Ageing and Society 6, 1986 271–293

Families and Households of the Elderly Population: Prospects for Those Approaching Old Age

IAN TIMAEUS*

ABSTRACT

Long-term demographic trends that determine the absolute and relative size of the elderly population also underlie changes in the proportions of older people with living spouses and children. Such changes have important implications for residential isolation, the provision of care and the overall quality of life of the old. Demographic trends influencing the family situations of older people in Britain are discussed and detailed projections presented for women reaching age 60 in the period 1971–96. Increases in the propensity to marry and bear children after about 1940, together with declining mortality, mean that the proportions of older women that are married and that have children are likely to increase until the second decade of the next century. It is often assumed that demographic ageing will result in an increase in the number of elderly women living alone. However, the increase in the proportion of them that are married offsets this trend.

Introduction

Many discussions of the demography of the elderly population concentrate on the phenomenon of demographic ageing. In particular the absolute and relative increases expected in the number of very old people in countries such as England and Wales have received considerable attention.[1] Other changes in the demography of the elderly population are less widely understood. One feature of this age group that distinguishes it from the population in general is that it is subject to rapid turnover. In Britain, turnover among those aged 65 and over is about 12.5% each year – five times the rate in the total population.

* Centre for Population Studies, London School of Hygiene and Tropical Medicine, University of London, 31 Bedford Square, London WC1B 3EL, England

TABLE 1. *Percentage distribution according to household circumstances of the population aged 65 and over by marital status and sex, Great Britain, 1980*

Household circumstances	Single	Married	Widowed, divorced/ separated
	Men		
Lives alone	53	0	69
Lives with spouse only	—	82	—
Lives with spouse and others	5	17	0
Lives with son or daughter	3	—	22
Lives with siblings	23	—	1
Other	16	—	7
Base = 100%	101	1387	354
	Women		
Lives alone	66	0	74
Lives with spouse only	—	87	—
Lives with spouse and others	0	12	0
Lives with son or daughter	2	0	20
Lives with siblings	24	—	2
Other	7	—	3
Base = 100%	299	1015	1360

Source: Office of Population Censuses and Surveys, *General Household Survey 1980*, HMSO, London, 1982.

As a result, changes in the structure of the elderly population may be large and rapid. At present the characteristics of the very old reflect, in part, levels of education typical of the early part of the century, massive male casualties in the First World War and economic and demographic conditions prevailing in the interwar years. In contrast, cohorts now approaching old age have benefited from, for example, improved economic conditions and the growth of the welfare state for most of their adult lives. This paper considers one such change in the circumstances of older people – trends in the demography of their families and households. As well as discussing the direction of these changes in Britain, it attempts to estimate their extent.[2]

For most people those they live with and close relatives outside the household are their most important social contacts and sources of help in everyday life. These relationships are particularly important for the old, for they are seldom in paid work and relatively likely to suffer from some form of disability. The role of spouses and children is especially significant. For example, as can be seen from Table 1, the household circumstances of older people depend largely on their marital status. Most of them live with their spouse, if they are married, or alone. If

they do reside with anyone else, older people tend to live with a son or daughter, although the small group that never married frequently form households with their siblings. Moreover much of the care, or help in caring for themselves, needed by older people is provided informally by other household members.[3] In addition, relatives, especially children, provide much of the care received from outside the household by elderly couples and those who live alone.

Demographic changes are only one factor that will affect the residential patterns of the elderly population, their social contacts with relatives outside the household and the informal provision of care. The economic situation of older people, their preferences, their mobility and that of their children are other factors of obvious importance.[4] However, the number and nature of the close living relatives of older people represent a framework within which other social changes must operate. The discussion that follows concentrates on the immediate family, spouses and children, whether or not it forms a residential unit. It is particularly concerned with the prospects for women reaching age 60 in England and Wales between 1971 and 1996, but includes a discussion of the determinants of the availability of kin to elderly people and their relative importance that may be of more general interest.

The body of the paper is divided into four sections. The first considers in a general way the impact of trends in the immediate demographic determinants on numbers of primary kin of older people. In the light of this, the second section describes the structure of the model used to project family situations and the assumptions made about future demographic trends. Then the results are presented in the form of forecasts for five-year cohorts. This section also discusses the sensitivity of the estimates to the assumptions made. The fourth section summarises the main findings and discusses some of their implications.

Determinants of the availability of immediate kin

The proportions of elderly men and women with living spouses and children depend on demographic trends over a prolonged period. The main factors influencing them are fairly clear. They are marriage patterns, divorce and remarriage, childbearing and the survival of spouses and children relative to the elderly people concerned. However, the links between aggregate demographic rates and the family structures produced by the varied life histories that these rates represent are complex and difficult to unravel. A useful simplification is to distinguish two phases of life: that of family building and that of family dissolution.

TABLE 2. *Percentage distribution according to marital status of the population aged 65 and over, Great Britain, 1981*

Age	Single	Married	Widowed	Divorced
		Men		
65–69	8.2	80.7	8.9	2.1
70–74	8.0	75.9	14.5	1.6
75–79	8.2	67.8	22.9	1.2
80–84	7.6	55.5	36.1	0.8
85+	7.1	38.6	53.7	0.6
All 65+	8.0	72.9	17.4	1.6
		Women		
65–69	9.6	55.9	31.8	2.7
70–74	11.6	42.6	43.7	2.0
75–79	13.6	28.4	56.6	1.4
80–84	14.4	16.3	68.4	0.9
85+	15.9	7.3	76.3	0.6
All 65+	12.2	37.2	48.9	1.8

Source: Office of Population Censuses and Surveys, *Census 1981, National Report Great Britain Part 1*. HMSO, London, 1983.

