

Mortality Changes Among Elderly in Kerala and India: 1970–2000¹

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Introduction

Mortality transition has not received adequate attention of social scientists in the recent past. This has largely been due to the overriding concern about exceptionally high levels of fertility in the past and the consequent implications of population growth in the country. Of late, there has been some attention in the recent years towards Maternal and child mortality. But this does not mean all is satisfactory on mortality front in the country. There is evidence to suggest that mortality decline has slowed down considerably during the 1970's. Moreover, despite the fact that there have been some attempts to analyse the age pattern of mortality in the country (Roy and Lahari 1988; Parasuraman 1990; Navaneetham 1993; among others), but the emphasis of these studies has not been on the changes in old age mortality. Along with the decline in general mortality, there appears to be change in the mortality of elderly population in India and faster change in Kerala state. Hence, there is an imminent need to know the changes in the pattern and tempo of mortality of elderly population that took place in Kerala and India in the last three decades.

The paper deals with the trends in old age life expectancy (i.e. at ages 60, 65 and 70) by sex and residential background. The residential variations in the change of old age life expectancy are discussed in the later part.

Data

The analysis is based on the information provided by the Registrar General, India's quinquennial Sample Registration System (SRS) Life tables for the period from 1970-75 to 1996-2000 in India and its states. The life tables have been prepared for Males and Females by Rural and Urban residence. The information on the life expectation at ages 60, 65 and 70 from these tables has been used along with the expectation of life at birth (i.e. at age Zero) for this analysis. It is also proposed that for the period 2000-2004 the expectation life at birth will be projected using the MORTPAK software, and life expectancies at old ages will be estimated.

Old Age Mortality Trends in India

The trend of old age life expectancy and expectation of life at birth in Kerala and India by sex and residence for the periods from 1970-75 to 1996-2000 are presented in Tables 1 & 2. During 1970-2000, the old age life expectation of males (i.e. at age 60) increased from 15 years in 1970-75 to 18.7 years in 1996-2000, where as, it increased from 13.4 years to 16.3 years during the same period in India. This increase in old age expectation, however, is not uniform through out the period under reference. Two fifths of this increase in the old age life expectation took place between 1970-75 and 1981-85, which exhibits that the pace of decline in old age mortality has slowed down in the late 1980's and thereafter. It is

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interesting to note that the expectation of life at birth of males increased by 17 percent and the expectation of life of them at age 60 increased by 25 percent between 1970-75 and 1996-2000 in Kerala. However, the expectation of life at birth had greater momentum in the mid 1980s, where as, the old age life expectancy had its momentum in the early 1970s. The percentage increase in the expectation of life at old-old males in Kerala was higher (33) during the period under study than at young old ages (i.e. 25 and 28 percents at ages 60 and 65 respectively). There is increase in the percentage at old-old age life expectancy of males in India as well but the increase is less than that of Kerala.

The old age expectation of life at 60 for females increased from 16.5 years to 21.5 years between 1970-75 and 1996-2000 in Kerala and nearly three fifths of this increase took place in 1980s. On the other hand the increase in the old age expectation of life of females in India was from 14.3 years to 17.2 years during the same period and nearly three fourths of this increase took place in 1980s. The percentage increase was almost uniform among all old ages in India. But the percentage of increase in old age life expectancy (20) is less than the increase in the expectation of life at birth (29) among females in India, whereas, it is vice versa in Kerala where the percentage increase in Old age life expectancy of females was higher (30) than the increase in e_0 of females (20). The percentage increase in life expectancy was higher among Old Old females (36 percent each at ages 65 and 70 and 30 percent at age 60) than the young old females.

Old age mortality differentials by residence

Old age mortality differentials by residence do exist in Kerala and India, but the differentials are more in India as compared to Kerala and they are getting narrowed in Kerala. The old age expectation of life of males in Kerala was 15.2 years in rural areas and 14.3 years in urban areas in 1970-75. It increased to 18.8 in rural and to 18.6 years in urban areas in 1996-2000. There was an increase of 3.6 years in old age expectation at age 60 in rural areas and 4.3 years in urban areas. It is interesting to note that the old age expectation of life of males in rural areas is higher than their counterparts in urban areas during the period under study, which is peculiar to Kerala, which needs further research.

The difference in old age expectation of life between urban and rural areas is narrowing down (i.e. from 0.9 years in 1970-75 to 0.2 years in 1996-2000). The pace of decline in old age mortality was higher in early 1970s in rural areas and mid 1980s in urban areas. Further, the rate of decline in mortality among younger olds was faster in urban areas as compared to their counterparts in rural areas and vice versa among Old Olds.

The old age expectation of life of females at age 60 increased from 16.4 years in 1970-75 to 21.4 years in 1996-2000 in rural areas of Kerala and it increased from 17.4 to 21.8 years in urban areas during the same period. The increase was higher in rural areas than in urban areas in expectation of life at among all old ages. Among females the Old age life expectancy was higher in urban areas than in rural areas with exception in 1981-85.

