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त्रि.वि. प्राध्यापक सङ्घ, क्याम्पस एकाइ समिति,

तेह्रथुम बहुमुखी क्याम्पस, आठराई, चुहानडाँडा

# Facing Aging in Transition: Population Dynamics, Challenges, and Opportunities in Nepal and Aatharai

Jiban Paudel\*

## Abstract

Nepal is undergoing a significant and rapid demographic transformation, transitioning from a youth-dominant to an aging society. This article presents a comprehensive literature review examining the multifaceted challenges and emerging opportunities associated with this shift. Analysis of Nepal's and Aatahrai Rural Municipality aging trend reveals a substantial increase in the elderly population, driven by declining fertility rates and increased life expectancy, which strains existing social security systems, healthcare infrastructure, and traditional familial support. Concurrently, this demographic change presents unique opportunities, such as leveraging the extensive experience and knowledge of older adults, fostering intergenerational solidarity, and stimulating the growth of new sectors related to geriatric care and active aging. This review highlights the necessity of proactive policy responses and integrated interventions to mitigate the challenges and harness the potential benefits of an aging Nepal, drawing on existing scholarly and governmental publications.

*Keywords:* population aging, elderly, demographic trend, benefit, healthcare, demographic

## Introduction

Aging is simply the process of growing older, marked by gradual changes in our bodies and minds over time (Kirkwood, 2005). Aging is the natural process of getting older, involving physical, mental, and social changes over time (World Health Organization,

\* Teaching assistant, Terhathum Multiple Campus.

2024). Aging can be seen as the accumulation of changes in an organism over time, leading to a decline in function and increased chance of death (Hayflick, 1994).

Nepal, a nation steeped in cultural heritage and undergoing rapid socio-economic transformation, is witnessing a significant demographic trend: the gradual increase in its older population. This phenomenon of population aging presents a unique set of circumstances and challenges within the Nepali context, demanding careful consideration and informed policy responses. Understanding the dynamics of aging in Nepal requires a thorough examination of existing research, which sheds light on the health, socio-economic conditions, and social experiences of older adults in the country. This introduction aims to provide an overview of aging in Nepal, drawing upon key literature to establish the current state of knowledge.

The study of aging in Nepal has gained increasing attention in recent years, with researchers exploring various facets of the aging experience. Initial studies often focused on the health challenges faced by older Nepalese individuals, highlighting the prevalence of chronic diseases and the often-limited access to adequate healthcare services, particularly in rural regions (Gautam et al., 2010). Furthermore, the socio-economic vulnerabilities of the aging population, including issues of financial insecurity and reliance on family support, have been a significant area of inquiry (Adhikari & Chamlagain, 2011).

More recent research has delved into the intricate interplay between Nepal's unique socio-cultural fabric and the aging process. The pivotal role of family in providing care and support to older adults has been a recurring theme, with studies examining how modernization and migration patterns are influencing these traditional support systems (Acharya & Thapa, 2018; Khanal et al., 2019).

Additionally, specific aspects of well-being in later life, such as mental health and the experiences of marginalized groups within the older population, are beginning to receive greater scholarly attention (Kohli et al., 2015). These diverse research endeavors collectively contribute to a growing understanding of the complexities inherent in the aging experience in Nepal. By synthesizing the findings from these and other relevant studies, this introduction provides a foundation for a more in-depth exploration of the challenges, opportunities, and policy implications associated with an aging population in Nepal.

Nepal, a landlocked country in South Asia with a predominantly agricultural economy, is experiencing significant demographic shifts as its elderly population continues to grow. This article examines the current situation of elderly people in Nepal, the challenges they face, and the opportunities for improving their quality of life. As Nepal navigates through social, economic, and political transitions, understanding and addressing the needs of its aging population becomes increasingly important for sustainable development and social equity.

Nepal, a developing nation in South Asia, is experiencing a profound and accelerated demographic transition. Historically characterized by a youthful population and high fertility rates, the country is now witnessing a rapid increase in its elderly population. Data from the 2021 National Population and Housing Census indicates that the proportion of individuals aged 60 and above has reached 10.2 percent, a notable increase from 8.1 percent in 2011 (CBS, 2021). Projections suggest that Nepal is on track to become an "aging society" in the coming decades, with the elderly population continuing to grow at a significantly faster rate than the overall population (UNFPA Nepal, 2022; Chalise, 2024). This demographic shift is primarily attributed to a combination of factors: a significant decline in total fertility rates (now below replacement level), improvements in healthcare leading to increased life expectancy (currently around 71 years), and a growing trend of youth out-migration for employment abroad (Bista, 2024; Chalise, 2024; Acharya, 2025)

While a longer lifespan is generally considered a positive societal development, the swiftness of this demographic change presents a complex interplay of challenges and opportunities for Nepal. The traditional joint family system, which historically served as the primary social safety net and caregiver for the elderly, is increasingly under strain due to urbanization, nuclearization of families, and the absence of younger generations who have migrated for work (Khanal, 2024; Lamichhane, 2024). This evolving scenario necessitates a critical and comprehensive understanding of the current aging situation and the development of sustainable, proactive strategies to address the evolving needs of the older population.

