

Demographic situation of population ageing in Nepal

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Abstract

Advances in medical technology have led to increases in the life expectancy as well as increases in the number of older people, which makes population ageing an international priority in the 21st century. However, very little is known about the elderly in Nepal, one of the poorest countries of the world. Although the proportion of elderly is increasing both in absolute numbers and as a proportion of Nepal's total population, traditional family norms and values of supporting the elderly are eroding at an alarming rate. The objective of this paper is to illustrate population ageing in Nepal using census data, other reports for the purpose of further research and inquiry.

Key words: Population ageing, elderly, fertility, mortality, South Asia, Nepal

Nepal is a small landlocked Hindu Himalayan Kingdom sandwiched between India and China, the two demographic and spatial giants of the world. The landscape of that country is characterized by extreme diversity, with elevations ranging from 65 metres above sea level in the south to 8848 meters above sea level in the north, all within a distance of a slightly over 150,000 metres¹. The population is generally poor, and Nepal has limited communication and infrastructure. The gross national product per head of household is about \$220².

In Nepal, individuals over 60 years of age are considered elderly. According to the 2001 census³ of Nepal, there were 1.5 million elderly inhabitants, which constitute 6.5 percent of the total population in the country. During the years 1991-2001, the annual elderly population growth rate was 3.39 percent, higher than the annual population growth rate of 2.3 percent^{4,5}. Nepal has a high population growth rate and it is concurrently attempting to introduce population control programmes. These programmes have resulted in a lower birth rate which will subsequently result in an even greater proportion of elderly individuals⁶. Unfortunately, however, there is a dearth of specific initiatives to deal with the issues associated with aging at the international level⁷.

Since the International Plan of Action on Ageing⁸ was adopted by the United Nations (UN) in Vienna, Austria in 1982, concern for the study of the elderly has increased. Twenty years later, the Second World Assembly on Ageing⁹ was held in Madrid, Spain in 2002 and it outlined an action plan in the assembly at national and regional levels to increase awareness of ageing issues and develop concrete plans of action for ageing. However, advances have been few and far between in much of the developed world and virtually overlooked in developing countries like Nepal.

Demographic situation of population ageing in Nepal

Fertility, mortality and life expectancy are all closely related concepts. Control over unplanned pregnancies and early mortality has led to a greater chance that those new lives will live longer and thrive. In Nepal during the 1950s, life expectancy was quite low (about 27 years) due to a high infant mortality rate. However, a continuous decrease in the infant mortality rate has led to an increase in the stated life expectancy. Consequently, during the second half of 20th century, life expectancy in Nepal has increased from 27 to 60 years.

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Table 1: Declining fertility, mortality and increasing life expectancy

Year	TFR ^a	IMR ^b	CDR ^c	Life expectancy		Family size
				Male	Female	
1952/54	-	250-260 ^d	36.7	27.1	28.5	5.4
1961	-	-	27.0	37.0	39.9	5.3
1971	6.3	-	21.4	42.1	40.0	5.5
1981	6.3	117.0	13.5	50.9	48.1	5.8
1991	5.6	97.0	13.3	55.0	53.5	5.6
2001	4.1	64.4	9.6	60.8	61.0	5.4

Source: Central Bureau of Statistics^{3,4,5}

^aTFR: Total Fertility Rate, ^bIMR: Infant Mortality Rate, ^cCDR: Crude Deate Rate

^dFor female 250 and for male 260 per thousand live births.

Conventionally, there are two mechanisms to population ageing - 1) aging at the base and 2) aging at the apex. Ageing at the base results from a decrease in fertility; and then subsequently, by reducing mortality among the elderly. According to Ogawa¹¹, the main cause of population ageing in Asian countries is a decline in fertility rather than a decrease in mortality. However, if the trend of mortality improvement continues in these countries, mortality at advanced ages will fall substantially in the future. In that respect, mortality improvement contributes significantly to population ageing¹⁰. In Nepal, fertility decline and mortality improvement of the elderly are both relatively recent developments.

Internationally, Nepal is recognized as an exceptional country where men live longer than women¹¹. Nutritional deprivation, access to medical care, socio-cultural values and norms, and a male child preference are all possible reasons for this switch from the female superiority in life expectancy.

