TECHNICAL REPORT

Systematic rapid evidence assessment

The effectiveness of interventions for people with common mental health problems on employment outcomes

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EPPI-Centre report no. 1509T· 2007

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The results of this rapid evidence assessment are available in four formats:

SUMMARY	Explains the purpose of the review and the main messages from the research evidence
REPORT	**Describes the background and the findings of the review(s) but without full technical details of the methods used**
TECHNICAL REPORT	Includes the background, main findings, and full technical details of the review
DATABASES	Access to codings describing each research study included in the review

These can be downloaded or accessed at **http://eppi.ioe.ac.uk/reel/**

The EPPI-Centre reference number for this report is 1509T.

This report should be cited as: Underwood L, Thomas J, Williams T, Thieba A (2007) The effectiveness of interventions for people with common mental health problems on employment outcomes: a systematic rapid evidence assessment. In: Research Evidence in Education Library. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

ISBN: 978-0-9556026-4-1

CONTENTS

List of abbreviations

CBT	Cognitive Behavioural Therapy
CSR	Comprehensive Spending Review
CWT	Compensated work therapy
EPPI-Centre	Evidence for Policy and Practice Information and Co-ordinating centre
ESRC	Economic and Social Research Council
GP	General Practitioner
GSRU	Government Social Research Unit
JRRP	Job Retention and Rehabilitation Pilot
JRT	Job Retention Team
MH	Mental Health
MISS	Minimum Intervention for Stress-related mental disorders with Sick leave
LEA	Local Education Authority
NHS	National Health Service
ONS	Office of National Statistics
PCT	Primary Care Trust
QuEST	Quality Enhancement by Strategic Teaming
QI	Quality Improvement
PTSD	Post Traumatic Stress Disorder
RCT	Randomised controlled trial
SREA	Systematic rapid evidence assessment
WoE	Weight of Evidence

Preface

Scope of this report

This report describes the findings and methods of a systematic rapid evidence assessment (SREA) of research relevant to mental health and employment outcomes. It was commissioned by the CSR Policy Review Team to inform policymaking in the current Comprehensive Spending Review (2007).

The SREA examines the number, types and quality attributes of existing research studies concerned with mental health problems of all kinds and employment outcomes. It brings together the findings of a subset of these studies to assess 'what works' to enable people with common mental health problems to retain or gain paid employment. The policy and practice implications of the findings of the SREA are discussed and recommendations made.

How to read this report

Some readers will be interested in the entirety of this technical report in order to get an overall picture of not only the findings of the SREA but also of how these findings were reached. Others will want to be directed to the parts most relevant to their needs or may prefer to read the standard report which contains less detail on the methods of the SREA.

This report is divided into two sections: Part I focuses on the findings of the SREA with only very brief information given on the methods; Part II describes the SREA methods in detail, as well as describing the scope of research activity uncovered by our searches.

Where to find further information

http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=2315

Executive Summary

Who wants to know and what do they want to know?

The 2006 Budget announced a review of the policies needed to improve mental health and employment outcomes. Too many people of working age are excluded from work when, with proper help and support, it should be possible for them to find or remain in work. The Rapid Evidence Assessment reported here contributed part of the evidence base for the Policy Review Team by systematically assessing research on 'what works' in terms of interventions that address employment outcomes for people with mental health problems.

What did the researchers do?

First, the researchers looked at the following question:

What research measures the impact of interventions on employment among people with mental health problems?

They found that there is much more research (135 out of 155 studies) on interventions for people with severe mental health problems (such as psychosis and schizophrenia) than for those with common mental health problems (such as depression and anxiety), despite the greater prevalence of the latter. An in-depth review was undertaken on eight interventions which targeted common mental health problems.

What did we find?

Studies focusing on common mental health problems aimed either to improve the treatment of people's mental health problems ('mental health' interventions) or to assist directly people with mental health problems to gain or retain employment ('employment' interventions).

While the studies were variable in terms of their quality and relevance, the evidence suggests that 'mental health' interventions can improve the employment status of people with common mental health problems, especially for those already employed. The evaluations of 'employment' interventions tended to be less robust and could not provide conclusive evidence that these programmes are effective. However, there is some indication that these interventions can be implemented and are popular and acceptable among stakeholders.

What are the implications?

On the basis of existing evidence, for those currently employed with common mental health problems (but not necessarily for those currently unemployed), the following conclusions were reached:

- Improvements in mental health are associated with better employment outcomes. (It should be noted that this is an association, and not necessarily causal.)
- Receiving recommended primary care improves employment outcomes.
- Interventions to improve mental health guideline implementation and adherence can improve employment outcomes.

