

CHARACTERISTICS OF AGEING — CAPE JEWISH AGED HOME AS AN EXAMPLE

I. M. HURWITZ, M.R.C.S., L.R.C.P., *Hon. Medical Superintendent, Cape Jewish Aged Home*

People differ from each other as a result of the interaction of diverse genetic causes and environmental factors. Hereditary effects are more influential in shaping the young, but with the passing of years, nurture and general ecological conditions gradually assume a dominant rôle. The factors involved are many, great, and complex and, after a time, overshadow genetic effects.

Hence, as age advances and the individual's mobility decreases progressively, while his dependence increases at the same pace, the effects of earlier varying or digressing factors cancel each other. Insidiously, but relentlessly, the order of

their development or involution becomes almost uniform. Homogeneity, like monotony, overtakes all at varying speeds.

Accordingly, in this paper, an assumption is made that data obtained from the analysis of a small, random number of elderly individuals may be accepted as an approximate index of the composition, likely prognosis, trends of development and needs of larger groups of ageing people.

Though, at the time of this survey, there were less than 200 residents at the Cape Jewish Aged Home, they complied with the requirements of a random sample. Except for victims of communicable disease or serious mental impairment, almost

all handicapped Jewish applicants are accepted. There is no means test, nor is country of origin or language an obstacle. This sample, therefore, provides an index of the problems created by an ageing population and may constitute a guide towards future planning.

On 18 August 1959, the population of the Cape Jewish Aged Home consisted of 179 residents (exclusive of staff). Of these, 111 or 62.02% were females and 68 or 37.98% were males. The preponderance of females in the ageing population is a world-wide phenomenon. Of 200 candidates seeking admission to the Witwatersrand Jewish Aged Home from November 1958 to March 1960, 64% were females and 36% were males.¹ Going further afield, Franz Goldman,² in his survey of the residents of 5 Jewish Homes for the Aged in North America, found that of 530 residents, 330 were females and 200 males, the percentages being 62.3% and 37.7% respectively.

This is not an exclusively Jewish trait. In the state of Daghestan (USSR), Alikishiev³ found that 200 persons more than 100 years old were divided into 123 women (61.5%) and 77 men (38.5%). Of between 600 and 700 centenarians in France, there is a considerably higher number of females than males.⁴ Longevity in the female, compared with the male, is not confined to the human race, but is seen in various species of animals from mammals down to house flies.

AGE COMPOSITION OF THE RESIDENTS

Table I classifies the residents according to their calendar or chronological age. The declared age given by the resident or

TABLE I. CLASSIFICATION OF RESIDENTS OF CAPE JEWISH AGED HOME ACCORDING TO THEIR CHRONOLOGICAL AGE

Age (years)	Females	Males	Total	
			No.	%
Under 50	3	0	3	1.7
50-54	3	2	5	2.8
55-59	4	3	7	3.9
60-64	6	3	9	5.0
65-69	6	3	9	5.0
70-74	19	16	35	19.6
75-79	29	16	45	25.2
80-84	28	15	43	24.0
85-89	10	6	16	8.9
90-94	3	4	7	3.9
Total	111	68	179	100.0

by his or her guardian was accepted as the actual chronological age.

This age composition is not peculiar to the Cape Jewish Aged Home. Statistics obtained at similar institutions in

TABLE II. PERCENTAGE DISTRIBUTION OF AGES OF RESIDENTS IN THE CAPE JEWISH AGED HOME COMPARED WITH 5 NORTH AMERICAN HOMES AND THE WITWATERSRAND JEWISH AGED HOME

Age (years)	Cape Jewish Aged Home	} 0.4	5 North American Aged Homes	} 27	Witwatersrand Jewish Aged Home
	%		%		%
Under 60	8.4	}	0.4	}	6
60-64	5.0				27
65-69	5.0	}	6.2	}	67
70-74	19.6				
75-79	25.2	}	26.4	}	67
80-84	24.0				
85-89	8.9	}	17.9	}	67
90-94	3.9				
95-99	0	}	1.3	}	67
100 and over	0				
Age not recorded	0	}	0.8	}	67

other countries reveal an approximately similar age distribution.

