

# Demographic and Socio-Economic Study of the Elderly Population in Kolkata, India

Ambika Roy Bardhan

**Abstract**—Kolkata, the City of Joy, is a greying metropolis not only in respect of its concrete jungle but also because of the largest population of 60-plus residents that it shelters among all other cities in India. Declining birth and death rates and a negative growth of population indicate that the city has reached the last stage of demographic transition. Thus, the obvious consequence has been the ageing of its population. With this background, the present paper attempts to study the demographic and socio-economic status of the elderly population in Kolkata. Analysis and findings have been based on secondary data obtained from Census of India of various years, Sample Registration System Reports and reports by HelpAge India. Findings show that the elderly population is increasing continuously. With respect to gender, the male elderly outnumber the female elderly population. The percentage of households having one elderly member is more in the city due to the emergence of the nuclear families and erosion of joint family system. With respect to socio-economic status, those elderly who are the heads of the family are lower in percentages than those in the other age groups. Also, male elderly as head of the family are greater in percentage than female elderly. Elderly in the category of currently married records the highest percentage followed by widowed, never married and lastly, separated or divorced. Male elderly outnumber the female elderly as currently married, while female elderly outnumber the male elderly in the category of widowed. In terms of living status, the percentage of elderly who are living alone is highest in Kolkata and the reason for staying alone as no support from children also happens to be highest in this city. The literacy rate and higher level of education is higher among the male than female elderly. Higher percentages of female elderly have been found to be with disability. Disability in movement and multiple disabilities have been found to be more common among the elderly population in Kolkata. Percentages of male literate pensioners are highest than other categories. Also, in terms of levels of education male elderly who are graduate and above other than technical degree are the highest receivers of pension. Also, in terms of working status, elderly as non-workers are higher in percentages with the population of elderly females outnumbering the males. The old age dependency ratio in the city is increasing continuously and the ratio is higher among females than male. Thus, it can be stated that Kolkata is witnessing continuous and rapid ageing of its population. Increasing dependency ratio is likely to create pressure on the working population, available civic, social and health amenities. This requires intervention in the form of planning, formulation and implementation of laws, policies, programs and measures to safeguard and improve the conditions of the elderly in Kolkata.

**Keywords**—Demographic, Elderly, Population, Socio-economic

## I. INTRODUCTION

KOLKATA, located in the eastern part of India, this 300-year-old city spreading linearly along the banks of the

river Hooghly, has witnessed great development over the centuries. Kolkata still retains many of its former attributes as the first major city of India – the enormous size of its population, its volume of trade and commerce, the diversified avenues of employment that it offers, the assortment of its inhabitants speaking diverse languages that give it a cosmopolitan character, and its sustained importance of being the center of art and culture. Such favorable factors have always helped the city to develop and grow. With time, the city being several hundred years old is now witnessing the greying of its population. Demographic transitions, social conditions and the political environment of the last few years are the important reasons for the changing views of the concept of ageing that is a complex and fascinating process. It is complex because it has many facets -physiological, emotional, cognitive, economic and interpersonal influence our social functioning and well-being. It is also fascinating because the changes and their meanings are socio-culturally locally applicable, and thus they occur differently in each one of us [3]. Thus, a look into the situation prevalent in the city becomes important. This paper deals with the demographic and socio-economic indicators that are related to the ageing of the population of Kolkata. City of Kolkata encompasses the area under the jurisdiction of the Kolkata Municipal Corporation (KMC) which is the area covered by the Kolkata Police. It consists of 144 wards covering an area of 200.71 km<sup>2</sup>. The area of Kolkata district is the area under KMC as considered by Census of India, but for administrative purposes sometimes the area of Kolkata district includes the area under KMC and some adjacent areas as well. Since only census data has been used in the present study, the area of Kolkata district has been considered as the area of the Kolkata city (area under KMC).

## II. OBJECTIVES

The main focus of this paper will be to highlight the status of elderly population in Kolkata with respect to:

1. Demographic indicators such as decadal variations in population, birth rate, death rate, population change, population composition, age composition, growth of elderly population and numbers of elderly per household.
2. Socio-economic indicators such as head of the households, marital status, living status, literacy rate, levels of education of the elderly, types of disability of the elderly, working status, pensioners by educational level and old age dependency ratio.

Ambika Roy Bardhan is with Jadavpur University, India (e-mail: ambika.roybardhan@gmail.com).

### III. DATA SOURCES

This paper is mainly based on secondary data obtained from the Census of India for various years, SRS (Sample Registration System) Reports and reports by HelpAge India.

### IV. ANALYSIS AND FINDINGS

#### A. Demographic Conditions in Kolkata relating to the Elderly Population

Kolkata was the first major city developed by the British East India Company in the early 1700s [5]. The East India Company built their first fortified construction, Fort William, to protect them from the other colonial aspirants. It was around this fortified structure that the city of Kolkata grew and nurtured itself. It was a garrison town first, then the Company's town, next a provincial city, and later the headquarters of the British India government [4]. This augmented the level of importance for the city and helped in significant growth in its size over the years. Eventually change in size of its population has also taken place which is now ageing with time.