Implementation and process data from the studies on 'employment' interventions provide some support for these interventions and could make a useful basis for the development and evaluation of future programmes.

More research needs to be undertaken on what works to help people with common mental health problems find work, if they are unemployed, or stay in work if they are employed. More research on how to help those currently unemployed is particularly important, given the paucity of evidence addressing this issue.

PART ONE- BACKGROUND AND RESULTS OF THE SYSTEMATIC RAPID EVIDENCE ASSESSMENT

CHAPTER ONE
Background

1.1 Policy background

This systematic rapid evidence assessment (SREA) has been written to inform policymaking with respect to helping people on incapacity benefit (IB) with common mental health problems to obtain work. The motivation for undertaking this work is the current Comprehensive Spending Review (CSR) and, in particular, the issue of people currently on IB due to mental health problems who may be able to work given the appropriate support. The SREA supports the CSR by examining the research evidence available to both support unemployed people into employment and help those at risk of losing their jobs, due to mental health problems, to retain their employment.

Mental health problems can be one of the greatest causes of social exclusion and the Office for National Statistics estimates that fewer than one-quarter of adults in this category are currently in work (ONS, 2003). The number of people affected by common mental health problems is estimated to be between one in six and one in four of the general population (Seymour and Grove, 2005), whereas more severe problems, such as bipolar disorder and schizophrenia, are experienced by around one in 100 people (Mental Health Foundation, 2003).

The Government is committed to improving services for people with mental health problems in both primary and secondary settings. It also aims to reduce the number of people on Incapacity Benefit by 1 million and, given that nearly 40% of people receiving IB have mental health problems, this group has been identified as meriting particular attention (Department for Work and Pensions, 2006).

Following the Department for Work and Pensions Green Paper, A New Deal for Welfare: Empowering People to Work (January 2006), the 2006 Budget announced that policies relating to mental health and employment outcomes were to be reviewed (section 6.7). More needs to be known about effective methods to enable significant numbers of people with mental health problems to enter, or re-enter, the workplace. This will benefit them as individuals, enabling them to break the cycle of social exclusion. It will also benefit the wider economy by increasing productivity and reducing benefit costs. As well as identifying effective strategies for enabling currently unemployed people with mental health problems into work, there is an associated need to understand how to support them to remain in employment.

1.2 Research background

Existing reviews of research on mental health problems and employment outcomes have tended to focus on interventions for people with severe mental health problems such as vocational rehabilitation (Bond et al., 1997; Crowther et al., 2001) or assertive community treatment (Marshall and Lockwood, 1998). Reviews which have looked at more common mental health problems focus on particular types of intervention or setting such as antidepressants (Greener and Guest, 2005) or workplace interventions (Seymour and Grove, 2005).

The latter systematic review, carried out by the British Occupational Health Research Foundation, looks at three phases of intervention: prevention, retention (of those identified as at risk of developing mental health problems) and rehabilitation (of those who have mental health problems). Few studies measuring employment outcomes were found, but the review suggests there is evidence for the effectiveness of brief individual therapy, especially cognitive behavioural therapy for people already experiencing common mental health problems (Seymour and Grove, 2005).

In addition to this research, two systematic 'reviews of reviews' that include sections on people with mental health problems have been carried out for the Government. 'Concepts of rehabilitation for the management of common health problems' considered the relationship between biological, social and psychological factors and rehabilitation but was unable to find any evidence on employment outcomes for people with common mental health problems (Waddell and Burton, 2004). Similarly, a review which aimed to provide evidence relating to policies within the White Paper Saving Lives: Our Healthier Nation (Department of Health, 1999) was only able to find evidence on employment outcomes for unemployed people without mental health problems or people with severe mental health problems (Contributors to the Cochrane Collaboration and the Campbell Collaboration, 2000).

Evidence-based clinical guidelines for the treatment of common mental health problems (for example, McIntosh et al., 2004; NCCMH, 2004) provide recommendations on the care that people should receive from the NHS but rarely address employment outcomes or interventions which target employment. The NICE guideline for depression recommends that 'Where a patient's depression has resulted in loss of work or disengagement from other social activities over a longer term, a rehabilitation programme addressing these difficulties should be considered' (NCCMH, 2004, p 71), but this is not based on research evidence and is aimed at those with chronic or severe depression.

1.2.1 Two types of intervention

It is generally accepted that common mental health problems often result in poorer employment outcomes (McIntosh et al., 2004; NCCMH, 2004) and therefore many interventions rely on the inverse being true: that improving the mental health problem itself will naturally result in improved employment outcomes. In addition to employment-based interventions that target employment issues specifically (and may or may not have an explicit focus on mental health), there are a number of mental health-based interventions that aim primarily to improve symptoms, and any employment outcomes are secondary measures. Thus, the interventions described in this review tend to fall into these two categories in terms of focus, setting and service provision: 'mental health' interventions and 'employment' interventions.