The residents of Jewish Aged Homes in North America are older than those of Jewish Aged Homes in South Africa, as can be seen from Table II.

Thus at 5 North American Aged Homes about 6.6% of the residents are under 70, and about 92.6% are over 70 years of age, in contrast to 18.4% under 70 and 81.6% over 70 years old at the Cape Jewish Aged Home, and 33% under 70 and 67% over 70 at the Witwatersrand Jewish Aged Home.

DISEASES OF RESIDENTS AT THE CAPE JEWISH AGED HOME

Diagnosis is based mainly on symptoms and signs detected by the general practitioner in charge of the patient. Where a satisfactory diagnosis cannot be made by the general practitioner, ancillary methods of investigation are utilized or a consultant is called in.

Since the number of patients is small, the 56 pathological conditions occurring at the Home are reduced to 12 groups. Diseases are placed together in one group, not necessarily because of their affecting the same organ system or having a similar pathology, but because of the similarity of effect or disability they produce. To give an extreme example: Hernias and fractures are placed in one group because the handicap of both is mechanical. A patient suffering from more than one disease in any one system is counted once only, e.g. a sufferer from coronary heart disease and hypertension appears once only in the cardiovascular group.

On the other hand, a patient suffering from hypertension and an affection of the prostate appears under both the cardiovascular and genito-urinary groups. Residents are thus classified into the following groups:

1. *Cardiovascular* — arteriosclerosis, atherosclerosis, coronary disease, peripheral gangrene, heartblock, hemiplegia, hypertension, peripheral vascular disease and Raynaud's disease.
2. *Mental impairment* — alcoholism, dementia praecox, difficult to control, depressions, neuroses, paranoia, psychoses, schizophrenia, senile dementia, and minor psychological upsets.
3. *Metabolic* — cholecystitis, cirrhosis, diabetes mellitus, gout, myxoedema, obesity, and osteoporosis.
4. *Nervous* — aphasia, epilepsy, parkinsonism and spasticity.
5. *Genito-urinary* — gynaecological, prostatism, urological diseases (including incontinence).
6. *Special senses* — blepharitis, blindness, handicapping defective vision, deafness, dumbness, glaucoma, tinnitus.
7. *Rheumatic* — arthritis, osteoarthritis, rheumatoid arthritis.
8. *Mechanical* — amputations, fractures, and hernias.
9. *Gastro-intestinal* — diseases affecting the gastro-intestinal tract, excluding hernias.
10. *Cancer*.
11. *Respiratory* — asthma, pulmonary diseases, bronchial disorders.
12. *Skin diseases*.

Table III places diseases encountered at the Cape Jewish Aged Home in descending order of appearance according to the above-mentioned groups and according to sex.

It may be valuable to examine a few of the most prominent

TABLE III. DISEASES ENCOUNTERED AT THE CAPE JEWISH AGED HOME IN THE WHOLE POPULATION OF THE HOME AND IN THE FEMALES AND MALES SEPARATELY

Disease group	Total population		Females		Males	
	No.	%	No.	%	No.	%
1. Cardiovascular	71	40.0	43	38.7	28	41.1
2. Mental impairment	55	31.0	39	35.1	16	23.5
3. Metabolic	28	25.6	21	18.9	7	10.3
4. Nervous	26	14.5	17	15.3	9	13.1
5. Genito-urinary	25	13.9	8	7.2	17	25.0
6. Special senses	22	12.3	14	12.6	8	11.7
7. Rheumatic	21	11.7	16	14.4	5	7.3
8. Mechanical	14	7.7	9	8.1	5	7.3
9. Gastro-intestinal	13	7.3	7	6.3	6	8.8
10. Cancer	7	3.9	3	2.7	4	5.9
11. Respiratory	6	3.3	6	5.4	0	0.0
12. Skin	3	1.7	3	2.7	0	0.0

diseases in greater detail, and to study their age and sex distributions.

