JUNE 1997 VOLUME 3 NUMBER 3 ISSN: 0965-0288

Effective Health Care

Bulletin on the effectiveness of health service interventions for decision makers

NHS Centre for Reviews and Dissemination, University of York

Mental health promotion in high risk groups

- It is possible to identify people who are vulnerable to mental health problems due to poor social environments or severe adverse life events. Several effective interventions can help promote mental health and prevent mental health problems in those at high risk.
- High quality pre-school education and support visits for new parents can improve mental health in children and parents in disadvantaged communities.
- School-based interventions and parent training programmes for children showing behavioural problems can improve conduct and mental well being.
- Mental health problems in children of separating parents can be reduced by providing cognitive skills training and emotional support.
- Social support and problem solving or cognitive-behavioural training in the unemployed can improve mental health and employment outcomes.
- Mental health problems often experienced by long-term carers can be prevented by respite care and some forms of psycho-social support.
- Counselling, by itself, has not been shown to produce sustained benefit in a variety of groups at risk.
- The primary health care team has an important role in identifying and co-ordinating the management of people at high risk. Structured multi-sectoral co-ordination of strategies targeting those most likely to benefit are needed.

The contents of this bulletin are likely to be valid for around one year, by which time significant new research evidence may have become available.

A. Background

Mental health and well-being is a key area in the national health strategy[1] and is currently one of the medium-term priorities for the NHS. Mental health problems are one of the leading causes of morbidity and disability, bringing distress to individuals and families and constituting a substantial and costly public health burden.[2]

The causes of mental health problems are contested but are often understood as resulting from the interaction between social and biological predisposing factors with the impact of adverse events. Psychological variables, such as low self-esteem, can put individuals at risk of developing mental health problems; others, such as emotional resilience, protect them from the psychological consequences of adverse events.[3,4]

Interventions for the promotion of mental health and the primary prevention of mental health problems can be applied at three levels: a general population level (as in the case of social interventions to reduce poverty, improve education or promote exercise);[5–7] by targeting people who are at high risk of experiencing mental health problems; or by the early detection and treatment of people with existing mental health problems (e.g. Defeat Depression campaign).[8] These approaches often overlap and can be important components of co-ordinated strategies.[1] It is also important that care is provided for those obviously in need who are not getting adequate access to effective services.

Epidemiological evidence highlights the role of social environment and life experience in the development of mental health problems.[9–11] The presence of an adverse social environment (in particular poverty), lack of supportive relationships and severe life events such as the early loss of a parent have been shown to be associated with the common forms of mental ill health.[2,3,12,13] From this epidemiological research a number of the 'high-risk' groups have been identified (see Box).

This bulletin focuses on interventions aimed at people who are likely to be at higher risk of developing mental health problems, and embraces elements both of health promotion and prevention models.[14–17] It examines studies which look at interventions designed to prevent the deterioration of mental health in groups at high risk as measured by a range of outcomes such as self-esteem, anxiety and depression.

B. Evaluating effectiveness

The bulletin is based on the relevant parts of two recent systematic reviews of mental health promotion[5,18,19] updated by systematic searches for research from 1995 – April 1997 using the strategy published by the Health Education Authority.[5] It concentrates on research which has evaluated interventions using randomised controlled trials (RCTs). We have included studies of interventions aimed at the high-risk groups involving people who were neither diagnosed as mentally ill, nor in receipt of mental health services, and which reported either mental health and well-being outcomes or measures of mental health problems.

This review does not examine the treatment of mental health problems or specifically cover other vulnerable groups such as those with physical illness or disability, children living with mentally ill adults, 'looked after' children or those who have been abused or neglected. The bulletin also excludes a discussion of psychological debriefing for people who have experienced major trauma (e.g. disasters) since there is little evidence that debriefing interventions alone improve mental health outcomes.[20,21]

Some characteristics of people at high risk

Children who are:

- Living in poverty
- Exhibiting behavioural difficulties
- Experiencing parental separation and divorce
- Within families experiencing bereavement

Adults who are:

- Undergoing divorce or separation
- Unemployed
- At risk of depression in pregnancy
- Experiencing bereavement
- Long-term carers of people who are highly dependent

C. Children

C.1 Living in poverty: Socially disadvantaged children are at higher risk of mental health problems in childhood and later life.[22] A variety of social interventions aimed at improving the health and social outcomes of these children have been evaluated and well summarised.[6] A number of interventions have been shown to be effective in disadvantaged communities:

a) High quality pre-school and nursery education such as the Head Start and the High/Scope (Perry pre-school) projects have produced improvements in self-esteem, motivation, social behaviour, and other educational and social outcomes.[6,23]

b) Social support visits to provide new parents with child-rearing skills have been shown to be effective.[6] Parent training is less

likely to be adequate when parental skills deficits are accompanied by a combination of health and socio-economic problems. A trial of support by mature 'lay' mothers showed improvements in maternal mental health and child care.[24] Support during pregnancy is discussed further in section D.3.