With regard to mental health-based interventions, some claim there is evidence that a reduction in depression symptoms is associated with an improvement in employment outcomes (Greener and Guest, 2005; Simon et al., 2000; Smith et al., 2002), while others acknowledge that, in practice, there is often uncertainty about whether such a relationship between clinical and social outcomes actually exists (Schoenbaum et al., 2002). Many agree that primary care treatment for common mental health problems frequently falls below standards set by clinical guidelines and that improvement in mental health outcomes is less than optimum (Greener and Guest, 2005; NCCMH, 2004). Therefore, efforts to improve outcomes are often focused on improving the quality of care that people receive (Simon et al., 2000; Smith et al., 2002; Wells et al., 2001). However, few studies of mental health interventions measure employment outcomes (Greener and Guest, 2005; Wells et al., 2000), as is evident from the small number of studies in this SREA.

On the other hand, efforts to directly improve employment by providing support for people with disabilities or those on incapacity benefit often fail to address the specific needs of sub-groups, including those with mental health problems. Notably, those vocational interventions that are aimed at people with mental health problems tend to be provided to those with more severe or complex problems and not to the larger group of people with common mental health problems (Drebing et al., 2005).

Many feel that focusing on clinical outcomes first and only moving onto rehabilitative interventions if treatment fails (or as severity increases) is inappropriate. A recent report from the Department of Work and Pensions concluded as follows: 'Every health professional who treats patients with common health problems should be interested in and take responsibility for rehabilitation and occupational outcomes. That requires radical change in NHS and health professionals' thinking' (Waddell and Burton, 2004, p 7). The studies in this SREA show that there are increasing attempts to provide comprehensive services which integrate elements of both health and employment interventions (Purdon et al., 2006) and moves to ensure that health, social and employment services work together more effectively (McCrum et al., 1997).

1.3 Rapid evidence assessment process

1.3.1: Aims and rationale

This report describes the results of a particular type of review, a systematic rapid evidence assessment, which uses the same methods and principles as a systematic review but in a more condensed form in order to suit the timescale of the Policy Team. While having many of the same features and processes as a systematic review, the purpose of the SREA is to give a specific answer to a specific problem, and is not a broad, critical investigation of the topic area in question.

The aim of this systematic rapid evidence assessment is to provide evidence on 'what works' to assist people with common mental

health problems to obtain work if they are currently unemployed, or to stay in work if they are currently employed. The team began by constructing a descriptive map of the existing research on all mental health problems and employment outcomes before narrowing the evidence down to an in-depth assessment of those studies which look at common mental health problems. (Appendix 1.2 provides definitions of these terms and Part II of this report gives a detailed description of the methods used).

The scope of the SREA is as follows:

- The **population** of interest is both individuals and employers. Individuals are people of working age (either in or out of work) with a diagnosed mental health problem. Those employers which seek to support people with mental health problems are also included.

- **Interventions** are defined very broadly. They include medication, 'community interventions', counselling or other kinds of support; they may occur within or outside the workplace.

- The **outcomes** of interest define the scope of the SREA quite strictly. Only studies which include an outcome relating to a change in employment status are included. Employment is defined as 'a full or part time position held by the client in an ordinary work setting, for which they were receiving payment at the market rate' (Crowther et al., 2001, p 4).

1.3.2: Outline of methods used in the SREA

The focus of the SREA, the criteria used to determine which studies should be included, and the topic of the in-depth phase were decided through a series of meetings and email exchanges with the CSR Policy Review team. The methods for the SREA followed standard EPPI-Centre procedures for systematic reviews , but were somewhat condensed in order to meet the tighter timeline required by an SREA.

The SREA was conducted in two phases: a mapping phase and an in-depth phase. Through searching electronic databases, looking for citations in reference lists, searching the web and personal contact, 155 research studies were identified which evaluated interventions among people with mental health problems and included employment outcomes. After taking stock and examining the research that had been identified, the researchers met the CSR Policy Review team and agreed a tighter focus for looking at research in depth, examining common, rather than all, mental health problems.

The in-depth phase of the SREA looked in detail at the eight evaluations of interventions we had identified in the map which concerned people with common mental health problems. There were two broad categories of intervention: either those which aimed to improve the treatment of people's mental health problems ('mental health' interventions) or those which aimed directly to assist people with mental health problems to gain or retain employment ('employment' interventions). Data was extracted from each study by two researchers working independently and judgements were made regarding the reliability of their findings. Results from this process were compared and agreed before the findings of the studies were brought together in a narrative synthesis.

A detailed account of the methods used is given in Part II of this report.

