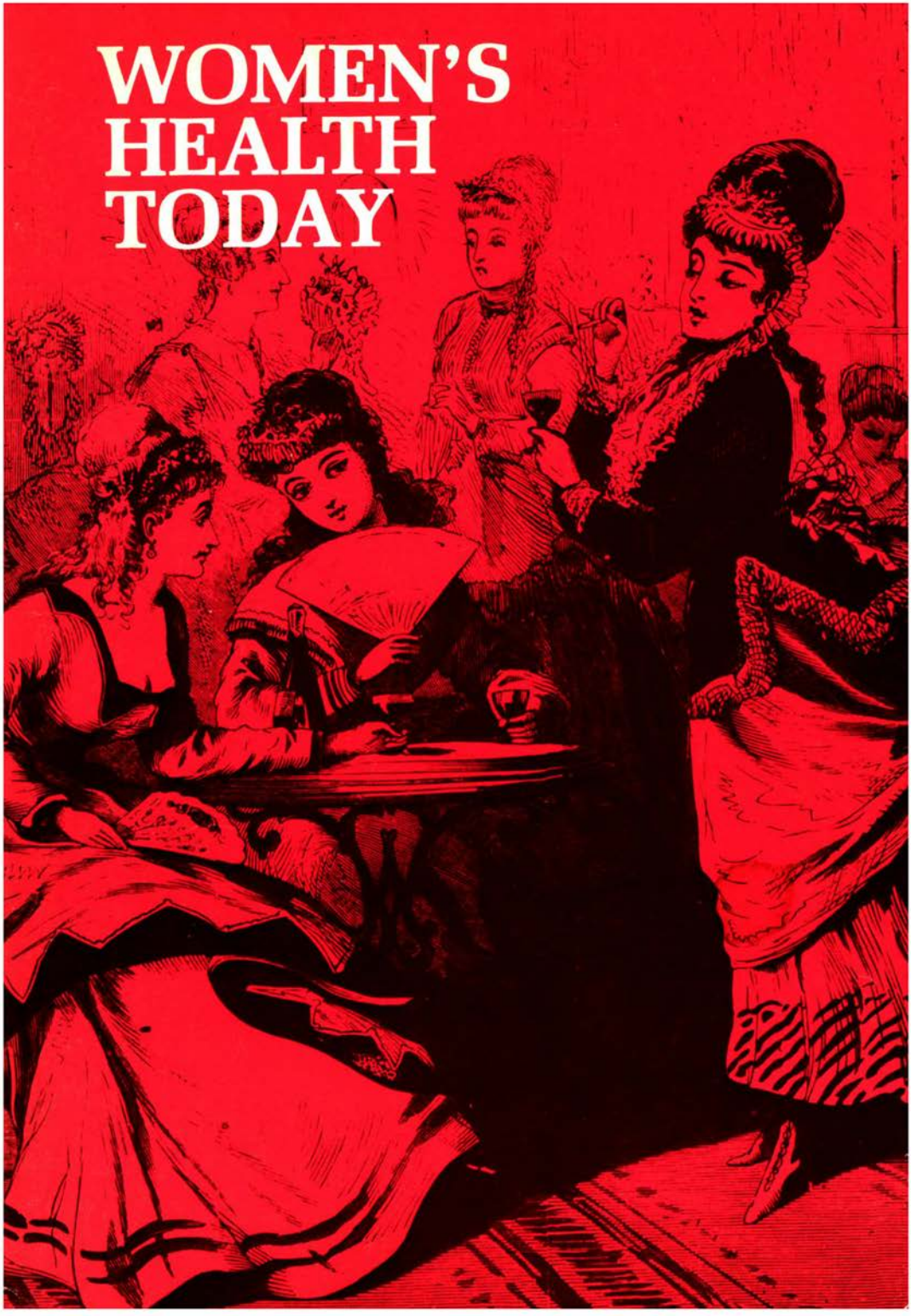
WOMEN'S HEALTH TODAY



WOMEN'S HEALTH TODAY

Office of Health Economics
12 Whitehall London SW1A 2DY

No 88 in a series of papers on current health problems published by the Office of Health Economics. Copies are available at £1.00. For previous papers see page 71.

ISSN 0473 8837

Cover illustration: from Mary Evans Picture Library.

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Office of Health Economics

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Foreword

In 1986, the Medical Women's Federation approached the Office of Health Economics with the suggestion that an overview of women's health would be timely. It was considered opportune, not simply because the MWF is celebrating its 70th Anniversary this year – furthermore, OHE itself is currently embarked on its 25th year of studying health care issues – but, more importantly, as a means of stimulating further interest in women's health. In particular, as discussion of the topic extends into ever wider territory, it is important to identify and not lose sight of those issues that are clearly of central concern.

This report firmly establishes the nature of contemporary mortality and morbidity profiles among women. As greater equality between the sexes has been achieved in terms of education and employment opportunities, women have also acquired similar lifestyle patterns to men. Diseases such as coronary heart disease and cancer of the lung can, therefore, no longer be seen as problems of the male sex alone. It is also clear that individual behaviour regarding cigarette smoking, diet, alcohol consumption and exercise is an important determinant of many other diseases experienced by women. Consequently, considerable potential exists for improving the health of women through the successful implementation of initiatives in disease prevention and health promotion.

The booklet highlights the importance of taking the broad view of women's health and including all illnesses, not just those (such as cervical and breast cancer) which are seen as 'women's diseases'. Clearly, it would be a mistake to concentrate solely on diseases specific to women as this ignores more fundamental health problems suffered by women as well as men. It is essential to focus on those illnesses which result from social, environmental and lifestyle patterns that are potentially preventable.

Anyone interested in improving women's health will find this paper a mine of valuable information. The report draws attention to many major areas of concern and identifies issues which require further action and research. Prominent among those clearly requiring more extensive investigation are the observed differentials in health by occupational and socio-economic grouping. The Office of Health Economics is to be congratulated on setting the scene for constructive debate by the publication of this important paper.

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Introduction

The health debate is more and more concerned with the promotion of lifestyles to avoid disease. As a consequence of this trend, studies have increasingly sought to group individuals according to various characteristics such as age, social class and geographical region of residence with the objective of identifying aspects of behaviour that might be modified to benefit health. A further obvious division of the community is by sex. Until recently, however, males have tended to attract more attention in this regard than females.

Interest in women's health is, nevertheless, steadily gathering momentum. Support for this observation may be drawn from a number of recent developments. This year, for example, the go-ahead for a national breast cancer screening initiative has been announced whilst on a negative note, widespread concern has been expressed at the deficiencies uncovered in certain parts of the screening programme for cervical cancer. In addition, increasing numbers of articles concerned with women's health issues are now appearing in academic journals. Recent examples include a paper from the Royal College of Physicians Research Unit (Bayliss, 1986) and a leading article in the *British Medical Journal* (Silman, 1987) both of which sought to identify the reasons for the longer life span enjoyed by women. Finally, women's health has been steadily gaining political recognition and last year one of the government's health ministers – a woman – added formal responsibility for the topic to her departmental brief.

At first sight, the upsurge of interest in women's health may appear surprising. From the perspectives of mortality and life expectancy, for example, the experience of females is markedly more favourable than that of males. At all points along the age spectrum, women have lower death rates. Premature mortality, in particular, is predominantly a male problem: among the population under 65 years of age there are 165 male fatalities for every 100 female deaths. Survival data indicate that girls at birth can expect to live on average six years longer than boys. Furthermore, this survival advantage is maintained into old age – men aged 65 years have only a 41 per cent chance of celebrating their 80th birthday compared to a 61 per cent probability for women.

Yet in spite of the seemingly advantageous position of women described by these statistics, a number of health concerns have recently become increasingly conspicuous. For example, health education has been relatively less successful in persuading women of the hazards of cigarettes and almost 7 million females over 16 years of age – one in three – continue to smoke. The costs associated with the spread of the habit among women are now being seen in the form of rising lung cancer mortality rates for some sections of the female population at a time when male rates are falling.

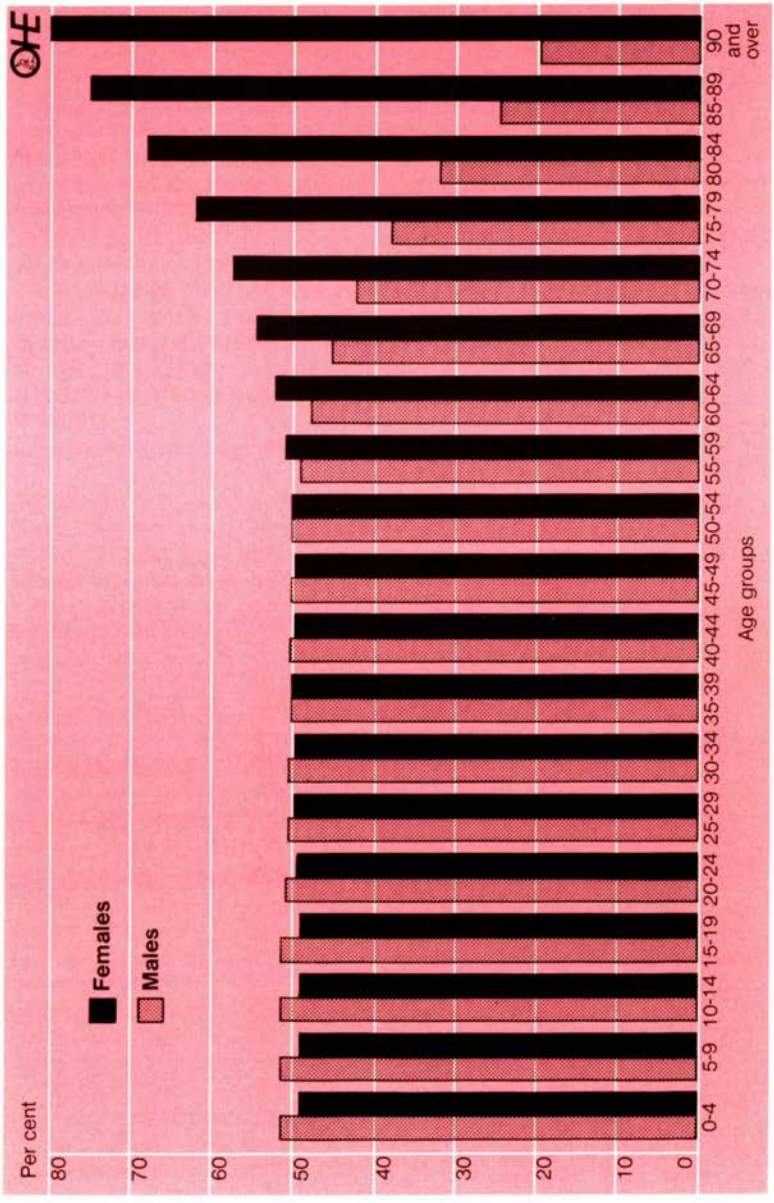
The ageing population may to a large extent be seen both directly and indirectly as a female issue. Seven out of ten of the 1.6 million individuals currently aged 80 years or more are women and this pro-

portion is expected to be very nearly the same at the start of the next century when there will be a further 620,000 people in this age group. As a result, 'mass' diseases of old age such as dementia and osteoporosis tend to be seen as health problems predominantly affecting women. At the same time, younger women are playing an essential role in the provision of informal care for large sections of the elderly population.

Women also suffer a higher incidence of morbidity and this in part explains the finding that they consume a larger share of the resources of the National Health Service. The Third National Study of Morbidity in General Practice suggests that about 61 per cent of consultations with family doctors involve women. In the hospital sector, data from the Hospital In-patient Enquiry indicate that the 2.7 million female cases treated in England in 1985 generated 33 million bed days, or 61 per cent of the total. A further three million bed days stemmed from maternity cases. In addition women accounted for 58 per cent of the 200,000 admissions to mental illness hospitals and units in England in 1985. Assuming proportional burdens similar to those noted above apply throughout the other sectors of public health care provision it can be calculated that in 1985 females comprised 51 per cent of the UK population but accounted for between 60 and 65 per cent of the £18.4 billion spent on the National Health Service.

Against this background, the aim of the present paper is to encourage further the growth of interest in women's health. More specifically, it seeks to provide an overview of the mortality and morbidity of women in England and Wales today. The report is based upon national census and survey data and will therefore be selective in the sense that issues not embraced by these information sources will generally be excluded from the analysis. It is also inevitable that the paper, with such a broad objective, will only skim over many topics that undoubtedly merit much more detailed investigation. Nevertheless, the analysis clearly identifies a number of areas of concern, the significance of some of which has tended to be obscured in much of the discussion about women's health issues. In particular, it emerges that more favourable mortality and morbidity profiles in the future will depend to a large extent on the success that is achieved now in persuading more women to modify their lifestyles in the interests of their health.

Figure 1 **Distribution of population in selected age groups by sex, England and Wales, 1986, percentages.**

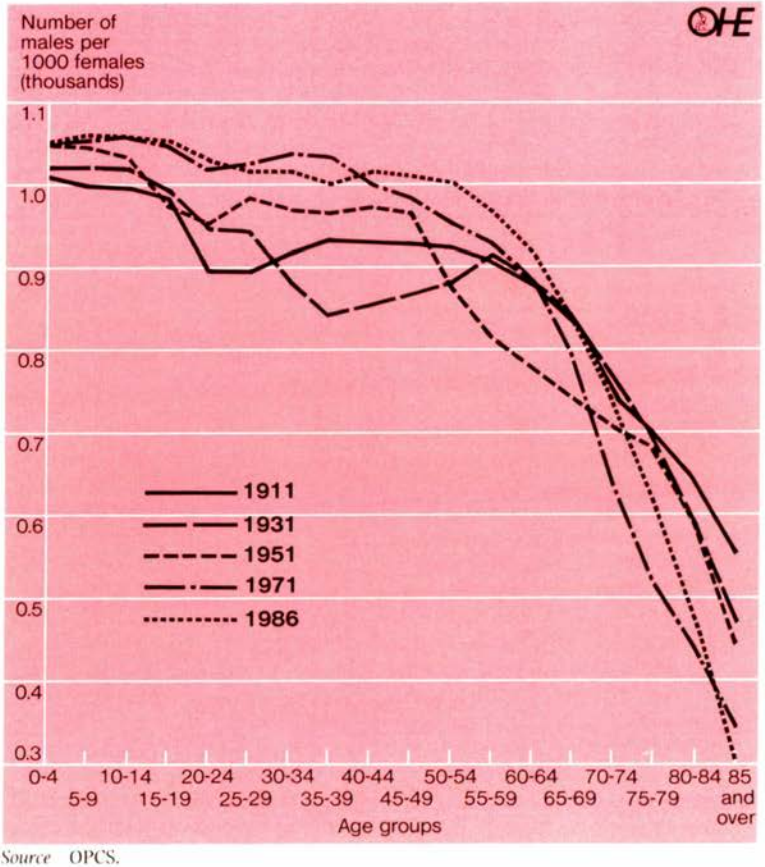


Source OPCS.

Demographic and health profiles

In 1986, a total of 661,018 infants were born alive in England and Wales. Boys accounted for just over half (51.3 per cent) of the live births and as Figure 1 shows this slight excess of males endures in every age band up to and including the 50–54 years grouping. Thereafter the pattern reverses and females achieve a share of the population that increases in each succeeding age group. As a result, females account for 58 per cent of people aged 60 years and over, 67 per cent of the 75 years and above grouping and 80 per cent of those surviving to 90 years and beyond.

Figure 2 **Number of males per 1,000 females, England and Wales, 1911, 1931, 1951, 1971 and 1986.**



Source OPCS.

Table 1 **Age at which females outnumber males for the first time.**

	Crossover age group
1911	5–9
1921	15–19
1931	15–19
1951	15–19
1961	20–24
1971	45–49
1981	50–54
1986	55–59

Source OPCS.

Table 2 **Population Projections for England and Wales and the changing balance of the sexes: number of males per 1,000 females.**

		Mid–1985 based projections		
Age group	*1986*	*1991*	*2001*	*2011*
0–4	1,052	1,060	1,060	1,061
5–9	1,056	1,056	1,063	1,063
10–14	1,058	1,058	1,065	1,065
15–19	1,051	1,056	1,057	1,063
20–24	1,028	1,042	1,045	1,052
25–29	1,016	1,025	1,037	1,038
30–34	1,015	1,013	1,030	1,030
35–39	1,001	1,013	1,015	1,025
40–44	1,015	999	1,003	1,021
45–49	1,009	1,009	1,003	1,005
50–54	1,001	1,000	984	989
55–59	967	985	985	980
60–64	918	937	957	944
65–69	838	866	911	917
70–74	741	765	823	851
75–79	617	642	707	758
80–84	473	509	575	635
85+	307	333	397	458

Sources OPCS Monitors PP1 87/1 and PP2 86/1.

The evolution of these demographic patterns over the course of the present century is illustrated in Figure 2. The latter shows in particular that the excess of females that used to occur throughout much of the age spectrum has become increasingly confined to the older age groups. As recently as 1951, females accounted for the greater part of each age group from the 15–19 year cohort onwards. By 1981, this 'numerical switch-over' had been delayed until the 50–54 year age group (Table 1). The latest available population estimates indicate that in 1986 females did not outnumber males until the 55–59 age range.