In order to understand the demographic conditions prevalent in Kolkata relating to the ageing of its population decadal variation of population, size, growth, composition and nature of elderly population by age and sex have been studied subsequently.

#### 1. Decadal Variations in Population of Kolkata

Fig. 1 shows that there has been an increase in population of Kolkata since 1901 till 1981, with the exception of 1921, which is the 'Great Divide' year when the whole country experienced negative growth rate due to high mortality caused by epidemics, influenza, famines etc. Kolkata experienced a sharp increase in its population during 1941 because of a high rate of influx of migrants from Bangladesh. However interestingly, Kolkata experienced negative growth of the population in 2011 which clearly reveals that it has reached the last phase of demographic transition characterized by low birth and death rates, increasing life expectancy and ageing of its population.

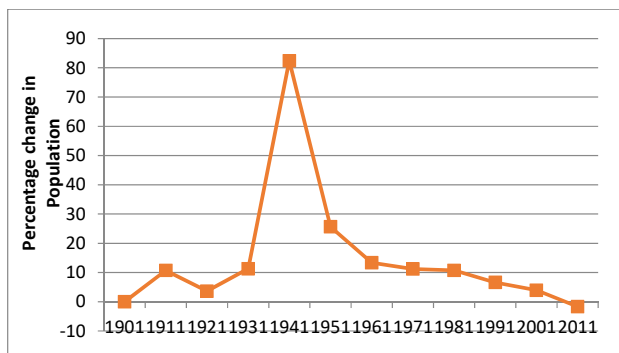


Fig. 1 Decadal Variations in Population of Kolkata from 1901-2011 [8]

#### 2. Birth and Death Rate in Metropolitan Cities of India, 2011-13

Table I clearly shows that the four important metropolitan cities of India are experiencing a decline in their birth and death rates. Importantly, Kolkata records the lowest birth rate among all the metropolitan cities in 2009-11 and 2011-13, while it records the highest death rate among the four metropolitan cities of India. This implies that the city will witness a negative growth of population. This supports the findings from Fig. 1.

TABLE I  
CHANGE IN BIRTH AND DEATH RATE IN METROPOLITAN CITIES BETWEEN 2009-11 AND 2011-13 [9], [10]

Cities	2009-11		2011-13	
	Birth rate	Death rate	Birth rate	Death rate
Chennai	15.5	5.1	15.1	5.1
Delhi	18.1	4.4	17.8	4.4
Kolkata	9.9	6.7	9.8	6.5
Mumbai	15.0	5.9	14.7	5.6

#### 3. Population Change by Age Groups in Kolkata

Fig. 2 shows that population in Kolkata has decreased from 1991 to 2011 for the age groups from birth till 34 years of age. From 35 years of age till 80 years and above, the population has increased. This means that gradually the young and adult population is declining, while on the other hand, the elderly population is increasing. Thus, it can be clearly stated that Kolkata's population is ageing.

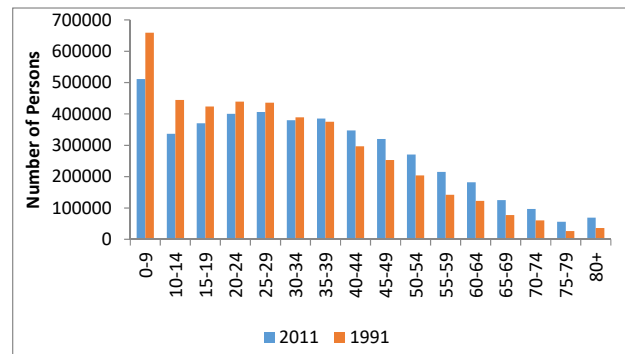


Fig. 2 Change in Population by Age Groups in Kolkata from 1991-2011 [6], [8]

#### 4. Population Composition by Age and Sex in Kolkata

Fig. 3 portrays the composition of population of Kolkata by sex and age. It is evident from the figure that the male population outnumbers females till the 70-74-year age group, after which, the population of males and females almost become equal. It can be seen that the gap between the male and female population is wide from birth till the 50-59-year age group; however, above 60 years, the gap starts diminishing. The larger male population in Kolkata can be due to the fact that the city being entirely urban in nature and economically developed has always attracted the young male population from rural areas, West Bengal and neighboring states to migrate for employment. Also, a higher male

population in the young age group of 0-14 years could be the result of female infanticide.

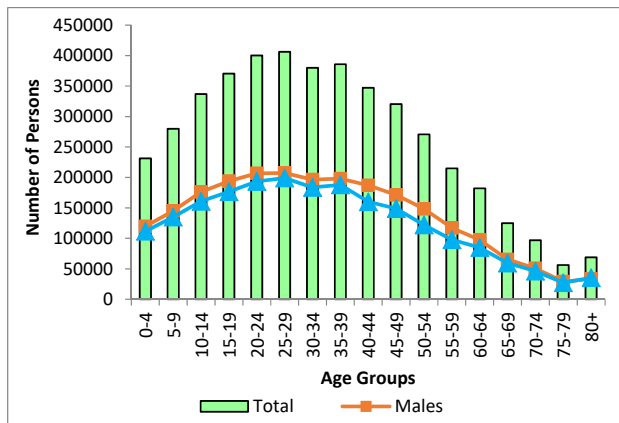


Fig. 3 Composition of Elderly Population by Age and Sex in Kolkata, 2011 [8]

#### 5. Growth of Elderly Population of Kolkata from 1991-2011

Fig. 4 shows that over the three census years, the elderly population has increased rapidly. Also, it has been found that the male elderly population has always been higher than the female elderly population. This is due to the fact that there has always been a higher percentage of migration of the male population into the city for better jobs. This migrating male population is often found to be eventually settling down in the city permanently. So, this addition of male population and gradually their ageing with time has resulted in a higher proportion of male than female elderly population.