Changes in the family circumstances of young men and women occur almost entirely as a result of marriage, divorce and childbearing. The direct impact of mortality is very slight. As a cohort passes through middle age the pattern is reversed. Marriage, divorce and fertility rates fall to low levels and death rates rise. Thus changes in the distribution of a cohort according to marital status and number of living children depend increasingly on mortality. In particular the proportion of older people who survive longer than their close kin depends on the relative levels of male and female mortality and of mortality at different ages. Distinguishing family building and dissolution suggests that the present and future family circumstances of both the elderly and the middle aged depend on past fertility and nuptiality trends throughout their adult lives, but that mortality trends in the period before a cohort reaches age 50 are of little importance. In contrast, in any forecast of the family resources of the currently middle aged and elderly, it is the assumptions made about future mortality that will be crucial.

In the early part of this century Britain exhibited what has been described as the 'European Marriage Pattern'. Marriage occurred much later than elsewhere in the world and a high proportion of people, especially women, never married.[5] After about 1940 the propensity to marry increased rapidly, a trend which continued until the early 1970s. Since then marriage rates have declined again. As a result of these trends, while about 15% of women born around the turn of the century never married, the same will be true of less than 5% of women born

around 1940.[6] Currently the proportion of single women in the elderly population increases with age, as can be seen from the results of the 1981 Census shown in Table 2. As later cohorts move into this age range, the proportion of older women who are single will decline till about the year 2010. Trends in the proportion of men who ever marry have been less striking: between 91 and 92% of all cohorts born in the first half of the century are expected to marry by age 50.[7]

Divorce rates have shown an upward trend throughout this century. In particular they have risen rapidly since the early 1960s. While only 1.7% of people aged 65 or more were currently divorced in 1981, one in three recent marriages may end in divorce.[8] However, divorce rates were lower when middle aged were at the ages at which most divorces occur and the incidence of divorce is unlikely to be great among these cohorts in the future. For example, ignoring mortality, at 1980 rates only 11% of married women aged 45 would experience a divorce subsequently. Moreover the impact of divorce on the marital status distribution of the older population is attenuated by high remarriage rates for the divorced. For example, at the beginning of the 1980s, one in every four divorced men aged less than 35 and almost as many women were remarrying each year.[9] At later ages the picture is rather different, with only 5% of the male and 1% of the female divorced population aged 55 or over remarrying in 1980. In general, age-specific remarriage rates of the divorced have declined since the 1960s. To some extent this trend stems from the lag between an increase in numbers of divorces and the subsequent increase in numbers of remarriages and it is difficult to measure the trend in the probability of a divorced person remarrying eventually.[10] However, it is clear that not every additional divorce results in an additional remarriage. Thus one can expect a moderate increase in the number of divorced elderly people in the future.

Most of the decline in average completed family size in Britain occurred in cohorts marrying between 1870 and 1914. While the mean number of children ever-born continued to fall for cohorts marrying up to 1940 and has since risen slightly, it has remained in the range 2.0–2.5 children.[11] Thus few members of high-fertility generations are still alive. Of more importance than average family size in the present context are the proportions of the population that have no children or only a single child. These were very high for couples who married in the inter-war years, but subsequently declined sharply. For example, according to the 1961 Census about 17% of couples in uninterrupted marriages marrying between 1916 and 1940 had no children and a further 26% only one child. According to the 1971 Census, the

proportion of married couples remaining childless subsequently declined rapidly to around 10–11%, while the proportion of couples having only one child declined more gradually to about 15%.[12] These figures exclude the widowed, divorced and remarried, and cannot be translated into exact estimates for the 1980s. Nevertheless, it is clear that, at present, a large proportion of older people never had children or had only one child and that in future this proportion will decline rapidly. In 1971 48% of all women aged 55–59 were single, childless or had only one child; this figure was already as low as 31% for women aged 35–39 although they had not completed family building.[13]

Vital registration statistics suggest that there are substantial mortality differentials according to marital status in Britain.[14] In part these may be an artifact of discrepancies in the data but it is fairly certain that the mortality of the married population is lower than that of those without spouses.[15] Compared with a population without such differentials, this raises the proportion of ever-married individuals and, in particular, of elderly married couples in the population. Male age-specific mortality rates are higher than those for females and in addition men are, on average, several years older than their wives. As a result, not only do women survive longer than men but ever-married women are far more likely to be widowed than men of the same age. For the individual this means that, on average, a woman is widowed at a younger age, but dies at an older one, than a man: she spends longer as a widow. At an aggregate level it implies that there are relatively large numbers of very old women in the population who are highly likely to be widowed.