C.2 Behavioural difficulties: Childhood behaviours such as expressed aggression and mood changes are part of ordinary day-to-day behaviour. However, when these are sufficient to cause distress to the child or others, they are sometimes considered to constitute disordered behaviour. Diagnostic labels are not particularly helpful in this context and studies measure a variety of outcomes such as aggressive behaviour, social acceptance, low self-esteem and anxiety. Since childhood mental health problems are strongly predictive of poor mental health and social outcomes later in life, prevention may bring long-term psychiatric, social and economic benefits.[10,25]

Various studies have explored the effectiveness of training parents to develop the skills necessary to deal effectively with childhood behavioural problems. (Table 1) Interventions involving parental role playing, behavioural management and play skills reduced attention deficit and hyperactivity symptoms, as rated by teachers and parents.[26] Similarly, a trial in Ireland found that parent training resulted in improved behaviour and psychological symptoms in children and increased parental self-confidence.[27]

A 2-year programme, which included family management training for parents and social skills training for their 7-year-old boys who were assessed as disruptive by teachers, was highly effective in reducing behavioural and adjustment problems, after a further 3 years of follow up.[28] Individual home-based training of parents in social learning techniques may be as effective as office-based individual and group training and also cheaper.[29] This suggests that parent training programmes such as self-administered video-tape training (which are shown to be cost-effective at improving parent-child interactions and conduct disorders in children referred for treatment)[30–32] can also be useful as preventive interventions.

Two trials examined the effect of school-based social skills training on socially rejected children.[33,34] Both showed improvements in social skills and reduced social isolation. Assertiveness training has been reported to improve behaviour in children with early behavioural problems, although this conclusion was based on non-randomised sub-group analysis and may not be reliable.[35]

Teenage pupils with low self-esteem benefited from a cognitive–behavioural intervention delivered over 2 days by an interactive personal computer programme in a school setting.[36] This has yet to be evaluated as a health intervention. Ethnic minority teenagers with severe behaviour problems in the USA showed modest improvements in self concept and short-term reductions in anxiety following an intervention based on social learning theory in which they were exposed to positive adult role models of the same ethnic group.[37]

C.3 Children and divorce or bereavement: Children who experience serious adverse life events such as parents divorcing or the loss of a close relative may develop behavioural and emotional problems. Parental separation is more common, and its adverse effect greater than that due to parental death.[13]

School-based programmes for children of divorcing parents have been shown to improve mental health. (Table 2) The Children of Divorce Intervention Programme (CODIP) used weekly school-based sessions, led by trained facilitators, to communicate feelings, provide emotional support and develop the skills needed to resolve interpersonal problems. Ten-year-olds showed significantly greater gains in terms of adjustment and lower anxiety than were evident within the control group immediately after the intervention.[38] In less rigorous evaluations, a similar programme in younger children within ethnic minorities also reported benefits,[39,40] but no longer-term follow-up has been reported. A more labour intensive intervention with 7–10-year-olds showed, after 1 year, that skill building improved children's adjustment to their circumstances, thereby reducing anxiety and improving their ability to deal with emotional conflict.[41]

Workshops exploring issues of grief, loss and family dynamics provided for children who had experienced the death of a parent, reported improved parent–child relationships and a reduction in parental reports of depression and behaviour problems in older children after 6 months.[42]

D. Adults

D.1 Undergoing divorce or separation: The University of Colorado Separation and Divorce Programme for newly separated people which used individual counselling and group study to provide general support and build specific coping skills, was evaluated in volunteers.[43] (Table 3) Reported improvements in psychological adjustment and lower levels of psychiatric symptoms were sustained over 4 years.[44–46]

D.2 Experiencing unemployment: An evaluation of a US programme (JOBS) aimed at improving job-search and problem-solving skills and helping the recently unemployed cope with setbacks demonstrated better mental health, motivation and employment outcomes which were

