3.5 Mental Health
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Introduction

Major depression is forecast by 2020 to have risen from the fourth to the second most burdensome health condition world-wide, taking into account both associated disability and premature mortality (Murray and Lopez 1997). Late-life depression, when defined according to the broad criterion of clinical significance, is a common disorder affecting 10 to 15 percent of the over 65 year old population (Beekman et al. 1999). The prevalence of more severe disorder e.g. major depression is substantially lower, but this category excludes common forms of late-life depression, particularly those associated with bereavement and physical co-morbidity. Longitudinal population-based studies suggest that incidence and maintenance rates are both high, balanced by a high mortality for those affected.

One of the clearest findings in psychiatric epidemiology is the excess of depression among women. The extent of this excess varies across the life course, increasing from puberty into mid-life, and then declining into late-life (Jorm 1987). The EURODEP consortium (Prince et al. 1999b) reported a clear cut excess of depression symptoms in older women in population-based studies from 13 out of 14 European centres. This association was consistently modified by marital status, with marriage being protective for men but a risk factor among women.

The effect of age upon depression is in some respects unclear. The general impression has been that the frequency of depressive symptoms and broader depressive syndromes either increases or remains stable with increasing age (Emst and Angst 1995). However, for major depression, data from the United States suggested a lower prevalence for those over 65 years old (1.0 percent) than for those aged 45-64 (2.3 percent) and those aged 18-44 (3.4 percent) (Weissman et al. 1988). This may reflect measurement bias; older participants report as many depressive symptoms as younger participants, but are more likely to attribute them to physical causes, meaning that they are then excluded as a basis of diagnosing depression. Alternatively, it may be explained by the selective mortality of those most vulnerable to repeated severe episodes of depression (Emst and Angst 1995). Van Ojen (1995) reported, among those aged 65 and over that the prevalence of a past history of depression decreased linearly with increasing age.

There have been reports from cross-sectional community surveys from a variety of cultures of associations between late-life depression and relative disadvantage in income, housing status, and education. These are, of course, highly correlated variables, and it will always be difficult to determine the effect of one, independent of the others. While the focus of much of this research has been upon socio-economic disadvantage as a risk factor for depression, the well recognised phenomenon of social drift may play an important part; people whose adult life has been scarred by depression may experience occupational and economic disadvantage.

Many studies have commented on the strength of the cross-sectional relationship between physical health variables and depression in older age. The strongest reported associations have generally been between depression and summary measures of disability. Longitudinal studies have now shown a very strong association between disablement at baseline and the subsequent onset of depression with the strongest effect of disability in those with the least social support (Prince et al. 1998, Schoevers et al. 2000). The population attributable fraction (the proportion of new cases that might notionally be prevented
if the risk factor were removed) was 0.69. Most studies agree that it is the level of disability associated with the health condition, rather than the nature of the pathology that determines the risk for depression (Ormel et al. 1997; Prince et al. 1998).

Methods

The SHARE schedules include the EURO-D scale which has been validated in an earlier cross-European study of depression prevalence, EURODEP (Prince et al. 1999a, Prince et al. 1999b). For the purposes of this contribution we defined clinically significant depression as a EURO-D score greater than 3. This cutpoint had been validated in the EURODEP study, across the continent, against a variety of clinically relevant indicators. Those scoring above this level would be likely to be diagnosed as suffering from a depressive disorder, for which therapeutic intervention would be indicated. Respondents were also asked about their past history of depression.

We estimated the prevalence of current depression by age, gender and country. We also examined associations between current and past depression and a number of demographic, economic, health and social functioning indicators, using logistic regression. In these analyses we always control for age, gender, country and marital status. We also included in the models both current depression and past history, in order to examine the independent effect of each.

Sampling weights were not applied, but we have taken account of the clustering into households. In the graphs we present the estimates from the models and a 95% confidence interval based on sandwich standard errors.
Results
1 The prevalence of depression

A full description of the prevalence of depression by age, gender and country is contained in Table 3A.16 in the Appendix to this chapter. A graphical summary is provided in Figure 1.

In every country women have a higher prevalence of depression than men, most markedly in France, Spain and Italy (a significant gender by country interaction). The prevalence of depression rises consistently with age. There are substantial differences in the prevalence of depression between the countries. Note the high prevalence in the four countries bordering the Mediterranean. In northern European countries the prevalence in men increases from around 10-15% at age 50 to 20-25% at age 75, and in women from 20-25% at age 50 to 35-40% by age 70. In southern European countries the prevalence in men increases from 10-20% at age 50 to 30-40% by age 75, and in women from 30-40% at age 50 to 50-70% by age 75.

