

Patterns of Population Ageing in Kamrup (M) District, Assam: A Spatio-Temporal Analysis

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1. Abstract: The proportion of population having 60 years and above is increasing day by day which collectively termed as “Ageing”. Nearly 961 million of them have been found in the entire world that contributes 12.3% in 2015 and projected to reach at 21.5% in 2050 onwards. It has been continuing in respect of all developed as well as developing countries. It may result in the consequences of declining mortality with higher expectation of life at birth. The Kamrup (M) District has also witnessed this issue with a gradual trend of increasing that poses an upcoming serious threat of concern with challenges faced by elderly. For more convenient, the findings of the paper has extracted in the contexts of trend, growth, pattern as well as in the socio-economic composition of the elderly population as well. This attempt has been prepared on the basis of census data of the year 1991 to 2011.

Keywords: Ageing, Trend, Growth, Socio-economic.

2. Introduction: In general, one can term the world as “greying” as the coverage of larger number of aged population is increasing door by door. The drastic change in fertility and mortality leads to increase the number of aged population which can be collectively termed as ageing. Ageing is a biological phenomenon of the cycle of human life by which everyone is affected. It is the consequences of the declining of the mortality rate due to the efficient medical facilities as well as the improvement of the expectation of having longer life as well. Expectancy of long life is now being a common characteristic of population. The economically developed countries have already fascinated with this issue emitted from ageing which is increasing slowly in developing countries like India also. Currently there are 961 million of 60+ populations worldwide, which contributes 12.3% of the global population in 2015 and it is expected to reach 21.5% by 2050. Being a developing country, India has also started witnessing a similar trend of

ageing in recent time. As a matter of fact, expectancy of life has also increased from 49 years in 1970-75 to 67 years in 2009-13 and is also reflected the proportion of aged in the country from 5.9% in 1971 to 8.6% in 2011 respectively. So far the state of Assam is concerned, although it is lagging behind in terms of ageing with 4.71% in 1971, 6.70% in 2011 witnesses a slow and steady rise of ageing. The picture is almost the same in the case of Kamrup (M) District, where about one-fourth of population lives in the urban areas including the capital city of Guwahati with higher and increasing rate of elderly people in terms of ageing contexts as compared to the rural. Such situation is considered as one of the most distinctive demographic events of the 20th century at varying level of intensity at different points of time. With referencing this emerging issues, the present paper has been made at aiming to explore the recent trend of elderly composition in different points with their influences in the progressive development of the society at present.

3. Objectives: The main objectives of the study are to find out the trend and pattern of ageing in spatio-temporal contexts with their rural-urban and male-female variation also in the district. The study has also aimed to examine the influences of ageing as well as the challenges faced by elderly and the strategies adopted by them to cope with this changing norms of life in recent time.

4. Methodology: The present paper has been prepared based on secondary data collected from census board, Govt. of India, particularly for 1991, 2001 and 2011. The theoretical framework has been developed through the reviews related to the concern topic in the form of edited books, journals, earlier research work and others made in the area.. All collected data has been finalised and organized in a tabular form and based on this, various graphs have been used to portray the findings.

5. Study Area: The present Kamrup (Metro) district of Assam was carved out from erstwhile Kamrup district on 3rd February, 2001. It is one of the new district along with Guwahati city that comes under the jurisdiction of the Dispur State capital. It is situated on the southern bank of the mighty Brahmaputra lying in between 26° 0' to 26° 15' N Latitude and 91° 30' E to 92° 15' E

longitude. The district has six revenue circles with a total area of 955 sq.km. The gateway of Assam i.e, Guwahati city is the only sub-division of the district. The entire district is bounded by Kamrup (R) and Darang in the North, Meghalaya in the south, Morigaon district in the east anKamrup (R) district on the west respectively.