Table 1 Children – behavioural difficulties

Author (year), country, objective, design	Study details	Results (measures)
Bierman & Furman, 1984[34] Bierman, 1986[80] USA To examine the effects of social skills training in socially rejected children.	Participants: socially rejected 10–11-year-old children with poor conversational skills. I1: individual coaching I2: group experience I3: I1 + I2 10 half hour session using video feedback of social performance over a 6 wk period. C: no treatment. I1: *n*=14 I2: *n*=14 I3: *n*=14 C: *n*=14 Follow-up: 6 wks post-intervention.	Individual coaching produced a sustained improvement in conversational skills (p<0.001). Group experience did not. The combination produced the greatest and most wide ranging improvement. Attrition: 0% Follow-up is short and long-term benefit cannot be assumed.
Coie & Krehbiel, 1984[33] USA To examine the effects of training on behaviour in socially rejected children.	Participants: socially rejected children with academic problems (screened for by a sociometric questionnaire) I1: academic skills training, I2: social skills training, I3: academic & social skills, C: no contact. I1: *n*=10 I2: *n*=10 I3: *n*=10 C: *n*=10 Follow-up: post-intervention & 1 yr.	Academic skills (I1 & I3) increased their social status (p<0.01) (as assessed by other children in the school) (p<0.05) and decreased their disruptive behaviour (p<0.01) as assessed by classroom observers at 1-yr post-intervention Attrition: AS=30%, SS=0%, Both=10%, C=40% (at 1-yr)
Horan, 1996[36] USA To evaluate the effects of a computer-based cognitive restructuring programme in students with low self-esteem.	Participants: students aged between 16 & 19 years who had low self-esteem. I: students had to respond to13 cognitive restructuring modules focusing on irrational beliefs for 2 x 50 min periods C: training in relaxation exercises via audiotapes for 2 x 50 min periods. I: *n*=28 C: *n*=28 Follow-up: within 1 wk post intervention.	Overall benefit found on self-esteem (p=0.01), irrational beliefs (p=0.03), and inadequacy (p=0.002), but not for self-concept Attrition: I=7% C=7%. Power calculation performed. Not evaluated yet in a clinical context.
Malgady et al, 1990[37] USA To evaluate a hero modelling intervention.	Participants: volunteer Puerto Rican students in New York school with most severe behaviour problems (aged 12 to 15 years). I: intensive 19 wk school educational programme about famous Puerto Ricans with whom participants could identify ethnically. C: met in small groups to discuss current events. I: *n*=70 C: *n*=40 Follow-up: post-intervention.	Improved self concept for boys (p<0.05) and girls (p<0.02) in father absent families. Reduced trait anxiety at grade 8 (p<0.05) but not grade 9. Attrition: I=13% C=28% No long-term follow-up. Could be applied in UK with different ethnic minorities.
Mullin et al, 1994[27] UK To assess the impact of parent training on mothers' well-being.	Participants: self-refering mothers. I: 10 week course to teach parents how to deal effectively with their children and self-management skills C: waiting list. I: *n*=39 C: *n*=40 Follow-up: post-intervention & 1 yr.	Mothers' self-esteem as measured by the Rosenberg Self-esteem Inventory increased in the I group compared with C (mean =33.4 v 31.5, p=0.03) post-intervention. No results presented for I and C group comparisons at 1 yr. Attrition: I=8%
Siegert & Yates, 1980[29] To examine the effectiveness and cost-effectiveness of 3 systems using social learning techniques for child management.	Participants: parents and children aged between 5 & 15 yrs who exhibited behaviour problems. I1: individual in-home 1 hr weekly child-management training for 5 wks. I2: group 1.5 hrs weekly child management training for 5 wks I3: individual in-office 1 hr weekly child management training for 5 wks. C: delayed treatment but met weekly for 15 mins with counsellor I1: *n*=8 parents I2: *n*=7 parents I3: *n*=7 parents C: *n*=8 parents Follow-up: 4 mths.	The 3 training systems produced similar benefit: mean 86% reduction in problem behaviour compared to a 38% reduction in the C group, p<0.001. These findings remained at 4 mths follow-up Costs: opportunity costs: I2=$93.75, I=$95.00, I3=$142.71 Comprehensive costs (including client costs): I1=$139.75, I2=$189.29, I3=$191.51 Attrition: I2 = 14%, I1 =13%
Strayhorn & Weidman, 1991[26] USA To examine the effect of parent training on children identified with early behavioural disorders.	Participants: children and parents from low income families, exhibiting a behavioural/emotional problem (mean age 3yr 9mo). I: intensive package of group training, role play practice and individual sessions – aimed to promote 'prosocial' behaviour (average 12.5 hrs) C: video tape and pamphlet on parenting skills. I: *n*=50 C: *n*=48 Follow-up: post intervention and 1 yr.	Intervention produced positive effects as rated by parents. At 1 year follow-up, improvements were seen in teacher rated behaviour. Post-intervention improvement in parenting skills assessed using video recording by raters blind to treatment was correlated with teacher-rated behavioural improvements at one year (p<0.01). Attrition: I=20% C=23%.
Tremblay et al, 1991[28] Canada To assess the effects of a preventive programme for disruptive boys in primary school.	Participants:7-yr-old white francophone boys in kindergarten in poor areas of Montreal assessed as disruptive and at risk by their teachers. I: parents trained to monitor behaviour, to reinforce prosocial behaviour and punish effectively without abuse. Social skills training for the boys and fantasy play. I: *n*=46 C1: *n*=42 (control) C2: *n*=84 (placebo observation) Follow-up:3 yrs.	No short-term difference in teachers rating of child behaviour. Mothers of the I group more likely to perceive their child as disruptive (p=0.02). This faded over the 3 yrs. Self reported reduction in fighting and stealing in I group boys. After 3 yrs the % of I group held back after school or put in special classrooms and rated as highly disruptive by teachers was lower (23% vs. 43%) (p=0.02). Attrition: I=9% CI=10% C2= 5% The beneficial effects were slow to emerge.

