost six decades (from the 1953 census to the last one conducted in 2012) [10]. On the one hand, families tend to be smaller and have fewer children, and human resources in providing for the aged within the family continue to shrink. On the other hand, the family household structure is significantly aging. According to data from the last census, 40% of Cuban households had an elderly person living in them and 32% of them had up to 2 or 3 persons aged 60 and over, so it is very likely that one elderly person is taking care of the other [10]. In this context, intergenerational family conflicts and family pension risks will become increasingly apparent. Family intergenerational harmony is the basis of social harmony, and intergenerational family conflict is an important source of social contradictions. The increase in family support burden and the decrease of development vitality caused by the aging of the population, and the

manifestation of intergenerational resource allocation contradictions and conflicts are not conducive to the harmony and stability of family and society. Meanwhile, various contradictions and problems will be transformed from family level to intergenerational social level contradictions problems in an unprecedented manner and become new social contradictions under the conditions of an aging society.

In the next decade, the generation of Cuban baby boomers born in the 1960s will reach the aging stage. The rapid increase in the elderly population will impact the mechanism of existing family support for the aged in Cuba, and the intergenerational imbalance caused by the increased burden of support will weaken the foundation of family old-aged support in Cuba. The increasingly prominent interests of the elderly and the conflicting interests of the young will intensify, which may induce intergenerational value clashes and conflicts and deepen the intergenerational cultural rupture.

3.2. Socio-economic Impact of Population Aging in Cuba

Cuba's aging population is comparable to that of western developed countries. However, from the industrial revolution and colonial rule to the era of capitalist globalization, Europe has experienced more than 200 years of development to reach the degree of today's population aging, while Cuba has achieved a similar aging process in only more than half a century under the adverse economic situation. Although Dr. Juan Carlos Alfonso Fraga, director of the National Office of Statistics and Information's Population and Development Studies Center, is optimistic that "getting old is life's victory over death. There's no reason to be scared of it or see it as something negative because in our case it is, without a doubt, the result of the social development process undertaken by the Revolution," And Cuba is "a country of old people because we have a high rate of human development, not as a result of the island's economic performance, or gross domestic product per capita, but rather given its achievements in education and health." [7]

However, the socio-economic impact of population aging cannot be ignored. First of all, the rising dependency ratio of the elderly increases the burden of social and economic development. The population dependency ratio refers to the ratio of the number of dependents to the total working-age population in a country or region ^[11], which reflects the extent to which the working-age population of the whole society bears the nonworking-age population. The increase in non-working age groups will increase the population dependency ratio, which means that fewer people will take care of more people. More and more nonworking-age people need to obtain a formal or informal intergenerational transfer from fewer and less working-age people, which will increase the social burden and restrict economic development.

As of 2020, Cuba has 1.8 million population ages 65 and older, and the old-age (65 and older) dependency ratio (per 100 people ages 15-64) is 22.8 [5]. If a country's population dependency ratio index deteriorates seriously, it means that more working people are needed to continue to grow. For developed countries with high per capita GDP, residents still enjoy higher income after economically supporting non-working age groups, but developing countries especially like Cuba do not have a similar socio-economic foundation.

Moreover, the impact of population aging on labor resources is reflected in the decline of the proportion of the working population and means that the base of the working population will face an adverse situation from slow growth to absolute decline. Since the 1980s, Cuba's working-age population has increased by 17%, but this figure has basically stopped growing since 2016. In 2018, Cuba's workingage population was 7.1 million. It is expected that by 2021, the number of people out of working age in Cuba will exceed the number of people entering working age. By 2030, the working-age population in Cuba will fall to 6.4 million, and the total size of the population will not increase [12]. Due to Cuba's continuous improvement of education and labor skills, older workers generally have a better technical level, which to some extent offsets the negative effects caused by the reduction of the number of labor forces, but also leads to the upward trend of the average age of the working population. "Along with the decline in the size of the working-age population, the current trend of its increasing median age, which is one important component of Cuba's population aging process, will continue. The mean and median ages of the working-age cohort of the population will increase from 39.1 and 38.7 in 2010 to 41.7 and 41.2 in 2025" [13]. This trend will continue to worsen as the newborn population continues to decline and the aging population continues to increase. In terms of supply and demand, the deepening of population aging indicates a rise in the aging population, while the labor force population will relatively decrease. Therefore, the shortage of labor supply will affect economic growth in the long run.