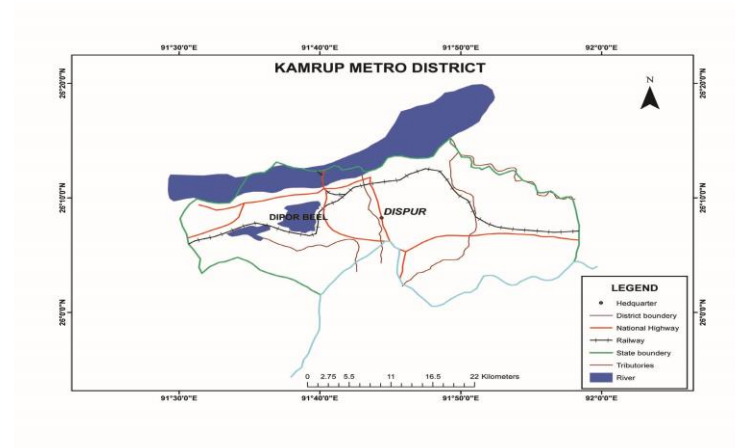


Fig. 1: Location Map

6. Result and Discussion:

6.1: Trend and Spatial Pattern of Ageing: Kamrup (M) district occupies 1.21% of the total area of Assam and accounts 1.02% of population to total Assam's population (2011 census). Like its development experience, the spectacular performance in demographic indicators has received the global attention to the district due to the improvement of medical facilities, improvement in science and technology etc. helps to reduce the rates of infant and maternal mortality and helps to raising the life expectancy rate of the people. One of the direct consequences of this trend is population ageing. The following table shows the trend of ageing in respect of 1991-2011 that shows that their proportion is increasing year by year and assumed to reach up to 7.04% in 2021 positively.

Table 1: Trend and Spatial Pattern of Ageing in the study area, 1991-2011

Spatial Contexts	% of 60+ Population			
	1991	2001	2011	*2021
India	6.75	6.91	8.55	10.27
Assam	7.55	5.90	6.64	7.58
Kamrup (M) district	4.80*	5.70*	6.75	7.04

*Undivided Kamrup district for 1991 & 2001

Source: Census of India, 1991-2011

With a proportion of 6.75%, India has increasing contribution in the contexts of ageing that reaches to 8.55% in 2011 and projected to reach at 10.27% and this similar picture is found in contexts both Assam and the Kamrup (M) district respectively with slight rural-urban and male-female variation. As Kamrup (M) district is carved out from the erstwhile Kamrup district in 2001, therefore census data has provided for the same thereafter. The changing scenario in demography of ageing indicates that the expectancy of people of having longer life is increasing up to 69 years on an average. This may caused as one-fourth of population lives in the urban areas including the capital city Guwahati where the district experiences spectacular development regarding medical improvement as well as the science and technological development

6.2: Rural-Urban and Male-Female variation in ageing: The distribution of elderly remains not uniform irrespective of gender and places. The study area comprises with higher rate of urban elderly along with higher male than the female portion (Table 2). It indicates the efficient and quick facilities of health care institution leading to lower the death rate of aged which is somewhere in rural areas are lagging behind in this context. The live of urban elders are

supposed to be better with standard quality of adjustment than the rural counterparts and therefore elderly proportion is in favour of urban contexts.

Table 2: Ageing Pattern in Gender Perspective in rural-urban contexts, 2011

Spatial Contexts	% of 60+ Population								
	TM	RM	UM	TF	RF	UF	TT	TR	TU
India	8.19	8.41	7.71	8.98	9.18	8.52	8.55	8.79	8.70
Assam	6.61	6.46	7.54	6.70	6.57	7.50	6.64	6.51	7.52
Kamrup (M) district	7.33	6.36	7.53	6.61	6.35	6.67	6.75	6.36	7.11

*TM= Total Male, *RM= Rural Male, *UM= Urban Male, *TF= Total Female, RF= Rural Female, *UF= Urban Female, TT= Total Total, TR= Total Rural, TU= Total Urban.

Source: Census of India, 2011

From gender perspective, the area experiences the lower proportion of female elderly particularly with widow/widower marital status (27.80%) in the study area. Among all contexts, their number has found with a similar trend of positive growth in urban female though lots of challenges may arise day by day.

6.3: Trend of Sex Ratio among elderly in relation to Younger population: If we compared their proportion to younger population in respect to sex, the study area shows great significance with increasing rate of it (Table: 3).

Table 3: Trend of Sex Ratio in different Age-Groups, 1991-2011

Spatial Contexts	1991			2001			2011		
	0-14	15-59	60+	0-14	15-59	60+	0-14	15-59	60+
India	931	787	930	865	931	1022	916	944	1033
Assam	968	901	462	956	919	949	959	955	970
Kamrup (M) District	983*	820*	845*	955*	868*	953*	955	938	944

*Undivided Kamrup district for 1991 & 2001

Source: Census of India, 1991-2011

Beginning from India, the sex ratio has found in increasing trend also in context of Assam and Kamrup (M) district. The study area has witnessed the gradual growth of sex ratio in favour of children (0-14 years) and older stage (60+) as compared to working age (15-59 years) groups. The larger gender gap in life expectancy may lead to this situation over the area as a whole.

6.4: Age-specific composition of Elderly Population: The structure of elderly is not uniform not only its total distribution but also in respect of different age-groups that are further categorised as younger-old (60-69 years), old-old (70-79 years) , oldest old (80+) respectively.