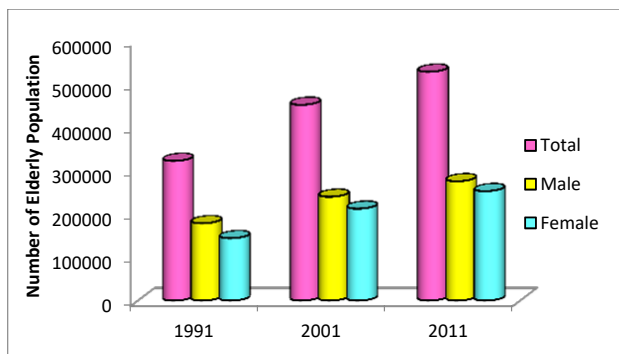


Fig. 4 Growth of Elderly Population by Sex in Kolkata, 1991-2011 [6], [8]

#### 6. Number of Elderly per Household Population in Kolkata

Fig. 5 shows the percentage of households having numbers of elderlies in 2011. Around 70% of households in Kolkata have one elderly member, while around 26% have two, while a very insignificant percentage of households has three, four and more elderly members. This can be due to the changing social structure taking place in the city with the disappearance of a joint family system and its replacement by the nuclear family.

#### 7. Age Composition of Population in Important Metropolitan Cities of India

While other Indian cities grow younger, the 60-plus population in Kolkata is now the largest in the country [11]. Age composition in some of the important metropolitan cities of India shows that Kolkata records the lowest percentage of young population of age group 0-14 years. The figures are lowest for both the male and female young population of the city. On the other hand, the highest percentage of old population belonging to the age group of 60 years and above is also recorded by the city of Kolkata. This clearly indicates that Kolkata is experiencing a low fertility rate on one hand and increasing life expectancy. So, it can be stated that the city is experiencing ageing of its population.

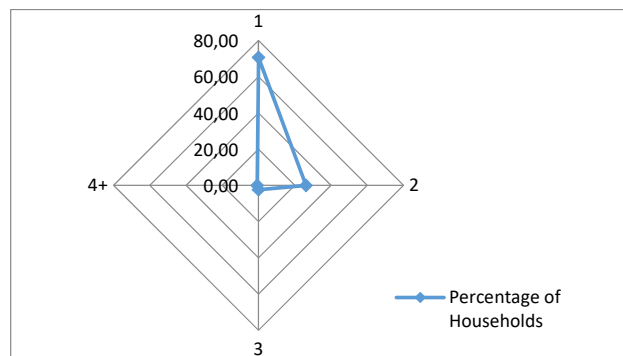


Fig. 5 Percentage of Households having Number of Elderly in Kolkata, 2011 [8]

#### B. Socio-Economic Status of Elderly Population in Kolkata

Rapid rate of urbanization, globalization and modernization have affected the socio-economic structure in the city. Replacement of joint families by nuclear families, out-migration of young generations for better employment opportunities, and erosion of social values etc., have changed the entire socio-economic conditions of the elderly in the city. In this respect, the marital status, elderly as head of the family, living arrangement, reasons for staying alone, literacy rate, levels of education, types of disability, pensioners by sex and levels of education, working status and old-age dependency ratio have been studied, to get an in depth understanding of the socio-economic conditions of the elderly in Kolkata.

##### 1. Head of the Family in Kolkata

Fig. 7 clearly shows that percentages of persons in the age groups between 30 years to 59 years are higher as head of the family. After 59 years, the percentage figure drops down sharply which means that a lower percentage of elderly are found to be the head of the family. On the other hand, populations in the working age groups between 30 years to 59 years are mostly found to be head of the family. Also, it can be seen that male population has the highest percentages as head of the family in all age groups compared to the female population. Thus, social status in the family can be said to be directly related to economic power. Higher earning capability and ability to contribute in the family gives the male

population in terms of sex and the working population in terms of age, the higher social status to be the head of the family.

## 2. Marital Status of the Elderly Population in Kolkata

Fig. 8 depicts that the percentage of currently married elderly population is highest in Kolkata followed by widowed, never married and lastly, separated or divorced. Importantly, male elderly who are currently married are higher in

percentages than that of female elderly. On the other hand, percentages of female elderly who are widows are more than that of male elderly. This is because of higher life expectancy among females that their proportions as widow are more. Hence, the situation of female elderly in Kolkata is miserable, without their husband, dependent on their children and more subjected to abuse and exploitation.