CHAPTER TWO

The evidence map

2.1 Results: descriptive map of research activity (mapping phase)

In the first phase of this SREA, the range of research activity (including systematic reviews) in the area of all mental health problems and employment outcomes (detailed methods are described in Part II) were examined.

A total of 580 studies were identified in the mapping phase and abstracts of all these studies were screened for relevance according to our agreed criteria (see Part II of this report). A systematic map based on the titles and abstracts of the 155 included studies was produced. Despite common mental health problems, such as depression, being far more widespread than severe mental health problems, such as schizophrenia, the number of studies concerning people with severe mental health problems outnumbers those examining people with common mental health problems by more than ten to one.

2.1.1 Main findings of the map

- A wide variety of interventions have been researched; the single most studied intervention is supported employment (including seven systematic reviews).
- Almost all the primary research studies found concern people with severe mental health problems. This group has also been well covered by several systematic reviews.
- The effectiveness of interventions to support people with common mental health problems is less well covered in research: there are far fewer primary studies dealing with this issue and a similar lack of systematic reviews on the subject.
- There are, however, some studies which may contain useful information regarding the potential for certain interventions to help people with common mental health problems back into work.

Having identified a significant difference in the distribution of research activity between common and severe mental health problems, the team moved on to examine the eight studies which measured employment outcomes for people with common mental health problems.

2.1.2 Conclusions and implications of the map

The finding that significantly more research on mental health problems and employment outcomes is carried out on people with severe mental health problems than on people with common mental health problems probably reflects the pattern of services received by these groups of people. The majority of people with common mental health problems are treated in primary care (Healthcare Commission, 2004; NCCMH, 2004) and it is usually only patients with more severe problems that are referred on to the more specialist services where vocational rehabilitation is offered (Aylward et al., 1998). Even when a person's mental health problem leads to loss of work and receipt of incapacity benefit (IB), there may be little overlap between the health and employment services they receive.

It is possible that there are few studies concerning people with common mental health problems because there are few interventions; people with common mental health problems may simply be given medication and not offered any further support.

Most evidence on 'what works' concerns people with severe mental health problems. However, since there are far more people with common mental health problems, any significant reduction in the number of people on IB will need to include this group of people. Moreover, as interventions targeted at people with severe mental health problems are specific to that group, they may not be

appropriate for people with common mental health problems.

Since some studies were found concerning people with common mental health problems, there would appear to be an urgent need for a systematic review which looks comprehensively at all the available evidence on the effectiveness of interventions to support this group of people back into work. This rapid evidence assessment has gone some way to meeting this need. While it is difficult to estimate whether a full systematic review would have found more studies, a larger piece of work would have been able to examine a greater range of outcomes and consider other issues, such as the appropriateness and acceptability of the interventions it included.

2.1.3 Development of the in-depth assessment

Of the 155 studies included in the map, 20 were not on people with severe mental health problems. Four additional studies were identified in the in-depth phase and added to the sample; therefore 24 studies entered the in-depth phase of the SREA. Sixteen studies were not coded; for nine of these, this was there was insufficient information on their eligibility; four are ongoing and three are systematic reviews. Eight primary studies were coded for the in-depth phase.

To enable consistent coding of studies and to ensure compatibility with the aims and objectives, systematic reviews which appeared relevant went into the in-depth phase but were not coded. Instead, the full text of the primary studies they included was obtained and screened against the inclusion criteria. Statements made by the reviews and the studies they were based on were also investigated to see whether they were relevant to the in-depth phase and could be analysed in the discussion.

CHAPTER THREE

In-depth assessment of interventions for people with common mental health problems

3.1 Description of the interventions

Following the division in the theoretical basis for interventions described in the research background, the descriptions of the studies included in the in-depth assessment are divided into 'employment' interventions and 'mental health' interventions. While some of the 'employment' interventions contain treatment components, the distinction is made between interventions whose primary aim is to improve people's employment prospects and those which aim primarily to treat people's mental health problems. All studies evaluated the impact of their intervention on employment, since this was a necessary criterion for inclusion in this review.

3.1.1 'Employment' interventions

Interventions which have a primary purpose of improving the employment prospects of people with common mental health problems have been evaluated by five studies: Drebing et al. (2005), Grove and Seebohm (2005), McCrum et al. (1997), Purdon et al. (2006), and Thomas et al. (2003). These interventions often use trained 'case managers' to evaluate the particular circumstances of clients and direct or supply the most appropriate type of support or guidance. This can take the form of counselling and specific therapies, such as CBT; support at the workplace and employer-employee facilitation/mediation; and assisting with finding future employment. The employment interventions fall into two main camps: those aiming to assist people who are unemployed to find employment, and those aiming to prevent the loss of employment by providing support to people most at risk of losing their jobs due to mental health difficulties. One of the interventions (McCrum et al., 1977) we found falls into the former category, while three are concerned with supporting people currently in work.