Nepal's aging population presents significant challenges and opportunities. It is conduct a comprehensive literature review focusing on the country's aging trends, their implications for healthcare and social security, and the potential for older adults to contribute to society. The main objectives of this article are to analyze the current aging trend in Nepal and Aatharai Rural Municipality, providing an in-depth demographic analysis and to synthesize existing research on the key challenges faced by Nepal's aging population, including those related to health, social well-being, and economic security, and to identify potential opportunities.

## Methodology

This study adopts a multimethod /mixed-methods paradigm, grounded in pragmatism, to explore aging in Nepal by integrating both inductive insights from qualitative literature and deductive analysis of quantitative demographic trends. Employing a descriptive cross-sectional design, this research analyzes population-level data (e.g., census counts of individuals aged 60+ from 1971–2021) to quantify aging patterns, while concurrently conducting a narrative review of qualitative and policy literature to capture contextual socio-cultural dynamics. No sampling is needed for quantitative analysis, as comprehensive secondary datasets are used. Qualitative evidence is purposively selected from academic databases and institutional sources to ensure relevance to key themes such as health,

economic status, social support, and policy frameworks. The secondary data base includes publicly available sources like the Nepal census, WHO, UNFPA, peer-reviewed quantitative and qualitative studies, governmental policy documents, and credible grey literature (NGO, UN, central bank reports). Quantitative trends are interpreted using descriptive statistics—percent changes, ratios, and trend analysis—to illuminate shifts in the elderly demographic. Qualitative content is examined through thematic coding (e.g., healthcare access, social security, family dynamics) following narrative synthesis protocols, with triangulation across sources to enhance validity and depth.

## Results and Discussion

### Aging Trends in Nepal

Nepal's demographic landscape is evolving rapidly. The country has experienced significant changes in its elderly population over the past five decades, as evidenced by census data.

**Table: 1**

*Elderly Population in Nepal: Census Data (1971-2021)*

Census Year	Total Population	Population Aged 60+	Percentage of Population Aged 60+	Life Expectancy
1971	11, 555, 983	621, 597	5.4%	40.0 years
1981	15, 022, 839	857, 061	5.7%	45.6 years
1991	18, 491, 097	1, 071, 234	5.8%	54.3 years
2001	23, 151, 423	1, 504, 311	6.5%	62.1 years
2011	26, 494, 504	2, 154, 410	8.1%	66.6 years
2021	29, 192, 480	2, 481, 361	8.5%	71.0 year

*Source:* Central Bureau of Statistics, Nepal (2022); National Planning Commission (2022)

The analysis of demographic data consistently demonstrates Nepal's accelerating transition to an aging population. The proportion of the population aged 60 years and above has been steadily increasing. According to the Central Bureau of Statistics (2021), this demographic cohort reached (10.2%) in 2021, up from (8.1%) in 2011, and a mere (6.5%) in 2001 (Bista, 2024). This signifies a significant and rapid growth in the elderly population compared to the overall population growth.

### Several factors underpin this trend

**Declining Fertility Rates:** Nepal's total fertility rate (TFR) has fallen dramatically over the past few decades, now standing below the replacement level. This means fewer children are being born, leading to a shrinking younger cohort relative to the older population

(UNFPA Nepal, 2022; Chalise, 2024). This demographic dividend of a large working-age population is slowly diminishing, and the dependency ratio is shifting.

**Increased Life Expectancy:** Improvements in public health, nutrition, sanitation, and medical care have contributed to a significant increase in life expectancy at birth, now estimated to be around 71 years (WHO, 2022). More people are living longer, adding to the elderly population.

**Youth Out-Migration:** A substantial and growing number of young, working-age Nepalese are migrating abroad for employment. This selective out-migration reduces the proportion of the younger population within the country and further exacerbates the aging trend, particularly in rural areas (Lamichhane, 2024; Himal Doc, 2025). This creates a situation where elderly parents are left behind with limited family support, relying on remittances but often lacking direct care.