Situation of population ageing in the South Asia

Table 2 shows the situation of population ageing in the Southern Asian countries using the projected data of the UN¹² and Population Reference Bureau¹³. The table shows infant mortality lowest in Sri Lanka and highest in the Afghanistan. Similarly, life expectancy at birth (e_0^0) and other indicators of ageing like the proportion of population 60 years and above, median age, index of aging, etc. are highest in Sri Lanka and lowest in Afghanistan. These parameters are intermediate for all other countries. In all southern Asian countries the growth rate of the population aged 60 and above exceeds that of the population total¹⁴. Projections indicate a pronounced increase in the elderly population in the coming decades to follow. The elderly in South Asian countries face many problems such as insolvency, loss of authority, social insecurity, insufficient recreational facilities, a lack of overall physical and mental care, problems associated with living armaments¹⁴ and many others.

Table 2: Situation of population ageing in the South Asia in 2000

Country	60 years & above population %	Dependency Ratio	IMR	e_0^0	Median Age	Index of ageing	
						2000	2025
Afghanistan	4.7	18.9	172	42	18.1	10.9	12.9
Bangladesh	4.9	18.6	65	61	20.2	12.8	29.8
Bhutan	6.5	12.5	61	63	18.4	15.2	19.6
India	7.6	12.4	60	62	23.7	22.7	53.6
Maldives	5.3	15.0	18	72	17.7	12.1	16.9
Nepal	5.9	14.8	64	62	19.4	14.4	21.4
Pakistan	5.8	14.8	85	62	18.9	13.8	21.1
Sri Lanka	9.3	10.8	11	73	27.8	35.3	90.2

Source: United Nations¹² & Population Reference Bureau¹³.

Population pyramids of Nepal

Population pyramids are generally a good way to depict the age and gender distribution of a population. Two population pyramids from 1981 and 2001 show the age structure of the population at those times. As mentioned earlier, the base population has begun to shrink due to reduced infant mortality and a decline in TFR in the last two decades. Demographic changes have implications for changes in family and household structure. Analyzing the most recent

censuses in Nepal, average household size decreased from 5.8 in 1981 to 5.6 in 1991 to 5.4 in 2001. This decrease in family size has occurred concurrently with, and in large part due to, an increase in life expectancy. However, research conducted in other countries shows conflicting results: that household size increases with an increase in the life expectancy¹⁵. Further research is needed to determine why the difference exists.

Figure 1: Population Pyramid of Nepal 1981

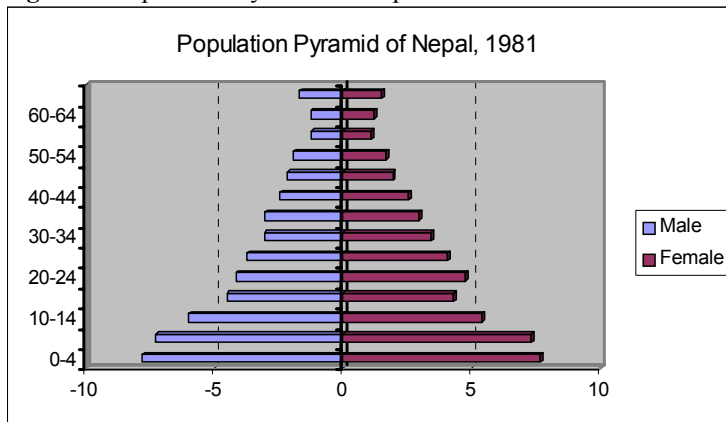
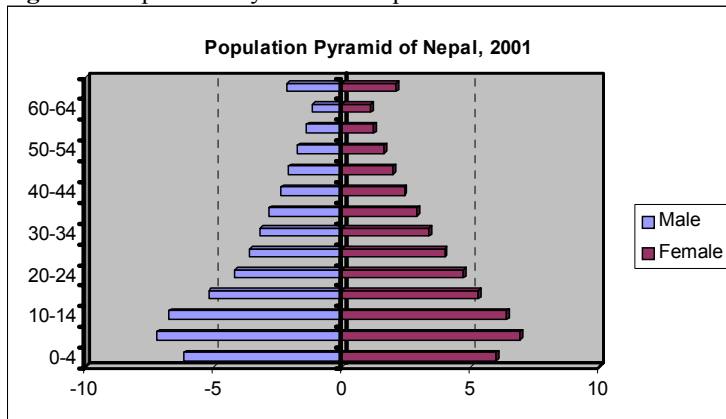


