CHAPTER - 6.

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SUMMARY AND CONCLUSION
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A) Summary :-

A study was carried out in the industrial area of Durgapur, District - Burdwan, W.B., during the period from June, 1988 to June, 1992, with the aged people of both sexes, 60 years and above. It was meant to study the socio-economic, environmental conditions of living and the health status of the senior citizens in the industrial-urban complex. 600 persons were selected by systemic random sampling, out of which 413 were males, and 187 were females. The informations about them were collected during home visit by questionnaire, meeting family members and physical examinations at the clinic, and laboratory examinations, and also by checking old medical records.

The people from various parts of the country as well as having various religious faiths were included in the study. 0.66 percent were born in Nepal, 24.17% in Bangla Desh (The then East Pakistan or undivided India), and the rest were born in India, out of which 58.17% in eastern part of India, 1.50% in western part, 11.17% in northern part, 1.33% in the central, and 3% in southern part. 87.50% were Hindus, 10% Muslims, 1% sikh, 0.16% each of Buddhists and Jains, and 1.17 percent were Christians.

10.83% of the study population spent childhood in urban area, 70.17% in rural, 15.33% in semi-urban, and 3.67% in
combined area.

21.84% was illiterate, 24.50% below primary, 23.50% primary, 17.33% middle, 5.67% matriculate, 2.50% intermediate, and 3.83% graduate, and above, and 0.83% were having technical education.

40.67% were retired or having nil occupation. 27.33% having house-hold work and 0.17% were engaged as clerk, 1.33% as teacher, 0.50% as daily worker, 16.50% as businessman, and 13.17% were engaged in other works.

As far as past occupation was concerned, 1.83% had no occupation at all, 50% were factory worker, 12.34% were non factory worker, 3.83% agricultural worker, 1.50% businessman, 1.67% had some other un-organised work, and 28.83% were engaged in house-hold work.

52.50% of the aged were addicted and 47.50% were nonaddicted. 68% had no individual monthly income, and 0.33% did not give any information, and 31.67% had individual monthly income with varying amount. Only 0.67% had received some pension. 68% of the study population was having dependent status in the family (house-hold), 23.50% dependent earner, and 8.50%, independent earner. Yet, 74.67% were the head of the household.

83.50% had adequate cloth, 15.67% partially adequate, and 0.83% inadequate cloth. Furthermore, 32.67% used natural fibre only, 0.50% man-made fibre only, and 66.83% mixed fibre.
37.33% of the study population were vegetarian, and 62.67% non-vegetarian. 67.67% had regular daily bath, 93.67% used ordinary soap, and 97.67% used oil before or after taking bath. 74.50% did not use anything like tooth paste or tooth brush etc.

37.50% had no past physical activity, and 80% at present had no such activity. 98.83% of the study population were freely mobile, 0.67% move with sticks, and 0.50% move with human help. 2.33% had taken vaccination, and the rest did not. Only 8.50% did not require aids and appliances. 5% required, but did not have any such, and the rest, 86.50% (100 - 8.50 and 5 percent) possessed some aids and appliances, out of which 48.17% had visual aids.

Out of 451 persons, who were ill at the time of survey, 3.11% used more than 6 drugs, 7.1% used 6 drugs, 17.3% used 5 drugs, 34.36% used 4, 24.61% used 3, 10.42% used 2, and 2.66% used one drug for sickness. Only 0.44% did not use any drug.

74.67% of the aged had good sleep and 25.33% had not-so-good sleep. 15.83% had the feeling of isolation, 76.34% were contented and hale and hearty, 2.83% were disconnected with real life, 2.50 had some other feeling, and 2.50 were discontented.

As far as social and leisure time activity was concerned, 83% had no activity at all, 6.17% had financial activity with profit, 0.50% had financial activity without profit, 4.16% had socio-religious activity, 0.33% had medico-social activity, 4.67 percent had socio-political, 0.5% had other, and 0.67% had com-
bined activity.