3.3. The Impact of Aging on the Social Security System in Cuba

Cuba's current health care system is called the Three-Level Medical Service system. The family doctor clinic in each region and the general clinic in the jurisdiction are collectively referred to as the "Primary Medical Network." The general hospitals in provincial capitals and important cities are collectively referred to as the "Secondary Medical Network." The national hospitals in the capital are called "Tertiary Medical Network." Among them, the "Primary Medical Network" is the final destination of medical and hospice care for the vast majority of Cuba's elderly. Currently, health care for older adults accounts for 28% of the primary care work load, 32% of surgery, 43% of medical specialties, and 48% of hospitalizations [14]. In the medical and health service industry, the high incidence rate of the elderly population determines that the medical and health system must increase hardware and software investment to deal with elderly diseases, including chronic and mental diseases. Especially for the elderly over 79, the per capita medical cost is far higher than the average expenditure of other age groups. The demand for medical and health services is more urgent and complex. The continuous investment in public services for the elderly means that the government's public finance and resources available for other development expenditures will be reduced accordingly. Cuba's healthcare expenditure in 2019 represented 11.12 percent of the Latin American country's gross domestic product (GDP), up from 11.02 percent one year prior. During the decade, healthcare spending in Cuba relative to its GDP ranged between 9.34 percent and 12.81 percent. In 2019, Cuba presented the highest healthcare expenditure as a share of GDP among Latin American countries [15]. This is also consistent with the status of the deepest degree of the aging country in Latin America. For Cuba, which has been under the economic blockade of the United States for a long time, its financial situation is already minimal, and it faces the risk of negative growth. More and more limited money will flow into old-age care instead of education and scientific research that is more conducive to the long-term development of the country, which will inevitably lead to a vicious circle, the sustained decline of the economy, and the loss of financial vitality. Even if the United States lifts sanctions in the future, it will be challenging to integrate into the current international economic system.

More importantly, the increase in pension payments due to the growth of the retired population is more than the country can afford and is a major challenge for Cuba during the demographic transition. Although the original Social Security Law of 1979 embodied the principle of socialist fairness and inclusiveness and played a role in maintaining stability in the special period of peace, there was a tendency for excessive security and equalitarianism in some areas and links. Since all Cuban retirees are included in the social security system, the social security expenditure, including pension, has overwhelmed Cuba's national finance. In 1979, the social security expenditure was 6750 million pesos, accounting for 4.0% of the total social output value. By 2008, this expenditure had increased to 4342.3 million pesos, accounting for 7.1% of the GDP of that year, and 9.1% of the total national budget expenditure [16]. The increase in the aging population has increased the demand for pensions, and in the face of the high growing expenses, the investment for production has to be reduced, affecting economic development, while the social security fund is facing a situation that is like a game of musical chairs-cannot meets the needs of everyone.

4. Cuba's government's response to its aging population

4.1. Cuba Community Practice of "Aging-in-Place."

The World Health Organization (WHO) introduced the concept of "Ageing-in-Place" in 2004. The goal of this concept is to meet the desire and ability of people, through the provision of appropriate services and assistance, to remain living relatively independently in the community in his or her current home or an appropriate level of housing [17]. Its core emphasizes the importance of offering services for the elderly nearby and locally, avoiding or postponing more unpleasant transitions to a dependent facility, like a nursing home. The benefits of this type of aging are apparent, satisfying seniors' sense of attachment, connection, security, and familiarity with family and community. At the same time, it is relatively independent and autonomous, satisfying the elderly's sense of privacy and identity. And in the context of an aging population, where Cuban families are becoming smaller and smaller and the corresponding state social sector must be mobilized to share the burden of family aging, thus, the Cuban government has established a model of geriatric community care that relies on a network of family doctors-Senior Centers.

Senior Centers mainly provide social security services, including lifestyle improvement, disease, and

disability prevention, and access to regular medical and health services to meet the social, economic, psychological, and medical needs of the elderly in primary communities. In 2016, there were 276 Senior Centers with capacity for 8217 people. Specialized Senior Centers have also been set up to care for older adults with mild to moderate dementia. There are also assisted living facilities providing short-, medium-and long-term institutional care for people with moderate or severe dependency who have no other alternatives in the community [14]. The establishment of this institution coincides with the concept of "Aging-in-Place," mobilizing the enthusiasm and creativity of the community and making it easier for the elderly to keep in touch with their communities and social networks.

In addition, the elderly have no conditions or ability to have a normal residence, and cannot be covered by the community medical network for other reasons. Cuba has also set up corresponding institutionalized support institutions to constantly meet the diversified needs of the elderly and their families regarding health and life. For example, the "Grandparents' Home" was established in the 1990s and is a professional institution providing medical services for the elderly. The country has 287 Grandparents' Home with 9838 places, 3400 day-care places in old people's homes [10]. With the active assistance and participation of the community, these elderly care institutions or other social institutions with elderly living assistance facilities provide free prevention, rehabilitation, and rescue services for the elderly and try to keep the elderly in touch with their families as much as possible.