The largest evaluation of an intervention supporting those in work was the *Job retention and rehabilitation pilot*, funded by the Department for Work and Pensions (Purdon et al., 2006). This was a two-year evaluation commencing in 2003 in the UK with 2,845 participants who were currently employed but had been off work due to sickness for between six and 26 weeks. Approximately 30% had mental and behavioural disorders, although the precise breakdown for type of problem is not clear from the detail given in published sources. The aim of this intervention was to 'decrease length of sickness absence and increase job retention for people with a health condition or impairment' (p 9). The means by which this was to be achieved varied from case to case, with intervention being tailored to individuals' needs. The most common intervention given to those with mental and behavioural disorders was counselling and cognitive behavioural therapy (CBT), although some also received additional health interventions, such as physiotherapy and complementary therapy, and workplace intervention, such as ergonomic assessment and employer liaison / mediation.

Comparable interventions were also evaluated by Thomas et al. (2003) and Grove et al. (2005). Thomas et al. (2003) conducted a year-long job retention evaluation based at the Avon and Wiltshire Mental Health Partnership Trust in the UK in 2002. Since the evaluation was taking place towards the beginning of the intervention and numbers of participants were likely to be small, the study is more exploratory and qualitative rather than an attempt to evaluate the effectiveness of the intervention. The intervention took the form of a 'job retention team' which received clients who had mostly been referred by local GPs. Of the 13 clients who participated in the evaluation, nine (69%) had mild to moderate mental health problems and four had severe and enduring problems; all received 'supportive counselling'; and most received intervention to improve their self-esteem and confidence (12 participants), as well as a range of other mental health interventions, such as coping skills (10), CBT (9), anxiety management (9), and assertiveness training (7). Other issues tackled for

smaller numbers of participants included anger management (2), social skills training (2), eating management (1), drug and alcohol management (1) and work-life balance (1). Intervention also took place at the workplace, with awareness and greater knowledge of mental health issues being increased in 11 cases and negotiations being facilitated in relation to 'reasonable adjustments' (8), job retention (5), and return to work (5).

A similar intervention to the above was evaluated in 2004 in Walsall, UK, by Grove and Seebohm (2005). *The Employment retention project* provided a service for people who were employed but absent, or were at risk of becoming absent, from work due to illness. It consisted of advisors operating within the Walsall Primary Care Trust boundary who provided tailored support to individuals who had self-referred or been referred by GPs or other health professionals. In addition to treatment interventions for mental health problems, the programme offered employer-employee liaison services and limited assistance in obtaining new employment where needed. Like the *Job retention and rehabilitation* programme described above (Purdon et al., 2006), this intervention was not only focused on those with mental health problems; of 229 clients with common mental health problems, 23 were referred to the 'GP strand' (GPs both referred participants and delivered part of the intervention); 47 of the 229 clients were referred to the 'mental health strand' of the intervention; and 134 to the 'depression and anxiety management service'. The 'mental health strand' of the intervention was based within a psychiatric unit and concerned with people with severe mental health problems. The 'depression and anxiety management service', however, was open to all referrals and aimed to 'enable the client to learn coping strategies and meet other people who are experiencing the same kind of problems. This intervention was of fairly short duration (about 3 weeks), using a Cognitive Behavioural Therapy (CBT) model incorporating lifestyle changes' (p 50).

Another type of 'employment' intervention was evaluated by McCrum et al. (1997). Unlike the other interventions, this one was concerned with people who were unemployed rather than those who were in work and at risk of unemployment, and took place in 1992-93, a decade before the other interventions in this section. It was located in Antrim, Northern Ireland and consisted of a *job clinic* established by the Department of Economic Development, the Industrial Therapy Organisation (a voluntary sector group) and the Department of Health and Social Services (NI). The clinic was staffed by a disablement employment adviser, a placement officer with the Industrial Therapy Organisation and a 'community occupational therapist attached to the local Community Mental Health Team' (p 507). The team worked with clients to help them to choose their career; to 'discover their job aptitudes'; to 'develop and achieve vocational goals'; to 'gain work skills and positive vocational experiences'; to 'identify training/vocational opportunities in the local area'; and to 'improve communication and liaison between all the statutory, voluntary and private sector groups involved in the provision of vocational opportunities for people with mental health problems' (p 507).