98.83% of our study population used company medical facilities, and 1.17% did not use so. 35.33% had financial problems, 23.33% had accommodation, and 0.50% had no problems at all. The others were placed in varying proportions in between. 93.17% of our study population were more or less satisfied with life, 2.67% definitely satisfied, 1% not satisfied, and 1.50% combined, and 1.66% were unsatisfied with particular thing in life.

16.50% of our study population were abused, out of which, 0.67% physically, 5.67% mentally, 9.66% financially, and 0.50% in combined way, and the rest, 83.50% were not abused. In this group, there were no elderly offenders.

1.50% of the senior citizens were unmarried, and the rest 98.50% were married, 91.67% once, 6.5% twice, and 0.33% were married for three times. 25.83% were married by 15 years of age, 40% by 16 - 25 years, and 32.67% by 26 years and above. In 4.33% cases marriage was arranged by self, 94.17% by elders, and in 1.33% cases it was combined arrangement.

There were age difference of upto 5 years between the couples among 39.17% of cases, 6 - 11 years among 50.67%, 12 -16 years among 6.16% of cases and above 16 years among 2.50% of cases. 93% had exogamous, and 5.50% had endogamous marriage.

65.83% had spouse living (Male - 67.55%, Female - 62.03%) and 32.67% had spouse dead (Male - 31.72%, Female - 34.76%).
Out of 1.50% unmarried (9 cases), 0.73% males (3 cases), and 3.21% females (6 cases). 44.16% had the health of the spouse good and 22.17% had the natural death of the spouse, and 2% had unnatural death.

Conjugal life were up to 9 years in 2.83% cases and 40 years and above in 31.67% of cases. Others were in between them. 68% had interrupted, and 30.50% had uninterrupted conjugal life. 13.17% of our study population had been engaged in or practiced sexual activity.

0.17% had maximum number of children of 10 and 5.50% had minimum of one child. Others were in between and the highest group had 3 children (22.67%). 18.34% had first child by 15 years and 7% had at 30 years or above. Others were in between the range. On the other hand, 12.33% had last child by 16 to 30 years of age, and 0.17% by above 60 years of age. 1.33% had no child at all, though married, of which 4 cases of each in males and the female group.

Out of 187 females, 3.21% had menarche within 10 years of age, 70.59% within 11 - 15 years, 18.18% within 16 - 18 years, and 8.02% had at above-18 years of age. On the other hand, 3.21% had menopause by 40 years of age, 57.75% by 41 - 45 years, 37.43 percent by 46 - 50 years, and 1.61% by above-50 years of age.

6.94% of females had one pregnancy at the minimum and 1.06 percent had 10 at the most. Others were in between with varying proportions. 72.92% had no abortions at all, 11.77% had one,
4.81% had 2, and 2.14% had 3 abortions. 5.88% of females had first pregnancy by 15 years of age, and 2.67% had so at 30 years and above. 5.36% had no pregnancy which include unmarried females also.

21.33% of the old persons had nuclear family, and 78.67% had joint family. Average size of the family was 4.88. It is to be noted that 70.50% had origin in India, 28% in Bangla Desh (previous East Pakistan), and 1.50% in Nepal. 61.83% family members move in urban area, 30.17% in rural area, and 8% move in semi-urban area.

As far as religious arrangements were concerned, 8.67% had no occasion or arrangements in the family, and 6% did it rarely. Others were in between.

18.50% had per capita monthly income of Rs. 801/- and more, 30.17% between Rs. 601 - 800/-, 48.17% had upto Rs. 600/-, and 3.16% did not give any information.

The families of our study population used various types of utensils. Aluminium utensils were used by maximum number of the families (97.67%), followed by steel and stainless steel (95.67%), plastic (91.67%), ceramic (86%), bell metal (37.67%), earthen or stone (27.83%), and least by glass (7.83%). Appliances for cooking and preserving food were used by 58.50% and 41.50% did not use any. Other domestic appliances such as washing machines and vacuum cleaner etc. were used by 6.5%, and 93.50% did not use any such.
89.17% used electricity and 78% used k-oil, 3.50% used other substances for lighting purposes. 91.66% used coal for cooking purposes, 61.83% used gas, 1.83% used electricity, 10.83% wood, 43.83% used k-oil, and 5.67% used others.