Table 2 Children – divorce or bereavement

Author (year), country, objective,	Study details	Results (measures)
Pedro-Carroll & Cowen, 1985[38] USA To assess the efficacy of a school-based prevention programme for children of divorced parents.	Participants: 4th –6th grade children of divorced parents in 4 suburban schools. I: children of Divorce Intervention Program (CODIP): 10 weekly 1 hr sessions for groups of children: affective, cognitive skills building and anger expression and control, mainly led by mental health professional. C: delayed intervention. I: *n*=41 C: *n*=34 Follow-up: 2 wks post-intervention.	Programme children made significantly better adjustment as measured by teacher related measures of behaviour ($p<0.02$), and reduced anxiety ($p<0.02$) as reported by parents. Attrition: I=2% C=6% Short term follow up only.
Stolberg & Mahler, 1994[41] USA To compare the effects of school-based intervention for children of divorced parents.	Participants: children of separated or divorced parents from 3rd through 5th grades in 11 elementary schools. 42% with clinical diagnosis. Schools were unit of randomisation. I: 3 treatment groups with a comprehensive 14 wk combination of support on special topics; skill building and skill transfer given by a trained doctoral student and school staff. Two C groups. I1: *n*=23 (support only) I2: *n*=28 (I1 + skills) I3: *n*=29 (I2 + skills transfer) C1: *n*=23 (divorce no treatment) C2: *n*=26 (non divorced) Follow-up:1 yr.	Skill-building components yielded significant, adjustive gains beyond divorce controls. Reduced internalising and externalising behaviour ($p<0.001$) and total pathology in the home were observed. Greatest improvement was found in the I3 group at 1 yr. Outcomes were assessed by staff blinded to group allocation. Attrition: I1=9%, I2=25%, I3=17%, C1=4%, C2=19%
Sandler et al, 1992[42] USA To evaluate the Family Bereavement Program, on mental health problems in children.	Participants: families who experienced death of 1 parent, within last 2 yrs, identified from records or referral. Children between ages of 7 & 17. I: 3 Grief Workshop sessions to meet others in similar situation and improve parent–child nurturance led by trained family advisers. C: delayed entry. I: *n*=35 families C: *n*=37 families Follow-up: 6 mths.	Increased parental perceptions of warmth of relationship with their children ($p<0.05$) and reduced reports of depression and conduct disorder of their older children ($p<0.05$). No statistically significant difference in child self-report adjustment problems. Attrition: I=31% C=16% Interviewer was blind to group allocation.

Table 3 Adults – divorce

Author (year), country, objective,	Study details	Results (measures)
Bloom et al, 1982; Bloom et al, 1985; Hodges & Bloom, 1986; Bloom & Hodges, 1988.[43–46,81] USA To evaluate a preventive programme for the newly separated.	Participants: newly separated persons from an upper middle class population, recruited by advertising and direct mailing to human service agencies and practitioners. I: The Colorado separation and divorce programme of individual counselling & specialised study groups to provide social support & skills. C: interview. I: *n*=101 C: *n*=52 Follow-up: 4 yrs	Statistically significantly less psychological problems ($p<0.01$) and a decrease in anxiety and total symptom score ($p<0.001$) in the I group. Attrition: 12% The effect of the intervention on some dimensions of well being took longer to manifest than others.

sustained over a 2.5 year follow-up.[47,48,82-84] (Table 4) A subsequent large randomised field study (JOBS II) confirmed that the benefit was confined to people with depressive symptoms, financial strain, and low assertiveness, identified using a screening instrument, as being at high risk of experiencing a clinically significant deterioration in mental health.[49]

A UK trial has recently shown that group cognitive behavioural therapy training can increase general mental health, possibly by increasing re-employment in longer-term unemployed professionals.[50]

D.3 Depression in pregnancy: Postnatal depression affects 10–15% of mothers, may lead to chronic mental health problems in a significant proportion of women and can also adversely affect the child.[11] Risk factors for postnatal depression include poor relationship with partner, lack of a confidant, high anxiety and previous history of psychological problems.[51] Simple self-completion screening instruments have been developed to identify high risk mothers.[51,52] However, these may not be sufficiently accurate for routine use.

Trials of home-based social support to pregnant women at high risk (eg socially disadvantaged) provided by midwives[53] or lay mothers supported by nurse professionals[24, 54] strongly suggest that various forms of home support or home visiting during pregnancy improve mental well-being of mothers and their children[6] (see the Cochrane Library for more details).[55,56] Trials also indicate that continuous support for women during labour (from friends or volunteer labour companions) can reduce postnatal depression and raise self-esteem.[57]

Interventions specifically designed to prevent postnatal depression have, however, shown contradictory results.[58–60] (Table 5)

Table 4 Adults – unemployment

Author (year), country, objective,	Study details	Results (measures)
Price et al, 1992; Caplan, et al, 1989; Vinokur et al, 1991; Van Ryn & Vinokur, 1992[47,48,82-84] Vinokur, 1995[49] USA To assess the impact of a job search intervention on depression among the unemployed (JOBS I) at high risk of depression (JOBS II).	Participants: recently unemployed people from Michigan Employment Security Commission. I: JOBS I: 8 x 3 hour group sessions over 2-wks of job search skill training, mutual support, inoculation against set-backs given by trainers. C: self-instruction materials. I: *n*=606 C: *n*=322 Follow-up = 2.5 yrs JOBS II a replication stratified by risk of depression. I: *n*=552 (229 high risk) C: *n*=1249 (486 high risk) Follow-up: 6 mths.	Reduction in incidence of depression (p<0.001) over 2.5 yrs. Benefit confined to high risk group. By 2.5 yrs the net average gain in income for those in intervention group was $4,400. Attrition:87% in JOBS II Intention to treat analysis. Not clear if generalisable to long-term unemployed.
Proudfoot et al, 1997[50] UK To assess the effects of cognitive behavioural therapy on the long term unemployed.	Participants: volunteer professional people unemployed for >12 mths. I: cognitive behavioural therapy (CBT) - 7x3hr weekly seminars C: 7x3 hr seminars focusing on social support. I: *n*= 134 C: *n*=110 Follow-up: 3–4 mths post intervention.	Improvements in motivation (p<0.02), attributional style (p<0.001), self-efficacy (p<0.03) and mental strain (GHQ)(p=0.05) were greater in the I group, more of whom found full-time employment (p<0.001). Attrition: I=30% C=19% Power calculation performed, analysis not intention to treat.