In 1981, for example, there were over four times as many elderly widows as widowers enumerated in Britain.[16] Despite considerable year-to-year fluctuations, there has been an appreciable fall in mortality at older ages in Britain recently. Women have tended to benefit more than men.[17] A decline in the mortality rates experienced by one sex will lead to an increase in the proportion of that sex who are widowed, because of the increasing number of very old people, but will decrease the proportion widowed of the opposite sex. The net impact of a reduction in old-age mortality that affects both men and women is to bring about a relative decline in widowhood for both sexes but to increase the absolute number of very old, widowed individuals. Although mortality rates of children and young adults are very low, they begin to increase sharply above about age 40. The mean age of women giving birth in Britain in the 1940s and 1950s was between 28 and 29 years. Thus, when women who were having children around then reach their late 70s and 80s, their offspring will largely be aged between 40

and 70. At current rates about 9% of the population would die before age 55, suggesting that not insignificant proportion of those who survive to an advanced age lose a child before they die themselves.[18]

The profound demographic changes in British society over the last century that resulted in the ageing of the population have also transformed the family circumstances of the elderly. The decline in fertility that was largely responsible for the increase in the proportion of elderly people in the population also reduced the number of children available to the elderly. Mortality decline has meant that more people survive to older ages but also that they tend to spend a smaller proportion of their old age as widows or widowers. While far fewer children die at young ages, more people survive to see their children die in middle age.

To some extent the elderly population of the 1980s can be seen as belonging to a transitional generation. Like members of older cohorts, they were relatively unlikely to marry. However, they also included a higher proportion of couples who remained childless, or had only one child, than generations that came before or after. The abrupt change in the demographic behaviour of couples who married in the 1940s means that, in future, the proportions of the elderly population who are married and have children will increase. In addition, any future fall in mortality should result in a further decline in the proportion of ever-married older people who are widowed. No reversal of these trends is likely until well after the turn of the century. However, assuming that the low marriage and fertility rates and high divorce rates of the 1970s and 1980s are not totally compensated for later in the lives of those currently building families, the proportion of older people with few close kin will then begin to rise again.

Modelling immediate kin frequencies

To quantify the net outcome of the interrelated demographic processes that determine the family structures of the elderly population, it is necessary to construct a simplified model. The aim is to capture the impact of the major determinants of family circumstances while ignoring complicating processes that are of little significance. Even the simplest approach that is likely to be useful embodies too many relationships to envisage analytical solutions. Instead a model of the flows between the most pertinent family structures is constructed that can be solved numerically and used to project the population in each such status. The tool used is the multiple increment–decrement life table.

This is a generalisation of the idea of a life table that examines the attrition of a population by mortality and is familiar to demographers, epidemiologists and actuarial scientists. In the increment–decrement life table several subpopulations are examined simultaneously. Each may suffer attrition by more than one process; for example, death, widowhood and divorce all reduce the number of married individuals. In addition, each may gain members; for example, by marriage and remarriage in the case of the married population. A substantial literature has appeared recently on the mathematics of multi-state demography and its application to various fields.[19] These subjects are not discussed in detail here.

The principal variables differentiating family circumstances with which this paper is concerned are marital status and family size. Three different marital statuses are distinguished in the model – single, married and divorced or widowed. Divorce and widowhood have rather different implications for future marriage prospects and mortality, as well as for residence and lifestyle, and ideally a model should examine the two groups separately. However, there are so few divorced older people that simplification by treating them together seems justifiable. Similarly, the remarried and married are grouped together, although the former, for example, are more likely to divorce again. It is whether or not a person has a spouse that is most important in the present context and women, at least, usually maintain close contact with children from all their marriages. Four family sizes are considered – zero, one, two and three or more living children. When considering the residential patterns of the elderly population, caring for them or their social contacts, it is highly relevant whether they have no children, one child or more. The exact family size of older people with several children is less important. It is further assumed that the single are childless. While this is not absolutely true, illegitimacy rates were lower in the past and only a very small proportion of the elderly will have had a child and neither married subsequently nor had it adopted.

A schematic outline of the model is presented in Figure 1. Those in all family statuses are subject to the risk of death. There is a flow out of the single state because of marriage but no inflows. In contrast the other states are subject to both decrements and increments. The married population can move to the equivalent widowed and divorced groups and there are reciprocal flows due to remarriage. Family size increases for both the married and the widowed on childbirth and decreases on the death of a child. Birth of a fourth or subsequent child does not affect the family statuses distinguished in the model. It should be noted that international migration is ignored. It has little impact on

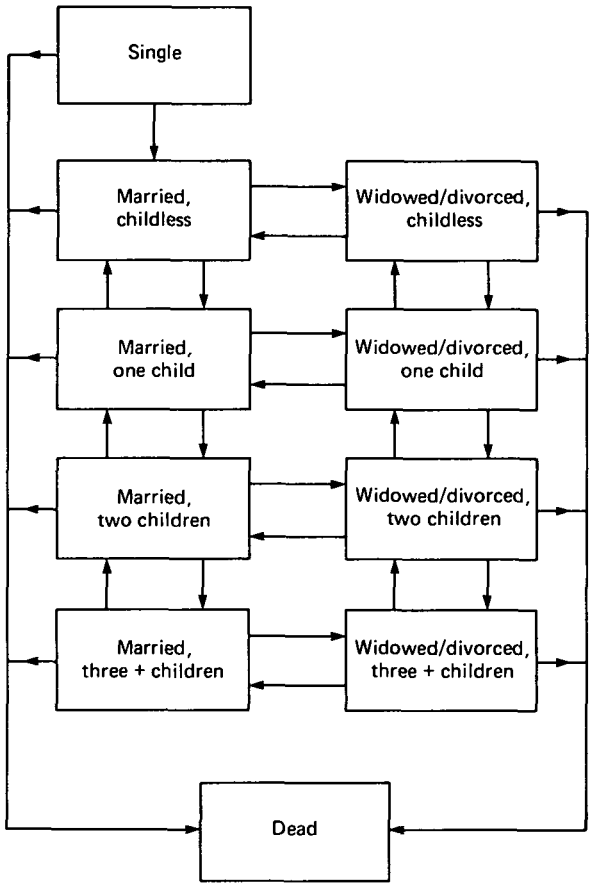

Fig. 1. The marital status and family size life table.

the composition of the elderly population but some of the children will be living abroad.

