Introduction

Major depression is associated with subjective well-being, increased mortality and use of health services. We could identify no prior systematic review of treatment for depression in either primary care attenders or population samples of older people. The weighted average prevalence of major depression in older people was 1.8% in an international systematic review, although estimates as high as 35% have been reported. The prevalence of depression increases with age, and it is more common among females than males. Several factors, such as social isolation, bereavement, chronic illness, and medication side effects, may contribute to depression in older people. Additionally, depression is underdiagnosed and undertreated in older people, and treatments may need to be adapted to the specific needs of older people.

Methods

We searched electronic databases such as Medline, Embase, Cinahl, the Cochrane Library, Psyclit, BIDS—Social Science Citation Index, and BIDS—Science Citation Indices for trials of drug treatment, interpersonal psychotherapy, cognitive behavioural psychotherapy, counselling and social interventions for late life depression in English, French, or German published between 1980 and June 1999. We included studies that met specific criteria related to the population and interventions of interest. The studies were then critically appraised for their methodological quality.

Results

Of the studies identified, only two were of patients over 60 years of age and met all inclusion criteria for content and quality. Three further studies that were not restricted to but included patients over the age of 60 years also fulfilled our criteria. We found no studies of psychological therapies for depression in older people. With few exceptions, studies were limited to older people who reached a diagnostic threshold and excluded those with 'subcase level depression'.

Conclusion

There is little evidence of effectiveness for a variety of treatment approaches for depression in older people in primary care, particularly in those with less severe depression. As older people take more medication, making contra-indications to the use of antidepressant drugs more likely, there is a pressing need for studies of the efficacy of non-pharmacological interventions in primary care settings.

Keywords. Aged, depression, drug therapy, primary health care, psychotherapy.
Index, and the references of studies we identified as well as those of other reviews of antidepressant treatment. Controlled clinical trials, randomized controlled trials, ‘controlled before and after studies’ and ‘interrupted time series’ studies were included if they were published between 1980 and June 1999 and the language of publication was English, French or German. We sought trials of cognitive and/or behavioural therapy, interpersonal psychotherapy, ‘counselling’, social support and drug treatment.

In addition, subjects had to be recruited from a sample of the general population or from primary care attenders. Studies were included if all subjects were over the age of 60 years. However, studies that were not elderly specific but included some subjects over the age of 60 were sought and analysed separately. Initial selection on all the above criteria was made by one of the authors.

**Methodological quality criteria for inclusion**

All included studies had to comply with the quality criteria for intervention studies published by the Cochrane Effective Practice and Organisation of Care Group. The criteria pertinent to the retrieved studies were: relevant and interpretable data, concealed allocation of subjects, follow-up of at least 80–100% of randomized patients, a baseline measurement, a reliable primary outcome measure, protection against contamination, and blinded assessment of primary outcomes or use of an objective outcome measure. This review was, however, not carried out by members of the Cochrane Effective Practice and Organisation of Care Review Group but employed some of its methods.

Two reviewers, trained in the use of the quality criteria, read each study independently (and blind to the other’s appraisal). They summarized the presented data and categorized the compliance of studies with the quality criteria (done, not clear, not done or do not know). They then compared their findings and discussed differences. Agreement on the accuracy of the factual information, the quality and the decision to include or exclude a study were made by consensus between the two reviewers. In general, studies were excluded if one of the quality criteria was classified as ‘not done’. However, the actual method of randomization often was not stated. We therefore included studies that stated randomization without providing further detail.

**Results**

Seven studies of patients over the age of 60 years met all selection criteria. All were randomized controlled trials. Only two of them also met all methodological quality criteria and were therefore included in the review. Both investigated the effectiveness of psychiatric team care for patients with depressive symptoms or depression found among a population sample screened for depressive symptoms. Information about included and excluded studies is presented in Tables 1 and 2, respectively.