Looking to the future, Table 2 shows the anticipated changes in the sex ratio at different ages calculated from the Office of Population Censuses and Surveys' population projections. Such data have of course to be treated with caution since the passage of time confers increasing susceptibility to error upon the assumptions that have to be made concerning, *inter alia*, mortality, fertility and migration rates. Nevertheless, the official figures point to two significant developments over the next quarter of a century. First, the immediate future will see an abrupt halt to any further advance in the age at which males have numerical pre-eminence over females. The cross-over point, having 'aged' rapidly from 15–19 years in 1951 to 55–59 years in 1986, appears set to remain in the fifties age band for at least the next 25 years. Second, the difference between the number of males and females at older ages is expected to diminish over time. In 2011, females will outnumber males by 1.6:1 in the 75 years and over age group compared with the current ratio of 2:1.

Mortality

Since the start of the present century, the mortality rates for females and males have fallen in all age groups (Table 3). However, the reductions have almost universally been greater for females. Furthermore, the drop in female mortality rates took place from lower initial levels than was the case with males. Consequently, the disparities between the sexes that already existed at the turn of the century have in many instances widened with the passage of time (Table 4).

Notwithstanding these differences, the temporal distribution of the improvements in mortality over the 85 year period has been broadly similar for the two sexes. Figure 3 indicates that the reductions in female and male death rates below approximately 65 years of age had, to a substantial extent, taken place before the 1960s. In contrast, a much larger part of the mortality improvement for the older age groups has occurred during the last two decades. This pattern is common to both sexes although it is more pronounced for males: focusing on the 75–84 age group, for example, Figure 3 shows that 52 per cent of the drop in male mortality over the 1901–85 period was concentrated in the post 1961 era compared to 35 per cent for females.

The latest detailed mortality figures by age for England and Wales are for 1985 and these are shown in Figure 4. Female death rates are consistently lower than those for males throughout the entire age

Table 3 **Mortality rates per 1,000 by age and sex, England and Wales, 1901–05 to 1981–85.**

Period		*Under one year*	*1–4*	*5–9*	*10–14*	*15–19*	*20–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75–84*	*85+*	*All ages*
1901–05	*Females*	124	—	3.79	2.24	3.02	3.66	5.04	8.05	13.1	25.4	54.8	119.9	249.4	15.0
1931–35		54	6.23	2.07	1.37	2.22	2.77	3.09	4.33	7.96	17.0	42.8	108.9	245.0	11.4
1961–65		18	0.78	0.32	0.25	0.38	0.47	0.73	1.78	4.43	10.6	29.8	8.36	206.7	11.2
1981–85		8.9	0.41	0.18	0.19	0.30	0.33	0.50	1.17	3.55	9.6	24.1	64.4	175.9	11.4
% reduction															
1901–05 to 1981–85		93	—	95	92	90	91	90	85	73	62	56	46	29	24
1901–05	*Males*	151	—	3.68	2.14	3.20	4.39	5.89	9.74	17.0	32.4	65.3	137.6	274.6	17.1
1931–35		70	6.88	2.28	1.44	2.45	3.15	3.31	5.40	11.2	23.6	56.7	135.2	278.9	12.7
1961–65		23	0.94	0.47	0.41	0.95	1.11	1.11	2.46	7.38	21.7	54.0	121.3	253.2	12.4
1981–85		11.5	0.50	0.25	0.28	0.75	0.83	0.88	1.73	5.71	17.4	45.2	103.6	220.9	11.9
% reduction															
1901–05 to 1981–85		92	—	93	87	77	81	85	82	66	46	31	25	20	30

Source OPCS.

Table 4 **Female mortality rates as a percentage of male rates, by age, England and Wales, 1901–05 to 1981–85.**

Period	*Under one year*	*1–4*	*5–9*	*10–14*	*15–19*	*20–24*	*25–34*	*35–44*	*45–54*	*55–64*	*65–74*	*75–84*	*85 and over*	*All ages*
							Percentages							
1901–05	82	—	103	105	94	83	86	83	77	78	84	87	91	88
1931–35	77	91	91	95	91	88	93	80	71	72	75	81	88	90
1961–65	78	83	68	61	40	42	66	72	60	49	55	69	82	90
1981–85	77	82	72	68	40	40	57	68	62	55	53	62	80	96

Source OPCS.

Figure 3a **Reduction in female mortality rates, by age group, England and Wales, 1901/05 – 1981/85.**

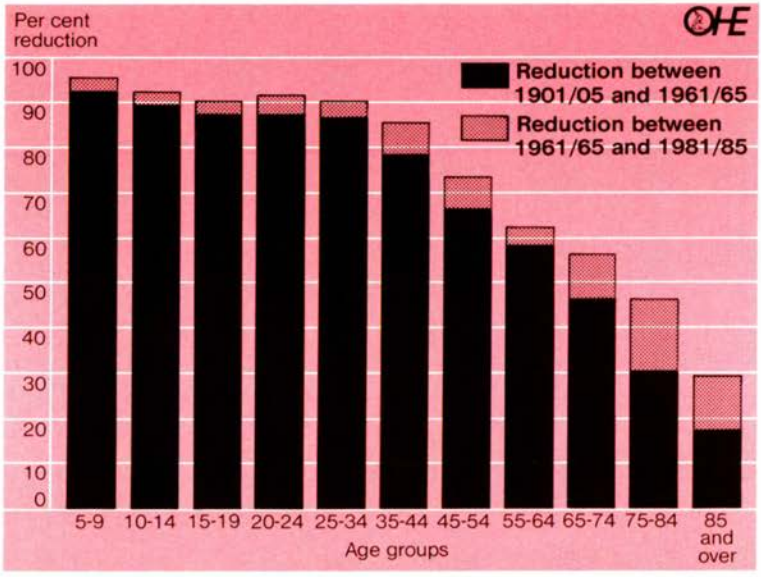
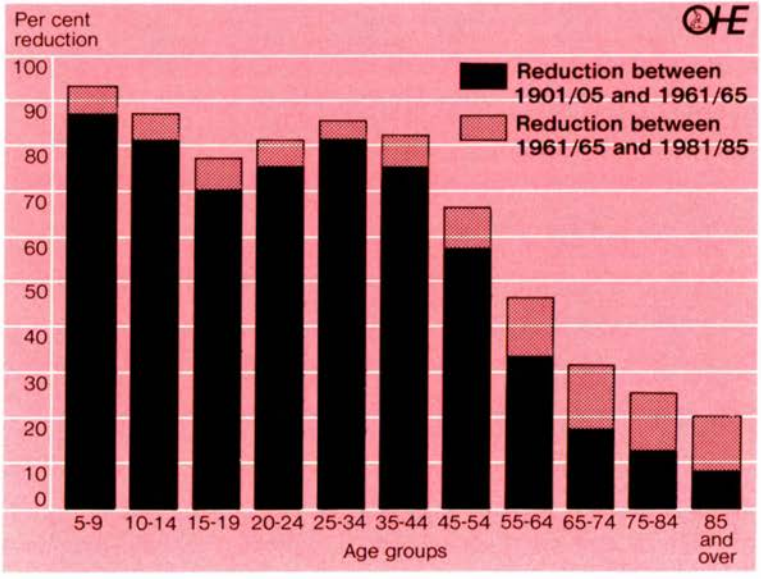
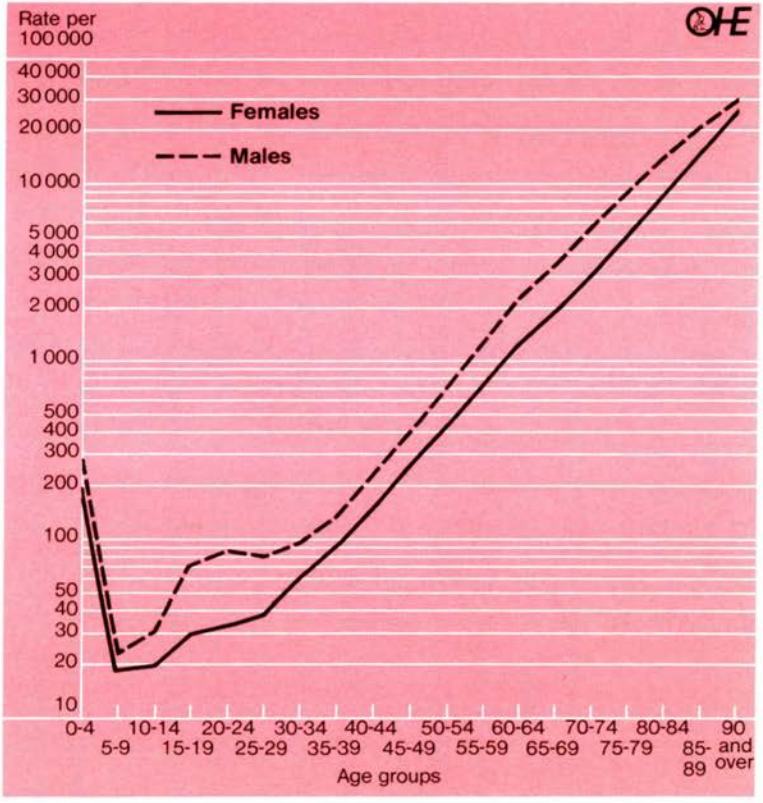


Figure 3b **Reduction in male mortality rates, by age group, England and Wales, 1901/05 – 1981/85.**



Source OPCS.

Figure 4 **Mortality rates per 100,000 population, by age and sex, England and Wales, 1985.**

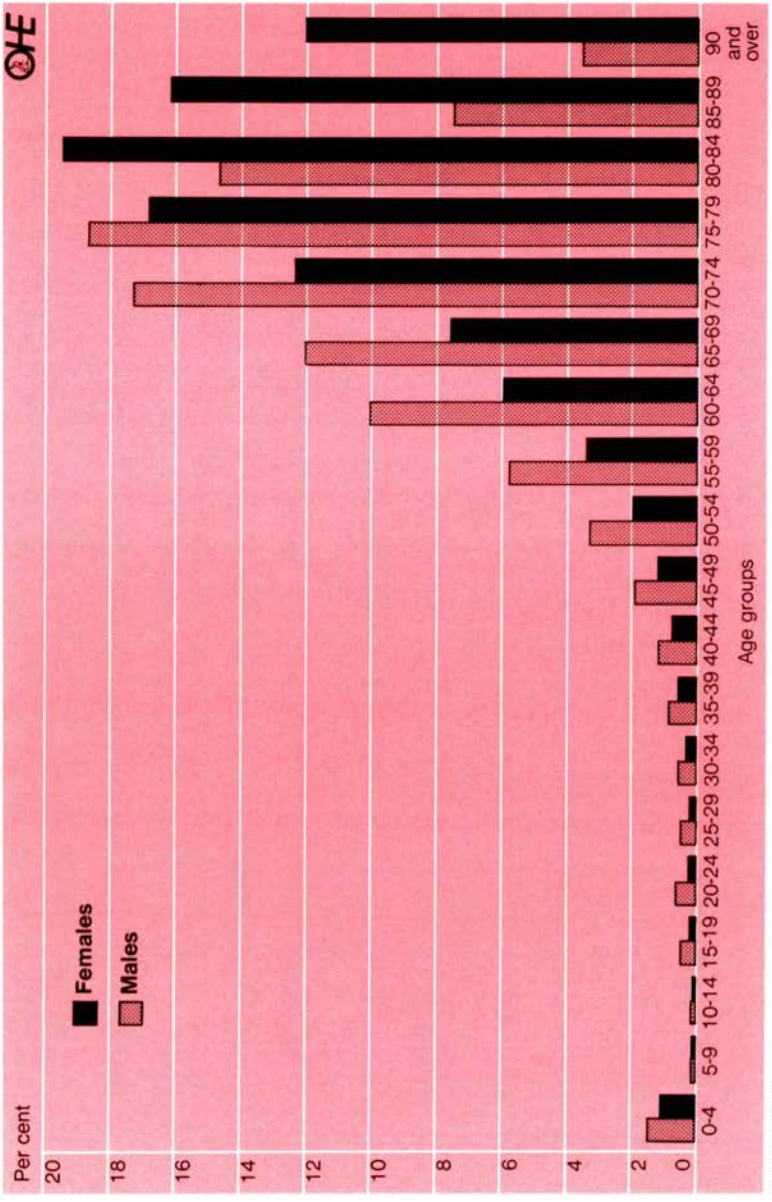


Source OPCS.

spectrum. The magnitude of the difference between the rates for the two sexes is greatest between the ages of 20 and 24 years and least among those aged 90 years and over. More generally, the 1985 data indicate that the gap between the two rates diminishes at the extremes of the age spectrum and that between the ages of 30 and 84 years (a span containing 78 per cent of all deaths in 1985) female mortality rates are about 60 per cent of those for males.

The mortality distributions consequent upon these rates may be viewed from two different perspectives. First, Figure 5 illustrates the pattern within each of the two sexes and indicates that more than 26 per cent of male deaths occur before the current retirement age of 65 years. In contrast, less than 16 per cent of female mortality takes place before this age.

Figure 5 **Distribution of female and male mortality by age group, England and Wales, 1985, percentages.**



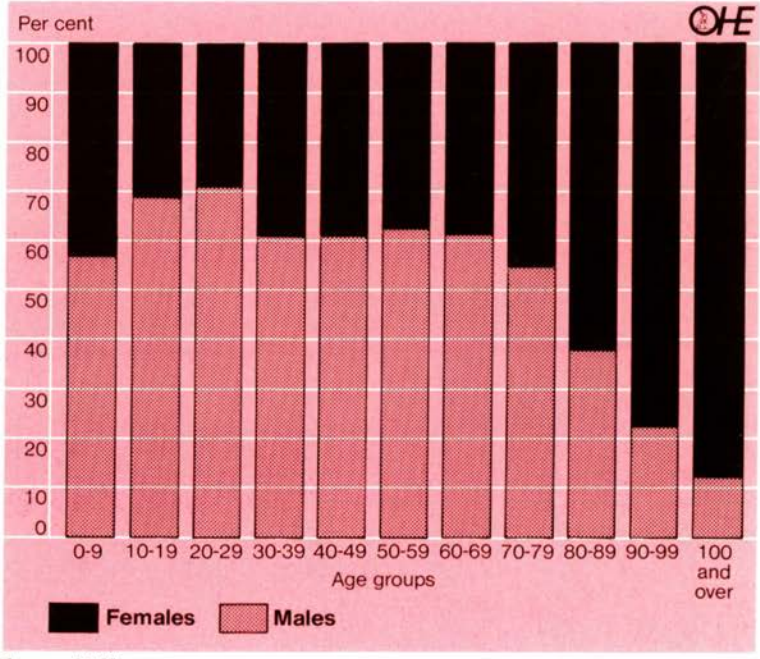
Source OPCS.

Second, Figure 6 shows the proportion of deaths occurring at different ages attributable to each sex. At one extreme, females account for only 29 per cent of deaths between 20 and 29 years, but at the other end of the spectrum this figure rises to 88 per cent in the 100 years and over cohort. However, the key point to emerge from these two diagrams is that, at the present time, premature mortality is essentially a problem for the male sex – men account for nearly two out of every three deaths occurring below 70 years of age.

Life expectancy

Life expectancy estimates offer an alternative means of looking at mortality figures. Table 5 shows that 23.3 years and 25.3 years of extra male and female life respectively have been added to average expected survival at birth since the beginning of the present century. As a result, newly born males today have a life expectancy of 71.8 years and for females the corresponding figure is 77.7 years. Significant improvements have also been achieved at other ages although almost universally they have not been on the same scale as the gains at birth. (The

Figure 6 **Percentage of deaths at different ages attributable to females and males, England and Wales, 1985.**



Source OPCS.

Table 5 **Expectation of life at birth, one year, 15, 45 and 65 years, England and Wales, 1901–10 to 1983–85.**

	Birth		*One year*		*15 years*		*45 years*		*65 years*	
Year	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*	*Males*	*Females*
1901–10	48.5	52.4	55.7	58.3	47.3	50.1	22.3	25.5	10.8	12.0
1910–12	51.5	55.4	57.5	60.3	48.6	51.4	23.9	26.3	11.0	12.4
1930–32	58.7	62.9	62.3	65.5	51.2	54.3	25.5	28.3	11.3	13.1
1950–52	66.4	71.5	67.7	72.4	54.4	59.0	26.5	30.8	11.7	14.3
1970–72	69.0	75.3	69.4	75.4	55.8	61.8	27.4	32.9	12.2	16.1
1980–82	71.1	77.1	71.0	76.9	57.3	63.1	28.7	34.1	13.1	17.1
1983–85	71.8	77.7	71.6	77.4	57.9	63.6	29.2	34.5	13.4	17.5

Source OPCS.