The final 'employment' intervention in this SREA was evaluated by Drebing and colleagues (2005). This study is something of an exception in the sample with regard to its population: dually diagnosed veterans (most with depression or anxiety, and all with alcohol or substance abuse problems) and intervention – compensated work therapy (CWT) with enhanced incentives. All participants were enrolled in 'a multi-component work-for-pay vocational rehabilitation program' (p 362), which included supported employment. The intervention being evaluated was the addition of cash awards (relating to job acquisition and abstinence from substance abuse) to the CWT programme. While this study met the inclusion criteria for the review, and therefore must be included, its contribution to the findings of this review is limited.

3.1.2 'Mental health' interventions

The 'mental health' interventions tended to be less complex than the above interventions and were either concerned with the correct implementation of guidelines or the relative efficacy of drug treatments.

Both Smith et al. (2002) and Wells et al. (2000) evaluated interventions which aimed to improve the implementation of guidelines to treat depression. Smith and colleagues evaluated the quality enhancement by strategic teaming (QuEST) intervention in the USA in 1996-97 among 262 people with depression. The intervention consisted of training all enhanced care physicians and nurse care managers in the use and application of the 'Agency for Healthcare Research and Quality guidelines' (Depression Guideline Panel, 1993) through four telephone conference calls. In addition, 'Nurse care managers received an additional day of training on educating depressed patients about treatment options, encouraging adherence to treatment, and monitoring treatment response' (p 44). The intervention aimed to improve the quality of treatment, and did not actually assign patients to particular treatments.

Wells et al. compared two quality improvement programmes in the USA in 1996-1997 among 1356 people with 'depressive disorders' in primary care settings. The quality improvement intervention had four components: an 'institutional component' which was concerned with resource allocation; the training of 'local leaders' in implementing the interventions; the training of local staff in clinical assessments, patient education, 'and activation based on a written manual and videotape' (p 215); and patient identification. Two slightly different interventions were compared with usual care: the first consisted of follow-up assessments and

support services to enhance resources for supporting medication management, while the second aimed to enhance resources for providing psychotherapy for depression and included individual and group CBT for 12 to 16 sessions.

The final interventions to report in this section were evaluated by Simon et al. among 290 people the USA. This evaluation compared three different anti-depressant drug treatments: fluoxetine, desipramine and imipramine. The setting for the twelve-month study was seven primary care clinics among participants with major depression. After the trial, patients were classified as remitted, improved, or persistently depressed. Unusually for this type of evaluation, employment outcomes were assessed and, for this reason, it is included in the synthesis.

3.2 Examination of study type, quality and relevance

Since the reliability of a study's findings depends on the selection of appropriate methods and their correct implementation, the types and quality of the evaluations of the above interventions are now considered. (The Appendices provide tables which summarise details of the studies and Part II of this report gives more information about the methods and tools.)

Purdon et al. (2006) describe the results of a large randomised controlled trial with an abundance of accompanying process information. This is, however, the only robust evaluation of effectiveness among these studies. While providing rich contextual and process information, McCrum et al. (1997), Thomas et al. (2003), and Grove and Seebohm (2005) are based on relatively small numbers and do not employ an independent comparison group to provide a robust counterfactual to the group that received the intervention. As discussed above, Drebing et al. (2005) is not particularly relevant to this SREA both in terms of population and intervention. Although it is a randomised controlled trial it has a small sample size. For these reasons, the study is not included in the synthesis of study findings.

The 'mental health' studies were all carried out in the USA using randomised controlled trials (RCTs). This method provides the most robust evidence of 'what works', but unless it is accompanied by an evaluation of processes, often does not tell us very much about other issues, such as acceptability, appropriateness and ease of implementation. However, while the study conducted by Simon et al. (2000) is based on data from an RCT, the way the data was analysed to examine employment outcomes means that the study becomes, essentially, a before-and-after study and is therefore not rated as being as reliable as the other studies in this category.

There therefore exists the potential to know whether 'mental health' interventions are able to improve employment outcomes for people with common mental health problems, but conclusions regarding the effectiveness of 'employment' interventions are limited to the results of one study.

3.3 Studies' results and SREA findings

Two sets of findings emerge from this systematic rapid evidence assessment of mental health problems and employment outcomes: the state of the current evidence base and what that evidence tells us about interventions for people with common mental health problems.

It is clearly established that most employment research is focused on people with severe mental health problems and that most research about mental health does not measure employment outcomes. This finding matches those of other research carried out in this area (Greener and Guest, 2005; Waddell and Burton, 2004).

These findings account for the lack of available evidence to answer the in-depth research question:

What is the evidence for the effectiveness of interventions for people with common mental health problems on improving employment outcomes?

3.3.1 Results of the 'employment' interventions

The results of the employment-based evaluations can be summarised as follows:

- Purdon et al. (2006): Overall, this study did not find any difference between those who received the intervention and those who did not, and, if anything, the study suggested that the people with mental health problems in the control group appeared to have slightly better employment outcomes than those receiving the intervention.