We found no studies of psychological treatment, nor did we find any high quality studies of drug treatment in the studies restricted to older people. Studies of drug treatment that we did find were short (4–8 weeks) and excluded many patients with other illnesses, thus making any assessment of how treatment would perform under health service conditions (effectiveness) rather than ideal circumstances (efficacy) virtually impossible.

Exclusions commonly used in studies of antidepressants in older people are summarized in Table 3 to show the limited generalizability of drug trial results.

Given the extent of the evidence, only limited conclusions are possible. A flexible approach to the treatment of depression in older people led by a community psychiatric team can lead to the considerable improvement of 40–50% of those treated. Routine treatment in primary care only achieved ~25–30% improvement. The difference was probably largely due to the greater number of patients on antidepressant drug treatment in the intervention groups.

A total of eight studies that were not primarily of older people, but did include patients over the age of 60 years, met all selection criteria. All were randomized controlled trials of antidepressant drugs. Three of them also met all methodological quality criteria and were therefore included in the review. None of the eight studies investigated the effectiveness of psychotherapy.

The studies are also shown not because they allow specific conclusions to be drawn for the overall effectiveness of antidepressant treatment in older people but because they provide a fuller impression of the treatments used with older people even when they were not the focus of the study. Only one excluded study analysed results for subjects over 65 years separately. A meta-analysis of results was therefore impossible.

We did not analyse effect sizes in more detail because of this lack of separate analysis and the lack of comparability of patient groups between the two trials of older people alone.

In contrast to trials of psychiatric team care, the drug trials of antidepressant drugs with less representative participants and of younger patients achieved higher rates of improvement (54–81%). The most likely explanation would be the exclusion of patients with significant co-morbidity. It is also worth noting that 47% of patients treated with placebo improved over 6 months in the study of Malt et al., probably reflecting the spontaneous improvement of some patients over the relatively long observation period as well as the placebo effect.

We cannot say on the basis of our review whether serotonin re-uptake inhibitors (SSRIs) should be used in preference to older antidepressants in the elderly. The high quality studies of community mental health team care did not provide a breakdown of specific treatments.
<table>
<thead>
<tr>
<th>First author, country, year, reference</th>
<th>Intervention, control treatment</th>
<th>Duration of intervention and of follow-up</th>
<th>Population, exclusion criteria (if different from summary in text)</th>
<th>Sample size (intervention and controls)</th>
<th>Outcome, comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterreus, UK, 1994&lt;sup&gt;20&lt;/sup&gt;</td>
<td>Nurse outreach, psychological and drug treatment as appropriate, ‘usual care’ by GP</td>
<td>12 weeks</td>
<td>Participants in a community survey (average age 76), depressed mood assessed by short care screening instrument, all were included in the trial. Only 56% of screen positives were depressed according to GMS-AGECAT structured interview. No exclusion criteria stated.</td>
<td>96</td>
<td>43% of patients in the intervention group much improved on SHORT-CARE score. 27% in the control group, twice as many patients in intervention group received antidepressants.</td>
</tr>
<tr>
<td>Banerjee, UK, 1996&lt;sup&gt;20&lt;/sup&gt;</td>
<td>Care package psychogeriatric team, usual care by GP</td>
<td>24 weeks</td>
<td>All recipients of homecare in an area (average age 80.4) who scored &gt;8 on self-care questionnaire, excluded if in psychiatric care</td>
<td>69</td>
<td>58% much improved in intervention group. 25% in control group. Antidepressant use 4 times higher by GP if in psychiatric care in intervention group.</td>
</tr>
<tr>
<td>Ekselius, Sweden, 1997&lt;sup&gt;17&lt;/sup&gt;</td>
<td>Citalopram (34 mg) sertraline (83.5 mg)</td>
<td>24 weeks</td>
<td>Primary care attenders (age range 21–70) depression diagnosed by GP, MADRS score &gt;21</td>
<td>400</td>
<td>81% much improved in intervention group. 75% in control group, the only study where intention to treat analysis and treatment success for those who completed treatment were done and reported. Clinical improvement was 10% higher for completers in both intervention and control group.</td>
</tr>
<tr>
<td>Malt, Norway, 1999&lt;sup&gt;26&lt;/sup&gt;</td>
<td>Sertraline (144.6 mg) mianserin (78 mg) placebo</td>
<td>24 weeks</td>
<td>Primary care attenders (age range 18–79) depression diagnosed by GP, MADRS score &gt;20</td>
<td>372</td>
<td>61% much improved in intervention group. 54% mianserin, 47% placebo.</td>
</tr>
<tr>
<td>Patris, France, 1996&lt;sup&gt;10&lt;/sup&gt;</td>
<td>Citalopram (20 mg) fluoxetine (20 mg)</td>
<td>8 weeks</td>
<td>Primary care attenders (age range 18–79) depression diagnosed by GP, MADRS score &gt;22 (age range 21–73) In addition to the common exclusions also excluded those whose MADRS score decreased by &gt;20% during placebo treatment prior to randomization</td>
<td>357</td>
<td>78% much improved in intervention group. 76% in control group.</td>
</tr>
</tbody>
</table>