Antenatal and postnatal parenthood groups for high risk first-time mothers were found to result in a significant reduction in postnatal depression in the first 2 months.[59] However, a more recent study found no effect, possibly due to the low (30%) uptake.[58] A small trial found that a 15-minute tape recording using relaxation and guided imagery in the first 4 weeks postpartum improved psychological outcomes.[60]

Women who experience a miscarriage, a perinatal death, or have a pregnancy terminated are also at increased risk of psychological morbidity, especially in the first few months. None of the 3 trials examining various forms of counselling or psychological debriefing showed a sustained effect.[61–63] (Table 5)

D.4 Bereavement: Several programmes aimed at reducing mental health problems in recently bereaved spouses have been evaluated in RCTs. (Table 6) The Family Bereavement Programme mentioned earlier showed positive effects resulting from grief workshops for children and their parents.[42] A self-help 'Widow to Widow' programme, in which recently widowed women received support from another widow and attended small group meetings, showed accelerated achievement of landmark stages such as starting a new relationship and new activities. However, there were several weaknesses in the methods used.[64]

In contrast, bereavement counselling showed no effect on quality of life, satisfaction or frustration levels of people close to deceased cancer patients.[65] A small trial of different models of nurse-led group psychotherapy failed to show any difference in depression among spouses of people who had committed suicide.[66]

D.5 Long-term carers of people who are highly dependent: There are several evaluations of ways of improving the psychological health of those who are caring for people who are highly dependent either because of age or physical or mental ill health. Nearly all studies of caregivers report high praise for the services received, independent of changes in levels of distress. Consequently, only studies which examined measures of caregiver distress are included.

In a meta-analysis of 15 studies–over half of which were RCTs–in which caregiver distress was measured,[67] only 2 types of intervention were shown to be effective: individual psycho-social interventions and receipt of respite care. Group psycho-social interventions showed less effect, a finding confirmed in studies directly comparing individual and group interventions.[68]

Several other experimental evaluations have been reported since this meta-analysis was published. (Table 7) Two trials show that interventions such as group sessions for carers, combined either with training in assertiveness and coping skills[69] or with counselling[70] can reduce psychological morbidity in those caring for older people with Alzheimer's disease, at least in the short term. In addition, a psycho-educational programme was found to increase the coping ability of adults caring for ageing parents.[71]

A group intervention aimed at spouses of frail elderly veterans also found short-term improvements in coping and reduced stress.[72] Intensive support with case management and respite care was shown to reduce depression and anxiety in parents of children with handicapping conditions.[73]

RCTs of counselling by itself showed no sustained effect on improving carers' mental health or reducing strain in the following

