# LIVING ARRANGEMENTS AND THE HEALTH OF OLDER PERSONS IN DEVELOPED COUNTRIES

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## INTRODUCTION

In 1950/51, only a handful of developed countries had populations in which those aged 65 comprised 10 per cent, or slightly more, of the total. By 1996, virtually all developed countries were in this position, and in most of Northern, Southern and Western Europe those over 65 accounted for 15 per cent or more of the population (Council of Europe, 1998). In much of Europe and North America recent increases in the proportion of very old people have been particularly marked (Grundy, 1996).

The same post-Second World War period has seen substantial changes in the living arrangements of older people. The proportions living alone have increased and the proportions living in complex households with kin other than members of the nuclear family have plummeted (Kobrin, 1976; Pampel, 1983; Murphy and Grundy, 1994; Elman and Uhlenberg, 1995; Weinick, 1995). These trends are illustrated for England and Wales in figures I and II.

Figures Ia and Ib show that the average size of households in which elderly people lived was considerably lower in 1991 than in 1981 or 1971. It can also be seen that the relationship between age and household size has changed. In 1971, household size initially fell in the younger elderly groups (reflecting the effects of widowhood and the departure of children from the home) but rose at later ages, suggesting movement by some into the households of relatives. By 1991, this latter rise is not apparent at all among men and is only manifest among women among the extreme aged. Indeed, by 1991, as shown in figures IIa and IIb, the proportion of adults living alone increased steadily throughout adult life, reaching very high levels among those aged 85 and over, particularly among women. The changes between 1971 and 1991 do not reflect increases in widowhood ! on the contrary, sex differentials in England and Wales and in some developed countries have recently narrowed, with a consequent increase in the proportion of elderly women still living with a spouse (Murphy and Grundy, 1994). However, while living with a spouse has in some (but not all) developed countries become slightly more prevalent at older ages, co-residence with a child in the very old age groups has become much less usual. In England and Wales, as recently as 1971, 41 per cent of women aged 85 or over lived in two- or three-generation households; by 1991, this proportion had fallen to 21 per cent (Grundy,

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effects (considered in more detail below) are an important factor in accounting for differences in the health status of marital status groups, but the literature on associations between marital status and health and on links between social ties and health also suggests a number of mechanisms whereby living with others might have beneficial effects on health. These include the provision of services such as meals, nursing care when ill and support and companionship (Verbrugge, 1979; Umberson, 1992; Hahn, 1993; Murphy, Glaser and Grundy, 1997). Marriage or co-residence with other relatives may also bring material advantages, especially for women (Hahn, 1993; Rendall and Speare, 1995). Finally, marriage (or co-residence) may bring control of unhealthy behaviours; unmarried men, for example, have higher rates of alcohol consumption than do married men (Umberson, 1992).

While living with a spouse would seem to confer various health-related benefits, it does not necessarily follow that living with someone other than a spouse (the only likely "choice" for an elderly widow) confers similar advantages over living alone. Evidence on this, reviewed below, is sparse compared with the literature on marital status and even more complicated by the problem of selection effects.

## LIVING ARRANGEMENTS AND HEALTH: PREVIOUS STUDIES

There is some rather fragmentary evidence that living alone may be associated with various health-related disadvantages. Davis and others (1990), for example, found a greater prevalence of dietary inadequacy among elderly people living alone in the United States of America. There are also some studies that have found higher rates of poor health among people living alone. Murphy (1997), for example, reported that, in the United Kingdom, rates of long-standing illness were higher among those living alone than among those in other types of household, but only in middle-aged groups. Welin and others (1985), in a large prospective study of middle-aged and elderly Norwegian men, found an inverse relationship between household size and mortality, that is, those with the most co-residents had the lowest risks of death. Mor and others (1989), using data from another longitudinal study, the United States Longitudinal Study of Aging, found that after controlling quite carefully for initial health status, elderly people living alone had a higher risk of functional decline than did others. Sarwari and others (1998), in a prospective study of elderly white women in Baltimore, Maryland, found that among women with severe impairment at the baseline, those who lived alone experienced significantly greater deterioration in functional status than did those living with others, particularly those living with non-spouse others. However, among the women without severe impairment at the baseline, the reverse was the case ! those living alone experienced the least deterioration.