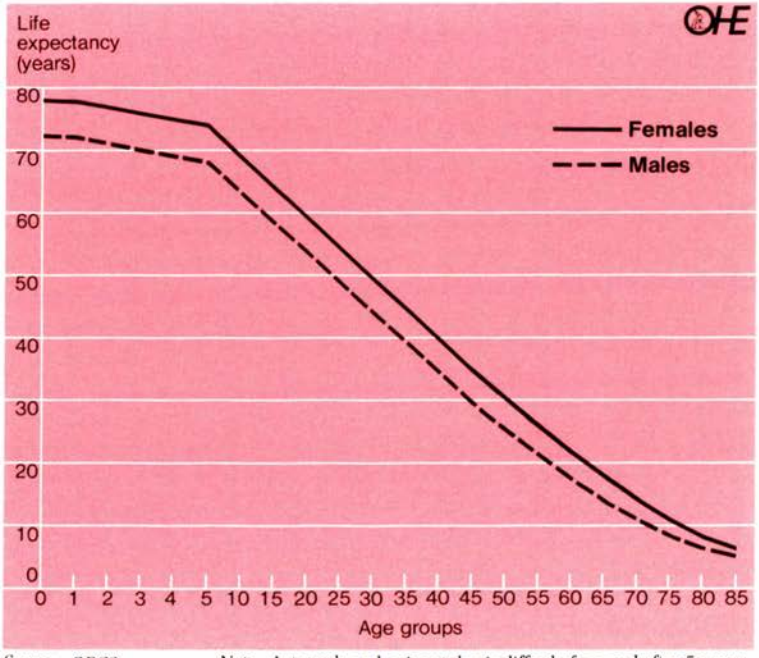
one exception in this regard is provided by female life expectancy at 65 years.) It is also noteworthy that if attention is confined to the period following 1970, the most substantial survival extensions have accrued to the elderly. For both males and females the percentage increase in life expectancy at 65 years of age between 1970–72 and 1983–85 was approximately 2.5 times the gain recorded for newly born infants.

Figure 7 contains the latest detailed information on life expectancy by age. It is clear that, in absolute terms, the 'survival gap' between the sexes steadily closes with advancing age. At birth, females are expected to live 5.9 years longer than males. By the ages of 20, 40, 60 and 80 years the difference has fallen to 5.6, 5.3, 4.6 and 1.9 respectively. Yet this trend should not obscure the fact that survival patterns in old age differ markedly between the sexes. Table 6 shows, for example, that 61 per cent of females aged 65 years will survive to reach 80 years compared with only 41 per cent of males.

Morbidity

Individuals at the extremes of the distribution of well-being can readily be categorised as either healthy or ill, but for the majority of the popu-

Figure 7 **Life expectancy at different ages, England and Wales, 1983–85.**



Source OPCS. *Note* Intervals on horizontal axis differ before and after 5 years.

Table 6 **Average survival probabilities for persons aged 65 years, based on life expectancy data for 1983–85, England and Wales.**

65 year olds surviving to: Age	*Percentages*	
	Males	*Females*
70	84	91
75	63	79
80	41	61
85	20	40

Source OPCS.

Table 7 **Prevalence of self-reported chronic sickness, by sex and age, Britain, 1985.**

Age group	*Percentages*			
	Males		*Females*	
	(a)	*(b)*	*(a)*	*(b)*
0–4	11	4	9	3
5–15	18	8	13	6
16–44	21	10	22	11
45–64	42	27	43	26
65–74	55	38	56	38
75 and over	58	43	65	51
Total	29	16	31	18

a: long-standing illness
b: limiting long-standing illness

Source General Household Survey.

lation classification in such an unambiguous fashion is clearly not feasible. This observation reflects many factors including the absence of a universally accepted package of suitably weighted measures that might theoretically be employed to determine an individual's health status. At the same time there are a number of conditions – such as hypertension and raised serum cholesterol levels – which may not currently be associated with any ill health but could lead to significant problems in the future. This point emphasises the importance of defining with care the aspect of morbidity that is to be measured. In this context, Blaxter (1987) has drawn attention to the critical distinctions between disease (biological or clinically identified abnormality), illness

(the subjective experience of symptoms of ill health) and sickness (the functional consequences of disease or illness).

Morbidity does not therefore lend itself to straightforward measurement. Nevertheless, the results of two nationally-representative sample surveys offer some insights into the general health of the population. The first of these investigations is the annual General Household Survey, which has been running since 1971. The latest data are for 1985 when the number of households responding to the survey totalled almost 10,000. Focusing on self-reported long-standing illness, Table 7 shows that prevalence increases steadily with age and that there is generally little difference between the sexes in age specific rates until old age. In 1985, among individuals aged 75 years and over, the rate for females was 12 per cent higher than that for males.

These data are, however, subject to relatively sharp year-on-year fluctuations – for the oldest age group, the 1984 General Household Survey found only a two percentage point difference between the rates for the two sexes compared with the seven point gap in the latest survey. In order to overcome this problem, Table 8 averages the findings of the General Household Survey for the last three years (1983–85). Below 16 years of age males have a marginally higher prevalence of chronic illness than females. Subsequently the discrepancy diminishes and the rates for the two sexes remain approximately equal until retirement age when female prevalence rates become progressively higher than those for males. It is not clear, however, to what extent the latter finding is a reflection of genuine differences in

Table 8 **Long-standing illness: comparison of the prevalence rates reported by the General Household Survey and the Health and Lifestyle Survey in Britain.***

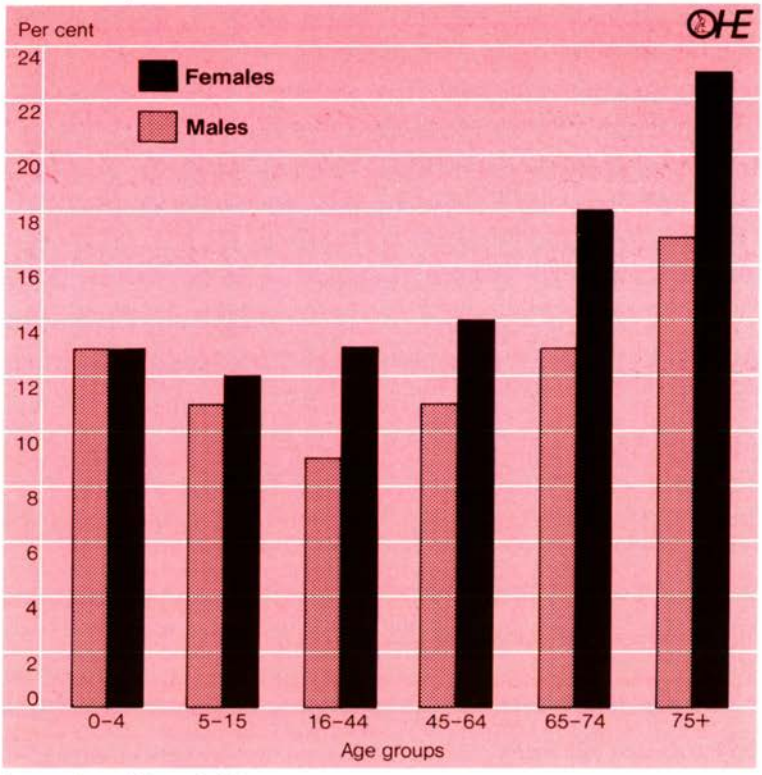
	Percentages			
	Males		*Females*	
Age group	*GHS*	*HLS*	*GHS*	*HLS*
0–4	11	—	9	—
5–15	18	—	14	—
16–44**	22	22	22	19
45–64	43	41	44	38
65–74	57	49	59	50
75 and over	63	48	67	53

* GHS data are averages for 1983–85. The HLS figures derive from survey work carried out between autumn 1984 and summer 1985.

** HLS data relate to the age range 18–44 years.

Source General Household Survey and Blaxter, 1987.

Figure 8 **Percentage of females and males reporting restricted activity in the 14 days before interview, Britain, 1985.**



Source General Household Survey.

disease incidence. The longer life expectancy of females means that women in this open-ended age grouping are on average older than males and hence more likely to be ill or infirm (OPCS, 1986a).

The pattern of prevalence of chronic ill health revealed by the General Household Survey has recently been confirmed by the findings (also shown in Table 8) of the Health and Lifestyle Survey, a random-sample survey of 9,003 Britons over 18 years of age living in private households carried out in 1984/85. It is noteworthy, however, that the two surveys show marked disagreement regarding the prevalence rates for the elderly. An additional inconsistency between the two sets of data arises in connection with the disabling consequences of chronic ill health: among persons aged 75 years or more, the Health and Lifestyle Survey suggests that long-standing disease has a deleterious impact on daily life in 50 to 60 per cent of cases, whereas the General Household

Survey indicates a significantly higher range of between 70 and 80 per cent.

These discrepancies probably reflect differing methodological characteristics of the two surveys and this factor similarly inhibits any direct comparison of the findings in the area of acute illness. Nevertheless, both sources of information are consistent in showing that females report more short-term ill health or symptoms than males. The General Household Survey seeks information from respondents about restrictions upon activity forced by illness or injury during the two weeks before interview. The findings for 1985, contained in Figure 8, show that at all ages from 5 years onwards, prevalence rates are higher for females and that after 16 years of age the 'excess' is no less than 27 per cent (at 45–64 years) and can be as great as 44 per cent (at 16–44 years).

The Health and Lifestyle Survey adopted a different approach and investigated the occurrence of selected symptoms during the month preceding the interview. Table 9 contains the study's findings for 13 common symptoms. Female reporting rates are, with the exceptions of painful joints, indigestion and colds/flu at ages 18–44 years and ear problems and persistent coughs between 45 and 84 years, universally higher than those for males. In the youngest age group shown in Table 9, there are some substantial disparities between the sexes – for

Table 9 **Percentage of Health and Lifestyle Survey sample reporting the occurence of selected symptoms during the month before interview.**

	Percentages					
	18–44		*45–64*		*65–84*	
	M	*F*	*M*	*F*	*M*	*F*
Painful joints	12.1	10.9	26.9	33.3	30.0	44.6
Palpitations/breathlessness	5.8	8.0	15.3	19.9	23.5	28.5
Bad back	14.3	16.7	18.3	23.3	19.7	29.1
Trouble with feet	10.0	10.3	14.5	21.3	17.9	27.0
Trouble with eyes	9.4	11.8	12.8	21.3	18.0	30.8
Trouble with ears	5.3	6.2	10.7	10.2	21.4	18.2
Faints/dizziness	3.3	7.5	5.2	7.6	8.3	13.4
Constipation	2.7	10.9	4.8	11.6	10.6	15.9
Persistent cough	8.5	9.1	12.1	11.7	13.9	11.1
Sinus trouble/catarrh	17.1	18.3	15.6	19.5	16.3	16.9
Indigestion	14.9	13.6	18.9	19.0	19.7	23.4
Headache	25.2	38.5	16.4	32.4	12.7	24.0
Colds/flu	36.3	36.0	28.8	30.4	26.3	26.3

Source Blaxter, 1987.

Table 10 **Percentage of Health and Lifestyle Survey sample reporting four or more symptoms in the month before interview, by age and sex.**

	Percentage declaring high rates of illness	
Age groups	*Males*	*Females*
18–39	12.3	21.8
40–59	16.8	31.1
60 and over	21.5	32.4

Source Blaxter, 1987.

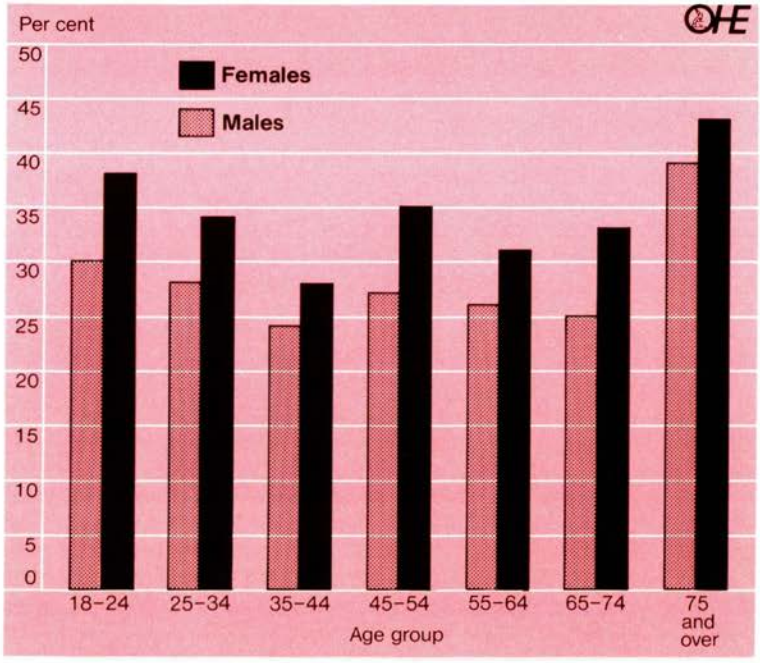
example, in the occurrence of headaches and constipation – but in many instances the differences are relatively small. There is a tendency, however, for some of these disparities to become more marked with increasing age. This observation applies, for example, to back pain and eye troubles where the female excess in reporting rises approximately threefold between 18–44 and 65–84 years.

Table 10 focuses attention on persons experiencing four or more symptoms in the month before interview. Individuals qualifying for this analysis are not necessarily 'more ill' than those reporting a smaller number of symptoms. (In order to investigate this possibility, information would be required about the severity of experienced symptoms and their impact on daily living, but it is not available.) Care must therefore be exercised in interpreting Table 10. Nevertheless, the findings highlight once again the marked differences that exist between males and females in the reporting of acute illness. Combining all age groups, 27.5 per cent of females report that they have recently suffered four or more symptoms compared to a figure of 16.1 per cent for males. More specifically, the magnitude of the difference between the sexes is greatest between the ages of 40 and 59 years and least among those aged 60 years and over.

The sex-specific patterns for acute morbidity outlined above were also identified by the Health and Lifestyle Survey in several other health related contexts. For example, the survey revealed that from early middle age onwards, females were more likely than males to assess their own health as being only 'fair' or 'poor'. At ages 40–59 years, 27.9 per cent of females classified their health status in this way compared with 25.8 per cent of males. The gap was wider for the 60 years and over cohort, the corresponding figures being 36.4 and 31.5 per cent for females and males respectively.

The Survey also investigated a range of psycho-social symptoms to construct a broad measure of the prevalence of 'malaise'. Oral questionning of the respondents about sleeping patterns, anxiety, boredom, concentration and other related items indicated that the proportion of females reporting a high level of malaise is significantly greater than

Figure 9 **Proportion of Health and Lifestyle Survey sample scoring above threshold possibly indicative of minor psychiatric disorder.**



Source Huppert *et al*, 1987.

that for males throughout the entire age spectrum (Table 11).

A more formal examination of minor psychiatric illness was undertaken by employing the respondent-completed 30-item version of the General Health Questionnaire (GHQ). This approach, too, identified significant differences between the sexes. Overall, 33 per cent of females and 27 per cent of males attained a threshold score at and beyond which there is a raised possibility of the presence of psychiatric disorder (Huppert *et al*, 1986). Figure 9 shows that disparities between the sexes occurred in all age groups and were particularly marked in the 45–54 and 65–74 cohorts.

It is highly probable that these data overstate the true prevalence of psychiatric disorder in the community (Huppert *et al*, 1986). This situation reflects uncertainty about the appropriate threshold levels to be applied to survey findings when the GHQ instrument is employed in this particular setting. More generally, attention needs to be drawn to the limitations inherent in all of the morbidity data presented in this section. The collection of information via interviews and self-completed questionnaires is inevitably subject to differences in the extent to which

Table 11 **Distribution by age and sex of categories of malaise.**

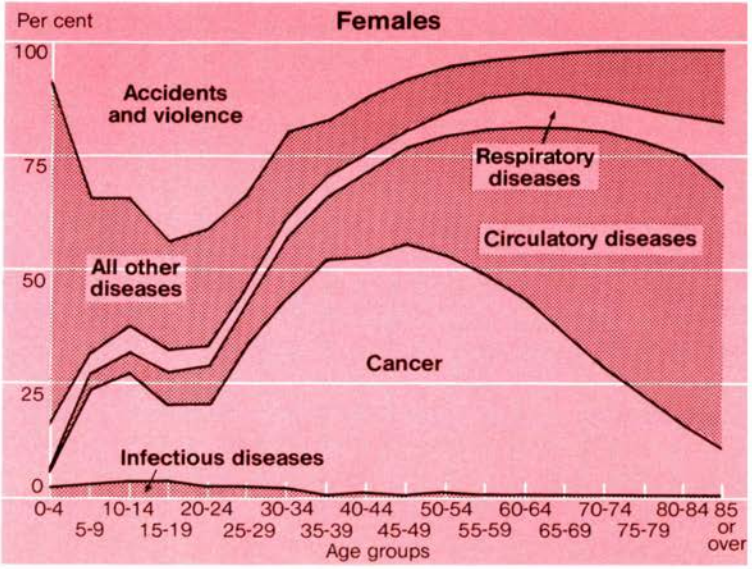
	Percentages					
	Males			*Females*		
Malaise category	*18–39*	*40–59*	*60 and over*	*18–39*	*40–59*	*60 and over*
Low	37	46	53	28	31	35
Average	40	33	28	38	34	30
High	23	21	20	34	36	35

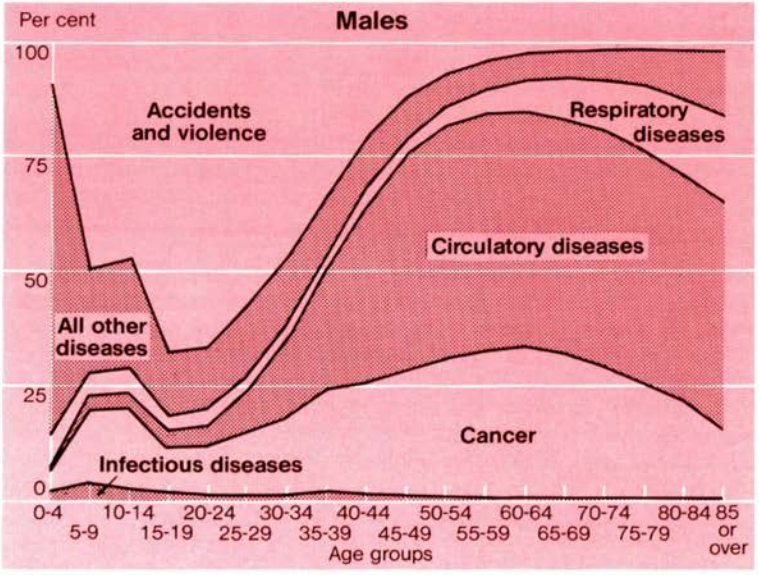
Source Stark, 1987.

individuals are prepared to divulge information about themselves. Furthermore, respondents differ in their knowledge about their own health and in terms of the impact that disease is perceived to have on their lives. (In this particular respect, the General Household Survey suggests that the prevalence of disabling chronic illness has increased quite markedly since the major study of impairment and handicap in the late 1960s (Harris *et al*, 1971) and the findings of a new investigation in this area are therefore awaited with interest since they may shed some light on the explanations for this trend.) Yet more obviously, community surveys will exclude serious forms of morbidity requiring treatment or care in hospitals and other nursing institutions.