To implement such a model it is necessary to assume an initial distribution of the population between the states and specify schedules of rates measuring the probability of each possible transfer between states. The transition rates are assumed to be state and age-specific. A full implementation of the model might start with a cohort of single individuals at birth and follow them through their entire life. However, the structure of the model and the assumptions it makes mean that it is unlikely to produce realistic results if used in this way. Risks of divorce and remarriage, in particular, vary more closely with duration since a previous change in family circumstances than with age, probabilities of divorce and remarriage are related to family size,[20] and,

as has already been pointed out, the different transition probabilities of those in first and subsequent marriages and of the divorced and widowed are ignored. Finally, it is very difficult to predict future trends in nuptiality and fertility. These limitations of the model cannot be easily overcome; there are methodological problems and the necessary data are not available. What the approach is sophisticated enough to model is the later phases of family life and it has been applied only to cohorts that have largely completed the process of family building. However, because of the very limited information available on male fertility and the greater importance of distinguishing men's children in their current marriage from those born in an earlier one, it is used only to study the future family situations of elderly women.

Information about the distribution of women according to marital status and parity in England and Wales is available from the 1971 Census and is used to determine the initial characteristics of the population. The Census may slightly underestimate the extent of childlessness and marital dissolution but it is not thought to be seriously biased.[21] These data were obtained about ever-married women aged less than 60. Future family circumstances are projected only for women aged 35 and above. Thus, in all, five five-year cohorts are examined. Vital registration statistics are used to update their marriage, child-bearing and mortality experience to 1981. By this date child-bearing by even the youngest cohort was virtually complete. All illegitimate births to women aged 35 or more were assigned to ever-married women. Information on their order is unavailable and they were assumed to be distributed identically to legitimate births. The number of children still living was assumed to be equivalent to the number of children ever-born. These approximations have a trivial impact on the family size distributions obtained.

Divorce and remarriage rates are assumed to be independent of a woman's number of living children and are based on the experience of all married and all divorced and widowed women respectively. Similarly, fertility and mortality are assumed to be unrelated, though separate mortality schedules are applied to the single, married and divorce and widowed populations. Age-specific widowhood rates are published regularly. Measuring the mortality of women's children is more problematic. It varies with their ages, depending on each child's sex and date of birth. As such rates are relatively low, a drastic simplification should nevertheless provide reasonable results. This is to assume that all children experience the mortality of the population 30 years younger than the mothers, this being approximately the mean age of women giving birth.

To pursue the projection further it is necessary to make assumptions about future nuptiality and mortality, though not fertility. As it is uncertain whether the trend toward declining first marriage and remarriage rates and increasing divorce rates established in the 1970s will continue, it was decided to assume that the 1980 rates would apply in future. To examine the sensitivity of the forecasts to this assumption, a variant projection is presented that extrapolates the nuptiality trends observed between 1976 and 1981. Assumptions about trends in mortality are borrowed from official government population projections.[22] The principal projection embodies the forecast that mortality at age 65 and above will decline by 25% over the next 40 years. At younger ages the improvement is rather less. Variant projections assume declines in older age mortality of 12.5% and 37.5%. These trends are applied to baseline rates incorporating mortality differentials by marital status characteristics of recent experience, scaled to the overall mortality level used for the official projections. To assess the sensitivity of the projections to any errors in the data on mortality by marital status and to changes in the pattern of differentials, a further variant projection was made assuming that no such differential exists. It is assumed that widowhood rates will decline at the same speed as mortality. To eliminate erratic fluctuations the decline is applied to rates based on experience in 1976–80. This approach ignores the impact of any changes in the age distribution of husbands relative to their wives. Finally, the mortality of children is calculated on the basis of trends forecast by the official projections for the age group thirty years younger than that of the mothers.

Prospects for the future

The size of the elderly female population in the year 2001, according to the principal 1981 government projections and the present study, is shown in Table 3. Although both projections incorporate the same forecast decline in mortality, the results differ slightly, largely because those presented here are based on population estimates for 1971 rather than 1981. Table 3 also emphasises that, while there will be little change in the overall size of the elderly population in the near future, it will experience substantial demographic ageing. At the turn of the century there will be fewer women aged 65–74 than at present, but many more aged 75 and over and, in particular, aged 85 and over. Other things being equal, this would increase the proportion of women aged 65 or more who are widowed from 49% in 1981 to 52% in 2001.

TABLE 3. *Elderly female population according to age in 1981 and 2001, England and Wales (thousands)*

Age	1981	Present projections	Official projections	Present/ official
65–69	1373	1148	1158	0.991
70–74	1248	1098	1114	0.986
75–79	959	993	1007	0.986
80–84	603	702	726	0.967
85–89	289	430	438	0.982
65–89	4472	4371	4443	0.983

Source: Official projections – Office of Population Censuses and Surveys, *1981–2021 Population Projections*. HMSO, London, 1984.