Table 4: Trend of changing proportion of elderly in different age-groups, 1991-2011

Spatial Contexts	Year	Proportion of 60+ Population (%)				
		60-64	65-69	70-74	75-79	80+
Kamrup (M) District	1991*	2.01	1.00	0.90	0.40	0.60
	2001*	2.20	1.50	1.00	0.50	0.61
	2011	2.77	1.51	1.19	0.62	0.68

*Undivided Kamrup District for 1991 & 2001

Source: Census of India, 1991-2011

With slight improvement, the elderly into different age-groups shares a clear view of increasing out of which, youngest-old groups remains high during successive years also. The changes in demographic transitional pattern over the district give lighting on a trend of ageing.

6.5: Trend of Growth of Old-Age people in relation to total population: The increasing growth rate of elderly population shows the development and progress of their characters. In the

study area, growth trend shows 4.06%, 2.06%, and 3.06% as compared to 2.35%, 0.97%, and 1.66% respectively during 1991-2011 (Table 5).

Table 5: Annual Growth Rate of 60+ Population to total Population, 1991-2011

Spatial Context	Annual Growth rate (%)					
	1991-2001		2001-2011		1991-2011	
	Total Population	60+ Population	Total Population	60+ Population	Total Population	60+ Population
India	2.06	2.23	1.63	3.92	1.85	3.02
Kamrup (M) District	2.35	4.06	0.97	2.06	1.66	3.06

Source: Census of India, 1991-2011

Due to the improvement of medical facilities as well as adopting family planning, the growth rate of total population is declining year by year as the birth rate is low that needs more attention as like as ageing challenges and prospects over the area. Under the impact of urbanization, the growing of nuclear family has become the norm in present time that affected the family support system of elderly (Goyal, 2000) and gradually it leads to decline of performing social and familial roles in respect of elderly population. Eventually, the average household size is declining whether the number of aged arose across the world.

Table 6: Changing Pattern of average Household size and proportion of elderly, 1991-2011

Spatial Contexts	Average Household Size			% of 60+ Population		
	1991	2001	2011	1991	2001	2011
India	6.50	5.83	4.80	6.75	6.91	8.55
Assam	6.29	5.42	4.90	7.55	5.90	6.64
Kamrup (M) District	6.90*	5.13*	4.30	4.80*	5.70*	6.75

*Undivided Kamrup district for 1991 & 2001

Source: Census of India, 1991-2011

Traditionally, the extended or joint family system has considered as the basic support for elderly but due to changing structure of it, there are absences of care and support forms of elderly particularly for those who are alone in terms of marital status. The above table shows that in due courses of time, the study area has also witnessed a declining rate of household size as a result of changing family types though proportion of elderly be increasing at alarming rate (Table 6).

6.7: Ageing Index and Old-age Dependency ratio: With modernization of society, the adopting nature of family planning etc. has ultimately influenced on the fertility growth as thereby the proportion of children (below 15 years) is slowly decreasing while proportion of aged population is leading with faster growth rate. As a matter of fact, the proportion of ageing index as well as the old-age dependency ratio becomes more in recent time across the world. (Table 7 & Table 8).

Table 7: Trend of Ageing Index of the area, 1991-2011

Spatial Contexts	% of Ageing Index		
	1991	2001	2011
India	18.15	21.10	27.89
Assam	18.77	15.65	20.28
Kamrup (M) District	12.98*	17.19*	29.78

*Undivided Kamrup district for 1991 & 2001

Source: Census of India, 1991-2011

Table 8: Trend of Old-Age Dependency Ratio of the area, 1991-2011

Spatial Contexts	% of Ageing Index		
	1991	2001	2011
India	12.19	13.08	16.52
Assam	13.95	10.33	11.02
Kamrup (M) District	8.32*	9.27*	10.07

*Undivided Kamrup district for 1991 & 2001

Source: Census of India, 1991-2012

As old-age dependency is measured as a ratio in between the 60+ population and the working age-group (15 years to 59 years) population that are used to assess the economic consequences of population ageing. The study area is also deals with the similar situation of increasing rate in contexts of these convenient indices of measuring ageing. It has great impacted on a broad range of socio-economic, psychological contexts with shifting in age structure and gradually it leads to diminished the ethical values from the society as older has treated as a burden for family. The tendency to increase the dependency burden on working age groups reveals throughout the year. The absence of ethics related to older has now started to decrease among the people that reschedule it as challenges of ageing. The combination of all these aspects reveals the upcoming threat of elderly population as being an isolated part from the mainstream of populace. People started to behave the elderly as like a burden for them. The coping capacity of elder with the present generation is in miserable situation that resulting in abuse of elderly in both inside and outside of family. In this context, introducing of old age homes for the welfare of elders should be given priority.

Conclusion: Old age is the last part of our biological life cycle. We born grow and at time surely to die. No one can deny of getting old as per the nature's demand. Old age is a most difficult part of life. At time, older wants to be happy from all sides and it should be our duty to make their life as convenient as we can. Though their proportion has been increasing year by year, but it does not mean that we treat them unwell and force them to think themselves as secluded, separated and rendered powerless as well.

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