Notwithstanding these shortcomings, the central point to emerge from the available data is that females consistently declare higher rates of short-term illness than males despite apparently little difference between the sexes in the self-reported prevalence of chronic disease. This finding combined with other evidence from the Health and Lifestyle Survey – for example, women as well as men are more likely to select a male when asked to 'think of someone you know who is very healthy' – suggests that healthiness is less readily seen as a female characteristic (Blaxter, 1987b). To some extent the sex differences in morbidity may reflect variations in the perception and reporting of ill health rather than clear differences in the incidence of short-term debility and pain. Other explanations have drawn attention to differences in genetic, hormonal, behavioural and environmental factors (Whitehead, 1987). However, it is not the objective of this paper directly to investigate the reasons for the dissimilarities between the sexes reported in this section. Instead, it seeks to clarify those areas of women's health that are sources of contemporary concern and mortality statistics provide an appropriate starting-point for the analysis.

Figure 10 **Selected causes of death by sex and age, United Kingdom, 1984.**





Source Social Trends 17, (1987).

Causes of mortality

The basic information from which death rates are constructed is extremely detailed and permits a clear identification of the constituents of mortality profiles at different ages. The data therefore provide an important means of highlighting particular areas of concern in relation to women's health although it should be emphasised that they suffer a number of limitations as guides to the burden of disease within the community. Notably, many of the major causes of ill health and disability are rarely directly responsible for death and their significance will consequently not be adequately represented by annual mortality statistics. For example, arthritis affects 41 per cent of the population aged 65 years or more (Dreghorn *et al.* 1986) yet all arthropathies and related disorders account for substantially less than one per cent of mortality at these ages. Similarly, the 7,000–8,000 deaths attributed to senile dementia disguise the fact that the condition affects more than half a million people over the age of 65 years, the majority of whom are women.

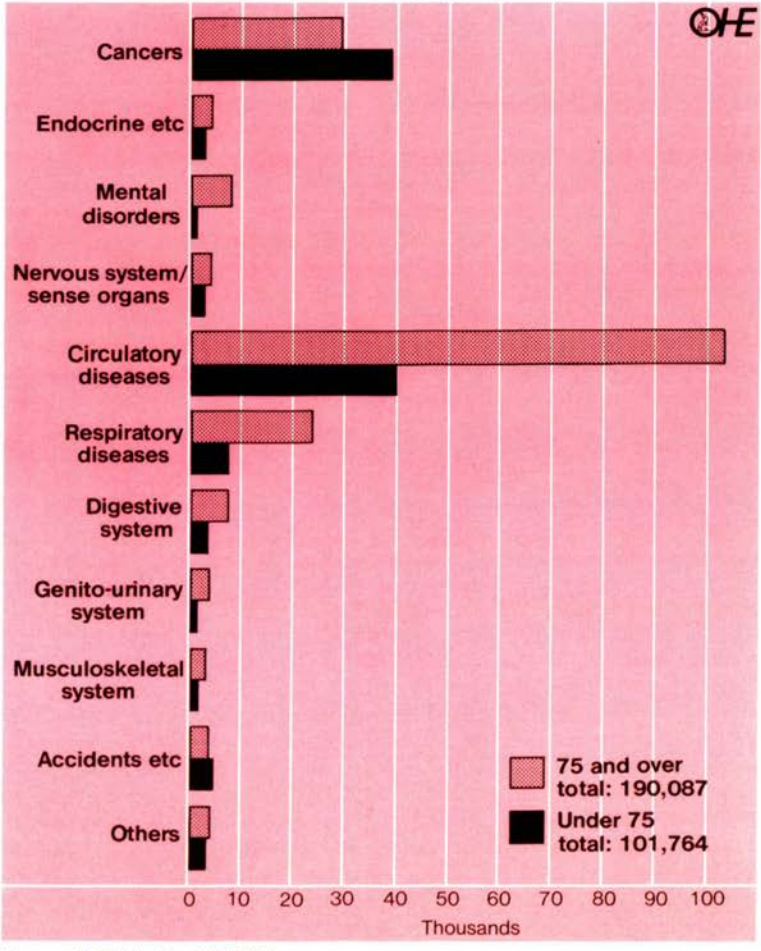
Osteoporosis is another example in this context that is especially relevant to women. The disease involves the loss of bone mass, thereby predisposing to fractures, and is most frequently associated with hormonal imbalance consequent upon the failure of ovarian function (Stevenson, 1986). Bone loss is most rapid during the first five years of the menopause and, despite subsequent deceleration, skeletal mass may have been reduced by about a third by the end of 15 years. Overall, it is estimated that one woman in four will suffer the effects of osteoporosis. More specifically, between 10 and 20 per cent of postmenopausal women experience a vertebral crush fracture (and 60 per cent of the remainder will have radiological evidence of spinal osteoporosis in their eighth decade) and by the age of 80 years, 6 per cent of women will have sustained a fracture of the femoral neck (Nordin, 1980). From these figures, osteoporosis is clearly responsible for significant levels of morbidity but the magnitude of this burden is not reflected in mortality data. The latter currently show an annual total of only about 2,000 deaths in the ICD categories, osteoporosis and fracture of the neck of femur. More than 90 per cent of these fatalities involve women aged 75 years and over yet the two categories account for just one per cent of deaths in this age group.

Accepting the limitations outlined above, Figure 10 illustrates the broad causes of female mortality at different points along the age spectrum. The diagram highlights, in particular, the greater significance of cancer for females compared to males in middle age. More detailed information is contained in Figure 11, which shows the numbers of deaths of women below and above 75 years of age, by principal cause in England and Wales in 1986[1]. The use of this particular age, instead of the more usual choice of 65 years, to differentiate 'premature' from

1 The 1,458 female deaths occurring within the first 28 days of life have been excluded from the analysis.

other deaths reflects the fact that female life expectancy has been steadily improving over time and that the mean age at death is now 76.4 years (compared to 70.4 years for males). The extension of the cut-off point in this way increases the proportion of female fatalities defined as premature from 15 to 35 per cent. The magnitude of this difference underscores the importance, in the absence of unequivocal rules or consensus, of specifying clearly the definitions being employed in the interpretation of mortality data. However, it emerges in the following

Figure 11 **Causes of female mortality below and above 75 years of age, England and Wales, 1986.**



Source OPCS Monitor DH 2 87/3.

analysis that shifting the cut-off point does not, in this particular instance, alter the identity of the problems requiring attention.

In 1986, there were 101,764 deaths among females aged 0–74 years in England and Wales. Setting aside the disagreement that might arise in the context of circumscribing single disease entities, Table 12 indicates that just six diseases currently account for 63 per cent of female mortality below 75 years of age. (The table also shows that this proportion falls only slightly – to 58 per cent – if premature deaths are defined conventionally as those occurring before 65 years.) The most significant of this group is coronary heart disease.

Until recently, discussion of coronary heart disease has focused predominantly on its role as a cause of premature loss of life among males. Data for 1986 indicate that the number of male deaths under 75 years from this cause is 2.3 times greater than the corresponding toll for females. The bias inherent in the concern surrounding the disease might therefore appear to be fully justified. Yet the fact remains that every day 63 women under 75 years die from coronary heart disease. Furthermore, nearly a third of these individuals have failed to reach 65 years of age.

Since the second-half of the 1970s improvements in coronary mortality have been experienced by both sexes. The calculations shown in Table 13 suggest that declining female rates between the ages of 35 and 74 years resulted in nearly 1,700 fewer deaths in 1986 than would have been expected in the absence of any improvements since 1978. The saving of life for males, however, was considerably greater – five times the female total. Disparity on this scale is, of course, to a large

Table 12 **The six principal causes of mortality for females under 75 years and their significance in the 0–64 and 75 and over age groupings, England and Wales, 1986.**

	Under 65		**Under 75**		*75 and over*	
Disease	*Number*	*Per cent of total*	**Number**	**Per cent of total**	*Number*	*Per cent of total*
Coronary Heart Disease	6,690	15.2	**23,085**	**22.7**	46,509	24.5
Cerebrovascular Disease	2,844	6.5	**10,008**	**9.8**	34,218	18.0
Breast Cancer	5,542	12.6	**8,889**	**8.7**	4,752	2.5
Lung Cancer	2,981	6.8	**6,723**	**6.6**	3,299	1.7
Cancer of Genito-Urinary organs	3,617	8.2	**6,485**	**6.4**	3,706	2.0
Cancer of Digestive organs and Peritoneum	3,628	8.3	**8,677**	**8.5**	10,462	5.5
	25,302	57.6	**63,867**	**62.7**	102,946	54.2

Source OPCS Monitor DH2 87/3.

Table 13 **Changes in coronary heart disease mortality, England and Wales, 1978–86.**

	Females				*Males*			
	CHD mortality rate per 1,000				*CHD mortality rate per 1,000*			
Age group	*1978*	*1986*	*% reduction*	*Deaths avoided*	*1978*	*1986*	*% reduction*	*Deaths avoided*
35–44	1.03	0.64	37.9	132	6.16	4.06	34.1	725
45–54	5.20	3.74	28.1	397	27.92	20.93	25.0	1,906
55–64	20.28	19.45	4.1	232	73.25	63.97	12.7	2,440
65–74	69.60	65.86	5.4	931	166.89	148.93	10.8	3,536

Source OPCS.

extent a reflection of the significant differences that exist between male and female mortality rates for coronary disease. Nevertheless, the fact remains that over the period 1978–86, the reduction in coronary mortality among males aged 55–74 was more than twice that observed for females and coronary heart disease is now responsible for one death in every four (a total of nearly 22,000) occurring among women in this age range.

Cerebrovascular disease (stroke) is the second most important cause of mortality among females under 75 years. In 1986, the disease was responsible for slightly more than 10,000 deaths in this age group. The majority of female deaths from cerebrovascular disease are in fact concentrated in the 'old elderly population' – that is, three quarters of the total occur among women over 75 years of age – yet the significance of this particular cause at younger ages should not be underestimated. For the under 75 years grouping as a whole, it accounts for one death in every 10 and for one in eight in the 65–74 age range.

Table 14 shows that stroke mortality rates rise rapidly with age for both sexes although the pace of increase is faster for males. Thus the rates are very similar below 44 years of age but by 64–75 years male mortality exceeds that for females by 32 per cent. Table 14 also shows that males and females have enjoyed broadly similar improvements in stroke mortality over the period 1974/75 – 1985/86. Without these reductions, an estimated 4,500 additional stroke deaths might have occurred in the 25–74 age range of both sexes in 1986.

Cancers constitute the other major causes of premature female mortality identified in Table 12. Nearly 50,000 new cases of cancer of the breast, lung, digestive organs and genito-urinary system involving women under 75 years are registered in England and Wales each year. Mortality figures for 1986 indicate that the four sites, which account for 80 per cent of cancer-related deaths below 75 years, are responsible for almost one premature death in every three.

Table 14 **Cerebrovascular disease mortality rates per million population, England and Wales, 1974/75 and 1985/86.**

	Females			*Males*		
Age group	*1974/75*	*1985/86*	*% reduction*	*1974/75*	*1985/86*	*% reduction*
25–34	32	27	16	32	29	9
35–44	109	74	32	109	77	29
45–54	370	211	43	397	271	32
55–64	1,032	734	29	1,427	986	31
65–74	4,000	2,902	27	5,218	3,819	27
75+	19,678	15,962	19	18,887	14,846	21

Source OPCS.

Table 15 **Female deaths attributable to selected cancers in 1986 and the number of patients first diagnosed with these cancers in 1983 and registered by 30 June 1986, England and Wales.**

Cancer site	*Deaths under 75*	*As % of all deaths under 75*	*Deaths over 75*	*As % of all deaths over 75*	*New diagnoses under 75*	*As % of all new diagnoses under 75*	*New diagnoses over 75*	*As % of all new diagnoses over 75*
Breast	**8,889**	**8.7**	**4,752**	**2.5**	**16,259**	**21.6**	**5,038**	**15.2**
Trachea, bronchus, lung	**6,723**	**6.6**	**3,299**	**1.7**	**6,836**	**9.1**	**2,639**	**7.9**
Genito-urinary organs	**6,485**	**6.4**	**3,706**	**1.9**	**12,691**	**16.9**	**4,238**	**12.8**
Cervix uteri	1,591	1.6	413	0.2	3,426	4.6	449	1.4
Other uterus	781	0.8	676	0.4	2,967	3.9	907	2.7
Ovary	2,788	2.7	1,062	0.6	3,547	4.7	974	2.9
Digestive organs and peritoneum	**8,677**	**8.5**	**10,462**	**5.5**	**12,214**	**16.2**	**10,863**	**32.7**
Stomach	1,472	1.4	2,305	1.2	2,071	2.8	2,422	7.3
Colon	2,799	2.8	3,263	1.7	4,348	5.8	3,776	11.4
Rectum	1,196	1.2	1,452	0.8	2,472	3.3	1,857	5.6
Pancreas	1,560	1.5	1,533	0.8	1,458	1.9	1,294	3.9
	30,774	**30.2**	**22,219**	**11.7**	**48,000**	**63.8**	**22,778**	**68.5**

Source OPCS.

A more detailed analysis of the sites is shown in Table 15 and confirms breast cancer as the single most important of these causes of death. For females aged 0–74 years the disease was responsible for almost one death in every ten in 1986. Among women aged 35 to 54 years, however, the corresponding proportion was significantly greater at one death in every five.

Little optimism can be drawn from the trends in mortality recorded in recent years. Table 16 compares 1974/75 with 1985/86 and shows that marginal improvements in the breast cancer death rates below 54 years have been counter-balanced by increasing mortality at older ages. Indeed, application of the age specific rates for 1974/75 to current population data suggests that an extra two deaths have been added to the daily toll of breast cancer mortality among women aged 54–74 years since the mid-1970s.

In the league table of cancer-related mortality among women under 75 years, breast cancer is followed by neoplasia of the trachea, bronchus and lung. In 1986 the latter resulted in 6,723 female deaths

Table 16 **Breast cancer mortality rates per million population in 1974/75 and 1985/86, England and Wales.**

	Death rates per million	
Age group	*1974/75*	*1985/86*
25–34	39	38
35–44	245	217
45–54	649	635
55–64	956	1,053
65–74	1,164	1,341

Source OPCS.

Table 17 **Lung cancer mortality rates per million population in 1974/75 and 1985/86, England and Wales.**

	Females			*Males*		
Age group	*1974/75*	*1985/86*	*Percentage change*	*1974/75*	*1985/86*	*Percentage change*
25–34	6	4	–33	15	6	–60
35–44	45	40	–11	107	72	–33
45–54	268	197	–26	781	463	–41
55–64	631	824	+31	2,740	2,203	–20
65–74	901	1,484	+65	5,801	5,044	–13

Source OPCS.

Table 18 **Female deaths from selected cancers, 1980 and 1986, England and Wales, rates per million.**

	Colon (ICD 153)		*Ovary (ICD 183)*		*Uterus (ICD 179, 180, 182)*	
Age	*1980*	*1986*	*1980*	*1986*	*1980*	*1986*
All ages	239	236	147	150	141	135
35–74	263	244	251	241	222	196

Source OPCS.

in this age group or nearly seven per cent of the total. Currently, lung cancer has, of course, a much more marked impact on the health of males. In 1986, male deaths from this cause were 2.5 times the total for females both above and below 75 years of age. Yet the present pattern is significantly different from that prevailing a decade ago. Table 17 compares 1974/75 and 1985/86 data for England and Wales and shows that below 54 years of age mortality rates for males have fallen to a much greater degree than they have for females. In the 55–74 years age grouping (a span containing 61 per cent of all contemporary lung cancer fatalities) male rates fell by between 13 and 20 per cent over the period whilst those for females increased substantially – by as much as 65 per cent for those aged 65–74 years. As a result, the gap between the sexes in lung cancer mortality has been steadily closing over the past decade: the rate for females aged 35–74 years was just 22 per cent of the male equivalent in 1974/75 but had risen to 37 per cent by 1985/86.