TABLE 4. *Percentage distribution according to marital status of the female population aged 65 and over, 1981 and 2001, England and Wales*

	1981			2001		
Age	Single	Married	Widowed/ divorced	Single	Married	Widowed/ divorced
65–69	9	57	34	5	60	35
70–74	11	43	46	6	49	46
75–79	13	29	58	6	36	58
80–84	14	17	70	7	23	70
85+*	15	7	77	(8)	(14)	(78)
65+*	12	38	51	(6)	(41)	(53)

Source: Office of Population Censuses and Surveys, *Census 1981, National Report Great Britain, Part 1*. HMSO, London, 1983.

* The projected figures do not include the population aged 90 or over; that is, about 37% of the projected population aged 85+ and 6% of the population aged 65+.

In Table 4 the forecast marital status distribution of the population in the year 2001 is compared with that for 1981. The most notable change to be expected is that the proportion of single women will more or less halve in every age group. Overall it will decline from about 12% to 6% of the total elderly female population. Projection with these transition rates suggests that the result, within each age group, will be an increase in the proportion of currently married women rather than in the proportion divorced and widowed. The impact of increased marriage and divorce on the relative size of the latter group is more or less offset by the impact of the mortality decline experienced by husbands. However, the proportion of widowed and divorced women in the total female population aged 65 and over does increase slightly as a result of demographic ageing. For the same reason, although in

TABLE 5. *Percentage distribution of women according to marital status by the period in which they reach age 60*

Age	Marital status	Period in which reach age 60				
		1971–6	1976–81	1981–6	1986–91	1991–6
60	Single	9	8	7	6	5
	Married	71	73	73	73	73
	Widowed/divorced	19	20	20	21	22
		100	100	100	100	100
75	Single	9	7	6	6	4
	Married	39	40	42	42	43
	Widowed/divorced	53	52	52	52	52
		100	100	100	100	100
85	Single	9	7	6	5	4
	Married	16	17	18	19	20
	Widowed/divorced	76	76	76	76	76
		100	100	100	100	100
Time of death*	Single	9	7	7	6	5
	Married	23	23	24	24	24
	Widowed/divorced	68	69	69	70	71
		100	100	100	100	100

* Women surviving to age 60.

most age groups married women will form about 6% more of the total population in 2001, they only increase from 38% to 41% of all elderly women.

Projected marital status distributions for the five cohorts are examined in more detail in Table 5. In each cohort the proportion of ever-married women who are widowed or divorced increases rapidly with age. The proportion of single women, however, is more or less constant. It is unaffected by first marriages in old age or differential mortality. Looking across cohorts, the decline in the proportion of single women is more or less taken up by an increase in the currently married population as suggested by the comparison of the estimates for 1981 and 2001. The exception is that the proportion of women who are widowed and divorced at age 60 does rise slightly. At this relatively young age increased probabilities of divorce are not fully offset by decreasing widowhood. The bottom panel of Table 5 examines marital status at the time of death. Assuming that widowhood rates and women's own mortality are subject to the same proportionate declines in the future, although ever-married women in later cohorts will be less likely to be widowed or divorced at any specific age, they will remain just as likely to lose their husband eventually.

TABLE 6. *Longitudinal measures of women's marital experience after reaching age 60 according to the period in which they reach age 60*

Measure	Period in which reach age 60				
	1971–6	1976–81	1981–6	1986–91	1991–6
Life expectancy (years)	21.4	21.8	22.1	22.5	22.8
Proportion of cohort life spent single	0.09	0.07	0.06	0.06	0.05
Proportion of cohort life spent married	0.44	0.45	0.46	0.46	0.46
Proportion of cohort life spent widowed/divorced	0.47	0.47	0.47	0.48	0.49
Expected duration of single life (years)	20.3	20.7	21.0	21.3	21.6
Expected duration of a marriage (years)*	12.9	13.2	13.5	13.7	14.0
Expected duration of an episode spent widowed/divorced (years)*	14.3	14.5	14.6	14.9	15.2

* Current at age 60 or entered subsequently.

An alternative way of examining the implications of demographic trends for family circumstances is in terms of longitudinal measures of cohort experience as opposed to cross-sectional distributions. A number of such measures of marital experience are presented in Table 6. Life expectancy at age 60 of successive cohorts increases slowly and steadily as mortality falls. As the proportion of the total time lived after age 60 that is experienced by single women declines, the proportions of time spent married and widowed and divorced increase more or less equally. Although the proportion of single women falls over time, from the point of view of an individual single woman aged 60 the average length of time she can expect to remain single before she dies, or in a few cases marries, increases by over a year. Similarly the expected duration of a marriage existing at age 60, or contracted subsequently, and the average time spent widowed and divorced by someone aged 60, or losing their spouse subsequently, before death or remarriage both increase by about one year across the five cohorts. Thus as life expectancy rises, elderly married women can expect to spend longer married rather than longer widowed or divorced.