<sup>a</sup>Proportion improved represents either those with a 50% drop in scores on a depression screening tool or a move from case to non-case.
<table>
<thead>
<tr>
<th>First author, country, year, reference</th>
<th>Intervention, control treatment</th>
<th>Duration of intervention and of follow-up</th>
<th>Population</th>
<th>Reason for exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies of patients aged 60 years and over solely</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hutchinson, UK, 1991</td>
<td>Paroxetine (20 mg) amitriptyline (100 mg)</td>
<td>6 weeks</td>
<td>Primary care attenders (average age 72), judged as depressed by GP and scoring above a specified level on HAM-D</td>
<td>&lt;80% follow-up of subjects</td>
</tr>
<tr>
<td>Schweizer, USA, 1998</td>
<td>Buspirone (36 mg) imipramine (80 mg) placebo</td>
<td>8 weeks</td>
<td>Primary care attenders and other volunteers (age range 65–89) depressed by semi-structured interview</td>
<td>&lt;80% follow-up of subjects</td>
</tr>
<tr>
<td>Valle-Jones, UK, 1983</td>
<td>Flupenthixol (0.75 mg) amitriptyline (37.5 mg)</td>
<td>4 weeks</td>
<td>Primary care attenders aged over 60 diagnosis by GP</td>
<td>Clinical information not relevant, control drug given in subtherapeutic dose</td>
</tr>
<tr>
<td>Brodie, UK, 1975</td>
<td>Fluphenazine/ nortriptyline (1.5/30 mg max. dose) promazine (150 mg max. dose)</td>
<td>4 weeks</td>
<td>Primary care attenders (average age 72) not stated how and by whom depression defined</td>
<td>Trial not designed to study efficacy, one of the intervention drugs not now recommended for depression, control drug not used for depression at all</td>
</tr>
<tr>
<td>Høstmaelingen, Norway, 1989</td>
<td>Flupenthixol (0.8 mg) amitriptyline S/R 40 mg</td>
<td>4 weeks</td>
<td>Primary care attenders (age range 65–88), not stated how and by whom depression defined</td>
<td>Trial not designed to study efficacy, relevant clinical information could not be derived from data provided</td>
</tr>
<tr>
<td>Studies which included some patients aged 60 years and over</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laakmann, Germany, 1996</td>
<td>Lorazepam (4.93 mg) alprazolam (2.08 mg) amitriptyline (102 mg) placebo</td>
<td>6 weeks (but continued longer for some)</td>
<td>Attenders of community-based general physicians, psychiatrists, neurologists, GPs (age range 19–75)</td>
<td>&lt;80% of patients in final analysis, excluded those who responded to placebo retrospectively, not clear at which point in the analysis exclusion took place, not stated who first identified patients for inclusion into trial and how</td>
</tr>
<tr>
<td>Laws, UK, 1989</td>
<td>Fluvoxamine (140 mg) lorazepam (2.96 mg)</td>
<td>6 weeks</td>
<td>Primary care attenders (age range 18–82)</td>
<td>Clinical Global Impression Scale (physician opinion) used to report patient improvement, not reported patient symptom score change—not clinically relevant</td>
</tr>
<tr>
<td>Dorn, Germany, 1980</td>
<td>Lofepramine (105 mg) amitriptyline (75 mg)</td>
<td>6 weeks</td>
<td>Primary care attenders (age range 36–89), not stated by whom and how depression defined</td>
<td>Not defined who identified patients for inclusion and how severity of depression assessed, used unrefereced outcome measure</td>
</tr>
<tr>
<td>Sussex Clinical Trials Group, UK, 1985</td>
<td>Fluphenazine/ nortriptyline (1.5/30 mg) fluphenazine (1.5 mg) nortriptyline (30 mg) placebo</td>
<td>4 weeks</td>
<td>Primary care attenders (age range 18–79), depression diagnosed by GP</td>
<td>Did not provide clinically relevant information</td>
</tr>
<tr>
<td>Moon, UK, 1990</td>
<td>Trazodone SR (150 mg) trazodone (150 mg)</td>
<td>6 weeks</td>
<td>Primary care attenders (age range 18–72), depression diagnosed by GP and HAM-D&gt;17</td>
<td>&lt;80% of patients followed-up, did not provide clinically relevant information</td>
</tr>
</tbody>
</table>
used. Of the studies including some patients over the age of 60, only that of Malt used a tetracyclic antidepressant (miacrin) with an SSRI (sertraline) and placebo. Total drop-out from active treatment was 29% for the tetracyclic, 26% for the SSRI and 5% for placebo. In contrast, Ekasius et al. compared two SSRIs in a slightly younger population with only about half the drop-out rates (10 and 15%). Subject selection rather than the nature of the drug may be the cause of the differences between studies of similar size and the same duration.