The remaining two cancer sites identified in Table 12 as major causes of premature mortality in women are those of the genito-urinary organs and digestive system. Both of the groupings may be sub-divided into more specific sites yielding neoplasms of the colon, ovaries and uterus as the most significant. In 1986, 13,373 female deaths were attributable to this diverse group of cancers and of these 7,959 or 60 per cent involved women below 75 years of age. The latter proportion disguises marked differences in the age distribution of the fatalities from each of the three cancers – 46 per cent of colon cancer deaths occur before 75 years compared with 69 and 72 per cent for neoplasms of the uterus and ovaries respectively. However, none of the three sites is individually responsible for more than 3,000 premature female deaths each year. Furthermore, Table 18 indicates that the present decade has, to date, witnessed reductions in the death rates for all three cancer sites in the 35–74 years age group.

Sources of morbidity

Data permitting detailed analyses of trends in disease and ill health over time are not collected, officially or otherwise, in the same way as statistics on mortality. The absence of an appropriate information base inevitably means that accurately identifying contemporary morbidity burdens is a difficult task. Valuable information about the incidence and prevalence of specific diseases may be obtained from studies undertaken on a local basis by groups of research workers. However, in addition to the obvious problem of omission inherent in such a highly selective approach to disease coverage, these surveys frequently vary in many important dimensions – for example, the choice of demographic parameters, the applicability of the results to wider populations and, of course, in their age. Consequently, they are of very limited use to the present paper which seeks to identify, and generate a broad ranking of, current female health problems. (Access to these data presents further difficulties since study findings are reported in a wide variety of medical journals and no attempt has yet been made to trawl the literature with a view to compiling what could potentially be a very valuable morbidity resource document.)

National sources of morbidity information are associated with a variety of drawbacks. The General Household Survey, for example, does not provide any insight into the specific types of disease underlying the reported prevalences of acute and chronic illness. The Hospital In-patient Enquiry (HIPE), by definition, confines its attention to only a small section of the morbidity continuum. In addition, HIPE data do not cover psychiatric hospitals and are subject to a number of other limitations. For example, information is gathered about episodes in hospital rather than patients and it is not possible to distinguish between 10 patients each admitted once a year and one patient experiencing 10 separate admissions over the same period (West, 1987). Furthermore, HIPE data are influenced by a range of 'non-morbidity factors' such as resource availability, admission and discharge policies and technological and procedural innovation. In connection with the last point, an increasing volume of morbidity that formerly required in-patient care is now being managed on a day case basis and will not therefore be reflected in HIPE data. (Day cases as a proportion of total hospital treated cases increased by 25 per cent between 1979 and 1984, reaching an estimated 15 per cent in the latter year.)

Some knowledge of contemporary morbidity profiles can, however, be gained from the third national survey of morbidity in general practice (RCGP, 1986). The latter is a detailed investigation of the morbidity brought to 48 general practices caring for a total of 332, 270 patients between 1 July 1981 and 30 June 1982. Table 19 is compiled from the resulting data and shows the 10 diseases with the highest female consultation rates during the study period. Non-febrile upper respiratory tract infection clearly emerges as the single most frequent cause of consultation with almost 10 per cent of women seeking the help of their

Table 19 **Patients consulting general practitioners for selected diseases, rates per 1,000 at risk.**

	Females	*Males*
Upper respiratory tract infection (non febrile)	99.7	82.7
Acute bronchitis, bronchiolitis	58.4	57.8
Acute tonsilitis	45.6	38.5
Upper respiratory tract infection (acute febrile)	43.9	43.3
Uncomplicated hypertension	42.7	31.4
Cystitis and urinary infection	39.0	7.9
Depressive disorder	38.3	12.4
Anxiety disorder/state	37.6	16.0
Abdominal pain	36.3	22.7
Intestinal disease (presumed infective)	34.0	32.4
Conjunctivitis	32.3	24.1
Osteoarthritis	31.8	14.4

Source RCGP, 1986.

family doctor for this illness at least once during the course of a year.

In common with the other sources of information employed in this paper, general practice based data have also to be interpreted with care. The diseases shown in Table 19 are discrete entities defined by the coding system constructed specifically for the purposes of the morbidity survey. It might instead be considered more appropriate to group together some of the single entities shown in the published data to paint a broader picture of the major contemporary health problems facing women. For example, back pain is not included in Table 19 simply because the single classification bearing this specific designation was of insufficient magnitude to rank it among the leading 10 reasons for seeking care from a general practitioner. However, combining this classification with those for disc prolapse and 'other back pain' would generate a grouping with an overall consultation rate of 44.4 per 1,000 females and thus fifth position in Table 19 as it is presently constructed. Similarly, totalling the various categories of menstrual cycle problem would yield a consultation rate (46.3 per 1,000) meriting second position in Table 19. Assimilation of related single entities into broader disease groupings in this way is not strictly appropriate, however, because of the risk of double counting.

A further drawback of the information presented in Table 19 stems from the use of overall, that is all ages, consultation rates. As a result, diseases that tend to exert much of their impact at certain ages may not necessarily emerge in the overall rates as significant health issues. For example, congestive heart failure and senility/senescence cause respectively about seven per cent and four per cent of women aged 75 years and over to consult a general practitioner at least once during the course of a year. Significant as these diseases clearly are for this age group, neither appears in Table 19.

A more general limitation of the national morbidity study is that its findings reflect the use that is made of the general practice service rather than the true prevalence of disease in the community. Morbidity that is self-limiting and left untreated or eased with medicines purchased from pharmacies as well as episodes of ill health that bypass general practice with care being provided in other sectors of the health service will not therefore be included in the data collected by the Royal College of General Practitioners' study.

In spite of this catalogue of shortcomings and difficulties, a number of important points can nevertheless be drawn from the information that is available. First, the key female health concerns that emerge from general practice morbidity data are not the same as those revealed by analyses of mortality statistics. To some extent, this observation would be expected since the treatment of many of those conditions identified by the latter source of information is often administered in the hospital sector.

Second, the highest consultation rates for females are associated with a variety of respiratory disorders and there is relatively little difference between the sexes in the proportions seeking treatment from general practitioners for these conditions.

Third, the pattern of near-equality described above does not apply in the case of uncomplicated hypertension, the fifth most important diagnosis shown in Table 19. The morbidity survey found that more than four per cent of women consult a general practitioner at least once during a one year period for this reason. This proportion is more than a third higher than that reported for males. Consultation rates for uncomplicated hypertension rise steadily with age for both sexes and peak in the 65–74 group, reaching 14.8 per cent for females and 11.5 per cent for males. It is likely, however, that these discrepancies reflect a higher frequency of blood pressure measurement among females compared to males in the general practice setting (linked, initially at least, to the prescribing of oral contraceptives and antenatal care) rather than significant differences in the prevalence of hypertension. This explanation is supported by the findings of a detailed survey carried out in a Scottish town in the mid-1970s (Hawthorne *et al.* 1974) and, more recently, by the report of the Health and Lifestyle survey. Indeed, the latter found that the proportion of normotensive subjects in each age group up to the end of the sixth decade is higher among females than males (Table 20).

Fourth, the RCGP morbidity study indicates that within the group of leading causes of consultations with general practitioners, some of the largest disparities between the sexes occur in the broad diagnostic area of mood disturbance. Overall, female consultation rates for depression and anxiety are three and nearly two and a half times respectively those for males. Age specific analysis (Figure 12) reveals a steady closing of the gap between the sexes with increasing age for depression. In the case of anxiety, however, the corresponding differential remains approximately constant throughout the age spectrum. Excluding the

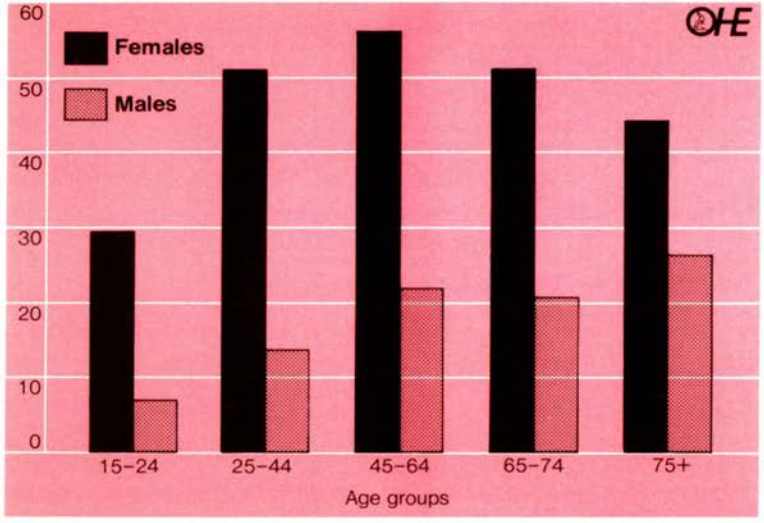
Table 20 **Blood pressure categories by age.**

Blood pressure category	*Age 18–29*	*30–39*	*40–49*	*50–59*	*60–69*	*70–79*	*80+*	*All ages*
	Males %							
Normotensive (⩽ 140/90 mmHg.)	92.2	88.0	77.8	58.4	50.1	34.8	43.5	72.0
Borderline (141/91 to 159/94 mmHg.)	5.9	7.1	10.5	17.1	18.1	24.0	22.6	12.2
Untreated hypertensive (⩾ 160/95 mmHg.)	1.4	4.1	8.2	12.1	13.2	18.6	11.3	8.1
Treated hypertensive	(2)	0.7	3.0	9.9	15.9	16.6	16.1	6.2
Normotensive but on drugs with anti-hypertensive effects (⩽ 140/90 mmHg.)	(2)	(1)	(3)	2.4	2.6	5.1	6.7	1.5
	Females %							
Normotensive (⩽ 140/90 mmHg.)	98.5	94.8	87.1	66.2	54.0	33.6	38.2	78.5
Borderline (141/91 to 159/94 mmHg.)	1.0	3.2	5.0	13.0	17.6	15.9	20.0	7.8
Untreated hypertensive (⩾ 160/95 mmHg.)	(1)	0.9	2.8	8.5	11.5	22.9	14.5	5.6
Treated hypertensive	(3)	0.6	4.1	10.8	14.2	24.6	22.7	6.9
Normotensive but on drugs with anti-hypertensive effects (⩽ 140/90 mmHg.)	nil	(4)	1.0	1.5	2.7	3.0	4.5	1.2

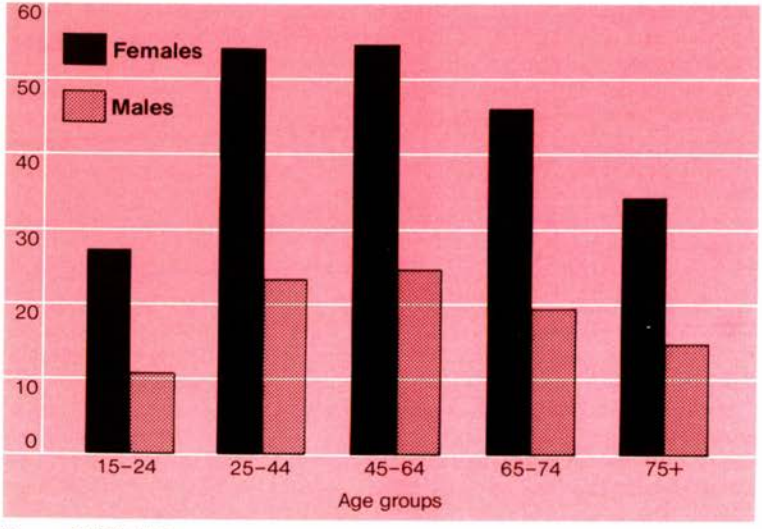
Source Cox, 1987.

Figure 12 GP consultation rates per 1,000 population for (a) depression; and (b) anxiety, 1981/82.

(a) depression



(b) anxiety



Source RCGP, 1986.

Table 21 **Admissions to mental illness hospitals and units, 1985, England, rates per 100,000 population.**

	All admissions		*First admissions*	
Age group	*Females*	*Males*	*Females*	*Males*
Under 10	8	16	5	10
10–14	33	43	23	26
15–19	144	146	68	69
20–24	311	347	108	120
25–34	445	472	116	118
35–44	521	462	109	106
45–54	570	408	108	94
55–64	620	393	120	91
65–74	785	538	188	146
75 and over	1,307	1,176	417	403
All ages	482	364	124	101

Source Health and Personal Social Services Statistics for England, 1987 edition.

extremes of the age distribution, the data indicate that over the course of a year, depression and anxiety each cause one woman in every 20 between the ages of 25 and 74 years to seek the advice and help of a general practitioner. For males, the equivalent ratio is only about one in every 50.

The inference from these data that females experience higher levels of psychiatric morbidity is supported by prevalence surveys conducted in the community. The latter suggest, for example, that 12–17 per cent of women suffer depression, compared with a figure of about 6 per cent for males. Similar sex differences are also apparent in data relating to deliberate self-harm (Crockett, 1987) and admissions to mental illness hospitals and units. Focusing on the latter, Table 21 shows that all and first admission rates for females exceed those for males by 32 and 23 per cent respectively. The 'excesses' peak in the 55–64 age grouping at 58 and 32 per cent respectively.

Numerous explanations have been put forward for the observed sex differences in psychiatric morbidity. In particular, the higher prevalence among females has frequently been attributed to biological factors and the effects of the reproductive system. Yet from available evidence Jenkins and Clare (1985) have argued that genetic factors are of negligible importance in most neurotic illness; that support for a hormonal role in *post partum* depression is only circumstantial; that menopause has no effect on rates of depression; and that the impact of premenstrual tension on depression appears to be of limited size. Indeed, there is evidence that causal pathways may lie in the opposite direction. Gath and his colleagues (1987), for example, have

Table 22 **Consultation rates per 1,000 population for selected female specific health problems.**

Diagnosis	*Age group*							
	All ages	*0–4*	*5–14*	*15–24*	*25–44*	*45–64*	*65–74*	*75 and over*
Vaginitis	14.3	6.7	4.7	22.9	25.0	9.1	6.4	5.0
Premenstrual tension syndromes	10.3	—	—	8.3	28.9	4.5	—	—
Menopausal symptoms	12.9	—	—	—	7.3	49.6	6.2	3.4
Menstruation pain	8.9	—	4.8	28.7	12.7	1.6	—	—
Menstruation absent	12.5	—	1.0	37.6	21.6	3.1	—	—
Menstruation excessive	18.5	—	3.9	23.4	38.8	17.8	—	—
Other disorders of menstrual cycle	6.4	—	—	13.1	12.2	4.3	—	—

Source RCGP, 1986.

Table 23 **Consultation rates per 1,000 population for selected 'signs, symptoms and ill-defined conditions'.**

Diagnosis		*Age group*				
		15–24	*25–44*	*45–64*	*65–74*	*All ages*
Dizziness/giddiness	F	5.6	9.0	17.4	27.9	12.7
	M	3.3	5.2	10.3	17.6	7.0
Headache	F	23.1	21.2	15.1	13.3	16.7
	M	11.0	10.3	8.2	8.8	9.4
Chest pain	F	8.3	13.6	16.5	15.0	11.1
	M	9.6	17.0	20.3	16.1	13.3
Cough	F	15.7	17.1	17.8	21.9	26.3
	M	7.1	9.8	12.2	22.5	23.6
Nausea/vomiting	F	15.2	9.2	7.8	10.2	11.9
	M	5.8	3.8	3.6	7.2	7.8
Abdominal pain	F	49.2	39.8	27.0	25.1	36.3
	M	17.9	18.7	18.6	21.7	22.7
Malaise, debility, fatigue, tiredness	F	17.5	18.7	15.9	19.0	16.6
	M	7.5	7.7	8.4	9.0	8.5
Rash, other non-specific skin eruptions	F	19.3	12.2	8.4	8.6	15.1
	M	8.8	7.3	6.0	6.9	11.4
All symptoms, signs and ill-defined conditions	**F**	**174.0**	**165.5**	**160.6**	**196.8**	**182.4**
	M	**91.5**	**99.5**	**119.6**	**159.9**	**134.4**

Source RCGP, 1986.

recently reported a striking degree of association between gynaecological symptoms – notably dysmenorrhoea and premenstrual tension – and psychiatric state. Investigation of such potential associations is fraught with methodological and other difficulties and it would be inappropriate to dismiss the possibility of some aetiological significance for biological factors. Nevertheless, Jenkins and Clare (1985) have concluded that 'where sex differences in minor psychiatric morbidity are commonly found they are unlikely to be caused by constitutional differences but rather by differences in the social environment and social roles of men and women'.

Fifth, conditions specifically affecting women appear, from the RCGP study, to account for only a relatively small element of the female morbidity profile. Table 22 identifies those diagnoses which gave rise to a consultation rate of 5 or more per 1,000 women in 1981/82. None of the seven conditions specified was associated with a rate in excess of two per cent even though rather higher levels were of course found among certain age groups. It should be emphasised, however, that several of the limitations inherent in the general practice data outlined earlier in this section are especially relevant in the context of the information contained in Table 22.