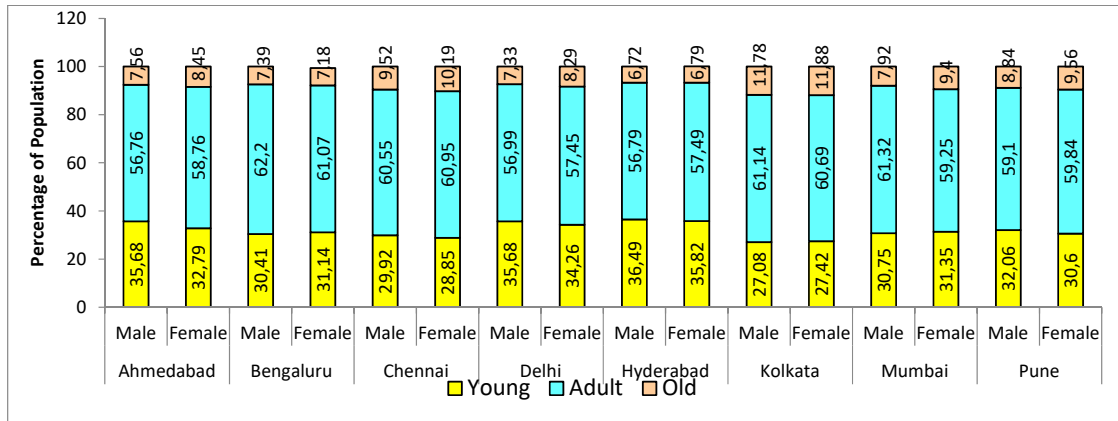


Fig. 6 Age Composition of Population in Important Metropolitan Cities of India [8]

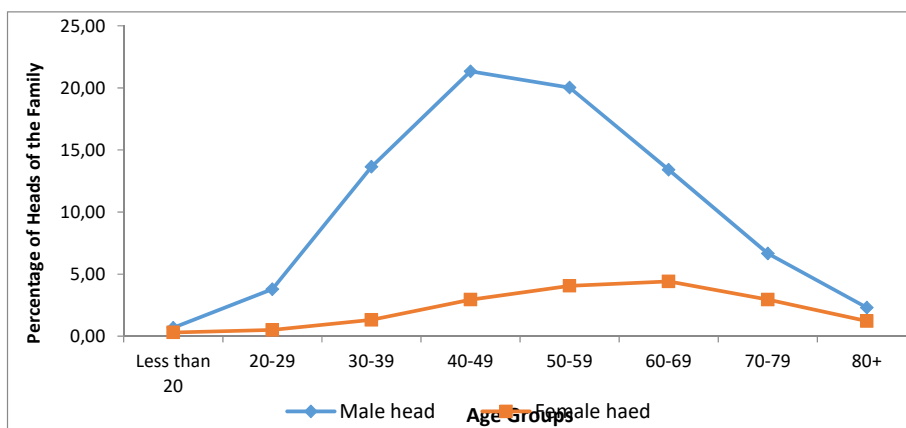


Fig. 7 Head of the Family by Age and Sex in Kolkata, 2011 [8]

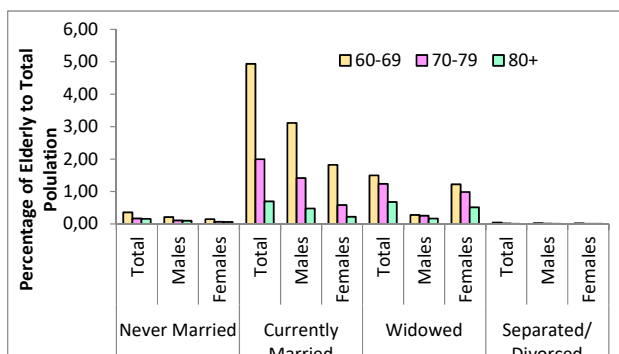


Fig. 8 Marital Status of the Elderly Population by Sex in Kolkata, 2011 [8]

## 3. Living Status of Elderly in some Important Metropolitan Cities of India

According to a survey conducted by HelpAge India [2], in some important metropolitan cities of India, majority of 80+ elderly have been found to be living with their sons. Importantly, among those who are living alone, Kolkata records the highest percentage of 18.6%. This is due to the rapid rate of urbanization, globalization and modernization that has resulted in disappearances of joint families, erosion of social values, and the migration of younger generations out of the city for better employment opportunities leaving the elderly isolated, helpless and alone in the city.

#### 4. Reasons of Elderly for Staying Alone in some Important Metropolitan Cities of India

Table III clearly shows that among the important metropolitan cities of India which have been surveyed by HelpAge India, the majority of oldest-old elderly stated the reason for staying alone as no support from their children. Importantly, 53.8% of elderly in Kolkata revealed that they are staying alone in the city as they have no support from

children. This percentage is highest among all the other important metropolitan cities in India. This situation is alarming, as it clearly signifies that the elderly parents residing in Kolkata are considered as a burden by their children and are in a miserable condition. Thus, there is an urgent need for the formulation of policies, programs and laws to safeguard the helpless elderly in the city.