A wider range of research has reported relationships between living arrangements and mental health. Harrison and others (1999), in a survey of adults aged 18 and over in the north-west of England, found that

those living alone had a 50 per cent higher risk of anxiety and depression (measured by score on the General Health Questionnaire (GHQ)) than did those living with at least one other adult, even after controlling for age and sex. (The risk for adults living only with children was even higher.) However, marital status was not controlled for. Results from the 1984 Health and Lifestyle Survey in the United Kingdom also showed poorer mental health (indicated by GHQ score) among those living alone, including elderly men. In that study, 40 per cent of men aged 65 and over who lived alone were above the threshold indicating probable psychiatric morbidity compared with 26 per cent of those living with a spouse and 29 per cent of those living with people other than a spouse. A slightly higher proportion of elderly women living alone were also above this threshold when compared with women living with persons other than a spouse, but this latter difference was not statistically significant (Grundy, 1989). (These differences, in cross-sectional studies, do not, of course, indicate a causal link; it may be that those prone to depression and anxiety have fewer chances of finding, or remaining with, co-residents.)

The studies referred to above show associations between living alone, or with fewer people, and various indicators of poor health, particularly poor psychological health, although in only a few of them is this relationship apparent in elderly age groups. More numerous are studies of elderly people that show those living alone, at least in the older old age groups, to be healthier than their counterparts living with adults other than a spouse, or in some cases, even than married adults (Fengler and others, 1983; Cafferata, 1987; Dale, Evandrou and Arber, 1987; Arber, Gilbert and Evandrou, 1988; Magaziner and others, 1988; Crimmins and Ingegneri, 1990; Soldo, Wolf and Agree, 1990; Stinner, Byun and Paita, 1990; Spitze, Logan and Robinson, 1992; Prohanska, Mermelstein and Van Nostrand, 1993; Glaser, Murphy and Grundy, 1997; Hebert, Brayne and Spiegelhalter, 1999).

living with a partner and a child have the lowest rates of illness, and lone parents and those who are not part of a family the highest. (Families are defined as co-resident couples or single persons living with never-married children.) Among women of this age, those with a spouse and children (who, within the broad age band would be younger on average) also have slightly lower rates of long-term illness than those in other groups. Among older women, lone parents appear to have the worst health. Among both men and women, rates of long-term illness among those living alone and those who, although not part of a family, lived with others (for example, ever-married children or siblings) were identical. Looking at variations by relationship to the head of household, it can be seen that rates of poor health are elevated among those who are the parent or parent-in-law of the household head. A similar picture is evident when the prevalence of long-term illness according to the number of generations in the household are examined (see figures IIIa and IIIb). Differences are slight among the younger elderly, but in older groups of women are lowest for those in one-generation households. Among men, those in three-generation households report the highest prevalence of ill health in the age groups 75-79 and 80-84, while at age 85+, living in a two-generation household appears most disadvantageous.

**(FIGURES IIIa AND IIIb HERE)**

The health survey for England (a large, nationally representative survey) includes more detailed information on health status and on health-related behaviours. These data are used below to compare elderly people living alone with those living with a spouse and those not living with a spouse but with at least one other person. Three aspects of health are examined: smoking behaviour, psychiatric morbidity as indicated by GHQ score, and self-rated health status.

Figures IVa and IVb show the prevalence of smoking among men and women, respectively, according to whether they lived alone, with a spouse (with or without others) or in some other type of private household (for example, with a child). Rates of smoking were lower among married persons (except among women aged 85 and over), although variations between those living alone and those living with others were less consistent.

**(FIGURES IVa AND IVb HERE)**

Among men, the prevalence of probable psychiatric morbidity (indicated by a score of 4 or more on the GHQ) was also lowest among the married (see figure Va), although differences between those living alone and those living with others were slight. Among women over 80, however, the lowest rates of morbidity were observed among those living alone.

aside, it is clear that a crucial factor underlying observed relationships between living arrangements and health is that of health-related selection in particular types of living arrangements.

## HEALTH SELECTION AND LIVING ARRANGEMENTS

The very extensive literature on associations between marital status and health has shown that the married have the best health, followed by the single, the widowed and then the divorced. Apart from the direct benefits of marriage considered earlier on, a major explanation for this pattern is health-related selection in and out of marriage. Ill people are less likely to marry, or remarry (Brown and Giesy, 1986). Those who are widowed, especially at relatively young ages, may also share various characteristics with their deceased spouse, including a common environment, and so may themselves be selected for poor health; additionally, the stress of bereavement or marital breakdown may itself have negative consequences for health (Bowling, 1994). Most studies have found that relationships between indicators of health and marital status are weaker in older age groups. Goldman, Korenman and Weinstein (1995) found that, at older ages, never-married women had better health outcomes than did their married counterparts. However, their analyses were based on data that excluded the population in institutions, a potential source of bias because the likelihood of entering an institution is

## NOTES

[1]As one contributory factor to declines in co-residence may be declines in the availability of kin resulting from falls in fertility (and consequent age-structure changes), these two trends are interrelated.