Finally, other investigations have found that females report minor transient illnesses at higher rates than males and the 1981/82 study of morbidity in general practice indicates that these differences are mirrored in the demands placed upon the primary health care sector. Focusing on the chapter of the International Classification of Diseases entitled 'Symptoms, Signs and Ill-defined Conditions', the study observed an all ages consultation rate for females of 182 per 1,000 which was 36 per cent higher than the corresponding male rate. The data in Table 23 indicate that this excess was considerably greater for certain age groups and diagnoses. The table lists the eight symptoms within the ICD chapter for which overall female consultation rates exceeded 10 per 1,000 population. With the exception of chest pain, female rates were almost universally higher than those for males and in some cases, for example, headache, nausea and malaise in the 25–44 year age range, there was a difference between the sexes of more than two-fold.

Influences on health

Analyses undertaken with the objective of explaining the more favourable survival experience of females have reached a variety of conclusions. Some investigations have concentrated on genetic differences and raised the possibility of a protective effect provided by endogenous female sex hormones. Silman (1987) has observed, however, that cancers dependent on female hormones kill many women. Furthermore, women's preferential survival is maintained after the menopause even though sex differences in hormone concentrations are reduced at

this stage in the life cycle. Other research has emphasised the importance of environmental factors. For example, a report last year from the research unit of the Royal College of Physicians (Bayliss *et al*, 1986) argued that females currently live longer than males because they have had more sheltered lives. Alternatively, the more frequent use of health services by females may contribute to their longer life expectancy.

The length and quality of life are, in reality, the result of a complex interplay of many factors and cannot, of course, be explained by any one force operating in isolation. Furthermore, the identity and impact of these influences will vary at different points in time. In the current era, however, it has become increasingly clear that lifestyle and behavioural habits provide the key to health and morbidity patterns. This section will therefore examine the data relating to women and four of the most important of these factors: smoking, alcohol consumption, diet and exercise.

Smoking

Cigarette smoking is widely regarded as the largest single cause of public ill health. It has been estimated that the habit is responsible for about 100,000 deaths each year and that the treatment of smoking related diseases costs the National Health Service £170 million per annum at 1985 prices (Balarajan *et al*, 1985). More specifically, 90 per cent of deaths from cancers of the lung, lip, oesophagus and larynx, a similarly high proportion of fatalities from chronic bronchitis, obstructive lung disease, chronic pulmonary heart disease and aortic aneurysm as well as 20 per cent of coronary heart disease mortality may be attributed to cigarette smoking (Currie, 1987). On this basis, and assuming that the proportions above are equally applicable to both sexes, the habit may be calculated to play a significant role in the deaths each year of about 15,000 women under 75 years of age. For women of all ages this total doubles to 30,000 yet even this figure may understate the true burden of mortality associated with cigarette smoking since the habit also increases the risks to women of other diseases including cancers of the cervix, bladder and pancreas (Zealley, 1987).

In recent years, there have been sustained reductions in the prevalence of smoking. Table 24 shows that the proportion of females who smoke cigarettes declined by 22 per cent between 1972 and 1984 to reach 32 per cent in the latter year. The rate for males, however, fell by approximately half as much again. The difference between the sexes in the extent to which prevalence has fallen over the period is even greater in the 16–19 age range and in contrast to the pattern prevailing at the beginning of the 1970s there are now more females than males in this age group who smoke cigarettes. Data from another source indicate that the habit is firmly established for many of these individuals before they leave school (Table 25).

As a result of the changes in smoking prevalence and the demographic trends since 1972, the number of female smokers expressed as

Table 24 **Prevalence of cigarette smoking by sex and age, 1972 to 1984, Britain.**

Year	*Males*							*Females*						
	16–19	*20–24*	*25–34*	*35–49*	*50–59*	*60 & over*	*All 16 & over*	*16–19*	*20–24*	*25–34*	*35–49*	*50–59*	*60 & over*	*All 16 & over*
	Percentage smoking cigarettes							Percentage smoking cigarettes						
1972	43	55	56	55	54	47	52	39	48	49	48	47	25	41
1974	42	52	56	55	53	44	51	38	44	46	49	48	26	41
1976	39	47	49	50	49	40	46	34	45	43	45	46	24	38
1978	35	45	48	48	48	38	45	33	43	42	43	42	24	37
1980	32	44	47	45	47	36	42	32	40	44	43	44	24	37
1982	31	41	40	40	42	33	38	30	40	37	38	40	23	33
1984	29	40	40	39	39	30	36	32	36	36	36	39	23	32

Source General Household Survey.

Table 25 **Smoking behaviour among school children in England and Wales, by sex and school year, 1984, percentages.**

	Boys						*Girls*					
	1st year	*2nd year*	*3rd year*	*4th year*	*5th year*	*All years*	*1st year*	*2nd year*	*3rd year*	*4th year*	*5th year*	*All years*
Percentage who:												
Have never smoked	75	52	41	32	23	44	76	55	48	30	25	46
Tried smoking once	17	28	25	28	22	24	16	26	22	23	21	22
Used to smoke	4	10	9	14	14	11	3	9	9	13	14	10
Smoke occasionally	4	7	12	10	10	9	4	8	12	9	11	9
Smoke regularly	0	3	12	17	31	13	1	2	9	24	28	13

Source Dobbs and Marsh, 1984.

Note The latest (1986) survey shows that the proportion of boys (all years) who smoke regularly has fallen to 7 per cent but for girls there has been only a very small reduction to 12 per cent (Currie, 1987a).

a proportion of the equivalent male population has risen from 86 to 96 per cent in the space of just 12 years. Expressed another way, 6.6 million women aged 16 years and over in England and Wales – one woman in three – currently smoke cigarettes. Nearly a third of this total may be classified as heavy smokers (consumption of 20 or more cigarettes per day) and these individuals are especially susceptible to the development of disease. As a specific example, Mant and co-workers (1987) have calculated that heavy smoking increases the risk for young women of myocardial infarction by a factor of six. In more general terms, Balarajan and colleagues (1985) have estimated that heavy smokers have a 76 per cent higher risk of developing chronic illness than non-smokers.

Alcohol consumption

Alongside the concern at the prevalence of cigarette smoking, attention has been increasingly focused on the health implications of the rising trend in alcohol consumption. A report published last year by the Royal College of Psychiatrists estimated that alcohol accounts for 4,000 deaths as well as 5,000 first admissions to psychiatric hospitals each year. It also calculated the annual medical costs of alcohol dependence to be almost £70 million (RCP, 1986). Until recently, studies of the impact of alcohol have been predominantly concerned with males, reflecting their substantially higher levels of consumption compared to females. Yet evidence is accumulating that women may be especially vulnerable to the effects of prolonged heavy drinking as a causal factor in many diseases of the gastrointestinal, neuromuscular, cardiovascular and other body systems (Blume, 1986). That is, a given amount of alcohol is associated with a higher risk of physical harm for women. As a result, a growing number of investigations are now concentrating on the problem from the female perspective.

Recent examples in this context include examinations of the risks of liver cirrhosis (Norton *et al*, 1987) and breast cancer (Willett *et al*, 1987) linked to the consumption of alcohol. The latter estimated that for women consuming three to nine drinks per week, the age-adjusted relative risk of breast cancer is 1.3 – that is, intake at this level causes a 30 per cent increase in the risk of breast cancer compared with abstinence. Higher levels of alcohol consumption are associated with a 60 per cent elevation of the risk. Statistical associations such as these are not, of course, proof of direct cause and effect but the findings of this study and those of several others collectively suggest that alcohol may certainly contribute to the risk of breast cancer (Skegg 1987).

The levels of alcohol intake in the community are not known with any degree of precision. Several surveys have been undertaken to gain information in this respect but they have consistently recorded lower levels of consumption than would have been anticipated from alcohol sales data (GHS, 1986). Accepting these and various other limitations, a recent general practice based study of weekly alcohol consumption recorded abstinence in 31 per cent of women aged 17–69 years

Table 26 **Weekly alcohol consumption by age and sex.**

	Men						*Women*					
Age	*No of individuals*	*No drink*	*<21 units*	*21–34 units*	*35–48 units*	*49+ units*	*No of individuals*	*No drink*	*<21 units*	*21–34 units*	*35–48 units*	*49+ units*
		%	%	%	%	%		%	%	%	%	%
17–19	1,014	15.6	66.5	11.1	3.8	3.0	1,319	18.2	77.2	3.1	1.0	0.5
20–29	4,611	9.3	63.8	13.7	7.4	5.7	7,735	23.2	73.4	2.4	0.6	0.4
30–39	5,451	10.6	70.6	10.6	4.4	3.8	9,140	22.9	75.0	1.7	0.3	0.2
40–49	4,993	14.4	68.4	9.7	3.8	3.7	7,108	28.2	69.3	1.8	0.4	0.3
50–59	4,371	20.4	65.3	9.0	3.0	2.4	5,425	38.5	59.1	1.8	0.4	0.3
60–69	5,056	27.9	59.7	8.0	2.1	2.3	5,930	51.6	45.6	2.1	0.3	0.3
All	25,496	16.4	65.7	10.2	4.1	3.5	36,657	30.8	66.5	2.0	0.4	0.3

Source Wallace *et al.* 1987.

Table 27 **Classification of females aged 18 and over by type of drinker, Britain, 1978 and 1984, percentages.**

	18–24		*25–44*		*45–64*		*65 and over*		*All 18 and over*	
	1978	*1984*	*1978*	*1984*	*1978*	*1984*	*1978*	*1984*	*1978*	*1984*
Abstainer	7	8	6	7	11	12	22	24	11	13
Occasional	13	12	21	16	28	23	33	29	25	20
Infrequent light	21	21	23	23	18	18	13	14	19	19
Frequent light	44	43	41	45	41	45	31	33	39	42
Moderate	9	10	6	6	2	2	Ø	Ø	4	4
Heavy	5	5	2	2	1	Ø	Ø	Nil	2	2

Source General Household Survey.

(Wallace *et al*, 1987). However, this average figure disguises a range from 18 per cent among those aged 17–19 years to 52 per cent for women in their sixties (Table 26). At the other extreme, 0.7 per cent of the sample – equivalent to approximately 120,000 women in England and Wales – were found to consume 35 units or more per week. (A unit is equivalent to half a pint of beer or cider, or a single measure of spirits, or a glass of wine or a small glass of fortified wine.) This level of intake is employed by the Royal College of General Psychiatrists to define 'harmful drinking' and is associated with a high risk of morbidity. Table 26 indicates that high levels of consumption are most prevalent among the younger age groups – slightly more than one per cent of women aged 17–29 years (that is, in excess of 50,000 young women) consume 35 or more units of alcohol per week.

Trends over time are yet more difficult to gauge. The General Household Survey has been monitoring developments biennially since 1978 and the principal findings are contained in Table 27. The latter shows that the proportion of women classified as frequent light drinkers – the largest single group – increased from 39 to 42 per cent between 1978 and 1984. The significance of this trend is uncertain since the category embraces a potential range of alcohol consumption extending from one unit on one or two occasions per week to 4.5 units on most days. Consequently, perhaps the main cause for concern to emerge from the data is the relatively high and unchanging prevalence of heavy alcohol consumption (defined as seven units or more at least once or twice per week) among young women aged 18–24 years[2].

Diet

The roles of dietary factors in health and disease have been the subject of extensive epidemiological and experimental research. Coronary heart disease, in particular, has been the target of numerous investigations aimed at identifying the dietary components underlying its aetiology. In broad terms, the findings indicate that diets rich in saturated fats are a cause of elevated serum cholesterol levels and that these in turn promote the formation of atheroma in the coronary arteries which can pave the way for myocardial infarction and other manifestations of the disease. At the same time, certain polyunsaturated fats, such as those contained in mackerel and other fish, appear to have a protective effect because of their action in inhibiting thrombosis.

Male subjects have predominated in the research in this area and this bias may appear reasonable in view of the higher coronary heart

2 Highlighting the difficulties of accurately determining changes in consumption over time, Dunbar and Morgan (1987) have recently reported Gallup Survey findings suggesting that the proportion of heavy drinkers (35 units or more per week) among women aged 18–24 years fell from four to two per cent between 1978 and 1985. In contrast, the proportion of heavy consumers of alcohol in the 25–34 age range increased from one to four per cent over the same period.

Table 28 **Consumption of selected foods.**

		Females				Males			
		18–39	*40–59*	*60+*	*All*	*18–39*	*40–59*	*60+*	*All*
		%	%	%	%	%	%	%	%
Frequency of red meat consumption	rarely/never	15	9	9	11	11	6	7	9
	once/twice per week	50	43	37	44	50	44	38	45
	more often	35	49	55	44	40	49	54	46
Proportion using butter on bread		35	41	51	41	36	42	45	40
Proportion frequently (most/every day(s)) eating chips		14	9	5	10	33	18	8	22
Proportion frequently eating other fried foods		12	9	10	11	32	24	19	26

Source Whichelow, 1987.

Table 29 **Body Mass Index (Wt/Ht²) categories by age.**

Body Mass Index category	*Age* *18–29*	*30–39*	*40–49*	*50–59*	*60–69*	*70–79*	*80+*	*All ages*
Males	*Percentage*							
Underweight	14.5	6.6	3.7	4.8	4.4	7.8	20.3	7.7
Acceptable weight	62.6	52.2	45.6	37.9	38.3	48.6	32.8	48.6
Overweight	18.7	31.9	42.2	45.5	47.8	36.5	40.6	35.6
Obese	4.2	9.2	8.5	11.8	9.5	7.1	6.3	8.2
Females								
Underweight	6.5	4.7	4.2	2.0	3.8	4.4	7.2	4.5
Acceptable weight	64.2	58.2	48.7	40.0	35.9	32.2	38.7	49.4
Overweight	22.6	26.8	30.6	35.7	39.6	44.6	31.5	31.2
Obese	6.7	10.3	16.4	22.3	20.7	18.8	22.5	14.9

Source Cox, 1987a.

disease mortality rates among men. However, as this paper has shown, the disease is also the principal cause of premature death for females and recently published evidence has highlighted the potential value of further research involving the female population. In an investigation of people with different diets in Britain, Thorogood and co-workers (1987) found that irrespective of diet type, women showed a steady rise in cholesterol concentrations with age, whereas in males this measure did not increase appreciably after 40 years.

Dietary factors also have important causative and protective roles in carcinogenesis. From United States data, Doll and Peto (1981) have estimated that 35 per cent of cancers may be attributable to components of the diet. Specific examples in this regard include the inverse relationship between fibre intake and the incidence of cancer of the colon and the positive association between the same cancer type and dietary fat consumption. The latter has also been implicated in the aetiology of breast cancer. Positive correlations have been reported between national per capita consumption of fat and age-adjusted rates of breast cancer. Studies within populations, however, have generally produced less consistent evidence (Willett and MacMahon, 1984).

Additional links between nutrition and disease include the reported associations between certain elements of the diet and raised blood pressure. Salt intake is a notable, but not the only, example in this context. Hypertension has in addition been linked to excessive alcohol consumption and obesity. The latter also appears to be associated with coronary heart disease – probably indirectly via its effect on hypertension (Shaper *et al*, 1985) – and certain cancers. The strongest correlation is with endometrial cancer although there are suggestions in the literature that links may exist in this regard with carcinoma of the gall bladder and breast.

None of the diet-disease relationships outlined above may be regarded as unequivocally proven and considerable differences exist, of course, in the strengths of the various associations. Nevertheless, there is now a broad consensus of opinion that a 'prudent' diet is one that seeks to restrict the intake of total and saturated fat to appropriate levels whilst promoting the consumption of fruit, vegetables and whole grain products. Focusing on the former, evidence from the survey of Household Food, Consumption and Expenditure (MAFF, 1986) indicates that total fat consumption in 1984 was 21 per cent above the level recommended by the Department of Health's Committee on Medical Aspects of Food Policy (DHSS, 1984).

An analysis of fat consumption by sex is not available from the MAFF source, but some related information in this general context is contained in the Health and Lifestyle Survey. Table 28 shows, for example, that there is relatively little difference between males and females in the frequency of red meat consumption and in the use of butter (both important influences on serum cholesterol). Significant variations are however apparent in the regularity with which fried foods are consumed: in the 18–39 age group, for example, more than twice as many

males as females regularly eat fried potatoes and other foods cooked in this way. This observation is consistent with other survey findings indicating that women generally attribute more importance to diet as an influence on health than men.

Marked differences also exist in the context of the second strand of the 'prudent' diet. The Health and Lifestyle Survey found that more women consume fruit on a daily basis (in summer at least) than men: for example, 62 per cent compared to 47 per cent at ages 18–39 and 68 and 54 per cent respectively in the 40 and 59 age grouping. Surprisingly, perhaps, the survey revealed little difference between men and women in their knowledge of the fibre content of certain foods in common use. Indeed, the responses in this area were of a standard which prompted the authors to question whether the term 'dietary fibre' is very widely understood (Whichelow, 1987).