Figure 2: Population Pyramid of Nepal 2001



Index of Ageing and Median Age of the population

Demographers use the “Index of Ageing” and “Median Age” of the population as indicators of population aging. Based on these criteria, a population may be described as ‘young’ if the Index of Ageing is under 15 percent and ‘old’ if its value is over 30 percent. Similarly, a population may be described as young, intermediate or old if the median age is under 20, between 20 and 29 or over 30 years¹⁶.

From Table 3, it is clear that both the Index of Ageing and Median Age are increasing in Nepal. The population of Nepal is moving slowly from a young population to an old population. The increase in the Index of Ageing as well as the Median Age is noteworthy between the 1991 and 2001 censuses. During that time, those criteria increased substantially due to reduced fertility rates and a decline in mortality.

Table 3: Index of Ageing and Median Age of the Population

Census Year	Male	Index of Aging		Median Age		Total
		Female	Male	Male	Female	
1971	13.20	14.75	13.86	19.80	20.70	20.30
1981	14.08	13.51	13.81	19.50	20.30	19.90
1991	13.56	13.80	13.58	18.41	19.40	18.92
2001	16.32	16.70	16.51	19.71	20.47	20.08

Source: Central Bureau of Statistics^{3,4,5}

Elderly population growth

Table 4 shows the total population of the elderly, the proportion of the elderly in the total population and the growth rates of those figures. A comparison of the size and growth rate of the elderly population with the national population suggests that both have been rising for the past 5 decades. The total population of the country (not shown here) has increased by 180 percent while the total elderly population has increased by 267 percent from 1952/1954 to 2001. From the following table, the growth rate of the elderly is always higher than that of the total population. If this elderly population growth rate continues at the current rate, the population of the elderly will double in 20 years- population doubling

is calculated on the basis of $\ln 2$ / population growth rate. Moreover, due to the possibility of a further decline in fertility rate, the elderly population in the future would appear to increase at an even quicker pace and the proportion of elderly will actually double in less than 20 years.

Table 4 further presents the proportion of elderly living in urban and rural areas. Like other Asian countries, many of the elderly in Nepal are living in rural rather than urban areas, both in terms of size and proportion. Most likely, this is due to a high rate of migration of working-aged adults from rural to urban areas seeking better jobs and higher pay.

Table 4: Population growth rate and elderly population growth rate

Year	Elderly Population	Population growth rate		Percent of elderly (60+)		
		Total (%)	Elderly (%)	Rural	Urban	Total
1952/54	409,761	-	-	-	-	5.00
1961	489,346	1.65	1.79	5.22	5.23	5.20
1971	621,597	2.07	2.42	5.63	5.12	5.40
1981	857,061	2.66	3.26	5.74	5.11	5.70
1991	1,071,234	2.10	2.26	5.95	4.99	5.80
2001	1,504,311§	2.24	3.40	6.60	5.70	6.50

Source: Central Bureau of Statistics^{3,4,5}

§Estimated from the adjusted total population of 23,151,423 of the 2001 census

Gender composition of Nepalese elderly

Generally, a sex ratio is used to measure the gender composition of a population. Sex ratio refers to the number of males per 100 females. Table 5 shows the sex composition of the Nepalese elderly for three different decades. The previous three censuses (1952/54, 1961, and 1971) show the dominance of women in Nepal's elderly population; however, in the

latter three censuses (1981, 1991, and 2001), a majority of males is evident. There is also quite a different composition of the elderly population in urban compared to rural areas. In urban areas, there is a dominance of women; however, a dominance of men is seen in rural areas at every age category before 75 years.