- Thomas et al. (2003): Of 13 participants, ten retained employment (78%), but it is not clear whether this was due to the intervention.

- Grove and Seebohm (2005): Nine (41%) participants referred to the 'GP strand' retained or returned to employment. Fifty-two (50%) participants referred to the 'depression and anxiety management service' retained or returned to employment. It is not clear whether these results were due to the intervention, or whether the participants would have returned to work anyway.

- McCrum et al. (1997): 17% of previously unemployed clients gained fulltime employment but it is not clear whether this was due to the intervention. Apart from a small number who did not attend the intervention, all the other clients went into education or training programmes or voluntary or supported employment.

Bearing in mind the relatively high rates of employment reported in the control group of the Purdon study (nearly 60%), the post-intervention employment rates in the studies without control groups look less remarkable.

3.3.2 Results of the 'mental health' interventions

With regard to the evaluations 'mental health' interventions that included employment outcomes:

- Simon et al. (2000): Employment increased over time for all (antidepressant) groups combined (it is not possible to extract exact data); however, it is not known whether this was due to the intervention. Patients with greater clinical improvement were significantly more likely to maintain paid employment.
- Smith et al. (2002): The study found that enhanced care improved employment outcomes compared with usual care, but while significant with 90% confidence, this was not statistically significant at 95% confidence. (95% is the level generally accepted by researchers as being acceptable evidence that the results are real and not due to chance.)
- Wells et al. (2000): Intervention patients were significantly more likely to be working at 12 months compared with usual care. Those who were working initially were more likely to be in work at 12 months, whereas there was no difference between groups for those not working to start with; that is, those who were employed were more likely to retain their jobs, whereas the intervention did not appear to enable those who were unemployed to gain employment.

The eight included studies vary to such an extent in terms of aim, method, quality, population, intervention, and outcome and in their ability to answer the question, that it is difficult to draw any firm conclusions. There is evidence to suggest that improving mental health care and outcomes can improve employment status of people with mental health problems, while the effectiveness of employment interventions to help people obtain work or stay in work is less clear. However, implementation and process data from the studies provide some support for these interventions and could make a useful basis for the development and evaluation of programmes.

CHAPTER FOUR

Conclusions and discussion

4.1 Summary of conclusions

The conclusion is reached that, while there is evidence to suggest that 'employment' interventions can be implemented and are popular and acceptable (see below), there is no evidence that they are effective in improving employment prospects for people with common mental health problems.

The evaluations of 'employment' interventions tended to be less robust than those evaluating 'mental health' interventions.

The following conclusions were reached regarding those with common mental health problems who are currently employed:

- Improvements in people's mental health are associated with better employment outcomes.
- Receiving recommended primary care improves employment outcomes.
- Interventions to improve guideline implementation and adherence can improve employment outcomes.

However, the above may not be applicable for those currently unemployed.

More research needs to be carried out on what works to assist people with common mental health problems to find work, if they are currently unemployed, or to stay in work if they are currently employed, with specific attention given to measuring employment outcomes.

There is no shortage of evidence on 'mental health' interventions for people with common mental health problems, but few studies report employment outcomes. Many studies measure people's employment status at baseline but rarely use this measure as an outcome, despite indications that it might change as a result of improvements in mental health. A full systematic review of common mental health problems and employment outcomes with more sensitive and extensive searches could provide more evidence on which mental health interventions also promote employment. The fact that there is no systematic review which has addressed this broad issue marks a significant gap in research evidence.

In terms of employment interventions, those aimed at people with common mental health problems and those which are applying principles from interventions for people with severe mental health problems, need to be evaluated with high quality evaluations in the appropriate population before claims for their effectiveness can be made with any certainty.

4.2 Implementation and process of employment interventions

While there is limited evidence on the efficacy of employment interventions, there is some evidence that the people who participated in the employment interventions found them acceptable and valuable. Participants in Grove and Seebohm (2005) and Thomas et al. (2003) who returned to work felt they would not have done so without the intervention, and even those who did not return felt positively about the projects. In Grove and Seebohm (2005), 'all clients reported that their Advisor and the package of support provided by the Project…had been the major factor in their journey back to health' (p 25).

These views appear to be matched by other stakeholders, such as those referring people to the projects, employers, and GPs: 'All referrers rated the project as very helpful. Five clients rated it very helpful and one rated it helpful' (ibid., p 28) and 'Clients, referrers and the employer interviewed described it as expert, quick and effective in achieving its purpose' (ibid., p 5).