In view of the links between obesity and ill health, the findings of another section of the Health and Lifestyle Survey are a particular source of concern. Table 29 shows that 15 per cent of women may be considered to be obese according to Body Mass Index measurements. This overall average is exceeded by each of the 10 year age groupings between 40 and 79 years and reaches a peak of 22 per cent for women in their fifties. In broad terms, the data indicate that obesity is about twice as common among females as males. Interestingly, the survey found little difference between the sexes in the proportions considering their levels of food consumption to be excessive – approximately a quarter of both females and males believe they eat too much – although

Table 30 **Sports, games and physical activities: participation rates in the 4 weeks before interview by age for males and for females, Britain, 1983.**

	Age							
*Active sports, games and physical activities**	*16–19*	*20–24*	*25–29*	*30–44*	*45–59*	*60–69*	*70 or over*	*Total*
Females – Outdoor	Percentage participating in the 4 weeks before interview							
Walking – 2 miles or more (incl rambling/hiking)	18	20	21	21	20	17	6	18
Swimming (excl public pools)	5	5	3	5	2	1	Ø	3
Cycling	4	2	2	2	1	1	Ø	2
Horse riding	4	3	1	1	Ø	Ø	Nil	1
Athletics – track and field (incl jogging)	4	2	2	1	Ø	Nil	Nil	1
At least one activity†								
– excl walking	24	16	14	14	8	4	1	10
– incl walking	36	31	30	30	25	20	7	24

*Active sports, games and physical activities**	*Age*							
	16–19	*20–24*	*25–29*	*30–44*	*45–59*	*60–69*	*70 or over*	*Total*
Indoor								
Swimming	15	12	12	12	4	3	Ø	7
Keep fit/yoga	6	9	10	7	4	2	1	5
Darts	7	6	7	5	3	1	Ø	4
Snooker/billiards/pool	8	5	3	2	1	Ø	Nil	2
Badminton	6	3	4	3	1	Ø	Nil	2
Squash	3	4	4	2	Ø	Nil	Nil	1
At least one activity†	39	32	31	26	11	7	2	18
Males – Outdoor								
Walking – 2 miles or more (incl rambling/hiking)	13	14	20	23	21	22	13	20
Football	21	19	11	4	1	Ø	Nil	6
Golf	4	4	3	5	5	5	2	4
Fishing	7	6	4	5	4	1	Ø	4
Swimming (excl public pools)	7	6	4	5	3	1	Ø	3
Athletics – track and field (incl jogging)	7	7	7	4	1	Ø	Nil	3
Cycling	6	3	2	2	1	1	1	2
Bowls	1	1	1	1	2	2	2	2
Tennis	4	3	1	2	1	Ø	Ø	1
Cricket	4	2	1	2	Ø	Ø	Ø	1
Camping/caravanning	3	1	2	1	1	1	Ø	1
At least one activity†								
– excl walking	51	44	35	29	18	12	6	25
– incl walking	55	51	46	44	34	31	18	39
Indoor								
Snooker/billiards/pool	36	33	23	16	10	5	2	15
Darts	20	22	17	13	8	3	1	11
Swimming	13	10	10	11	4	2	1	7
Squash	6	9	9	6	1	Ø	Nil	4
Badminton	5	6	4	3	1	Ø	Ø	2
Table tennis	8	3	2	2	1	Ø	Ø	2
Bowls/tenpin	2	1	1	1	1	2	2	1
Gymnastics/athletics	6	5	2	1	Ø	Ø	Nil	1
At least one activity†	62	61	49	41	22	11	5	33

*Activities are listed in descending order of participation rates for all males/females in 1983. Includes only activities in which at least 1 per cent of males/females participated in the 4 weeks before interview in 1983.
†Total includes those activities not separately listed.

Source General Household Survey.

it should be emphasised that the quantity of food eaten is not the only determinant of obesity.

Physical exercise

The benefits associated with regular and vigorous physical activity are wide-ranging. Exercise can improve cardiovascular and muscle function and extend the tolerance of work effort. Carried through into old age, physical fitness can significantly enhance the prospects for an independent existence. In addition, exercise has been associated with gains for mental health, manifest in a sense of well-being and greater self-esteem. It also has a potentially significant role to play in the prevention of disease. In particular, research has shown exercise to have a protective action in coronary heart disease. Physical activity may also have preventive benefits in obesity-related diseases, osteoporosis (by slowing down the process of bone loss) and in reducing the risks of breast cancer and carcinomas of the reproductive system (Frisch *et al*, 1985).

Against this background, it is therefore an encouraging sign that the General Household Survey indicates increasing numbers of women participating in a wide variety of sports and other physical activities. The 1983 survey found that 18 per cent of females aged 16 years and over had engaged in at least one indoor activity in the four weeks before interview (Table 30). This proportion compares favourably with the figures of 15 and 13 per cent recorded in 1980 and 1977 respectively. It should be emphasised, however, that information is not available concerning the frequency, intensity and duration of the activities. The latter are the key determinants of the health benefits of exercise and it is clear that some of the activities included in the participation rates noted above are physically undemanding and thus unlikely to contribute to well-being or confer protection against disease. Nevertheless, the two most popular indoor activities in 1983 were swimming and keep fit, which individually attracted 7 and 5 per cent of women compared with 4 and 3 per cent, six years earlier. Focusing on outdoor activities, the General Household Survey also indicates that the proportion claiming to have walked a distance of two miles or more on at least one occasion during the month preceding interview increased from 17 to 18 per cent between 1977 and 1983.

Despite the welcome nature of these trends, Table 30 makes the fundamental point that vigorous physical activity remains a minority pursuit, even among the most 'enthusiastic' sections of the community. For example, only one woman in eight in the 16–44 age group had been swimming in the four weeks before the 1983 GHS investigation and just one in 13 had participated in keep fit activities. A higher proportion – one in five – had walked two or more miles but the amount of energy expended is unknown and likely to show a high degree of variation from one individual to another.

Participation rates for specific activities found by the 1983 General Household Survey are not universally consistent with those reported

Table 31 **Health of women by socio-economic status**

Social Class (Registrar General)	*Standardised Mortality Ratio (Married women aged 20–59 in 1979–83)*	*Long-standing illness (All ages in 1984)*	*Limiting long-standing illness (All ages in 1984)*	*Acute sickness (All ages in 1984)*	*Socio-economic group (General Household Survey)*
		Percentage reporting			
I	75	22	9	12	Professional
II	83	27	15	11	Employers and managers
IIIN	93	30	17	14	Intermediate and junior non-manual
IIIM	111	29	17	13	Skilled manual and own account non-professional
IV	125	39	25	16	Semi-skilled manual and personal service
V	160	47	34	19	Unskilled manual
All	100	32	19	14	All

N: Non-manual
M: Manual

Source OPCS decennial supplement on occupational mortality 1979–80, 1982–83, and General Household Survey for 1984.

by the recent Health and Lifestyle Survey. For example, the latter found keep fit to be two and a half times more popular among women aged 18–39 years than had been suggested by the General Household Survey for the nearest corresponding age group (16–44 years). Comparison is, in any event, difficult because the Health and Lifestyle Survey investigated activity in the two weeks before interview compared to the four week period employed in the General Household Survey. Nevertheless, the two surveys broadly suggest that 50 to 70 per cent of women aged between the late teens and early 40s do not take regular physical exercise. This finding appears to have important implications for health since the Health and Lifestyle Survey demonstrated that inactive women – throughout the entire age span – had higher resting pulse rates and blood pressure levels, poorer respiratory function and more weight problems than their exercise conscious peers. It is also paradoxical since exercise was mentioned by women aged 18–39 years more frequently than any other factor as one of the most important ways to maintain health.

Discussion

The analyses contained in this paper – based on overall and age specific data – have highlighted a number of key differences in the demographic and health profiles of females and males as well as pinpointed some of the major health problems that currently confront women in this country. However, attention must also be drawn to the substantial discrepancies in health that exist between different groups *within* the female population. Such variation is especially marked from the perspective of social class. The latest decennial supplement on occupational mortality shows a standardised mortality ratio (SMR)[3] for married women aged 20–59 years classified in Social Class V on the basis of their husband's social status that is approximately twice the ratio recorded for those belonging to Social Class I (Table 31). This finding has, however, to be interpreted with extreme caution. A major difficulty stems from the incompleteness of the available data. Registrars are not required to record a woman's last occupation at death unless she has been in paid employment for most of her life. Furthermore, part-time work is excluded from death registration. These deficiencies underlie the resort to data for married women classified according to their spouse's social class. Yet the latter itself is a source of fundamental concern – class is determined on the basis of occupation and there has been mounting criticism of the relevance of this variable as a proxy for socio-economic status.

Despite these difficulties and other qualitative shortcomings of the data which undermine the validity of their use in calculating occupa-

3 The standardised mortality ratio is the ratio of the observed deaths in a particular group to the number that might have been expected from the mortality experience of the population as a whole, after allowing for differences in age structure.

tional and hence social class SMRs (OPCS, 1986). Table 31 shows that the relationship between mortality and social standing is broadly mirrored by various measures of morbidity. Information from the General Household Survey shows, for example, that semi and unskilled women have a combined (self-reported) prevalence of longstanding illness of 41 per cent compared to 26 per cent for women classified as professionals and managers. The difference between the two groups is even greater for limiting longstanding ill health (27 and 14 per cent respectively). The gradient through the socio-economic groupings is not so consistent in the case of acute sickness although marked discrepancies between the ends of the social spectrum are still clearly apparent.

Women's health also shows marked variations according to employment status. Interest in the relationship between the two variables has been promoted by the growing significance of women in the nation's work force. The General Household Survey has shown that the proportion of economically active women aged 16–59 years increased from 60 to 63 per cent between 1973 and 1984. Over the same period, the economic activity rate for males aged 16–64 years fell from 94 to 88 per cent. The net effect of these and other trends has been to increase the number of economically active women in England and Wales by almost one million in 1984 compared with 1973. Today, more than 9 million women are in paid employment and comprise almost 40 per cent of the work force.[4]

The potential health implications of these developments are, of course, extremely wide-ranging. At a general level, for example, it might be predicted that improvements in women's career opportunities could be associated with an increase in the prevalence of those types of morbidity in which competitiveness, time urgency and other facets of Type A behaviour play a causal role. Some research findings suggest that stress-related ill health might also be expected to occur more frequently as increasing numbers of women add the pressures of being a paid employee to already existing domestic responsibilities. Conversely, for some women paid employment might protect against the stresses caused by the monotony, lack of self-esteem and other negative features sometimes linked with the role of full-time housewife.

More direct physiological harm might be a further consequence of recent employment trends. Jacobson (1986) has drawn attention to West German research indicating that mothers who work are more likely to smoke cigarettes than those who remain at home. Similarly, the Health and Lifestyle Survey suggests that alcohol consumption is higher for women who work outside the home than for housewives – for example, 34 per cent of women aged 18–39 years working in non-manual occupations may be categorised as moderate or heavy drinkers compared with 19 per cent among those not in paid employment. It should be emphasised, however, that the 'causal significance' of

4 Defined as economically active men and women aged 16–64 and 16–59 years respectively.

Table 32 **Composition of the female labour force of working age: marital status and number of dependent children by whether working full-time, working part-time, or unemployed.**

Women aged 16–59 — *Great Britain: 1984*

*Marital status and number of dependent children**	*Economically active women†*					*All women aged 16–59*
	Working			*Unemployed*	*Total*	
	full-time	*part-time*	*Total***			
	%	%	%	%	%	%
Married						
With dependent children						
1 dependent child	9	20	14	10	13	15
2 dependent children	7	29	17	12	16	18
3 dependent children	2	8	4	2	4	6
4 or more dependent children	Ø	1	1	1	1	2
	18	57	35	26	34	41
No dependent children	36	29	33	18	32	28
Total	54	87	68	44	66	69
Non-married						
With dependent children	3	5	4	8	4	6
No dependent children	43	9	28	49	30	26
Total	46	13	32	56	34	31

*Persons aged under 16, or aged 16–18 and in full-time education, in the family unit and living in the household.

†Full-time students who worked or were unemployed in the reference week are classified as economically inactive.

**Including a few women whose hours of work were not known.

Source General Household Survey.

employment in the acquisition and maintenance of these habits is unclear. Uncertainty also surrounds the influence of work on reproduction, a relationship that is attracting increasing attention as more women are working through conception and pregnancy (Lee and McCloy, 1986).

Investigations into the links between employment and women's health have also focused more specifically on the hazards associated with certain types of work. Roman and her colleagues (1985), for example, have reported excess mortality from anaemia in textile and clothing workers. In addition to such occupation-specific risks it might further be expected that the health of female employees will show marked variations according to personal circumstances. Table 32 indicates that the female section of the work-force comprises a large number of sub-groups of women with widely differing roles and responsibilities. In this regard, a recently published study by Arber and her colleagues (1985) employing data obtained by the General Household Survey has identified women under 40 years of age with dependent children and in full-time occupations classified either as intermediate/junior non-manual or manual as a particularly vulnerable group.[5] Such findings underscore the point that analyses limited to contrasting the health profiles of women in and outside paid work will camouflage the existence of important discrepancies between specific groups of employed women.

Available evidence also suggests that investigations of women's health should further differentiate on the basis of childbearing experience. Pregnancy and childbirth are, of course, no longer associated with high levels of direct risk to life. Since the 1930s, the introduction of the sulphonamides, penicillin and blood transfusion coupled with rising standards of obstetric education and care have produced a dramatic reduction in the maternal mortality rate (Loudon, 1986) – from 4.3 per 1,000 births in 1931–35 to 0.07 in 1986. Even the most recent 20 years period (1966–86) has witnessed a fall of 73 per cent in the maternal mortality rate and today fewer than 50 such deaths per annum are linked to the unknown number of conceptions which culminate in more than 660,000 births in England and Wales each year.

It has become increasingly evident, however, that childbearing may have important long-term health sequelae. For example, nulliparity has consistently been associated with an elevated risk of cancer of the breast, ovary and uterine body. Conversely, cervical cancer is more common in multiparous women. In addition, research now indicates

5 Another increasingly significant sub-group of the economically active female population is the unemployed. Six per cent of women aged 16–59 were unemployed in 1984 compared with two per cent in 1975. The corresponding figures for non-married women were 10 and four per cent respectively. Much of the research into the links between unemployment and health has examined the implications for males and women have been relatively neglected. However, an analysis of General Household Survey data by Arber (1987) found that 16 per cent of unemployed women aged 20–59 reported limiting longstanding illness compared to 12 per cent of those in employment. The differential was greatest among those aged 20–29 where the corresponding figures were 11 and 7 per cent respectively.

Table 33 **Proportions claiming that they 'do something to keep yourself healthy or improve your health', or claiming that there is something they would like to do but don't do, by socio-economic group (positive replies may be made to both questions, or to neither).**

	Household socio-economic group					
	Professional	*Employers/ managers*	*Other non-manual*	*Skilled manual*	*Semi-skilled*	*Unskilled*
	Percentage					
Females age 18–29						
Do things	77	65	63	53	52	44
Would like to	71	74	77	68	70	68
Females age 30–59						
Do things	76	66	63	55	53	43
Would like to	76	68	70	62	60	50
Females age 60 and over						
Do things	76	66	64	57	58	53
Would like to	45	48	41	38	38	34
Males age 18–29						
Do things	93	62	76	64	69	62
Would like to	78	76	71	61	64	79
Males age 30–59						
Do things	68	62	68	57	59	60
Would like to	71	69	64	60	55	44
Males age 60 and over						
Do things	61	71	76	69	67	62
Would like to	52	44	39	38	40	29

Source Blaxter *et al.* 1987.

that childbearing may have beneficial or harmful implications for a range of other conditions. An analysis of the relation between parity and cause of death for 1.2 million women aged 45–74 years (Beral, 1985) revealed that parous women are more likely to die from diabetes mellitus, gallbladder disease and certain circulatory diseases including hypertension, ischaemic heart disease and cerebrovascular disease than women who have not borne children. Inevitably, these findings raise more questions than the data from which they are derived can answer. Absence of more detailed information, for example, means that is is not possible to identify those aspects of pregnancy history that are most strongly correlated with each disease. The findings are also suggestive of a hormonal explanation for some of the observed associa-

Table 34 **Age-standardised mortality among females from coronary heart disease in 1980. Rates per 100,000 population aged 40–69 years.**

Country	*Mortality per 100,000*
Scotland	208
Northern Ireland	191
New Zealand	178
Eire	160
England and Wales	136
Hungary	134
Australia	133
Czechoslovakia	132
United States of America	130
Israel	128
Finland	121
Canada	118
Denmark	112
Bulgaria	100
Romania	93
Sweden	90
Norway	86
Austria	80
Netherlands	78
West Germany	75
Belgium	72
Yugoslavia	71
Poland	66
Italy	53
Switzerland	47
France	30
Japan	24

Source Uemura and Pisa, 1985.

tions but do not permit any further exploration of this possibility. Furthermore, the relationships between childbearing and disease are unlikely to remain static over time. Intergenerational variation may occur, reflecting differences in a range of variables including completed family size, the timing of family building and exposure to external factors such as oral contraception. The foregoing might be seen as a forceful argument for further research into these issues but its main purpose in the context of the present discussion, is to highlight once again the shortcomings of investigating women's health from too global a perspective.