**Discussion**

The aim of this review was to evaluate critically the current evidence for treatment of depression in older people. We found a lack of good quality studies in this area as well as a concentration on treatment of severe depression with no allowance made for prior duration, previous episodes or additional morbidity.

The focus on severe depression is understandable as researchers have reliable methods to identify severe depression. However, depressive symptoms below that level are much harder to classify meaningfully. They could represent the early or late stages of severe depression, reactions to upsetting life events or the response to adverse social circumstances. They could also be the effect of physical disease such as stroke. Older primary care patients with depressive symptoms also have more physical illness than their non-depressed peers. As in major depression, the treating physician has to decide whether to consider depressive symptoms as a disorder in their own right or as the symptom of another illness.

A previous history of depression particularly before the age of 65 increases the likelihood of recurrence. Age alone after adjustment for other known risk factors does not affect the likelihood of recurrence. However, depressive symptoms and the protracted nature of late life depression, studies need to treat or at least follow-up participants for at least 6 months.

Improvements on placebo that were apparent in Malt’s generally younger study population may be less common in older patients. A systematic review found that after 1 year, only 33% of patients were well compared with 21% who had died and another 33% who were still depressed. Because of the protracted nature of late life depression, studies need to treat or at least follow-up participants for at least 6 months.

Studies to date that have compared SSRIs and older antidepressants have been efficacy studies. We still need studies showing us how newer antidepressant drugs would perform specifically for older patients with minimal exclusions. Such studies might take the same flexible approach as Waterreus’ and Banerjee’s studies but use exclusively SSRIs in one group and older antidepressants in the other group.

Counselling was included in our review because it is widely available in UK primary care. It does not describe any specific psychotherapeutic approach but individual approaches to helping clients by counsellors with different backgrounds and with or without formal qualifications. A recent review of the effectiveness of counselling for major depression in adults under the age of 65 concluded that counselling was not effective in the treatment of major depression on current evidence and did not recommend its use for that purpose. However, it is also tremendously popular with the general public in Britain, with 90% of a representative sample considering it as effective for depression and only 60% thinking the same about antidepressants.