TABLE II  
LIVING STATUS OF THE OLDEST OLD ELDERLY IN SOME IMPORTANT METROPOLITAN CITIES OF INDIA [2]

Living with	Delhi NCR	Mumbai	Hyderabad	Chennai	Patna	Kolkata	Bhopal	Ahmedabad
Son	86.7	76.2	72.3	38	83	57.8	74.1	72.3
Daughter	6.7	8.9	11.9	16	6	16.7	10.2	3
Spouse	0.8	7.9	5.9	17	3	3.9	0.9	6.9
Grand Son	3.3	2	-	3	-	1	-	1
Grand Daughter	-	-	1	3	-	-	1.9	-
Domestic help/ caretaker	-	-	-	6	-	-	-	-
Alone	1.7	5	7.9	16	6	18.6	10.2	15.8
Others	0.8	-	1	1	2	2	2.8	1
<b>Total N</b>	<b>120</b>	<b>101</b>	<b>101</b>	<b>100</b>	<b>100</b>	<b>102</b>	<b>108</b>	<b>101</b>

TABLE III  
REASONS OF OLDEST-OLD ELDERLY FOR STAYING SEPARATELY IN SOME METROPOLITAN CITIES OF INDIA [2]

Reasons for Living Alone	Delhi NCR	Mumbai	Hyderabad	Chennai	Patna	Kolkata	Bhopal	Ahmedabad
No support from children	50	20	6.3	26.1	36.4	53.8	41.2	16
Children working/living in another place	-	60	81.3	45.7	36.4	15.4	17.6	56
Have no children	37.5	13.3	12.5	23.9	18.2	26.9	29.4	16
Health problem	-	-	-	2.2	-	-	5.9	-
<b>Total N</b>	<b>8</b>	<b>15</b>	<b>16</b>	<b>46</b>	<b>11</b>	<b>26</b>	<b>17</b>	<b>25</b>

#### 5. Literacy Rate of Elderly Population in Kolkata

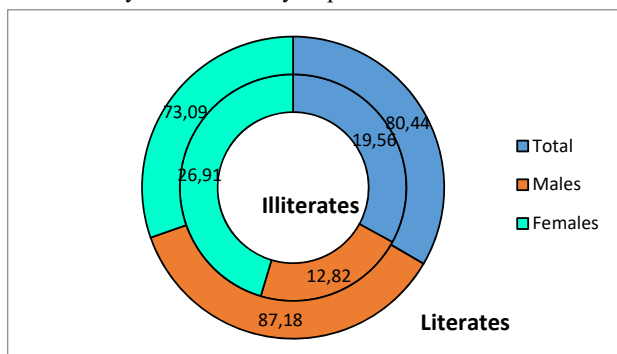


Fig. 9 Literacy Rates among Elderly Population by Sex in Kolkata, 2011 [8]

Fig. 9 clearly shows that 87.18% of the male elderly population are literate and only 12.82% are illiterate. On the other hand, 73.09% of female elderly are literate and 26.91% are illiterate. So, the rate of literacy is higher among the male elderly population. However, the percentage of literate population is high both among male and female elderly population. The dominant reasons can be due to higher number of educational institutions in the city, better transportation system, easy accessibility, emergence of private sector in extending educational facilities, prevalence of higher social and functional value of education etc. Also, the

prevalence of the urban lifestyle where residents aspire for a higher standard of living, in which a major portion of the income of parents is spent on their children's education, has been an important reason for the higher literacy rate in the city as depicted in Fig. 10.

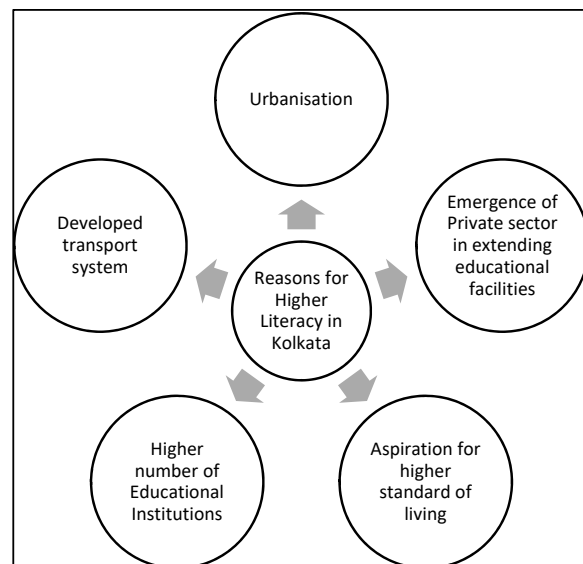


Fig. 10 Reasons for Higher Literacy Rates in Kolkata

### 6. Levels of Education of Elderly Population in Kolkata

Fig. 11 shows clearly that female elderly record a greater percentage in acquiring lower levels of education. On the other hand, higher percentages of male elderly have higher levels of education. This means that males are more highly

qualified than females. Thus, lower levels of education make females incapable of finding high paid jobs, and so receive lower incomes leading to limited savings, greater dependence on children and more subjected to abuse and exploitation, as depicted in Fig. 12.