A final illustration of this point may also be seen in the variation that exists between women in terms of health related behaviour. The Health and Lifestyle Survey found, for example, that the proportion of women who appear to exert a high degree of control over their health increases from 25 per cent among those without any educational qualifications to 35 per cent for individuals who have obtained degrees. Conversely, the proportion seeming to exercise little control diminishes from 42 to 30 per cent in the corresponding categories. Discrepancy on a yet broader scale is observed in the prevalence of activity performed to maintain or improve health. Table 33 shows, for example, that in the 18–29 age group, 77 per cent of professional women compared with only 44 per cent of those classified as unskilled claim to do something to keep healthy.

It is plain from the foregoing discussion that the experience of health and sickness as well as perceptions concerning the ability to influence personal well-being vary markedly within the female population. These discrepancies have obvious implications for the construction of successful initiatives aimed at improving women's health and are clearly highly relevant in seeking solutions to many of the specific health problems identified in the present paper.

Coronary heart disease is the single most important cause of premature mortality in women today. In 1986, it was responsible for more than 23,000 deaths under 75 years of age in England and Wales, thereby accounting for nearly one death in every four in this age group. Reductions in mortality have in fact been achieved since the start of the decade, when the countries of the United Kingdom were ranked in the top five of the international league table for coronary mortality (Table 34), but there is still considerable scope for further improvement. If women aged 35–74 years in England and Wales in 1985 had experienced the same age specific rates as those prevailing that year in West Germany, for example, a total of almost 9,000 coronary deaths at these ages might have been avoided.

Against this background, organisations such as the Coronary Prevention Group have called for more research into the coronary risk factors that are unique to women[6] and for some degree of re-orientation of

6 Risk factors such as smoking, diet, blood pressure and exercise are as relevant to women as they are to men, but there is in addition a group of female-specific influences including the effects of the menopause and the combined hazards of oral contraceptive usage and smoking which require further scientific investigation (Marmot, 1986).

health education programmes. In particular, the latter should place 'more emphasis on women's individual risk of heart disease rather than directing information towards women as mothers and partners' (CPG, 1987). At the same time, initiatives in this area will also need to take account of the wide disparities in coronary mortality by social class – the average of the standardised mortality ratios (recognising the limitations of the data outlined earlier) for social classes IV and V is three times the combined figure for social classes I and II (Table 35) – and the implications these differences have for the promotion of behavioural change.

The latter point applies equally in the case of cerebrovascular disease which is the second most significant cause of premature mortality among women. Despite steadily declining mortality rates in recent years, stroke is still responsible for the deaths of 10,000 women under 75 each year in England and Wales. The condition is also an important cause of morbidity. Extrapolations from the findings of the Oxfordshire Community Stroke Project (Sandercock *et al*, 1983) suggest that annually there may be more than 25,000 first strokes among women aged 55–74 years (as well as 31,000 similar episodes in the 75 years and over age group) and in perhaps one third of these cases the patient may suffer residual handicap (Christie, 1982).

High blood pressure is one of the most powerful risk factors for stroke and there is evidence to suggest that the increased use of anti-hypertensive medicines in recent years has been an important factor in accelerating the decline in stroke mortality (*Lancet*, 1983). Other findings from research conducted in Finland support the view that effective anti-hypertensive treatment in the community is a major determinant of mortality from stroke (Tuomilehto *et al*, 1985). Against this background, some of the observations of the Health and Lifestyle Survey raise the possibility that further reductions in stroke death rates among women could result from improvements in therapy. For example, the survey classified seven per cent of females aged 40–69 as untreated hypertensives. However, since hypertension was defined as blood pressure in excess of 95mm Hg and some commentators (for example, Silman 1984) argue that active treatment only becomes necessary at values of 105mm Hg and over, the implications of this finding are ambiguous. Consequently, the survey's discovery that about one quarter of women aged 18–69 years receiving medicines for high blood pressure remained hypertensive is potentially more significant and warrants further investigation.

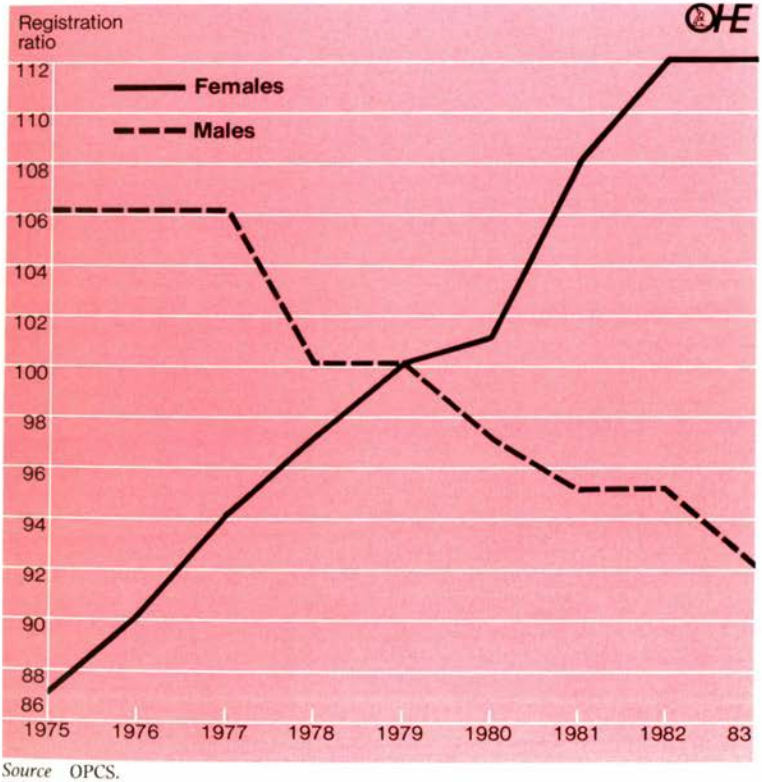
Improvements in stroke mortality might also indirectly flow from a lowering of the prevalence of obesity. The latter is associated with high blood pressure and was shown by the Health and Lifestyle Survey to affect almost 20 per cent of women between the ages of 40 and 59 years. It is noteworthy, however, that this mean figure disguises a range of prevalence from 13 per cent among women classified as professionals and employers to 24 per cent among semi- and unskilled women.

Table 35 **Mortality of married women aged 20–59 from selected diseases by social class (based on husband's occupation) 1979–80, 1982–83, Britain, standardised mortality ratios (all married women = 100).**

Social class	*Coronary heart disease*	*Cerebrovascular disease*	*Breast cancer*	*Lung cancer*
I	46	62	109	50
II	63	77	105	73
III Non-manual	80	87	114	81
III Manual	122	116	104	122
IV	144	135	107	138
V	194	179	104	170

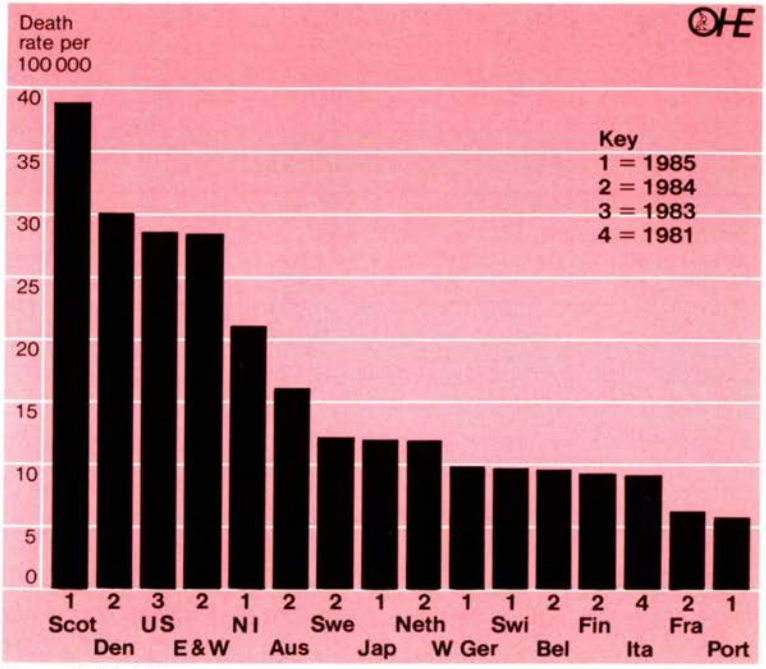
Source OPCS, 1986.

Figure 13 **Standardised registration ratios for lung cancer, females and males, England and Wales, 1975–83, 1979=100.**



Source OPCS.

Figure 14 **Age standardised (to the European population) death rates per 100,000 from lung cancer for females in selected nations in the mid–1980s.**



Source WHO, 1986.

In common with coronary heart disease and stroke, lung cancer mortality in women shows marked discrepancies according to social class (Table 35). Unlike the first two diseases, however, the burden associated with lung cancer has been increasing over time. In 1983, there were 9,475 new diagnoses of the disease in women, representing an increase of 36 per cent over the total for 1975. Nearly three-quarters of current cases involve women under 75 years and trends for this age group over the eight year period, shown in Figure 13, are the complete opposite of those observed for males.

Survival prospects following a diagnosis of lung cancer are poor. The latest available data are based on 1981 registrations and indicate for the 55–74 age range, for example, that only 21 per cent of patients are still alive one year after diagnosis. Fewer than 10 per cent survive to three years. Mortality from the disease is therefore high and has increased substantially among women over 55 years during the past decade. Furthermore, Figure 14 indicates that women in England and Wales now have one of the highest lung cancer mortality rates in the developed world.

Cigarette smoking is the principal cause of lung cancer. However, 'women have clearly not been responding as well as men to the message about the health risks of smoking' (Currie, 1986). Overall, 32 per cent of women in 1984 smoked cigarettes compared with 41 per cent in 1974. (The corresponding proportions for men were 36 and 51 per cent respectively and if the trends over 1974–84 persist during the next decade the prevalence of the habit will, by the mid-1990s, be the same for both sexes at about 25 per cent.) More specifically, prevalence has fallen most among professional women (a drop of 40 per cent over the 10 year period), less significantly for the intermediate groupings combined (26 per cent) and least of all for women belonging to the manual classes (18 per cent). As a result, the proportions in each socio-economic category classified as current cigarette smokers are 15 per cent, 28 per cent and 37 per cent respectively. Furthermore, smokers in the manual group have a weekly cigarette consumption that is 27 per cent greater than that observed for the professional category.

Cancer of the breast is a further leading cause of premature death among women but, in contrast to the three other diseases described above, it does not show marked variations in mortality according to social class. The overriding source of concern is therefore the fact that the incidence of, and mortality from, breast cancer have changed little in recent years. In 1983 (the latest year for which data are available), 21,297 women in England and Wales were diagnosed with breast cancer and 76 per cent of these cases involved individuals below 75 years of age. In 1975, the corresponding figures were 21,141 and 80 per cent respectively. Focusing on mortality, breast cancer continues to claim the lives of nearly 14,000 women each year and within this total 65 per cent are aged less than 75 years.

The cause of breast cancer and how it might be prevented are both unknown. As a result, early detection and treatment constitute the only way of reducing fatalities from the disease. The effectiveness of this approach has been demonstrated in a number of controlled trials and this evidence, in conjunction with the unchanging and, indeed, high levels of mortality from the disease (the death rate in this country is the highest in Western Europe and North America), led a government appointed expert group to recommend the implementation of a national breast cancer screening programme (DHSS, 1986). The government has accepted the proposal and work is now under way to establish a service providing screening every three years for all women aged between 50 and 64 throughout the United Kingdom.

It is intended that each Regional Health Authority shall have at least one screening centre functioning by March 1988. However, the requirements concerning new facilities for diagnosis, treatment, counselling and after-care as well as personnel training are extensive and mean that the programme – ultimately involving more than 100 centres – will not be fully operational until the start of the next decade. Thereafter, assuming that careful planning at this stage safeguards against the subsequent development of the type of organisation/

Table 36 **Beliefs about the role of individual behaviour in health and ill health for society at large and in the respondents' own lives.**

	Mentioned as important for health or ill health of society at large					*Mentioned as important for health or ill health in own life*				
	Age			*Socio-economic group*		*Age*			*Socio-economic group*	
	18–39	*40–59*	*60+*	*Non-manual*	*Manual*	*18–39*	*40–59*	*60+*	*Non-manual*	*Manual*
					Percentages					
Females	74	75	68	76	70	44	37	30	42	37
Males	70	70	68	76	65	59	48	41	56	47

Source Blaxter, 1987a.

management problems that have bedevilled, and shaken public confidence in, the cervical cancer screening service, it is hoped that the breast screening programme will reduce the number of deaths among women aged 50–64 years by about one third. Application of this proportion to mortality data for England and Wales indicates a potential annual saving of about 1,500 lives. It should be noted, however, that mortality equivalent to more than six times this figure currently occurs outside the age range to be screened for breast cancer.[7] Consequently, the implementation of the screening service should also be accompanied by a sustained programme of research aimed at identifying the causes of the disease and thereby the basis for effective prevention. In this regard, reproductive and genetic risk factors have attracted considerable interest but attention is now also focusing to an increasing extent on possible lifestyle influences, particularly the role of diet (Smith, 1986).

A consistent aspect of the four principal causes of premature female death described above is the established or suspected aetiological role played by a number of factors connected with lifestyle. Cigarette smoking, excess alcohol consumption, inappropriate diet and lack of exercise – the key influences – are of course also linked with many other diseases. Estimates contained in this paper suggest that the first of this group, for example, may be implicated in at least one female death in every seven below 75 years of age. In addition, smoking is believed to be a risk factor for several diseases – for example, osteoporosis – which are associated with considerable levels of morbidity.

Knowledge of the potential impact of lifestyle on health appears to be widespread. Irrespective of age or socio-economic group, the Health and Lifestyle Survey found that about three quarters of women believe individual behaviour to be an important determinant of health (Table 36). The other most frequently cited variables included medical science, living standards and the external environment, although none of these achieved a response rate that was even half that recorded for individual lifestyle. Yet evidence available from a number of sources indicates that too many women, especially in the semi- and unskilled socio-economic groups, are failing to translate this high level of awareness about the causes of ill health into appropriate action.

It should, however, be emphasised that such inaction is rarely the preferred choice expressed by women. The findings of the Health and Lifestyle Survey shown in Table 33 indicate that many women not pursuing health promoting lifestyles would in fact like to do so. But the switch to more appropriate behaviour patterns is frequently confronted by obstacles which are to widely varying degrees within the sphere of control of the individual. More optimistically, research suggests that counselling and advice provided on a one-to-one basis have considerable potential for promoting desired changes in lifestyle and in this respect the primary health care team may have a central role to play in

7 In broad terms, about 1,600 women under 50 die from breast cancer each year as do approximately 8,000 over the age of 65 years.

Table 37 **Female life expectancy at different ages in selected nations.**

Country	*Year*	*Expected years of life*		
		At birth	*At 45 years*	*At 65 years*
Japan	1985	81.0	37.5	19.5
Iceland	1984	80.6	37.1	19.2
Switzerland	1985	80.4	37.2	19.3
France	1984	80.1	37.1	19.4
Sweden	1984	80.1	36.6	18.9
The Netherlands	1984	79.9	36.6	19.0
Norway	1984	79.8	36.5	18.8
Finland	1984	79.0	35.5	17.7
Spain	1980	78.6	35.7	17.9
Greece	1984	78.6	35.7	17.7
USA	1983	78.3	35.6	18.8
West Germany	1985	78.3	35.2	17.7
Italy	1981	78.2	35.3	17.7
England and Wales	1984	77.9	34.6	17.6
Belgium	1984	77.8	34.9	17.5
Denmark	1984	77.8	34.7	18.0
Austria	1985	77.4	34.5	17.0
Luxembourg	1985	76.9	34.2	16.8
Portugal	1985	76.6	34.4	16.9
Northern Ireland	1985	76.5	33.4	16.5
Eire	1983	76.0	32.8	15.9
Scotland	1985	75.9	32.8	16.3

Source WHO, 1986.

improving the well-being of the population (Fullard *et al*, 1987). This approach would appear to be particularly relevant in the case of young women who 'perform' relatively poorly in the context of smoking, alcohol consumption and exercise – as a group, they have a greater likelihood of contact with a general practitioner over the course of a year than many other sections of the female population (82 per cent of women aged 15–24 consult at least once during a 12 month period compared, for example, with 72 per cent for those aged 45–64 and 76 per cent for women overall).

The objective of this paper has been to review the health of women today. It has shown that the prevalence of chronic ill-health is broadly similar for the two sexes, although short-term morbidity appears to be more common among women. The latter observation might have been anticipated in view of the more difficult lifecycle women have to cope with and the responsibilities many bear for the health of others alongside those for their own well being. It should be emphasised, however, that health and disease are highly complex concepts and that data concerning them have to be interpreted with care. This point is illustrated

by the Health and Lifestyle Survey which found that 60 per cent of women defined health in themselves as a feeling of psychological fitness but only 11 per cent described it in terms of 'never ill, no disease, never see a doctor'.

Conceptual difficulties such as these coupled with the paucity of reliable morbidity data have inevitably served to shift the principal focus of the paper onto mortality. In this regard, women's death rates are more favourable than those for men at all points along the age spectrum. The paper has nevertheless identified coronary heart disease, stroke, breast and lung cancer as major causes of premature death among women. These diseases and many others are causally associated with lifestyle factors. Initiatives that are successful in promoting healthier behaviour patterns could therefore lead to further reductions in women's mortality (and morbidity) and lift the countries of the United Kingdom out of the lower half of the international life expectancy rankings shown in Table 37.

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