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TABLE 1. PREVALENCE OF LIMITING LONG-TERM ILLNESS BY FAMILY/HOUSEHOLD TYPE AND RELATIONSHIP TO HOUSEHOLD HEAD, UNITED KINGDOM, 1991

*(Percentage)*

| | *Men* | | | *Women* | | |
|---|---|---|---|---|---|---|
| *Household type* | *65-74* | *75-84* | *85+* | *65-74* | *75-84* | *85+* |
| Couple+children | 32 | 39 | 60 | 26 | 48 | - |
| Couple no children | 34 | 41 | 55 | 30 | 45 | 58 |
| Lone parent | 39 | 44 | 63 | 32 | 52 | 74 |
| Not in family, lives with others | 38 | 48 | 55 | 33 | 47 | 62 |
| Lives alone | 38 | 48 | 55 | 33 | 47 | 62 |
| Relationship to head of household | | | | | | |
| Head or partner | 34 | 43 | 55 | 31 | 46 | 62 |
| Parent or parent-in-law | 39 | 54 | 69 | 38 | 59 | 73 |
| Other | 35 | 41 | 70 | 29 | 50 | 64 |

*Source*: Analysis of samples of anonymized records.

TABLE 2. ASSOCIATIONS BETWEEN LIVING ARRANGEMENTS AND HEALTH AMONG PEOPLE AGED 65 AND OVER IN PRIVATE HOUSEHOLDS, ENGLAND, 1993-1995

| | *Psychiatric morbidity (GHQ 4+)* | | *Poor self rated health*[a] | |
|---|---|---|---|---|
| *Household type* | *Model 1*[b] *odds ratio* | *Model 2*[c] *odds ratio* | *Model 1*[b] *odds ratio* | *Model 2*[c] *odds ratio* |
| ***Men*** | | | | |
| Lives alone | 1.68[d] | 1.60[d] | 1.18[e] | 1.07 |
| Lives with spouse (ref) | 1.00 | 1.00 | 1.00 | 1.00 |
| Lives with others | 1.67[f] | 1.47[e] | 1.55[f] | 1.32 |
| Number of observations | 4 124 | 4 108 | 4 199 | 4 103 |
| ***Women*** | | | | |
| Lives alone | 1.05 | 1.01 | 0.99 | 0.89 |
| Lives with spouse (ref) | 1.00 | 1.00 | 1.00 | 1.00 |
| Lives with others | 1.37[f] | 1.28[e] | 1.19 | 1.09 |
| Number of observations | 5 744 | 5 724 | 5 728 | 5 709 |

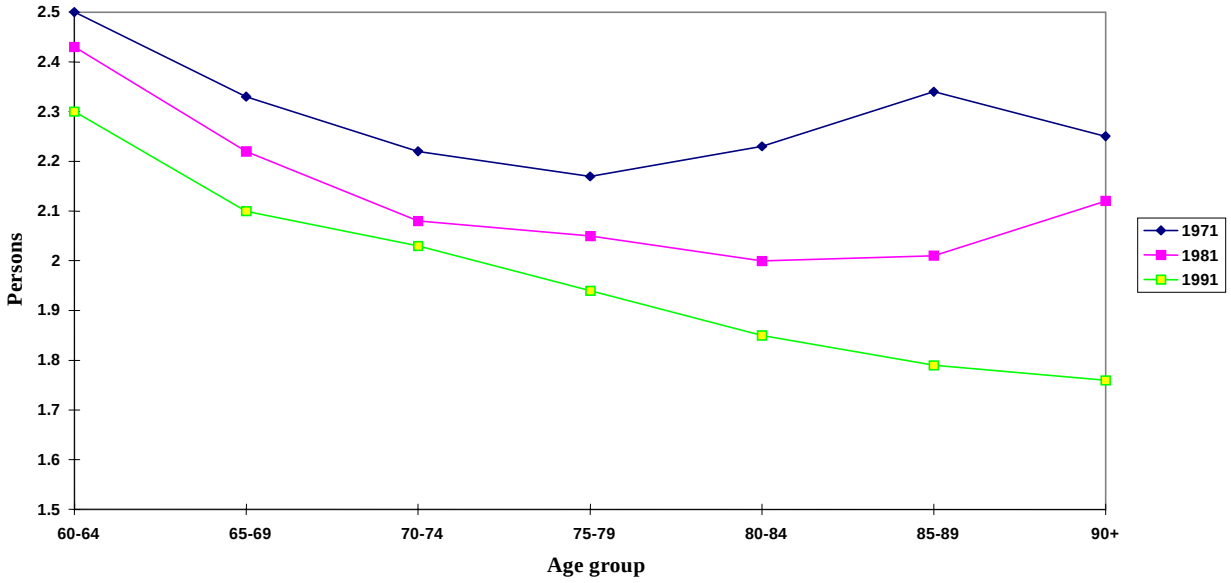
[a]