**Table 3** Common exclusion criteria for trials of antidepressant drugs in older people (based on the reviewed trials)

<table>
<thead>
<tr>
<th>Physical illness</th>
<th>Parkinson’s disease; prostatism; recent myocardial infarct; impaired renal or liver function; cancer; epilepsy; unspecified brain disorder; glaucoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental illness</td>
<td>Depression requiring admission; depression requiring ECT; patient suicidal; manic depressive disorder; other mental illness; alcohol or drug misuse (either current or in previous year)</td>
</tr>
<tr>
<td>Drug treatment</td>
<td>Current treatment with other psycho-active drug; treatment with tranquillisers or antidepressants currently or in the recent past</td>
</tr>
</tbody>
</table>
The benefits of all forms of treatment are much less clear for patients with milder forms of depression whose weighted average prevalence in the community is ~9.8%. It is also found more commonly in primary care. Only a third of adults under 65 years treated by primary care physicians in London reached Hamilton Depression Scale scores commonly used to select depressed individuals for inclusion into drug trials. It has been suggested that by limiting research to uncomplicated major depressive disorder, tested treatments may only apply to <15% of depressed primary care patients. Consequently, it is likely that primary care physicians currently are treating many depressed patients for whom there is no evidence that antidepressants are more effective than placebo.

We do not deny the obstacles confronting researchers who wish to study treatment strategies for depression in primary care. Only 11% of older people living in the community and screened as depressed would agree to take antidepressant medication as part of a trial. GP too need to be convinced of the importance of evaluating interventions for adequate sample sizes to be achieved. In one study in the UK, only 10% of randomly selected practices were willing to take part. Losses to follow-up may be ~10% over 1 year especially if those over 80 years are included. Although the prevalence of dementia in 60- to 64-year-olds is only ~1%, in 95- to 99-year-olds ~35% suffer from the condition. Test thresholds of case finding instruments change in the presence of mild dementia, and an assessment may become very difficult when it is severe. The design of future trials needs to address these problems to ensure that health care professionals can base their treatment on better evidence of effectiveness.

The alternative, chosen by some studies, of undertaking a population survey increases the numbers of eligible individuals but goes beyond the self-referral or case finding practised in primary care. Consequently, those studies tell us more about the burden of disease than the effectiveness of interventions in a primary care setting.

The natural history of depression is very variable. The positive predictive value of a variety of screening tools in primary care attenders was ~30% in one study of emergency primary care attenders. Only three out of 10 individuals identified by those screening tools as probably depressed, were actually depressed. For those reasons, if none other, screening is unlikely to be adopted as a routine measure.

On the basis of this systematic review, we would recommend that more research needs to be undertaken into the effectiveness of all forms of treatment of depression, both major and less severe, in older people by GPs. More evidence is needed about the effectiveness of psychological treatment for depressed older patients in primary care settings.

Acknowledgements

This work was funded by research and development grant RBH 97XX3 from the Regional Office of the NHS Executive Trent.

References

20. van Ojen R, Hooijer C, Jonker C, Lindeboom J, van Tilburg W. Late-life depressive disorder in the community, early onset and the
Treatments for late life depression

327

36 British Association for Counselling. Counselling: Definition of Terms in Use with Expansion and Rationale. Information Sheet 1, 1991.

Key points

• There have been no trials of specific psychotherapies or counselling for depression of older people in primary care.
• Two studies of patients over 60 years of age studied the effectiveness of community psychiatric team care.
• Three further studies, that only included some patients over the age of 60 years, tested the effectiveness of antidepressant drugs.
• Older people are more likely to require non-pharmacological interventions. These need to be tested in primary care.
• Follow-up of patients in trials of antidepressant therapy should be of at least 6 months duration.
• Patients with depression of lesser severity need to be included in trials in primary care as they are far more common than those with severe depression.