Table 5: Sex ratio of elderly in Nepal in different census

Year	60+	60-64	Age Group		75+
			65-69	70-74	
1952/54	80.2				
1961	83.3				
1971	92.1				
1981	111.1				
1991	102.7				
2001	101.7	101	103	107	96
2001 Urban	93.8	99	94	96	84
2001 Rural	102.8	102	104	109	98

Source: Central Bureau of Statistics^{4,5}

Marital status of the elderly

The marital status of the elderly is an important indicator of their residence, their support systems, and, importantly, their individual well-being. The elderly that are still married tend to a more rapid recovery from illness, better mental health, utilize more health promoting services, socialize more, and are generally more satisfied with life than those elderly without a partner¹⁷.

Table 6 shows the marital status of Nepalese elderly in each census. In each year, there are higher numbers of married elderly males compared to married elderly females. In 1961, only 73.17% male and 32.13% females were married, which increased to 88.3% for male and 71.7% for females. The lower proportion of married elderly women may be due to society's strict prohibition of widow remarriage. This prohibition is in addition to and exacerbated by the male tendency of marrying a younger woman. In Nepalese culture, widower remarriage is accepted¹⁸.

Table 6: Marital status of the elderly in different censuses

Marital Status		1961	1971	1981	1991	2001
Married	Male	73.17	78.95	80.82	79.39	88.30
	Female	32.13	44.38	61.04	49.17	71.70
Never Married	Male	0.98	1.07	7.83	1.29	1.40
	Female	0.45	0.62	6.24	0.89	1.20
Widowed	Male	24.50	19.68	10.92	18.24	9.40 ^a
	Female	65.73	54.65	32.07	47.54	25.10 ^a
Divorced / Separated	Male	0.39	0.30	0.43	0.56	-
	Female	0.24	0.36	0.65	1.05	-

Source: Central Bureau of Statistics^{4,5}

^aData includes divorced and separated

The proportion of never married elderly in Nepal is low, possibly due to the prevalent universal marriage system in the society. Many parents in the society believe they are responsible for the marriage of their offspring. Arranged marriages are fairly common in Nepal, but customs are changing

Living arrangements of the elderly in Nepal

Studies show that the concept of joint family may provide some guarantee that elderly parents will receive support from their adult children. However, several other studies show that joint family may not provide sufficient support for all needs^{19, 20}.

Social, economic and demographic developments have all caused changes at the individual, family and societal levels, all of which influence the lives of elderly people²¹. The living arrangement of the elderly in Nepal is contingent on their level of support. In particular, the availability of care from a spouse or child may be essential to the well-being of the very old or frail elderly. The elderly depend on their children, particularly sons, for support and

security in their old age. The government provides 150 Rupees (Rs.) per month to individuals that are at least 75 years of age. But in case of the widows, that allowance is applicable after the age of 60.

From the 2001 census, each individual's living arrangement is calculated indirectly from the question: What is your relation to the Head of the Household? Possible answers are the: 1. Head, 2. Spouse, 3. Son/Daughter, 4. Daughter-in-law, 5. Parent, or 6. Other. Based on this question, the living arrangement of the elderly is: (a) co-residing with children in which the elderly are head of the household, (b) co-residing with children in which children are head of the household, (c) co-residing with spouse in which spouses are head of the household, (d) co-residing with married daughters in which sons-in-law are head of the household, (e) co-residing with another relative in which the elderly are head of the household, and (f) co-residing with others (relatives and non-relatives) in which others are head of the household²².

Table 7: Living arrangement of Nepalese elderly

Head of household (HH)	Rural (%)			Urban (%)			Total (%)		
	60-74	≤75	Total	60-74	≤75	Total	60-74	≤75	Total
Living with children and still HH	38.0	23.3	35.1	40.0	27.3	37.6	38.3	23.9	35.4
Living with children who are HH	23.6	44.5	27.8	20.7	40.8	25.2	23.3	44.0	27.4
Living with spouse (with or without children) and is still HH	19.5	6.8	17.0	18.9	6.5	16.2	19.5	6.8	16.9
Living with daughter (the son-in-law is HH)	2.1	4.7	2.6	2.4	5.3	3.0	2.2	4.8	2.7
Living with others and still HH	13.3	15.0	13.6	12.3	13.5	12.6	13.2	14.7	13.5
Living with others who are HH	3.5	5.7	3.9	5.2	6.6	5.4	3.5	5.8	4.1

Source: Chaudhary²²

Generally, in the male-dominated Nepalese society, the eldest male member of the household is regarded as head of the household. The head of the household is the authority in the household. However, the 2001 census data classified heads of households as the person who is responsible for managing and looking after all household activities⁴.