TABLE 3. POSSIBLE EFFECTS OF LIVING ALONE: INTERACTIONS WITH OTHER DOMAINS AND POPULATIONS IN WHICH THE EFFECT MAY BE OBSERVED

| *Type of effect* | *Negative* | *Positive/neutral* |
|---|---|---|
| Psychological | If living alone is seen as stigmatizing (lower educated in Japan/ S. Europe) | If independence and autonomy are valued (highly educated in N. Europe/USA) |
| Economic | Low-income elderly lose opportunities for economies of scale (E. Europe, Greece) | No effect on high-income elderly (high-income USA, N. Europe) |
| Services/care | Elderly lacking domestic skills ("traditional" men; elderly with short-interval care needs) | No effect on "competent" elderly |
| Social support | If few other social ties (childless widowers/divorced men, especially in Northern Europe/USA; recent migrants; housebound) | |

**Figure Ia. Average household size lived in, England and Wales**

**Males**




**Females**

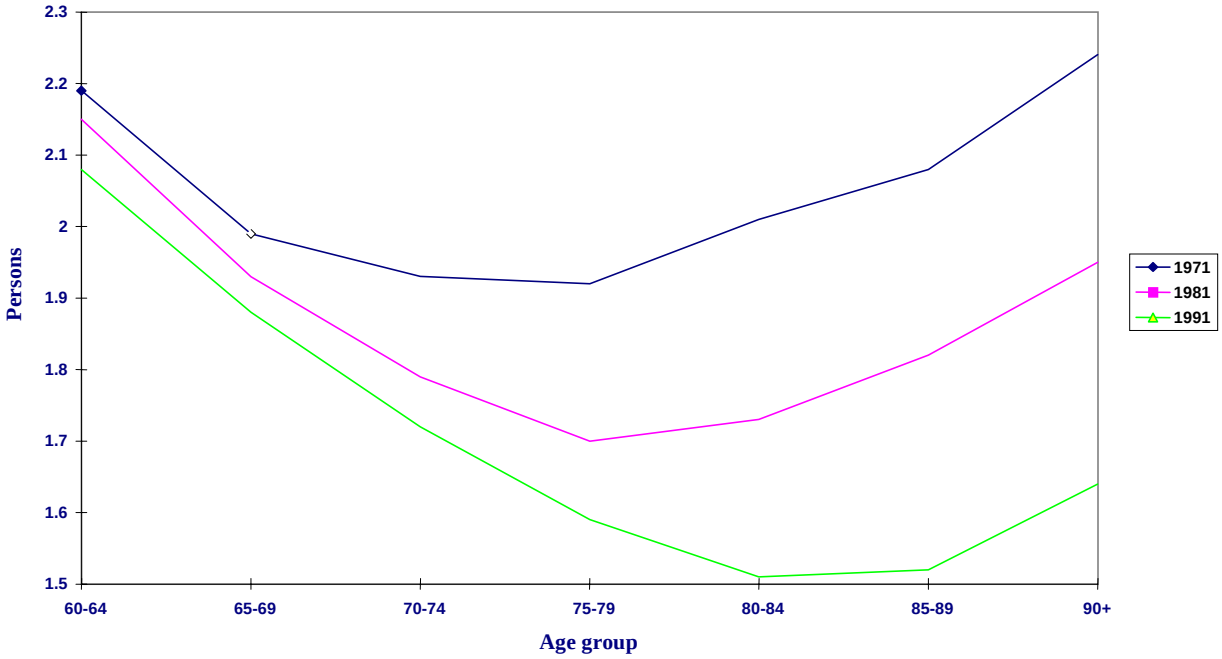


**Figure IIa. Household size distribution by age, United Kingdom, 1991**

**Males**

**Figure IIb. Household size distribution by age, United Kingdom, 1991**

**Females**

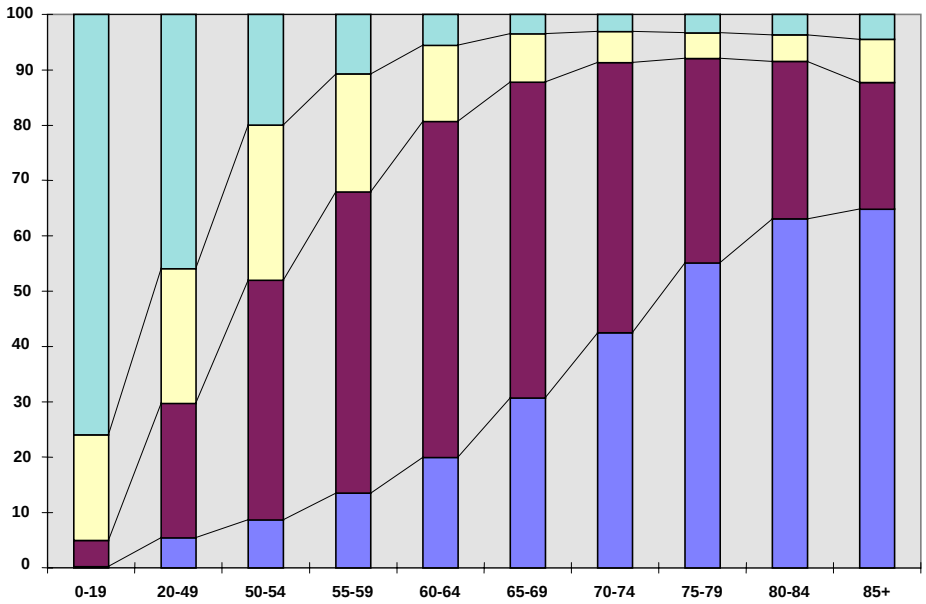
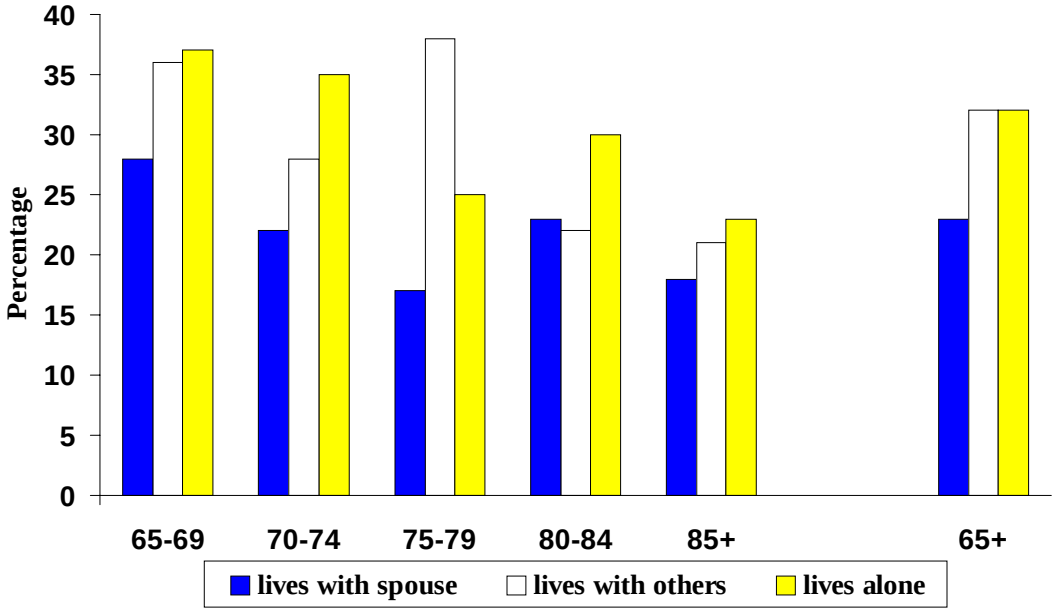