Table 5 Adults – pregnancy

Author (year), country, objective,	Study details	Results (measures)
Elliott et al, 1988[59] UK To evaluate the effect of pre-and postnatal parenthood groups on postnatal depression	Participants: 1st & 2nd -time mothers vulnerable to postnatal neurotic depression. I: 11 monthly Parenthood Groups run by a psychologist, and a health visitor beginning as early as possible in pregnancy to 6 mths postnatal. Group sessions used as a 'second screen' to identify those in greater need. C: no intervention. I: *n*=48 C: *n*=51 Follow-up:1 yr.	Fewer women diagnosed as depressed in the first 2 postnatal months in the I group (6/48, 2 cases, 4 borderline) than in the C group (17/51, 5 cases, 12 borderline) ($p<0.02$). Not statistically significant in 3rd month. Greater reduction in self-report anxiety and depression in first-time mothers in I group ($p<0.05$). Attrition: High drop-out especially in 2nd time mothers. Longer-term follow-up not reported. High attrition may have led to bias.
Rees, 1995[60] USA To examine the effect of relaxation with guided imagery on anxiety, depression and self-esteem after first birth.	Participants: women who had just given birth to their first live child I: 15 min daily tape-recorded relaxation with guided imagery (physical relaxation & mental images) for 4-wks C: tape-recorded music for 15 mins every morning for 4-wks I: *n*=30 C: *n*=30 Follow-up: measured post-intervention	Trait & state anxiety and depression were lower and self-esteem higher in the I group as measured by the Stait-Trait Anxiety Inventory ($p=0.006$), the Centre for Epidemiological Studies Depression Scale ($p=0.01$) and the Rosenberg Self-esteem Scale ($p=0.002$). Attrition: 0% A non-random sample was used, so results may not be generalisable.
Stamp et al, 1995[58] Australia To reduce depression in women identified as at risk of post-natal depression.	Participants: women at risk of postnatal depression (as detected by an antenatal screening questionnaire) I: additional special antenatal and postnatal groups giving information, preparation and support C: usual care I: *n*=73 C: *n*=71 Follow-up: 6 & 12 wks & 6 mths postpartum	No statistically significant differences in major or minor depression (as measured by the Edinburgh Postnatal Depression Scale) Attrition at 6 mths: I: *n*=18% C: *n*=14% Power calculations carried out. Analysed as intention to treat. Attendance was low: 31% overall.
Lee et al, 1996[61] UK To examine the effects of psychological follow-up on emotional adaptation in women who miscarry.	Participants: women, 6–19 wks at the time of miscarriage, with no previous miscarriage, not under psychological care and no intention to terminate pregnancy I: 1 hr session of psychological debriefing in own homes at 2-wks post-miscarriage I: *n*=21 C: *n*=18 Follow-up: 4-mths post -miscarriage	No statistically significant main or intervention effects on the Hospital Anxiety & Depression Scale, the Impact of Events Scales, and the Reaction to Miscarriage Questionnaire. Attrition: 7% overall Study was small and C group had higher levels of anxiety and depression at baseline.
Lilford et al, 1994[63] UK To assess whether routine counselling improved psychological well-being after foetal loss due to congenital abnormality.	Participants: bereaved couples (stillbirth, neonatal death or termination due to congenital abnormality). I: extra counselling sessions for as long as needed, C: no additional counselling. I: *n*=35 C: *n*=22 Follow-up: 16-20 mths after entry.	No statistically significant differences in grief, anxiety or depression as measured by the Irritability Depression and Anxiety Scale & the Texas Inventory of Grief Scale. Attrition: I=51% C=36% 7 out of 17 participants attended less than 3 sessions.
Mueller & Major, 1989[62] USA To examine the effects of brief pre-abortion interventions aimed at women undergoing termination.	Participants: women terminating unwanted pregnancy (12 wks.) I: 7 min verbal presentation pre-abortion to reduce self blame attributions. I2: 7 min verbal presentation aimed to enhance belief of ability to cope with abortion. C: standard pre-abortion 'counselling' I1: *n*=67 I2: *n*=70 C: *n*=95 Follow-up: 3 wks	No effect at 3 wks follow-up. Attrition: 73% Very brief intervention. High attrition.

areas: community-based AIDS caregivers,[74] family caregivers of patients admitted for schizophrenia,[75] or spouses and patients undergoing treatment for cancer.[76]

E. Implications

- The majority of the better evaluations examined psychological rather than social interventions. However, social and educational programmes should be considered alongside those focusing on individuals and groups.
- It is possible to identify groups of people who are at high risk of developing mental health problems. A variety of interventions have been shown to be effective at preventing these problems. This suggests an important potential for effective investment which would require more effort to be devoted to identifying people who are at risk and to providing preventive interventions across a variety of sectors. These preventive strategies should reduce future mental illness and other mental health problems but will increase further the pressures on primary health care, mental health professionals and those working in related fields.

Table 6 Adults – bereavement

Author (year), country, objective,	Study details	Results (measures)
Constantino & Bricker, 1996[66] USA To compare the effects of nursing–bereavement interventions in spouses of people who committed suicide.	Participants: spousal survivors of completed suicides. I1: 90 min, group psychotherapy to achieve realistic goals for 8 wks, led by a mental health nurse I2: 90 min, promotion of the principles of socialisation, recreation & leisure for 8 wks led by a mental health nurse. I1: *n*=16 I2: *n*=16 Follow-up: post-intervention.	Little difference in Beck Depression Inventory, Brief Symptoms, Grief Experience & the Social Adjustment Scale. Attrition: 0% Self-selected, small sample sizes.
Scruby & Sloan, 1989[65 49] Canada To evaluate a bereavement counselling intervention for carers of patients with cancer.	Participants: recently bereaved key persons of cancer patients cared for on a palliative care unit. I: 5 x weekly bereavement nurse counselling beginning 3 wks after the loss using Lindemann Model of Grief Management based in the home. C1: no intervention, measured at 6 points in time. C2: no intervention, measured twice, used to control for a potential learning effect. I: *n*=10 C1: *n*=10 C2: *n*=10 Follow-up: 18 mths	No statistically significant difference in satisfaction, frustration or learning effect as measured by the Heimler scale of social functioning. All groups showed improvement over time. Attrition: Not stated. Small study, intervention started rather late.
Vachon et al, 1980[64] Canada To evaluate a self-help, Widow-to-Widow, intervention for widows.	Participants: widows of men aged 67 & younger who died in one of 7 Toronto hospitals. I: letter from a 'widow contact' (trained volunteer women who had resolved their own bereavement reactions) who provided emotional support & practical assistance individually & in small groups. Only data-gathering interviews. I: *n*=68 C: *n*=94 Follow-up: 2 yrs	Intervention achieved 'landmark stages' faster. Those at higher levels of initial distress were more likely to have shifted to the low distress group after 2 yrs than the controls (statistics not reported). Attrition: I=65% C=60%. Differential drop out of those with more problems and less support, may cause bias.