Maximum persons (92.83%) had local gossiping and discussion as the source of knowledge, followed by television (70%), and 3% had no exposure medium at all. Others were in varying proportions in between. 95% were traditional families, 5% non-traditional, 93.17% orthodox in belief, 4.83 percent unorthodox, and only 2% were liberal.

96.17% had residence in non-slum area, and 3.83% in slum or near slum area. 2.83% had kutcha house, 7% semi kutcha (pucca), and 90.17% had pucca house for residence. 31.34% had lowest per capita house area of upto 30 Sq.ft. and 3% had highest per capita house area of above 80 Sq.ft. And varying proportions were in between them. 14.83% had clean, 63.33% had moderately clean, and 21.84% had dirty house and surrounding area. 95.50% had own and 4.50% had common latrine.

As far as water supply was concerned, 67.50% had house tap, 5.33% had street tap, and 22.50% use tube well and well. 4.67% got combined supply. Water quality were known for 94.5% of houses, of which 26.67% had hard, and 67.83% had soft water. 80.33% had satisfactory disposal, and 19.67% had unsatisfactory method of disposal of refuse. 86.17% had no domestic animal in the house. 4.83% had cow, 7% had dog, 1.5%
had goat, and 0.5% had other domestic animal.

Health status: 50.33% of our study population had past surgical operations (Male - 52.05%, Female - 46.52%), and 49.67% did not have any such experience. 33.83% had major and 16.50% had minor operations in the past.

The mean height among males were 153.7 cm. and 150.92 cm. among females. The height came down gradually as age advanced. The mean body weight among males was 52.10 kg. and 47.80 kg. among females. Like height, the body weight also came down as age advanced. The mean nutrition index among males was 33.8 and 34.7 among females. It also came down gradually as age advanced. The mean body mass index was 22 for males and 23 for females. Gradual decline along with advancing age was also seen here. 3.83% of our study population (Male - 4.11%, Female - 3.21%) were underweight, and 11% had over-weight (Male - 5.85%, Female - 24.06%). 85.17% had normal or average body weight (Male - 90.04%, Female - 72.73%). 14.67% of the aged had white skin (Male - 7.02%, Female - 31.55%), 18.17% had fair skin (Male - 10.89%, Female - 34.23%), 40.50% had black skin (Male - 48.43%, Female - 22.99%), and 26.66% had mixed colour of the skin (Male - 33.66%, Female - 11.23%). Our study population had 2.83% having big moles, 6.17% having warts without any disturbance, 38% had corn, 0.33% had non-pathological white patch and 52.67% had no such things over the skin.

Among males, 8.7% had major, 33.9% had partial baldness.
Females had only 1.60% having partial baldness. 81.83% (Male - 89.35%, Female - 65.24%) had grey hair over the scalp, and 18.17% (Male - 10.65%, Female - 34.76%) had black hair.

79.33% (Male - 79.67%, Female - 78.61%) were ill among the study population at the time of survey. 1.17% acutely ill, 75.17% chronic ill, and 3% had indifferent health. 20.67% (Male - 20.33%, Female - 21.39%) were healthy. The average number of illness per person was 2.29 (Male - 2.22, Female - 2.46). The total number of illnesses was 1378 (Male - 918, Female - 460). The average number of illness per ill person was 2.89 (Male - 2.79, Female - 3.13). Both the average number of illness per person and per ill person increased as age advanced. The number of illness was from one to six distributed among the ill persons. 7.98% had one illness, 23.11% had 2, 48.74% had 3, 14.08% had 4, 3.78% had 5, and 2.31% had six illnesses during the time of survey.

Illness prevalence rate was highest with the diseases of respiratory system (32.83%), and lowest with the diseases of psychological origin (1.16%). The diseases of other systems were in between with varying proportions.