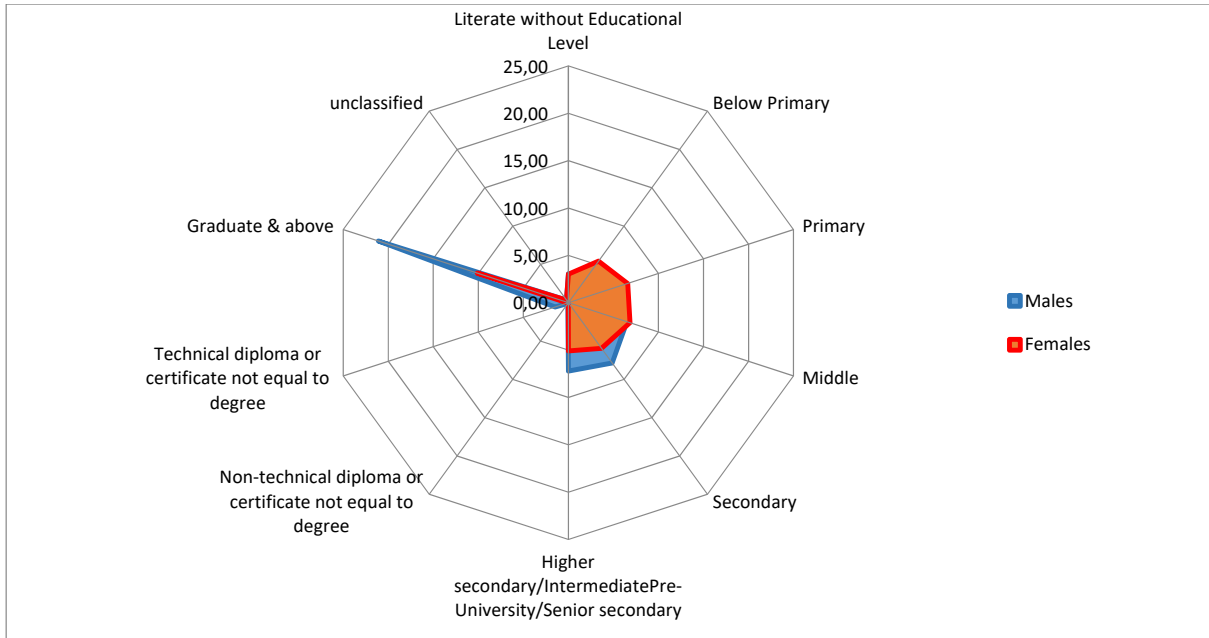


Fig. 11 Levels of Education among the Elderly Population by Sex in Kolkata, 2011 [8]

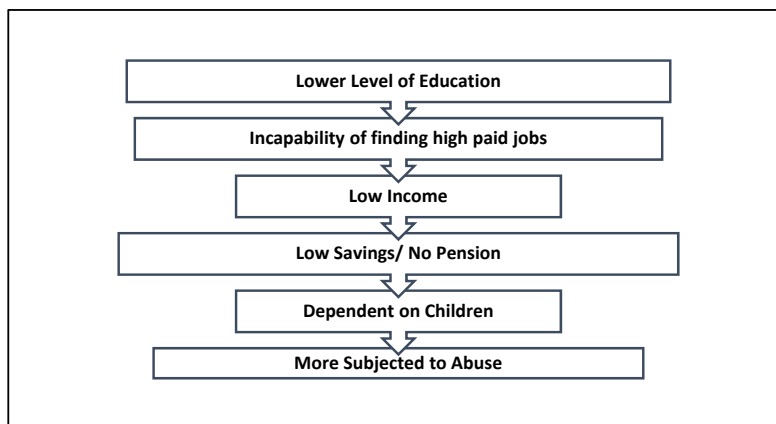


Fig. 12 Flow Diagram showing Low level of Education among Females as a Major Reason for Abuse and Exploitation

### 7. Types of Disability of Elderly Population by Sex in Kolkata

Kolkata, the metropolitan city of West Bengal in India, has a high share of elderly population. However, the health delivery system of Kolkata is not geared for elderly care and is reflective of the poor health infrastructure in the entire state of West Bengal [1]. Fig. 13 shows the types of disability that the elderly population of Kolkata has according to the 2011 census. It is evident that a majority of the elderly has disability

in movement, followed by mental disability and mental illness. Reasons for the high percentage of elderly having movement problems can be due to deterioration in health due to ageing, and inability to consume a proper diet due to low economic power etc., while other major reasons for high rates of disability among the elderly in Kolkata are the lack of education, lack of awareness, poverty, low economic power, and negligence of children to look after their parents etc.