From Table 7, more than 65 percent of the elderly are living as the head of a household. Similar numbers of elderly are the heads of households in both rural and urban settings. However, the elderly are less likely to head a household as their age increases.

Further analyzing the living arrangements of the elderly, more than 62 percent are living with their sons and only 2.7 percent are living with their daughters. The elderly who are living with their spouse, either with or without children is 16.9 percent and the number of elderly living with others is greater than 15 percent. Details of the living arrangements of those living with others are beyond the scope of this paper; however, comparing the elderly living with daughters in the age group 60-74 to 75+, the percentage of elderly over 75 years is more than twice that in the age group 60-74. This figure is

indicative of the change occurring in Nepal from a time when older parents did not live with their daughters. Moreover, one fifth (20.5 %) of the elderly who are older than 75 years are living with others – either relatives or non-relatives – whereas, in the 60-74 age group, the number is one sixth (16.7 %).

Pensions and other allowances

For older adults, a pension means security. Pensions are safe income for the remainder of life after retirement. Nepalese government provides pensions for government employees. It is provided to civil servants, military personnel, police officers and teachers. The retirement age is currently 58 for civil servants. However, in universities, the age of retirement for teachers and administrator is 63 and for the lower ranks of military and police officers, it is 46 to 48.

Table 8 shows the total number of pensioners from each sector. The highest number of pension recipients is former security personnel (military & police) followed by civil servants. The elderly use such a pension for daily living, medical supplies and religious work²³. Only a few individuals (less than 7 per cent) benefit from this pension system.

Table 8: Pensioners in each sector

Sector		Month and year	Pensioners
Civil servants		Jul – 03	28,542
Police personnel		Jul – 02	20,497
Army	Personnel	Jul – 02	30,166
	Family	Jul – 02	6,198
School teachers		Jul – 03	8,334
Tribhuvan University		Jul – 03	1,200
Constitutional bodies		Jul – 02	107
Palace and others		Jul – 02	448
Banks	Nepal Rastra Bank	Jul – 03	1,707
	Rastriya Banijya Bank	Jul – 03	630
Corporation	Nepal Electricity	Jul – 03	1,332
	Nepal Telecom	Jul – 03	558

Source: Shrestha and Satyal²³

In 1995, the government of Nepal introduced a new scheme for people over 75 years of age in five districts. The scheme was extended to cover the whole country in fiscal year 1995/1996: the amount paid to each beneficiary was 100 Rupees/month. The amount was increased to 150 Rupees in 1999²⁴. The programme also provides for widows over 60 years

of age and disabled individuals over 16 years of age. Small, regular payments to older people can improve their health and social standing²⁵. Although the amount paid to the elderly over 75 and to widows over 60 is small, it is a popular policy among Nepalese elderly. In total, more than 400,000 elderly citizens benefit from this scheme²³.

Discussion

The advances in medical knowledge may have led to an increase in life expectancy and increases in the number of older people in society. The rapid increase in the number of older people in the population raises various social, economic and health concerns. Developing countries will face the challenge of their own development concurrently with the aging of their societies²⁶.

The increase in the proportion and number of elderly is not matched by any corresponding increase in support measures either through formal channels – pension/ health plans - or informal channels -, socioeconomic security measures or the provision of subsidies for health care, home help or any other form of nursing care. Traditionally, Nepal's pension plan is the only system of social security for older people. However the pension coverage is limited. The elderly are then forced to be dependent upon family support.

As in other Asian countries, the responsibility of welfare for the elderly lies with their own children and the government has little obligation to provide care for the elderly in Nepal¹⁸. However, due to recent socio-economic changes, aging of the population in that country is emerging as a problem that demands consideration before it destroys that society.

Existing provisions for the protection and advancement of senior citizens, however, falls far short of their rapidly growing needs. Not only is social security weak, the rights of the elderly have not yet received as much attention as other groups. The elderly are thus one of the most neglected groups in Nepalese society.

Hopefully, this brief introduction to the plight of elderly in Nepal motivates some of the younger generations to act, promote legislation, support, and no longer neglect their elders that have given them so much.

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