Out of 1378 illnesses, 590 were known before, among males, and 230 among females. Detected during the survey were 328 among males, and 230 among females.

The mean blood pressure was 142.1 mm. of mercury (Male - 144.0, Female - 138.0), systolic, and 86.5 (Male - 86.6, Fe-
male - 86.4), diastolic. The systolic B.P. increased as age advanced, except the third group of 70 - 74 years among males. Among females, it steadily increased except the third and 4th. groups. The diastolic B.P. increased among males as age advanced except slight lowering in the 4th. group (75 - 79 years) and among females except 3rd. group (70 - 74 years) when it decreased slightly. 14.17% had B.P. of 160/95 or more mm of Hg. and marked as hypertensives. The mean pulse rate was 77.46 per minute (Male - 77.14, Female - 78.15). The range was 63-102 per minute (Male - 65 - 102, Female - 63 - 97).

The mean haemoglobin was 11.3 gm% among the senior citizens. It decreased gradually as age advanced. 14.83% had 7 - 9 gm%, 67% had 10 - 13 gm%, and 18.17% had 13.5 - 15 gm% of haemoglobin. 16.50% had some pathological findings with stool. 6.33% had amoeba, 7.17% had giardia, 1.17% had ascaria, and 1.83% had trichuris trichuria ova in stool examinations. While, 9.67% had some pathological findings in urine examinations, 5.17% had reducing substances, 1.17% had albumin, 2.83% had cast, and 0.50% had red blood corpuscles (R.B.C.).

Respiratory system had the prevalence rate of 32.83%. Chronic bronchitis occupying highest rate (14.50%), and acute bronchitis, the lowest (0.50%). The alimentary system had 32.67% prevalence rate, constipation occupying the highest position (16.83%), and chronic gingivitis and chronic periodontitis each occupying lowest position (0.33%). The circulatory system had 23.17% prevalence rate, hypertension oc-
pying the highest position (14.17%) and hypotension, the lowest (0.67%).

The diseases of skin and subcutaneous tissue had prevalence rate of 11.17%. Pruritus occupied 3.17% as highest and bullous pemphigoid occupied lowest position as 0.33%. Infective and parasitic diseases had 23.33% prevalence rate. Amoebiasis, 6.33%, and leprosy, 0.67%. The diseases of the endocrine system had the prevalence rate of 14.33%. Diabetes mellitus occupied 12.50% percent, and hyperthyroidism had the lowest rate of 0.50%. The rate was 21.67% with the diseases of the musculo-skeletal and connective tissue system. Osteo-arthritis had 17.17% prevalence rate. The genito-urinary system had total prevalence rate of 15.67% (Male - 15.25%, Female - 16.57%). Among males, hydrocele occupied highest prevalence rate of 7.51%, and among females, prolapse of uterus had highest rate of 8.55%.

Nervous system and special sense organs had the rate of 17.17%. The cataract occupied highest position, and epilepsy and parkinsonism each occupied lowest (9.67% and 0.17% respectively). The diseases of ill-defined conditions had 8.84% prevalence rate. Headache had highest position (2.67%), hyperesthesia, lowest (0.50%). Accident and injury had comparatively low prevalence rate of 1.83%. Blood and blood forming organs had the rate of 15.16%, when anaemia had 14.84%.

The lowest prevalence rate was with psychological diseases. Anxiety had 0.83%, and depression had 0.33%. The prevalence of
deficiency diseases was 10.67%. Vitamin B-complex deficiency was having 8% and calcium deficiency, 0.33%.

Disability was having 3.33% prevalence rate. 2.16% had complete, and 1.17% had partial disability. Among the major causes of illness, osteo-arthritis occupied a prevalence rate of 17.17%, constipation, 16.83%, anaemia, 14.84%, chronic bronchitis, 14.50%, hypertension, 14.17%, diabetes mellitus, 12.50%, and cataract, 9.67%. Others were less than 9%.

There were some statistically significant associations between the sickness and some factors as found in this study.