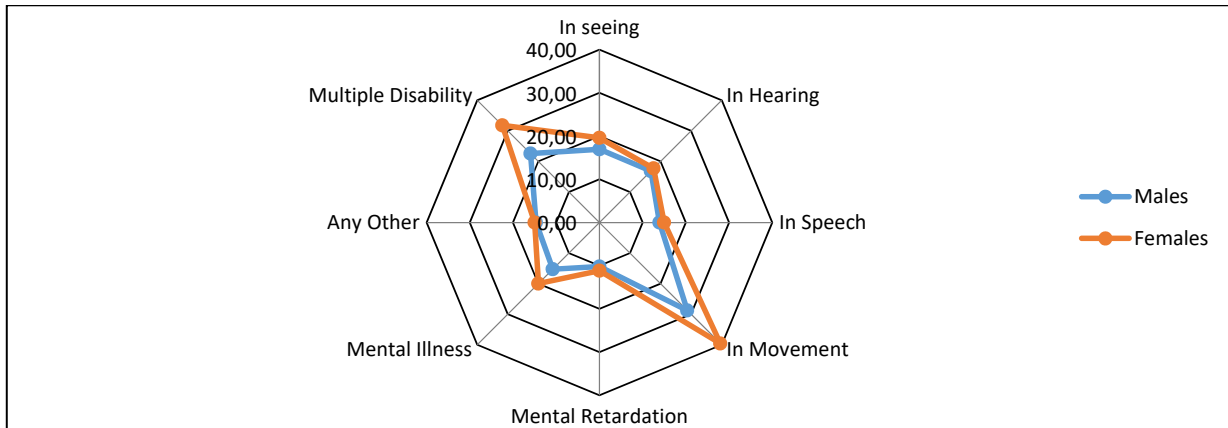


Fig. 13 Types of Disability of the Elderly Population by Sex in Kolkata, 2011 [8]

#### 8. Pensioners by Levels of education and Sex in Kolkata

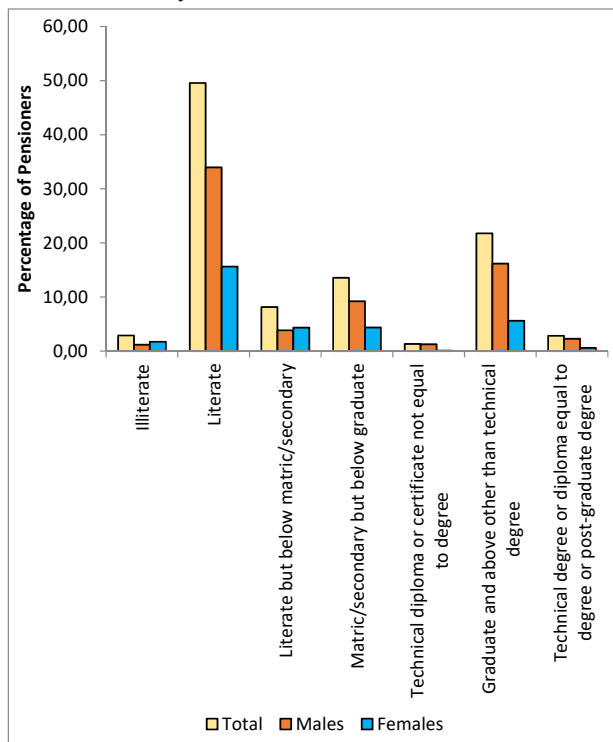


Fig. 14 Pensioners by Levels of Education and Sex in Kolkata, 2011 [8]

#### 9. Trend of Working Status of the Elderly Population by Sex in Kolkata

From Fig. 15, it can be said that the total percentages of non-workers are highest, followed by main workers, and lastly marginal workers for the two census years. This is because old age is often associated with the age of retirement. Also, female elderly non-workers are greater in percentages than male elderly. Between 2001 and 2011, the percentage of marginal workers has increased. This can be due to the increase in the number of part time jobs for the elderly in the city.

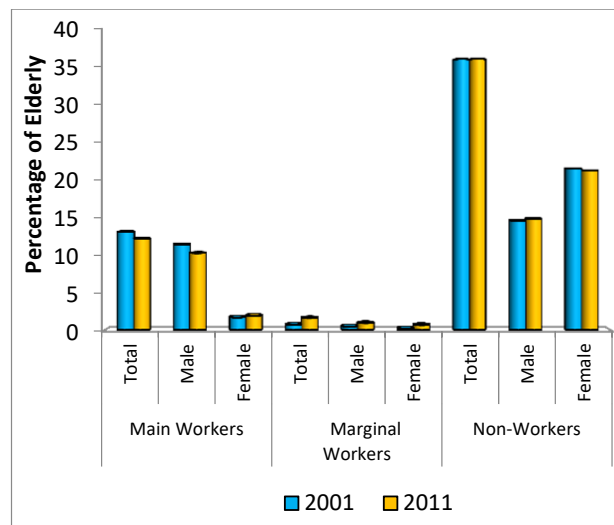


Fig. 15 Trend of Working Status of the Elderly by Sex in Kolkata, 2011 [6], [8]

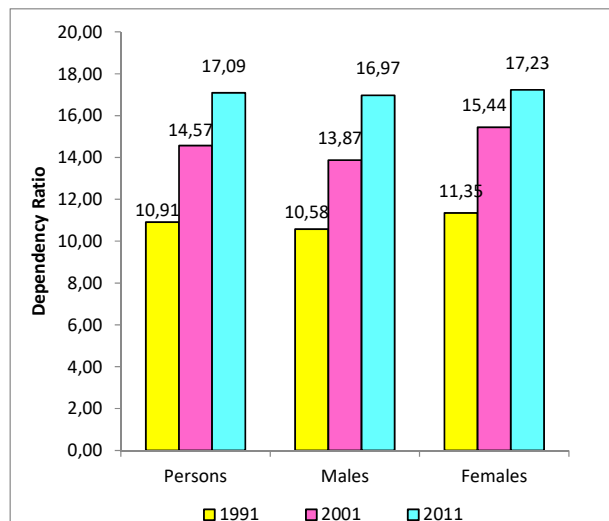


Fig. 16 Trend of Old Age Dependency Ratio by Sex in Kolkata, 1991-2011 [6]-[8]