Cardiovascular Diseases

Cardiovascular disease is an all-pervasive condition in elderly persons. Even old people who lack complaints are often found to be affected. Thus, it was reported from the Chicago Medical School⁵ that of 500 people, 50 years old and over, 60% had cardiac enlargement, 42% had murmurs, 22% had hypertension, 30% had inverted T waves and 6% showed cardiographic evidence of old infarcts. For practical purposes the cardiovascular system may be regarded as the principal factor affecting human health and longevity. Its deteriorations, whether showing themselves as cardiac malfunction or degeneration of the arterial tree, are the main cause of morbidity and mortality in the elderly. Hence cardiovascular disease constitutes the greatest challenge to the medical profession.

Table IV shows that it is the principal cause of disease at the Cape Jewish Aged Home. Seventy-one residents, of whom 43 are females and 28 are males (39.6% of the total population, 38.7% of the females and 41.2% of the males), suffer from cardiovascular disease; it also shows that males are slightly

TABLE IV. SUFFERERS FROM CARDIOVASCULAR DISEASE CLASSIFIED ACCORDING TO AGE GROUPS AMONG THE TOTAL POPULATION OF THE HOME AND THE FEMALES AND MALES SEPARATELY

Age group	Total population		Females	Males
	No.	% of age group		
50-59	3	25.0	1	2
60-69	7	38.8	5	2
70-79	37	46.25	21	16
80-89	22	37.3	15	7
90 and over	2	28.6	1	1
Total	71		43	28

more liable to these affections than females, and that the age group 70-79 is most affected in both sexes.

The greater liability of men to cardiovascular disease is a universal phenomenon. As an example, an analysis of cardiovascular-renal mortality for the Chicago population, aged 25-64, in 1951 and 1953, showed that the death rate from arteriosclerotic heart disease was 'severalfold higher in men than women'.⁶

Cerebrovascular Accidents

Hemiplegia, usually resulting from cardiovascular disease, also shows a preponderance of males over females, and here, too, the age group 70-79 has proportionately most sufferers.

Eighteen residents, or 10% of the total population, have or have had a stroke. Of these, 10 are females (9% of female residents) and 8 (11.8% of males) are males. This tallies with the findings of others; of 260 patients with cerebrovascular accidents, Greppi⁷ found that 65% were males and only 35% females, in spite of the fact that the number of aged women in that group was greater than that of aged men. Unfortunately the exact proportion of males to females in the patients investigated is not stated. In his group the greatest number of hemiplegias occurred in persons between the ages of 60 and 70.

Mental Impairment

As used in this paper, this term is an omnibus designation. Included in the group 'mental impairment' are 36 patients with the following disabilities: offensive eccentricity, abnormal irritability, neuroses, early psychoses, depressions, and chronic uncooperation. There are also 2 alcoholics, 1 patient with dementia praecox, 2 with paranoia, and 24 with senile dementia.

The magnitude of this problem the world over can be gauged from the statement that 9 million Americans are victims of serious mental disorders and that half the space in American hospitals is occupied by mental patients. As a counterweight, the USA devotes 30 million dollars annually to psychiatric research. It is a huge sum, but fades into insignificance when compared with the 300 million dollars which is spent annually in the USA on chewing gum.⁸

In Britain the position is no better.⁹ There it is estimated that one out of every hundred children is mentally deficient.

Mental impairment of the elderly arises from a multiplicity of causes, and shows itself in an equally great number of forms, all of which are uniform in that they destroy the individual's self-sufficiency and the harmony of his residence.