4.2. Pension System Reform

As mentioned above, the original 1979 Social Security Law could no longer support the pension system, so in 2008 Cuba reformed its Social Security Pension Scheme (SSPS). The new SSPS made many changes to keep pace with the reality of Cuba's aging society, such as increasing the sources of social security funding, adjusting the method of calculating pensions, extending the retirement age, and expanding the coverage of social security and social assistance.

First of all, Cuba has expanded its sources of financing and started charging workers. After the revolution's victory, the Cuban government stipulated that from 1962, all workers would not have to pay social security premiums. In addition to the national appropriation, the employer pays the social security fee. This regulation has been in effect for more than 30 years. It was not until the mid-1990s that a small number of workers, including the employees of cooperative enterprises, fishery workers, and self-employed workers, began to pay a certain amount of social security. However, the number of these people is only about one hundred thousand people, and the amount is not large, which is of little help to improving the lack of funds. Thus, the new scheme has changed the previous policy that workers did not have to pay social insurance premiums. The SSPS is a mandatory and contributory pension scheme available to all persons employed by the State, those employed by co-operatives, independent farmers, and legal reform in 2011 extended the scheme to self-employed persons [18]. According to the new law, the social security fund will come from three aspects: state allocation and fees paid by enterprises and workers according to the specified amount and proportion.

Moreover, Through Law No. 24 of 2008, retirement ages were increased by five years for both men and women (to 65 and 60, respectively) [19]. The required length of service for retirees has been increased from 25 to 30 years. While extending the retirement age, the new law also stipulates that retirees can continue working and receive income to improve their welfare. Suppose employees are engaged in a job different from that before retirement. In that case, employees can receive the pension and the salary of the new job at the same time after being authorized by the labor and social security departments. If the employee is engaged in the same work before retirement, the total amount of pension increase shall not exceed the salary level at the time of retirement. In addition, the Cuban government has simplified the registration process for the poor and strengthened its policies to protect vulnerable groups. These initiatives have greatly assisted older adults living alone in financial difficulty. For this reason, the SPSS reaches approximately 87 percent of older persons in Cuba, achieving one of the highest coverage rates in Latin America [18].

5. Enlightenment of Cuba's Aging Experience to Developing Countries

The trend of population aging is an inevitable product of the development of human material civilization to a particular stage, and the evolution and solution of the population aging problem will undoubtedly go through a complex and gradual historical process. Globally, as long as the progress of human medical technology and the increase in per capita life expectancy, aging cannot be reversed once it begins. Therefore, aging is not the monopoly of developed countries, and more and more developing

countries will face the problem of aging in the future. According to the World Bank predicted, Today, almost two-thirds (62%) of the 868 million people in the world aged over 60 live in developing countries; this proportion is expected to increase to 80% in 2050 [20]. Unlike developed countries, developing countries are aging before they are rich. The challenges they face are even more severe. As an early developing country facing the problem of population aging, Cuba's experience provides an essential reference and inspiration for developing countries and humanity to deal with the problem of population aging.

First of all, it is necessary to track and forecast the population trend as early as possible and have a general judgment on aging to formulate a plan for developing an aging society that is in line with the national conditions. Cuba's experience shows that a fair and comprehensive social security system is an indispensable institutional foundation for developing countries to deal with the problem of population aging. On this basis, the top-level design of the aging society should be strengthened, and the comprehensive medical service and social security system for the aging population should be further improved.

Second, improve the labor force participation rate and labor productivity. On the one hand, it is necessary to further improve the quality of the labor force and develop the population quality dividend from various aspects such as health and education; on the other hand, it is required to promote innovation, accelerate the transformation of the economic development mode, and accelerate the construction of an industrial system that matches human resources. Implement a delayed retirement policy to tap the resources of the elderly force fully; strengthen support for families, reduce employment discrimination, and promote female employment.

More importantly, older people have more urgent needs for public services and are the critical target of public services. In order to meet the growing public service needs of the rapidly growing elderly population, the Government should accelerate the establishment of a sound basic public service system and effectively expand the supply of services for the elderly, health care, culture and sports, and education. Just as the role of Cuba's health care system and family doctor system-the negative impact of the socioeconomic renewal process on the aging population has been minimized. And the establishment of institutions such as "Senior Centers" and "Grandparents' Homes" is to develop a social elderly care service system based on home, supported by communities and institutions according to the structural changes of public service demand brought about by the population aging.

With the improvement of modern medicine, aging is an inevitable trend that any country will experience. As a small country with few resources and a long-standing economic blockade by the United States, Cuba's experience and initiatives to deal with aging are worthy of learning from many developing countries with less developed economies. Suppose there is one sentence that sums up Cuba's experience in aging. In that case, a fair and comprehensive social security system is the essential institutional basis for developing countries to deal with the problem of the aging population—no need to be afraid of aging because everyone will grow old one day.

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