Projected trends in older women's number of living children are shown in Table 7. The family size distribution of each cohort only changes moderately as it ages. In each cohort about 5% more women have no living children or only one at the time of their own death than

TABLE 7. *Percentage distribution of women according to number of living children by the period in which they reach age 60*

Age	No. of children	Period in which reach age 60				
		1971–6	1976–81	1981–6	1986–91	1991–6
60	0	24	21	19	17	15
	1	24	23	22	18	15
	2	27	28	29	30	33
	3+	25	27	29	34	37
		100	100	100	100	100
75	0	24	21	20	18	15
	1	25	25	23	19	16
	2	26	28	29	30	33
	3+	24	26	28	33	36
		100	100	100	100	100
85	0	26	22	21	18	16
	1	26	26	25	21	19
	2	26	27	28	30	32
	3+	23	24	26	30	33
		100	100	100	100	100
Time of death*	0	26	23	21	19	16
	1	26	26	25	21	19
	2	25	27	28	29	32
	3+	23	24	26	30	34
		100	100	100	100	100

* Women surviving to age 60.

at age 60. In contrast the inter-cohort trends are very striking. Together, the increasing proportion of women who marry and the shift away from childlessness mean that, while 24% of women reaching retirement age in the early 1970s had no living children, the same will be true of only 15% of those reaching the same age in the early 1990s. Moreover, the proportion of women with only one living child will also fall from 24% to 15%. It is older people with neither a spouse nor children who are most likely to suffer isolation or to lack such care as they need. The projected family size distributions at age 60 of married and of widowed and divorced women are shown in Table 8. In all five cohorts they are rather similar. They remain similar throughout old age. Thus the proportion of all elderly women who are both widowed and childless by the time of their death decreases from 13% for those reaching age 60 in the early 1970s to 9% for women who are 20 years younger.

As the distribution of women according to their number of living children is similar for the married and the divorced and widowed, and

TABLE 8. *Percentage distribution of women aged 60 according to number of living children by marital status and the period in which they reach age 60*

Marital status	No. of children	Period in which reach age 60				
		1971–6	1976–81	1981–6	1986–91	1991–6
Married	0	16	14	14	12	10
	1	27	26	24	20	16
	2	30	31	32	32	34
	3+	27	29	31	36	39
		100	100	100	100	100
Widowed and divorced	0	17	15	14	12	11
	1	26	26	24	20	16
	2	28	30	31	32	34
	3+	29	29	31	36	39
		100	100	100	100	100

as it changes little between age 60 and when the women die, estimates of family size are clearly insensitive to the assumptions incorporated in the projections. In contrast, marital status distributions vary greatly with age, and trends in the marital structure of the elderly female population may depend on what happens to nuptiality and mortality in the future. A number of variant projections are presented in Table 9 to examine the impact of changes in the assumptions on the results and therefore the robustness of the estimates to errors in those assumptions. Estimates are presented only for the youngest cohort which will be most affected by different trends in the determinants of family circumstances.

If divorce rates continued to increase indefinitely, and remarriage rates to fall, at the speed that this occurred in the late 1970s, about 2% more of this cohort would be divorced by age 60 than if rates stabilise. This difference is maintained throughout old age. On these assumptions, instead of the decreasing proportion of single women in their 70s and 80s being complemented by a rise in the proportion married, the proportions of married and widowed and divorced women would increase more or less equally. However, such assumptions represent a very large increase in the prevalence of divorce. Moreover, because divorce and remarriage rates fall rapidly with age, their impact on the estimates for cohorts whose marital status is known at age 55 is trivial and on older cohorts non-existent. Thus the measures we have presented are fairly robust errors in the assumptions about future trends in divorce and remarriage.

TABLE 9. *Percentage distribution of women reaching age 60 in 1991–1996 according to marital status on varying assumptions*

Age	Marital status	Principal projection	Declining nuptiality	Rapid mortality decline	Slow mortality decline	Rapid male mortality decline	Slow male mortality decline	No mortality differentials
60	Single	5	5	5	5	5	5	5
	Married	73	71	73	73	73	73	72
	Widowed/divorced	22	24	22	23	22	23	23
		100	100	100	100	100	100	100
75	Single	4	5	4	4	4	4	5
	Married	43	41	45	41	45	41	42
	Widowed/divorced	52	55	50	54	50	54	54
		100	100	100	100	100	100	100
85	Single	4	4	4	4	4	4	5
	Married	20	18	23	17	24	17	17
	Widowed/divorced	76	77	72	79	72	79	78
		100	100	100	100	100	100	100
Time of death*	Single	5	5	5	5	5	5	5
	Married	24	23	25	24	26	22	27
	Widowed/divorced	71	73	75	72	69	73	69
		100	100	100	100	100	100	100

* Women surviving to age 60.