**Figure IVa. Prevalence of smoking among elderly men by whether they are living with a spouse,**



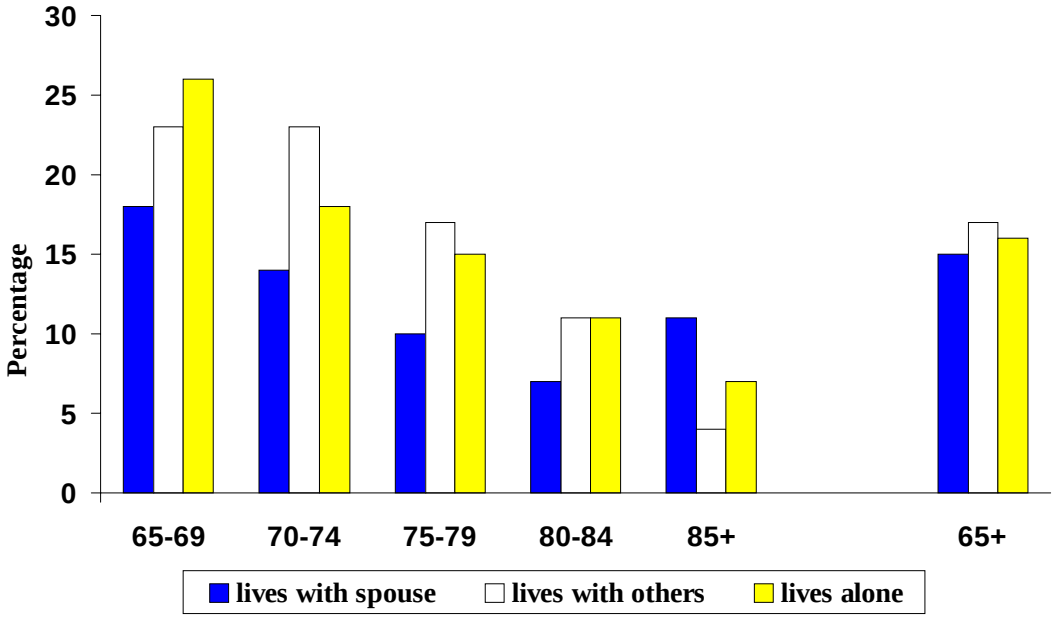



**Figure Va. Prevalence of psychiatric morbidity among elderly men by whether they are living with a spouse, living with others or living alone, England, 1993-1995**

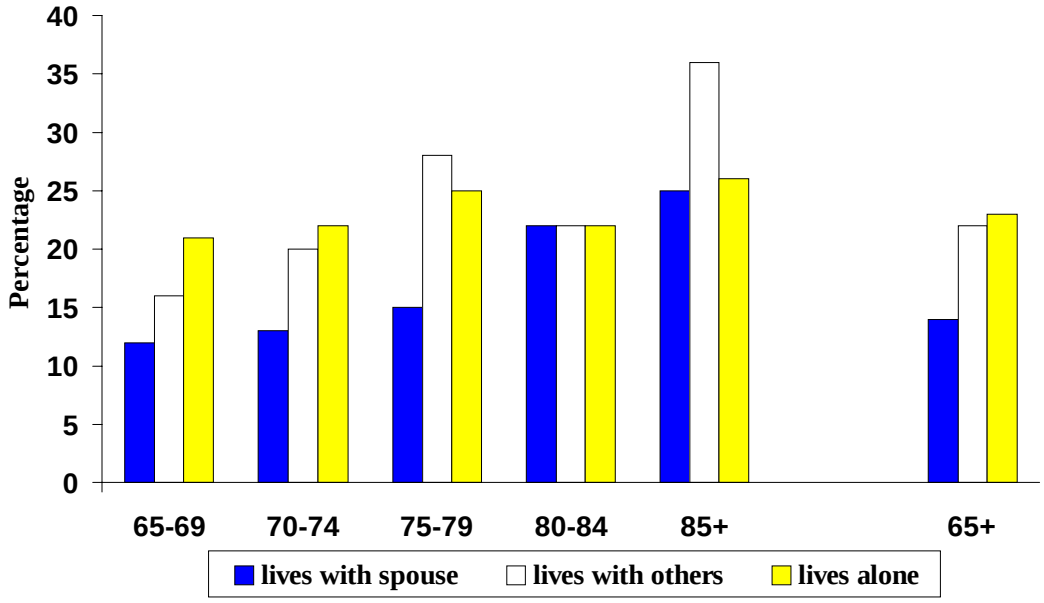



**Figure Vb. Prevalence of psychiatric morbidity among elderly women by whether they are living with a spouse, living with others or living alone, England, 1993-1995**