There was decline the old age expectation of life in rural areas during 1981-85 and 1991-95, as opposed to increase in urban areas in India. The decline in mortality at older ages was higher in rural areas and opposite is the situation in urban areas. In general the pace of decline in old age mortality slowed down in late 1980s in India as whole, this was the situation both in urban and rural areas.

Differential mortality exists between the sexes at older ages. Mortality of old age females was lower than their counterparts of the same age. The old age expectation of life females was 14.3 and 16.1 years in 1970-75 and 1986-90 in respectively. The old age expectation of life of male was 13.4 and 14.7 years in the same period respectively. The difference in the old age life expectancy widened between the sexes during the period under

the study in Kerala and only in urban areas in India. There was an increase of only 3.7 years in the old age expectancy of males as against to 5 years among females in Kerala. In India, the mortality of males is higher than females after adult ages. Hence, the female old age expectation of life was higher than males. The over all increase in the old age life expectation was mainly due to the greater decline in mortality of females in those ages. Also the greater decline in rural old age mortality has contributed to the overall increase in old age life expectation.

Change in Old Age Life Expectation in Kerala

The change in old age life expectation, however, was not uniform throughout the period under reference. More than half of the change occurred during the first five-year period and later it slowed down. Across major states of the country, old age expectation of life varied widely in terms of levels as well as change.

It is interesting to note that the expectation of life at birth was the highest in Kerala, (69.5 years in 1986-90). But the old age expectation of life was the highest in Punjab (19.5 years in 1986-90). It shows that along with the health facilities, the nutritional and economic status of the people in Punjab might have had an impact on the increase of old age expectation of life which needs an in-depth study.

Change in Old Age Expectation of Life of Males and Females

The level of old age life expectation and its pattern of change in India and Kerala is shown in Table. Kerala had the highest old age life expectancy of females in 1970-75 and 1980-85, while it was the highest in Punjab in 1976-80 and 1986-90.

Change in Old Age Expectation of Life in Rural Areas

The level and change in old age life expectation in rural areas of India and Kerala are presented in Table. It increased from 13.5 years in 1970-75 to 15.3 years in 1986-90: an increase of 1.8 years during the above period for the nation as whole. This increase on old age expectation of life was more than three times as compared to the increase in urban areas. In India and Kerala the greater momentum of old age life expectation was observed in early 1970's.

Change in Old Age Expectation of Life in Urban Areas

A marginal increase in old age expectation of life was noticed in urban areas during 1970 and 1990. The momentum in old age life expectation of urban areas took place in early 1980's. There is less increase in the old age expectation of life in urban areas due to deterioration in the environmental situation in urban areas although the health care facilities has increased which can not be afforded by the poor and middle class, which require further research.

Summary and conclusions

This paper attempts to study the level and change in the old age life expectation in India and Kerala, by using the data from the SRS. The main findings from the analysis are: the decline in old age mortality has been slowed down during the 1980's and later, as compared to the early 1970's. This was manifested from the lower rate of change in old age life expectation in mid 1980's and later. Also during the course of increase in old age life expectation, the rate of increase was higher for females than males between the periods 1970-75 and 1976-80. Although there was decline in the old age mortality in early 1970's, it was due to the higher rate of decline in mortality among old olds rather than the young olds. As regards the sex

differentials in the decline of old age mortality, female old age mortality declined faster than male old age mortality in India and Kerala. Further mortality of females is lower after young reproductive ages, than males. The decline in old age mortality in rural areas was faster than in urban areas. There is an urgent need to cater to the health needs of urban old age population in particular and urban population in general. An in-depth analysis should be carried out for the decline in old age expectation of life in urban areas. Is it because the hazards of people living in urban areas or other? The pertinent question which can be encountered from the above analysis is that, what are the significant factors contributing to slow decline old age mortality in mid and late 1980's. Among the prominent ones believed to affect the mortality levels are: long duration of illness like muscular pain, arthritis, cough, B.P, Cardio-vascular diseases, asthma, diabetes and increase of unhygienic conditions due to poor sanitation. Hence, the geriatric medical facilities should be created in hospitals. However, further research is needed in order to know the possible reasons for the slow decline in old age mortality.

Despite all these, there is a need to adopt differential health strategies to meet the health needs of the elderly population. The improvement in the nutritional intake of the members of the family in general and females in particular due to the eradication of poverty will lead to further decline in mortality and morbidity among the young old ages.

Owing to the decline in old age mortality and expected further decline in the same, would result increase in the size of the old age population in the years to come not only in Kerala but also in the Indian subcontinent. It is not the proportion but the size of the elderly population that is important for policy. Hence, there is an imminent need to plan for the health and welfare of the aged.