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**Figure 1** The prevalence of current depression by age, gender and country.
Depression, marital status and residential status

Not being married and living alone were each consistently associated with past and current depression (Figure 2). Associations with past depression were in most countries more marked than those with current depression. We did not find the expected interaction between marital status and gender, the protective effect was equally apparent for men and women.

Figure 2: The association between current and past depression and marital and residential status, by country
3 Depression, income and wealth

We modelled individual income and household wealth as log-normally distributed outcomes. Outliers have been excluded. We controlled for age, sex and marital status. Figure 3 shows the effects. The x-axis indicates the predicted income of a person with depression/ past history of depression as a proportion of that of a non-case. Neither depression, nor a past history of depression were consistently associated with income. There were only non-significant trends toward income decrements in the two Scandinavian countries, Denmark and Sweden. However, there did seem to be effects on wealth, with decrements associated with depression observed in the Northern European countries, the Netherlands, Germany, Denmark and Sweden.

Figure 3 The effect of past and current depression upon income and wealth, by country
4 Depression and support

The effects of current depression, and a past history of depression upon giving and receiving either emotional, practical or financial support were modelled using logistic regression, controlling for age, sex and marital status. Figure 4 shows that depressed people are in general less likely to give support and more likely to receive it. Both of these effects are more evident for current than for past depression. The association between depression and receiving support is stronger in southern than in northern European countries. The negative effect of depression upon giving support is only evident in northern European countries.

Figure 4 The associations between past and current depression, and giving support and receiving support, by country
5 Mental health and functioning
The effect of past and current depression upon performance of activities of daily living (ADL), performance of instrumental activities of daily living (IADL) and mobility were modelled using logistic regression, controlling for age, sex and marital status. Figure 5 shows consistent and very large effects on all of these for current depression with those with depression being two to six times more likely to report one or more ADL limitation, one or more IADL limitation and mobility limitation. The effect of past history of depression was much more modest, and indeed only generally apparent for mobility.

Figure 5 The associations between past and current depression, and indicators of functioning, by country
6 Mental health and physical health

The associations between past and current depression and self perceived health, physical symptoms and chronic illness were modelled using logistic regression, controlling for age, sex and marital status. Those with current depression had two to three times increased odds of reporting 2 or more chronic illnesses, and three to four times increased odds of reporting impaired health and 2 or more physical symptoms (Figure 6). The effects of past depression were again less marked with 1.5 to two times increased odds of reporting poor health.

Figure 6 The associations between past and current depression, and physical health indicators, by country.
Conclusion

Depression, consistent with previous observations (Prince et al. 1999b), is more prevalent among women, in older people, among those who are not married, and those who live alone. These associations are broadly consistent across the continent of Europe, with the exception that the female gender excess may be more prominent in southern European countries (this possibility was also suggested in the EURODEP consortium meta-analysis).

The negative impact of depression upon quality of life is underlined by the very strong associations between current depression, in particular, and impaired functioning and self-perceived health. Depression is a very disabling condition, equivalent in its impact to major chronic disorders such as rheumatoid arthritis. Associations between depression and impaired functioning are likely, however, to be bi-directional; previous prospective research has indicated that failing health and increasing disability are overwhelmingly important risk factors for the onset of depression. This would be consistent with our observation of stronger associations between poor health and current rather than past history of depression.

In our analysis we noted effects of current depression (more than past depression) upon wealth, rather than income. These were, moreover, only apparent in northern European countries. The association with current rather than past history of depression would suggest that the association is more likely to be in the direction of pre-existing socio-economic disadvantage influencing mental state, rather than the model previously proposed of impaired mental health across the life course leading to cumulative economic disadvantage. Were this to be the case, then the relative resilience of southern European populations to the psychological consequences of economic disadvantage are of interest and worthy of further exploration.

Some risk factors may be particularly salient for late-life depression, either because as in the case of poor health, disability or bereavement, they are a much more common exposure among the older population, or because they may impact differently upon those who are exposed depending on their age. There is already evidence to suggest that disability associated with declining health in older age may be a prime determinant of the prevalence, incidence and maintenance of late-life depression. There is a clear case for focusing in our investigations on those aspects of physical health status, cognition and social milieu which change most acutely in later life and best distinguish the life experience of older and younger adults.

- The SHARE dataset is unique in providing a comparison between countries using nationally representative samples. Previous studies used convenience samples or were of one country only.

- We have shown the relationship between various measures of social exclusion and depression. The variation between countries and in particular the North-South gradient suggests important structural mediators of this relationship.

- Although the differential effects of past and current depression provide clues about the direction of causation a fuller understanding will only come from longitudinal data.
References