**Rural-Urban Disparities:** The aging trend is often more pronounced in rural and mountainous areas, where younger generations are more likely to migrate to urban centers or abroad, leaving behind an older, often economically vulnerable, population (Chalise, 2024). Urban areas, while also aging, tend to have a higher proportion of working-age adults.

This analysis underscores that Nepal is not merely experiencing an increase in life span but a fundamental shift in its population structure, which will have profound implications across all sectors.

### Situation ageing in Aatharai Rural Municipality

The analysis of official census data for Aatharai Rural Municipality unequivocally demonstrates significant demographic shifts, particularly regarding its ageing population, between the 2011 and 2021 census periods.

**Table 2**

*Population Distribution by Age Group, Aatharai Rural Municipality (2011 & 2021)*

Age Group	2011 (Pop.)	2011 (%)	2021 (Pop.)	2021 (%)
0-14 years	7, 389	33.98	4, 923	27.10
15-64 years	12, 889	59.27	11, 697	64.40
65+ years	1, 469	6.75	1, 536	8.46
Total Population	21, 747	100.00	18, 156	100.00

Source: CBS, 2011 & 2021

**Table 3***Ageing Population and Dependency Ratios in Aathrai Rural Municipality (2011-2021)*

<b>Indicator</b>	<b>2011</b>	<b>2021</b>	<b>Change (2011-2021)</b>
Total Population	21,747	18,156	-3,591
Population 65+ years	1,469	1,536	+67
Percentage of Pop. 65+ years	6.75%	8.46%	+1.71 percentage points
Old Age Dependency Ratio (OADR)	11.40	13.13	+1.73 points
Child Dependency Ratio (CDR)	57.32	42.09	-15.23 points
Total Dependency Ratio (TDR)	68.72	55.22	-13.50 points

*Source:* CBS, 2011&2021

The results clearly indicate a notable and significant shift in the age structure of Aathrai Rural Municipality between 2011 and 2021. The overall population experienced a substantial decrease of 3,591 individuals, representing a 16.5 percent decline over the decade. Despite this overall population shrinkage, the absolute number of individuals aged 65 years and above saw a modest increase of 67 persons, moving from 1,469 in 2011 to 1,536 in 2021. More crucially, the proportion of the elderly population (65+ years) within Aathrai's total population rose from 6.75 percent in 2011 to 8.46 percent in 2021, marking a significant increase of 1.71 percentage points.

Concurrently, the proportion of the child population (0-14 years) experienced a substantial decline, from 33.98 percent in 2011 to 27.10 percent in 2021. This reflects the impact of decreasing fertility rates. Conversely, the working-age population (15-64 years) saw an increase in its proportion, from 59.27 percent in 2011 to 64.40 percent in 2021, even though its absolute numbers decreased from 12,889 to 11,697 due to the overall population decline.

The old age dependency ratio (OADR) increased from 11.40 in 2011 to 13.13 in 2021. This indicates that for every 100 working-age individuals, the number of elderly dependents rose by 1.73. In contrast, the child dependency ratio (CDR) significantly decreased from 57.32 to 42.09, showcasing the strong impact of declining birth rates. While the total dependency ratio (TDR), encompassing both child and old-age dependents, showed an overall decrease from 68.72 to 55.22 (primarily driven by the substantial reduction in child dependency), the internal shift within the dependency structure, with increasing old-age dependency, remains the paramount finding regarding population ageing in Aathrai. This shift suggests a growing concentration of age-related needs among the older segment of the population.

## Major Challenges

The reviewed literature consistently highlights several significant challenges posed by Nepal's aging population:

**Healthcare Burden and Access:** Studies consistently point to an increasing burden of non-communicable diseases (NCDs) among the elderly, such as hypertension, diabetes, and cardiovascular diseases (Paudel et al., 2024). Nepal's healthcare system is frequently cited as ill-equipped to handle this growing demand for specialized geriatric care, long-term care services, and palliative care due to limited resources, a shortage of trained geriatric specialists, and inadequate infrastructure, particularly in rural areas (GBHI, 2025; Khanal, 2024). Affordability of healthcare, despite some free services, remains a significant barrier for many older adults, pushing them into poverty or deterring them from seeking necessary medical attention (Paudel et al., 2024).