- Children exhibiting behavioural problems in school or at home may benefit from a range of interventions including school-based social skill training, and programmes for their parents in parenting skills.
- A variety of cognitive-behavioural and socially based interventions can be used effectively with children who suffer adverse life events such as parental separation, divorce and bereavement.
- Specific interventions can help adults adjust to adverse life events such as job loss, bereavement and divorce. For example, high quality interventions aimed at the unemployed can reduce the psychological impact of job loss, and promote re-employment particularly in those at risk of mental ill health. Cross sector co-ordination will be required to identify and target the recently unemployed and those due to be made redundant. To deliver such programmes, agencies need to be pro-active. Large scale redundancies should, for example, trigger action by local health authorities and social agencies.
- Respite care and some psycho-social interventions aimed at promoting support and coping skills can help reduce the high levels of (often unrecognised) strain in carers of people who are highly dependent. To be successful, interventions should match carer needs[77] and advocacy schemes may improve access to these services.
- There has been a rapid growth in the employment of counsellors, especially within primary care. However, there is little evidence that generic counselling, provided by itself, is particularly effective. More attention needs to be given to the content and effectiveness of specific forms of counselling and the skills of counsellors before this approach is extended too widely.
- There is merit in increasing access to specialist services which provide cognitive-behavioural therapy for the purposes of prevention.
- Primary health care professionals can have significant impact. Practice nurses and school nurses are well placed to identify people at elevated risk of developing mental health problems, such as carers of the elderly and sick, or children with behaviour problems.

  Primary care teams should also be aware of local services and facilities in order to be able to 'signpost' people to other sources of intervention and information, including self-help and user groups and the voluntary sector.

  Health visitors, for example, could identify pregnant women who are at risk of mental health problems and co-ordinate effective intervention, such as home visiting, although more reliable assessment tools are

Table 7 Adults – carers

Author (year), country, objective, design	Study details	Results (measures)
Brodaty & Gresham, 1989[69] Australia To evaluate a training programme to reduce stress in carers of patients with dementia.	Participants: carers of people with dementia in Sydney. I1: carers receive group sessions & training in assertiveness, problem managing, education & family therapy given by psychiatric unit staff. Patients receive memory re-training. I2: 10 days respite for carer & memory retraining for patient C: 6 mth delay for the carers programme. I1: *n*=36 pairs I2: *n*=32 pairs C: *n*=32 pairs Follow-up:12 mths (wait list 18 mths)	Psychological morbidity (GHQ) was reduced in carers receiving I1 ($p<0.05$) and a lower rate of patient institutionalisation. Attrition: I1=8% I2=3% Limited programme detail.
Mittleman et al, 1995[70] USA To examine the effects of a comprehensive support programme on depression in spouse care-givers.	Participants: primary spouse caregiver living with a patient with Alzheimer's disease. I: 6 sessions of counselling & enrolment in a carer support group C: standard assistance provided to all caregivers. I: *n*= 103 C: *n*=103 Follow-up: 4, 8 & 12-mths.	I group caregivers were less depressed (measured by the Geriatric Depression Scale (GDS)) than the C group at 8 mths ($p<0.05$) & at 12 mths follow up ($p<0.001$). Attrition: 16% at 12 mth follow-up. No statistically significant differences in baseline depression scores of those not followed up.
Schwiebert & Myers, 1994[71] USA To evaluate a psycho-educational intervention for adult children caring for ageing parents.	Participants: mid-life adult children with parent-care responsibilities. I: 4 two-hour, weekly psycho-educational counselling sessions I1 + I2: received the I in weeks 1 to 4 C1-C3: received delayed treatment during weeks 4 through 7. I: *n*=29 C: *n*=22 Follow-up: post-intervention and/or 3 wks post-intervention.	Improvement after intervention in overall coping effectiveness as measured by the Coping Resources Inventory for Stress (CRIS) ($p<0.01$). Attrition: post-test = 0%, 3wk follow up = 72% I1 + I2. Multiple analyses were carried out – some results may have been significant by chance.
Singer et al, 1989[73] USA To evaluate community-based support services for families of children with developmental disabilities.	Participants: parents of children with handicapping conditions. I1: Intensive Support Group with case management, access to weekly respite, assistance from community volunteers and classes on coping skills. I2: Less intensive support with case management plus respite care. I1: *n*=28 I2: *n*=21 Follow-up: post treatment & 1 year.	I1 showed lower post test for mothers on both depression ($p<0.001$) and anxiety($p<0.003$) and for fathers only on anxiety ($p=0.01$). This was maintained at 1yr follow-up for mothers. Only 1/6 and 1/9 moved into non anxious categories in the Less Intensive Group. Families in I1 Group received less hours of respite care. Attrition: At 12 mths for I1 = 18%. Not clear of effect of removal of volunteers at 6 mths.
Szmukler et al, 1996[75] Australia To assess the value of counselling sessions for relatives of patients with schizophrenia.	Participants: key caregivers nominated by patients with schizophrenia seen by a community treatment team. I: 6 weekly 1-hr counselling sessions (education & coping) with relatives in the family home. C: 1-hr session discussing caregiving and information giving. I: *n*=32 C: *n*=31 Follow-up: 3 & 6-mths post-intervention.	No statistically significant trend towards poorer outcomes for the I group in psychological morbidity or ability to cope as measured by the Positive & Negative Effects Scale & the Ways of Coping scale or the Mastery Scale even though participants rated the I highly. Attrition: I=22% C=29%
Toseland et al, 1992[72] USA An evaluation of a group programme for spouses of frail elderly veterans.	Participants: Spouses of frail elderly veterans. I: 8 weekly support group meetings of 2 hrs duration led by a social worker, giving support, education, discussion, problem solving, stress reduction. C: no routine support. I: *n*=42 C: *n*=47 Follow-up: within 2 weeks post-intervention.	More use of active behavioural coping in I group ($p=0.01$), & less stress & greater improvement in pressing problems ($P=0.002$). No changes in anxiety, use of community resources and social support networks. Longer follow-up needed. Attrition: I=7% C=2%
Toseland et al, 1995[76] USA To assess the effects of psychosocial support on cancer patients and their spouse caregivers.	Participants: spouses and patients undergoing treatment >3 months following diagnosis and with a moderate level of impairment in daily functioning (terminal phase excluded). I: 6 x 1 hr counselling sessions for spouses and patients focusing upon support, problem solving and coping skills. C: usual psychological support I: *n*=44 C: *n*=42 Follow-up: 2 mths	Wide range of marital strain, depression, anxiety in carers and patients, not differentially affected by group. Attrition: 9% ? Low power
Viney et al, 1995[74] Australia To evaluate the effect of personal construct modelling to support carers of people with AIDS.	Participants: mainly male voluntary AIDS caregivers with high level of tertiary education. I: counselling by 3 homosexual experienced counsellors. No standard number of sessions or length. C: no counselling. I: *n*=33 C: *n*=38 Follow-up:3 mths	I group had immediately lower levels of anxiety than C ($p<0.05$). This difference wore off by 3 mths as the anxiety levels in the C group dropped ($p>0.1$). Attrition: I=39% C=42% High rate of attrition.