In an aged institution, there is a progressive increase in those with mental impairment, since many whose minds are healthy on admission deteriorate as they grow older. It thus constitutes one of the greatest perils menacing persons of advancing years; fortunately, however, the alert clinician, not dominated by an attitude of fatalism, may often uncover preventable or curable causes. That abnormal behaviour often masks systemic disease is not sufficiently well realized.

The Cape Jewish Aged Home claims, with justifiable pride, that the mentality of many a person who, on admission, displayed some mental aberration, has improved after a short stay at the Home as a result of understanding care, amelioration of some physical ailment, sensible feeding and controlled medication. Thus, a number were saved from being committed to mental institutions, and their relatives from an unjustified stigma. Fifty-five residents, corresponding to 30.7% of the

TABLE V. SUFFERERS FROM MENTAL IMPAIRMENT CLASSIFIED ACCORDING TO AGE GROUPS AMONG THE TOTAL POPULATION OF THE HOME AND THE FEMALES AND MALES SEPARATELY

Age group	Total population		Females		Males	
	No.	% of age group	No.	% of age group	No.	% of age group
Under 50	2	1.1	2	66.6	0	0.0
50-59	7	58.3	3	42.8	4	80.0
60-69	8	44.4	6	50.0	2	33.3
70-79	19	23.8	15	31.2	4	12.5
80-89	18	30.5	12	31.6	6	28.6
90 and over	1	14.2	1	33.3	0	0.0
Total	55		39		16	

total, suffer from mental impairment. Of these, 39 are females (35.1% of the females) and 16 are males (23.5% of the males) —Table v.

The majority of residents under 65 are admitted because of mental frailty, hence the high percentage of mental impairment among them. Females thus appear to be more liable to mental affections than males. Perhaps a compensation for the cardiovascular position!

The percentage of those who deviate from the mental norm is not extraordinarily high; similar percentages are found in other institutions for the aged. Thus, the percentage of 'mentally confused' in 5 North American Jewish Aged Homes is given as 42.1%.¹⁰

A similar condition prevailed in 1952 at the Home for Aged Hebrews in New York, where 16.8% of the residents suffered from mental disorders (18.3% females, 13.9% males).¹¹

Diabetes

The prevalence of glycosuria is not as high at the Cape Jewish Aged Home as at some institutions in the USA. Here, 18 residents, or 10% of the total population, have glycosuria. At the Montefiore Home, Cleveland,¹² 29 out of 193, or 15%, are described as diabetics, while R. L. Brandt¹³ reported at the Fifth International Gerontological Congress in August 1960, that of 120 inmates investigated at Michigan, a presumptive diagnosis of diabetes mellitus could be made in 40.

At the Cape Jewish Aged Home, patients with a fasting blood sugar of over 120 mg. per 100 ml. are classified as diabetics, therefore renal glycosuric patients are not included in this group. On the other hand, since the blood sugar of persons who do not show glycosuria is seldom examined, the possibility of some diabetics escaping detection cannot be ruled out.

Of the 18 diabetics, 14 are females (12.6% of the female population) and 4 are males (5.9% of the males). This does not agree with Osler's *Principles and Practice of Medicine* (1924) which states that 'men are more frequently affected than women, the ratio being about three to two'.

At the Witwatersrand Jewish Aged Home, 13% of the females and 10% of the males suffer from diabetes.¹ One third of our diabetics suffer from cardiovascular disease, and an equal number are mentally impaired. Apparently the detectable incidence of diabetics is changing, more females now being liable to it than males. This is no racial peculiarity. In a study of 250 urbanized Africans, the peak incidence was in the sixth decade, and the disease was commoner in females in the proportion of 1.6:1.¹⁴

FUNCTIONAL CAPACITY OF THE RESIDENTS

Information obtained from grouping residents of a Home into their age or defect components is clinically useful and academically desirable, but is an inadequate guide for enabling the management to assess the type and amount of medical and custodial staff and equipment it needs to provide. To decide on this, the extent of each individual's dependence on the assistance of others is required. This can be deduced from measuring or assessing the person's ability to cope with his physical needs and his mental and social problems.