Assumptions about the speed of mortality decline have little impact on the marital-status distribution of elderly women at age 60, even though the cohort examined in Table 9 reaches retirement age 10–15 years after the beginning of the projection. Moreover, if men and women benefit equally from declining mortality, estimates of women's lifetime experience of widowhood depend only slightly on the speed of that decline. However, if mortality decline is more rapid than was assumed in the principal projection, about 2% fewer women would be widowed by age 75 and 3% fewer by age 85. Slower mortality decline produces equivalent differences in the opposite direction. Thus, if mortality decline is rapid, the inter-cohort trend will be for proportions widowed at older ages to fall rather than to remain more or less constant. On the other hand, slow mortality decline implies an increase in the divorced and widowed group, with the proportion of women who are married remaining constant as the proportion who are single declines. As might be expected, if only men experience higher or lower mortality in future than is assumed in the principal projection, the impact on the probability of women remaining married at any given age is the same as if the women had benefited equally. What differential mortality decline by sex *does* affect is women's lifetime experience of widowhood. If male mortality declines half as much again as female mortality, about 2% fewer of this cohort will be widowed or divorced when they die, while if male mortality declines half as much as that of females, 2% more women outlive their husbands. Finally, the assumption that there are no differentials in mortality by marital status produces a similar increase in widowhood at each age to a slow decline in mortality. In apparent contrast, it reduces lifetime experience of widowhood because, if married women experience higher mortality, fewer of them will outlive their husbands. The cohort shown in Table 9 reaches age 75 some 25–30 years into the projection. The estimates for older women involve considerably less uncertainty. For example, rapid and slow mortality decline produce only a 1% increase and decrease in the proportion of the cohort initially aged 55–59 who are married at age 85. Thus it is possible to predict the marital status distribution of the elderly cohorts with reasonable certainty for a period of at least 15 years, even for those cohorts that will be living through their 70s and 80s and experiencing a high level of mortality.

Discussion

The preceding analysis has established three important facts about the degree of impact of women's demographic experience after age 45 on their subsequent family circumstances. The first at least is fairly obvious. In a low-mortality country, once childbearing is complete the number of living children that women will have in the future is predictable. Although a few of those who survive to advanced ages will outlive their children, any plausible assumptions about their children's mortality will yield similar estimates of the extent of this. Secondly, the rapid decline of first marriage, divorce and remarriage rates with increasing age in countries such as Britain means that, whatever trends in them occur, they will have little impact on estimates of the future marital status distribution of women who are already at least 50. Thirdly, and in contrast, the absolute and relative levels of mortality experienced by older men and women determine the probability that an elderly person will be widowed. Equally plausible but different estimates of the future course of these have an appreciable impact on the prevalence of widowhood in the elderly population. The larger the future drop in old-age mortality, the lower the proportion of older people who are widowed. Mortality declines that favour men produce relatively greater falls in female widowhood, while declines that favour women have the opposite effect. In the short term, plausible mortality trends are fairly narrowly confined and estimated widowhood is partly dependent on current widowhood. However, there is considerable scope for error in projections that extend more than 15 or at most 20 years into the future.

It is clear that, whatever future trends in first marriage rates or mortality, the proportion of single older women and the proportion of ever-married older women who are childless or have only one living child have commenced a rapid decline that will continue till at least early next century. The impact of the change in family building patterns that commenced about 1940 is being felt increasingly. For example, 48% of women reaching their 60th birthday in 1971–6 fell into this group, while only 30% of those reaching the same age in 1991–6 will do so. The proportion of men who never married has remained at a more or less constant 8–9%. However, as family size is a characteristic of couples, a rapid decline in childlessness and one child families among older women implies a similar trend for older men.

What is less certain is the future trend in the proportion of elderly ever-married women who are widowed and divorced. More divorce

and less remarriage has occurred in those cohorts now approaching old age than previously. This, considered alone, would reduce the proportion of older people who are married in future. In contrast, declining mortality tends to raise it. The net impact of these factors is likely to be small, but its direction and size will depend on future mortality trends. The estimates presented in Table 5 for the year 2001 are as far into the future as we can hope to foresee with any certainty. They suggest that, in the short term, the impact of declining mortality will predominate. Most or all of the decline in the proportion of single older women will be taken up by the married population. Within each age group there will be little change in the proportion of widowed and divorced elderly women, although demographic ageing will increase the proportion of all women aged 65 and over who are widowed or divorced.

It is often assumed that demographic ageing of the population of pensionable age over the next few decades will lead to an increase in the number of elderly people living alone.[23] To some extent this is true, but there are compensating factors at work. The main reason why the proportion of people living alone increases with age is that fewer of them are married. The results presented here suggest that, even allowing for demographic ageing, the proportion of elderly women who are married will increase till at least the turn of the century. On the basis of changes in marital status and the residential patterns documented in Table 1, one would expect the proportion of women aged 65 and over living alone to decline by 2% between 1981 and 2001. This amounts to nearly 150,000 fewer elderly women living alone. Of course other social changes will modify this trend. It appears that a large and increasing proportion of both unmarried elderly people and elderly couples prefer not to reside with other relatives or friends.[24] If this continues it may offset the decline in numbers of older people living alone. The minority who do reside with others tend to be unable to care for themselves.[25] Overwhelmingly they live with their children, in particular daughters, rather than anyone else.

At present a very substantial proportion of older people have no children or only one child, who may be unable or unwilling to take in their parent. This proportion will shrink rapidly. Yet even in 2001 about 19% of all elderly women will be childless and about 21% have only one child. Children are important social contacts and sources to help with domestic tasks and personal care. Other things being equal, if more older people have children, presumably more of them will live with a son or daughter. Thus by the end of the century, while more of the elderly population may live alone or just with their spouse by

choice, fewer will do so because they have no other option. Equally though, an appreciable minority of elderly women will still have no spouse or children. Such individuals will be likely to be living alone and will also have to live without the company and help that children typically give their elderly parents.