#### 10. Trend of Old Age Dependency Ratio by Sex in Kolkata

The trends for old age dependency ratios have increased continuously from 1991 to 2011 for both males and females. The total old age dependency ratio for Kolkata has increased to 17.09%. from 10.91% For males it has increased to 16.97% from 10.58% and for females to 17.23%. from 11.35% Thus, for females, the old age dependency ratio is higher compared to males. This is again because participation of females in the workforce is lower compared to males.

#### V. CONCLUSION

From the above findings, it can be clearly stated that Kolkata is experiencing negative growth of population due to a low birth rate and high death rate, and is in the last stage of demographic transition. As a consequence, the city is experiencing a continuous rise in its elderly population and records the highest percentage among other important metropolitan cities of India. Being entirely urban in nature and a developed metropolitan city of India, it has always been endowed with many pull factors attracting a young male population to migrate, and eventually, the ageing of this population has resulted in a higher percentage of male elderly than female elderly in the city. Majority of the households in the city consists of only one elderly member in the family due to disappearance of joint family system and emergence of nuclear families. The percentages of elderly as head of the households are much less than the head of the families in other age groups. This is due to the erosion of social values, prevalence of nuclear families etc., and as well, males outnumber females as head of the family. The literacy rate has been overall considerably higher in the city. The living arrangement of the elderly according to a survey conducted by HelpAge India reveals that among the important metropolitan cities of India, the majority of oldest-old elderly are living alone in Kolkata. Also, the major reason for staying alone is because they have no support from their children. In terms of literacy, the male elderly literate population outnumbers the female population. The percentages of elderly in the category of 'graduates and above' has been found to be highest among the other levels of education. Disability in movement has been found to be highest among the elderly than the other types of disability. Also, percentages of male pensioners are more than female pensioners. In terms of levels of education, pensioners with education level graduate and above record highest percentage. In terms of the working status of the elderly population, non-workers have been found to be highest among the elderly population. Female elderly are higher in number than male elderly in the category of non-workers, while the opposite is true in the category of marginal and main workers. The old age dependency ratio has been found to be continuously increasing. The ratio is higher for female elderly compared to male elderly. Thus, with regard to these findings it can be said that Kolkata is facing problems of the ageing of its population. The conditions of the elderly are miserable, lonely and isolated and there is an urgent need for intervention to protect them.

#### REFERENCES

- [1] Bhattacharyya, T., Chatterjee, S.C., Chand, D., Chatterjee, D., & Sengupta, J. (2017). Assessment of Private Homes as Spaces for the Dying Elderly. *Indian Journal of Palliative Care*. Vol 23(3):325-330.
- [2] HelpAge India. (2010). Economic and Health Survey on India's Oldest Old (80+) Needs, Care & Access. *HelpAge India*. New Delhi. pp. 12. Retrieved from <https://www.helpageindia.org/pdf/surveysnreports/economichealth.pdf>
- [3] Hooman N R, Kiyak H A. (1995). Social Gerontology from a Multidisciplinary Perspective. *China Population Publishing House*. Beijing, pp. 346
- [4] Kundu, A. K., Nag, P., & National Atlas and Thematic Mapping Organisation. (1996). Kolkata; Atlas of the city of Calcutta and its environs, 2nd Edition. *Ministry of Science & Technology, Government of India*. pp. 10
- [5] Mitra, C., Shepherd, J.M., & Jordan, J.R. (2012). Assessment and Dynamics of Urban Growth in the City of Kolkata, India. Pp. 1. Retrieved from <https://www.researchgate.net/publication/289620851>
- [6] Registrar General & Census Commissioner, India. (1991). Census of India, 1991. *Office of Registrar General & Census Commissioner, India*. New Delhi.
- [7] Registrar General & Census Commissioner, India. (2001). Census of India, 2001. *Office of Registrar General & Census Commissioner, India*. New Delhi.
- [8] Registrar General & Census Commissioner, India. (2011). Census of India, 2011. *Office of Registrar General & Census Commissioner, India*. New Delhi.
- [9] Registrar General, India. (2011). Vital Rates; Figures at a Glance. *Office of Registrar General & Census Commissioner, India*. New Delhi. Retrieved from [http://www.censusindia.gov.in/vital\\_statistics/SRS\\_Report/2At%20a%20glance%20%202011.pdf](http://www.censusindia.gov.in/vital_statistics/SRS_Report/2At%20a%20glance%20%202011.pdf)
- [10] Registrar General, India. (2013). Vital Rates; Figures at a Glance. *Office of Registrar General & Census Commissioner, India*. New Delhi.
- [11] Sen, S. (2015). Kolkata is Ageing Faster than other Metros. *Kolkata, Times of India*. West Bengal, India.