The residents of the Home were therefore divided into three functional-capacity classes according to their compliance with the following criteria, taking into consideration the individual's own estimate of his health, something which influences his effectiveness to a considerable extent:

Class 1 (Fit)

An ambulant individual rated by himself and others as in moderately good physical and mental health and able to cope with the ordinary situations of everyday life. He is therefore able to look after himself, and is a resident of the Home because of pecuniary or social circumstances. He may have signs of diminution of reserve and slowing down of his faculties or he may harbour a progressive pathological condition, but the symptoms and signs of these have not yet reached the clinical threshold.

Class 2 (Moderately Fit)

(a) An ambulant individual capable of coping with ordinary problems of life, though suffering from a clinically discernible disease. He requires periodic attendance by a doctor and/or nurse, but is otherwise capable of looking after himself.

(b) A patient convalescing from an acute disease, or an exacerbation of a chronic condition.

Class 3 (Unfit)

A person suffering from one or more diseases necessitating frequent control by a doctor or nurse, e.g. (a) a bed- or chair-fast patient, (b) a person incapable of attending to his/her personal hygiene, (c) a harmless mentally disordered patient, or (d) a terminal patient.

It was found that 45 individuals or 25.1% of all the residents belonged to Class 1, 39 individuals or 21.8% of the residents belonged to Class 2, and 95 individuals or 53.1% belonged to Class 3.

Thus about 75% of the residents require frequent or periodic medical and/or nursing supervision. The preponderance of hospital or nursing-home types of persons at the Cape Jewish Aged Home is in no way unique. It accords with the trend in other countries where the chronic sick are steadily ousting the healthy aged. Thus, in his 1959 annual report, President Affelder, of the Montefiore Home of Cleveland,¹² stated: 'Twenty-five years ago, at least 90% of our residents were well, aged persons; today less than 10% of our residents can be qualified as such'. Moreover, not much difference is now discernible in the health status of residents of some aged homes and of some chronic-disease hospitals. In 1959, Baltimore (USA) City Chronic Disease Hospital had under its care 230 medical patients. Of these only 42% required constant medical and nursing care.¹⁵

For this reason some social and medical scientists are advocating that moderately healthy, self-sufficient aged persons should not reside at Aged Homes, but should be accommodated in apartments or flats or boarding houses specially designed for such people or should be boarded out with private families under the surveillance of a supervising organization. The present Aged Homes, on the other hand, should be equipped with adequate facilities for diagnosis and treatment of chronic diseases, and should be reserved only for victims of long-term diseases or crippling disabilities. It would appear that the Cape Jewish Aged Home is moving in this direction.

Drs. Franz Goldman and Neva Deardorff,¹⁶ after reviewing the position in the USA, recommended a modification of the above scheme. They stated: 'Instead of drawing a line of demarcation between homes for aged people in apparent good health and homes for aged people designed to serve the sick as well as the healthy, the emphasis should be placed on

development of (1) apartments for oldsters who can take care of themselves or need only some help, and (2) good institutions for long-term care of chronically ill or seriously disabled patients *regardless of age*. These two types of physical facilities should be in close proximity'.

WHICH IS THE HEALTHIER SEX?

At the Cape Jewish Aged Home, males are healthier than females, as is demonstrated in Table VI, which analyses the males, females and total population separately into the three functional-capacity classes. It will be seen that the percentage of unfit persons is significantly higher among the females than the males.