The very old are a group of particular interest to those involved in the provision of care. It is possible to predict their family circumstances for a considerably longer period than those of the young old without making any assumptions about the future family building of women who are still of childbearing age. Depending on the course of mortality decline, the proportion of women aged 85 and over who are married is likely to rise, and will certainly not drop, until at least 2021. Moreover, the proportion of them with no living children or only one child will fall for just as long. Despite this, growth in the size of this age group means that the absolute number of very old women who have few close relatives will increase sharply till around the turn of the century before dropping again. Perhaps even more strikingly, the number of very old couples will grow rapidly during this period. In 1981 there were about 25,000 married couples where the wife was aged 85–89. By 2001 there will probably be around 60,000 such couples and, by 2021, 75,000 of them. Typically, these women's husbands will also be very old and may require a considerable amount of care. Each partner in such a marriage is likely to provide a great deal of support for the other and both may be unable to cope on their own. Finding ways of helping such couples to continue living together in a suitable environment represents a challenge of increasing importance.

Conclusion

This paper has focused on the availability of spouses and children to elderly women. Moreover, it has concentrated on the changing frequency of such relationships rather than examining their social content. It has also ignored other purely demographic factors that are vital to understanding the family situations of elderly people. For example, migration patterns determine the residential propinquity of the old and their children and siblings appear to play a special role in the lives of the single. In addition, the children of the generations on which the paper has focused are adopting a very different pattern of family building to that of earlier cohorts. More illegitimacy, delayed childbearing and marital instability must all have implications for the content of their relationships with their parents. Nevertheless spouses

and children play a special role in the lives of older people. Future changes in the availability of such relatives can be predicted with some certainty and are going to be rather large. The implications for residential patterns, pensions, the health and social services and the overall quality of life of older people in the future are largely beneficial. However, the depressed levels of fertility and nuptiality prevailing at present suggest that the proportion of elderly people with few close relatives may begin to rise again in the second decade of the next century.

NOTES

1 Craig, J., The growth of the elderly population. *Population Trends*, **32** (1983), 28–33. Tinker, A., *The Elderly in Modern Society*, 2nd edition. Longman, London, 1984.
2 Eversley, D. E. C., 'The demography of retirement – prospects to the year 2030', in Fogarty M. (ed.), *Retirement Policy: The Next Fifty Years*. Heinemann, London, 1982. Evans, J. Grimley, 'The health of an ageing population', in Bittles, A. H. and Collins, K. J. (eds), *The Biology of Human Ageing*. Cambridge University Press, Cambridge, 1985.
3 Hunt, A., *The Elderly at Home*. HMSO, London, 1978.
4 Evans, *loc. cit.* in note 2.
5 Hajnal, J., 'European marriage patterns in perspective', in Glass, D. V. and Eversley, D. E. C. (eds), *Population in History*. Arnold, London, 1965.
6 Kiernan, K. and Eldridge, S. M., *A Demographic Analysis of First Marriage in England and Wales; 1950–1980*, CPS Research Paper 85–1. London School of Hygiene and Tropical Medicine, London, 1985.
7 *Ibid.*
8 Office of Population Censuses and Surveys, *Census 1981 National Report Great Britain, Part 1*. HMSO, London, 1983. Haskey, J., The proportion of marriages ending in divorce. *Population Trends*, **27** (1982), 4–8.
9 Office of Population Censuses and Surveys, *Marriage and Divorce Statistics 1980*. HMSO, London, 1982.
10 Coleman, D., 'The contemporary pattern of remarriage in England and Wales.' Paper presented at the IUSSP seminar on the demography of the later phases of the family life cycle, Berlin, 3–7 September 1984.
11 Office of Population Censuses and Surveys, *Fertility Report from the 1971 Census*. HMSO, London, 1983.
12 *Ibid.*
13 *Ibid.*
14 Office of Population Censuses and Surveys. *Mortality Statistics 1980*. HMSO, London, 1983.
15 Fox, A. J. and Goldblatt, P. O., *Longitudinal Study: Socio-economic Mortality Differentials*. HMSO, London, 1982.
16 OPCS *op. cit.* in note 8.
17 Office of Population Censuses and Surveys. *1981–2021 Population Projections*. HMSO, London, 1984.
18 *Op. cit.* in note 14.
19 Schoen, R. and Nelson, V. E., Marriage, divorce and mortality: a life table analysis. *Demography*, **11** (1974), 267–290. Bongaarts, J., 'Simulation of the family life cycle', in International Union for the Scientific Study of Population, *International*

Population Conference Manila 1981, vol. 3. IUSSP, Liège, 1981. Willekins, F. J., Shah, I., Shah, J. M. and Ramachardran, P., Multi-state analysis of marital status life tables: theory and applications. *Population Studies*, **36** (1982), 129–144.

20 *Op. cit.* in note 11. Murphy, M. J., Fertility, birth timing and marital breakdown, a reinterpretation of the evidence. *Journal of Biosocial Science*, **16** (1984), 487–500.

21 *Op. cit.* in note 11.

22 *Op. cit.* in note 17.

23 Hernwood, M. and Wicks, M., *The Forgotten Army: Family Care and Elderly People.* Family Policy Studies Centre, London, 1984.

24 Wall, R., Residential isolation of the elderly: a comparison over time. *Ageing and Society*, **4** (1984), 483–503.

25 Office of Population Censuses and Surveys. *General Household Survey 1980.* HMSO, London, 1982.

Acknowledgements

My thanks to Emily Grundy, Heather Joshi, Kath Kiernan, Mike Murphy and Richard Wall for their comments on earlier versions of this paper. The Centre for Population Studies is a designated research centre of the Economic and Social Research Council which provided financial support for this project.