Age - As age advanced, the sickness rate increased. It was found to be statistically significant.

Dependency - Sickness rate was more among dependents and was statistically significant.

Addiction - The sickness rate was more among the addicted persons which was statistically significant. It was also seen that more people suffered from chronic bronchitis with the habit of smoking and that was statistically significant.

Marital status - The sickness rate was lowest with unmarried group. Married but spouse dead had the highest sickness rate, and the middle position was occupied by married but spouse living group. The difference of proportions was
statistically significant.

Pattern of conjugal life - Sickness rate was more with the people having interrupted than with un-interrupted conjugal life. This was statistically significant.

Number of pregnancy and Age at first pregnancy - Sickness rate was more with the females having more number of pregnancy, and among those who had the first pregnancy by 20 years of age, rather than beyond. Both were found to be statistically significant.

Type of family - Those who had unitary family, had more sick persons than those having joint family. It was statistically significant.

Per capita house area - More sick people had less per capita house area. The sickness rate was less among those who had more per capita house area. It was statistically significant.

Disposal of refuse - Sickness rate was more among those who had unsatisfactory disposal of refuse, than those having satisfactory method of disposal. This was statistically significant.

Water supply - Sickness rate was more among those who had tube well, well, and street tap than those who had house tap. It was statistically significant.
Diet - Vegetarian group had less hypertensives than non-vegetarian group, which was statistically significant.

Past physical activity - Hypertension was less among those who had some physical activity in the past. It was statistically significant.

Addiction and hypertension - Addicted group was found to have more hypertensives than non-addicted group, which was statistically significant.

Over-weight and diabetes mellitus - The people having over-weight had more diabetic than the people placed in non-over-weight group. It was found to be statistically significant.

B) Conclusion :-

Aging is an universal process. Various physiological factors are involved in it. Socio-economic, psychological, and geographical or natural factors act as trigger to start the process with visible dimensions.

So is the pathological happenings. Therefore, the disease, the disease pattern, onset of morbidity, and sequela, are also peculiar to this group. These, item-wise, and in total, vary from country to country, and region to region.

In global perspective, one thing is conspicuous. The demographic analysis showed that the number of aged people are
increasing in the developing countries and so the problems are being faced which developed countries started to face long back. The number of the aged people are increasing day by day due to better health-care-technology and health-care-management.

The science of public health is now taking much interest in the problems of the aged, though it is less than 20 years since the word geriatrics became a part of contemporary medical thought in our country. 216

Indian society pays much respect to the aged, though a considerable deviation is also there. This had been reflected in our study. It is apprehended that the rapid industrialization, urbanization, and modernisation in our country will destabilise this traditional balance, unless multi-dimensional steps are taken in time.

Very few studies in our country were done about the aged. Ray, Sengupta, and others did the same in 1975, and 1981, and later on by Pathak. We require more studies about the aged especially in this mobile society like industrial area. This is the right way to pay respect to the senior citizens. This, will in addition, give us more informations whether their wisdom can be utilised for betterment of our society.

During this study, we had seen that our study was very interesting. The senior citizens, it appeared, are untapped mines of knowledge. We remembered Plato who mentioned long
back, "It gives me pleasure to converse with the aged. They have been over the road that all of us must travel, and know where it is rough and difficult and where it is level and easy." — (The Republic, 1, c, 370 B.C.).

Our experience also reminds us of Maugham who was not only a writer but also a medical doctor, "Old age has its pleasures, which, though different, are not less than the pleasures of youth." (The Summing Up — written in 1938, at the age of 64, by William Somerset Maugham).

Here we had seen that 79.33% were ill at the time of study. 3.33% were disabled, 16.50% were abused, and the average number of illness per aged person was 2.29. A lot of much more detailed studies can be made with these individual items and in totality, if the infrastructural facilities remain available, and the studies get recognition.

The health-care-delivery system may be adjusted accordingly, so that the senior citizens get their due share with respect. A data bank about them will grease the wheels of search and research about the aged.