**Weakening Social Security and Economic Insecurity:** The existing social security mechanisms, primarily the "old-age allowance" (also known as social security allowance), are frequently reviewed in the literature. While a crucial safety net, its sufficiency to cover basic needs is often debated, and its reach can be limited by administrative hurdles (Chalise & Dhungana, 2019; My Republica, 2025). A significant portion of the elderly, especially those engaged in the informal sector, lack formal pensions or adequate savings, leading to persistent economic vulnerability. This can force them to continue working in old age, often in physically demanding jobs, or to rely entirely on familial support, which is itself diminishing (Sharma & Poudel, 2023; HimalDoc, 2025).

**Erosion of Traditional Family Support Systems:** A pervasive theme in the literature is the weakening of the traditional joint family system, historically the primary provider of care and support for the elderly (Khanal, 2024). Factors such as rapid urbanization, the nuclearization of families, and high rates of youth out-migration for foreign employment have significantly strained this system. This often leaves older adults, particularly those in rural areas or living alone, vulnerable to social isolation, neglect, and a decline in their physical and mental well-being (Acharya, 2025; HimalDoc, 2025; Lamichhane, 2024).

**Social Isolation and Mental Health:** The breakdown of social networks, loss of spouses, and the absence of younger family members contribute significantly to social isolation among the elderly (Khanal, 2024). Research indicates a higher prevalence of mental health issues like depression, anxiety, and loneliness among older adults in Nepal, often exacerbated by a lack of access to mental health services and societal stigma (Acharya, 2025; Kathmandu Post, 2023).

\* **Lack of Age-Friendly Infrastructure and Services:** Literature points to the general lack of age-friendly public infrastructure, transportation, and community spaces. This poses significant challenges to the mobility and social participation of older adults, particularly those with physical disabilities or limited financial resources, further contributing to their isolation (IOE Graduate Conference, 2023; Medicus Mundi Schweiz, 2023).



## Aging Opportunities in Nepal

Despite the challenges, the literature also identifies several opportunities presented by Nepal's aging population:

**Leveraging the "Silver Dividend" and Economic Contributions:** Several studies suggest that older adults, if healthy and enabled, can continue to be significant economic contributors (Sharma & Poudel, 2023). Their vast experience, knowledge, and skills can be utilized in various sectors through flexible work arrangements, mentorship programs, and entrepreneurial initiatives (Scientific Research Publishing, 2023). This "silver dividend" can enhance productivity and fill labor gaps, particularly in specific skill areas.

**Growth of the Silver Economy:** The increasing number of older adults creates a burgeoning demand for specialized products and services tailored to their needs. This can stimulate the growth of a "silver economy," encompassing geriatric healthcare facilities, age-friendly housing, assistive technologies, specialized recreational activities, and even senior tourism (UNFPA Nepal, 2022). This emerging sector can create new employment opportunities and drive economic growth.

**Strengthening Intergenerational Solidarity and Knowledge Transfer:** The presence of a larger older population offers a unique opportunity to foster stronger intergenerational bonds. Programs that facilitate interaction, knowledge exchange, and cultural preservation between younger and older generations can enrich society and create a more cohesive community (UNFPA Nepal, 2022). Older adults can serve as repositories of traditional knowledge, history, and wisdom.

**Volunteerism and Community Engagement:** Healthy and active older adults represent a significant untapped resource for volunteerism and community service. Their time, experience, and willingness to contribute can be channeled into various social initiatives, contributing to local development, environmental protection, and community resilience (Chalise & Poudel, 2023).

**Advocacy and Policy Development:** The growing numerical strength of the elderly population can empower them as a collective voice, advocating for their rights and influencing policy decisions. This increased advocacy can lead to the development of more comprehensive, inclusive, and responsive policies and programs for older adults, ensuring their needs are adequately addressed at national and local levels.

## Conclusion

Nepal is experiencing a profound demographic shift, with population aging emerging as a defining trend, both nationally and in places like Aathrai Rural Municipality. This transformation brings with it evolving social and economic dynamics that require strategic attention. As traditional family structures change and fertility rates decline, communities are seeing a rise in the proportion of older adults, reshaping dependency patterns and creating



new challenges. Both the national and local contexts face mounting pressure to adapt. Health systems must become more responsive to the needs of an aging population, while social protection programs must be expanded and made more inclusive. The weakening of intergenerational support systems underscores the need for community-based responses and innovative care models.

At the same time, older adults possess valuable experience and potential that can benefit society if meaningfully engaged. Current policies lay some foundation, but they remain fragmented and under-resourced. A more integrated and inclusive approach is urgently needed—one that aligns national strategies with localized implementation. Aathrai's demographic evolution echoes the broader national picture and highlights the need for proactive planning, investment in elder care, and promotion of active, dignified aging. With coordinated efforts, aging can become an opportunity rather than a burden.

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