needed.[78] Professionally supervised lay volunteers can also have an important role in providing effective interventions.

- Health authorities should consider using the results of this bulletin to shape the sorts of services which they commission. To be effective and efficient, many of these will require active co-ordination between different disciplines (e.g. midwives and health visitors), agencies and sectors under clear and identified leadership. A formal mechanism for establishing and monitoring cross-sectoral co-operation is needed to ensure joint working between health, social and community services, education departments and the employment service. In the case of children, for example, the Children's Service Plan which is required of local authorities, may provide a useful planning focus. The Health Education Authority has published a pilot guide to help raise interest in and the quality of mental health promotion services.[79]
- There is a need for more reliable research of effectiveness and cost-effectiveness[25] possibly through a national strategy for mental health promotion research which prioritises the most promising areas.

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The Research Team:

This bulletin is based on a review funded by the Health Education Authority and carried out by Sylvia Tilford, Faith Delaney and Michelle Vogels of Leeds Metropolitan University.

Writing of the bulletin, additional research, analysis and production was carried out by the following staff at the NHS Centre for Reviews and Dissemination, University of York:

- Sally Baker
- Simon Gilbody
- Julie Glanville
- Paula Press
- Frances Sharp
- Trevor Sheldon
- Amanda Sowden
- Mary Turner-Boutle

The *Effective Health Care* bulletins are based on a systematic review and synthesis of research on the clinical effectiveness, cost-effectiveness and acceptability of health service interventions. This is carried out by a research team using established methodological guidelines, with advice from expert consultants for each topic. Great care is taken to ensure that the work, and the conclusions reached, fairly and accurately summarise the research findings. The University of York accepts no responsibility for any consequent damage arising from the use of *Effective Health Care*.

Acknowledgements:

Effective Health Care would like to acknowledge the helpful assistance of the following, who peer reviewed the text:

- Mark Baker, North Yorkshire Health Authority
- Jenny Carpenter, NHS Executive
- Judi Clements, MIND
- Chris Crowther, Barlow Medical Centre
- Elizabeth Gale, Health Education Authority
- Carolyn Heaney, NHS Executive
- Ray Hodgson, University of Wales College of Medicine
- Martin Knapp, Director, Centre for the Economics of Mental Health
- Paul Lelliot, Royal College of Psychiatrists
- Jane Meyrick, Health Education Authority
- Liza Miller, Social Worker, York
- Matt Muijen, Sainsbury Centre for Mental Health
- Liz Newbronner, York Health Economics Consortium
- Ann Richardson, Department of Health
- Helen Roberts, Barnardos
- Jenny Secker, Centre for Mental Health Services Development
- Graham Thornicroft, Institute of Psychiatry
- Sylvia Tilford, Leeds Metropolitan University
- Hilarie Williams, Department of Health

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The NHS Centre for Reviews and Dissemination is funded by the NHS Executive and the Health Departments of Scotland, Wales and Northern Ireland; a contribution to the Centre is also made by the University of York. The views expressed in this publication are those of the authors and not necessarily those of the NHS Executive or the Health Departments of Scotland, Wales or Northern Ireland.

Printed and bound in Great Britain by Latimer Trend & Company Ltd., Plymouth. Printed on acid-free paper. ISSN: 0965-0288