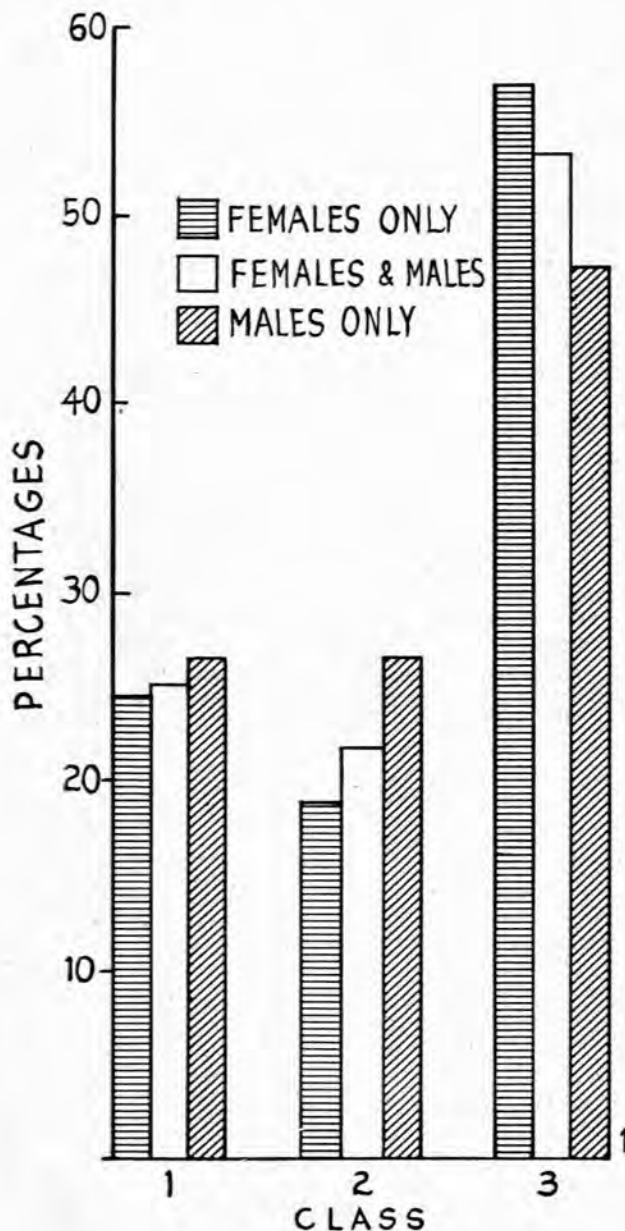


Fig. 1. See text.

TABLE VI. THE THREE FUNCTIONAL-CAPACITY CLASSES CLASSIFIED ACCORDING TO THE TOTAL POPULATION OF THE HOME AND THE FEMALES AND MALES SEPARATELY

Class	Total population		Females		Males	
	No.	%	No.	%	No.	%
1	45	25.1	27	24.3	18	26.5
2	39	21.8	21	18.9	18	26.5
3	95	53.1	63	56.8	32	47.0
Total	179	100	111	100	68	100

The histograms in Fig. 1 compare graphically the relative numbers of men and women in each capacity class, and illustrate that the percentage of relatively healthy men is greater than that of women.

It may be argued that these figures are of a specially selected group and that a higher percentage of fit males than fit females (or to put it differently, a higher percentage of unfit females than males) seek admission to the Home. Unfortunately the residents were not classified into functional-capacity classes on admission, therefore no data to verify or disprove this contention are available at the moment.

However, other workers have produced evidence showing that men who reach old age are healthier than women. Thus, Pemberton¹⁷ analysed the state of health of 284 elderly women and 192 elderly men not living in institutions, and found that 23.6% of females and 26.2% of males were fit; interestingly near to the percentages at the Cape Jewish Aged Home (Table VI).

Women live longer than men, but men are compensated by their suffering less ill health during their relatively shorter life.

SUMMARY

1. The ageing process follows a similar pattern in all countries with a Western mode of life.
2. Females are longer-lived than males, but in ageing are subject to more illness.
3. Cardiovascular disease and mental impairment are the predominant and gravest incapacitating illnesses of the aged.
4. To substantiate these conclusions, a survey is presented of the residents of the Cape Jewish Aged Home by sex, age, disease and functional capacity. It is compared with surveys elsewhere.
5. Some new trends in ageing and the housing of the aged are discussed.

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