The overall response from clients, GPs, employers and case managers was that the outcomes for clients, both in relation to their job and their mental health, were improved as a result of the JRT intervention. The majority of employers who participated in the research also reported positive outcomes for themselves in terms of feeling better informed and more able to manage mental health issues. Similarly, in addition to positive outcomes for their patients, GPs valued the impact of the service in decreasing demands on their own time. (Thomas et al., 2003, p 5)

The largest study on employment interventions in our sample was the Job Retention and Rehabilitation Pilot (Purdon et al., 2006). This study employed a randomised controlled trial design to evaluate a comprehensive range of services, and looked at a range of outcomes; it was disappointing to record that it found no significant differences between groups. Indeed, in the case of those with mental and behavioural disorders, the study stated that 'it appears that the interventions may have actually reduced the likelihood of a return to work' (p 5). Suggestions by the authors to explain this unexpected finding were that the interventions offered were not appropriately geared to participants' specific needs, that those in the control group were more proactive in seeking help on their own and that there were barriers to returning to work that were outside the control of the interventions (including those from employers and GPs). It is interesting to note that, while many participants in the workplace intervention expressed a desire to receive more health or medical interventions, relatively few in the health group wanted to receive more employment services (Purdon et al., 2006).

Thomas et al. (2003) and Grove and Seebohm (2005), in particular, use their process information to suggest criteria for effective interventions and make recommendations on service development. The Job Retention Pilot (Thomas et al., 2003) was evaluated against 13 criteria for a good job retention service derived from previous work – a literature review on job retention and mental health (Thomas et al, 2002). The criteria recommend that interventions include both vocational and mental health counselling, and cover access to the service, working with both health professionals and employers and providing a tailored, case-management service (Grove and Seebohm, 2005). Thomas et al. (2003) identified a further two criteria as a result of the evaluation – addressing family and relationship issues, and access to financial counselling and advice. They also concluded that early intervention was the most significant factor associated with an effective job retention service, and also highlight a focus on return to work, ongoing support, access regardless of diagnosis, and the role of the case manager. Grove and Seebohm (2005) then used these criteria as the framework for evaluating the Walsall Employment Retention Project.

While the Job Retention and Rehabilitation Pilot (Purdon et al., 2006) was very similar to these previous studies, it does not appear to have compared its interventions with the criteria for effective job retention service. It did, however, identify some of the barriers that might impact on effectiveness, particularly those faced by service providers, including attitudes and working relationships with employers, GPs and other health services, and the power of the employer in deciding employee's future employment.

4.3 Existing systematic reviews

In addition to the studies described above, three reviews appeared to be relevant to this SREA but, on obtaining the primary studies they contained, no additional studies were found. The type of intervention these reviews look at and the conclusions that they draw are similar to those in this SREA.

Waddell and Burton (2004) look at the evidence for both severe and common mental health problems and stress the use of rehabilitation approaches. They suggest that the principles for severe mental health problems might apply to people with common mental health problems, but acknowledge that 'there is very little direct evidence on the effectiveness of these interventions for minor problems…The main problem is the general lack of evidence on vocational outcomes' (p 42).

Seymore and Grove (2005) look specifically at workplace interventions and recommend 'the use of cognitive behavioural therapy (CBT) in brief therapy sessions of up to 8 weeks with people already presenting with common mental health problems' (p 41). These studies could not be included in the review, since none of them measured employment outcomes according to the set definition. However, their finding that 'skilling primary care practitioners to diagnose and treat depression is effective in helping people retain employment' is in accordance with this rapid evidence assessment, and one of the studies that this finding is based on is common to both reviews (Wells et al., 2000).

A review which aimed to look at the impact of depression treatment on occupational outcomes (Greener and Guest, 2005) states that there is 'compelling evidence' that antidepressants can improve employment outcomes by improving clinical outcomes (p 259). However, only one of the review's included studies met our criteria for inclusion (Simon et al., 2000), and the study concedes that the efficacy of antidepressants on work-related outcomes has been understudied in clinical trials.

However, only one of the review's included studies met our criteria for inclusion (Simon et al., 2000), and the study concedes that the efficacy of antidepressants on work-related outcomes has been understudied in clinical trials.

4.4 Other relevant interventions

In addition to the eight included studies and the three reviews described above, our search identified a further four studies which appear relevant but for which there is not enough information to code because they have not yet been published or are still ongoing. Probably the most relevant is a Dutch cluster-randomised controlled trial investigating the effectiveness of the Minimum Intervention for Stress-related mental disorders with Sick leave (MISS) in general practice. Outcomes from the 433 participants include return to work from sick leave, unemployment and receipt of disability benefit; results were due at the end of 2006 (Bakker et al., 2006). Another Dutch study - a participant-level randomised controlled trial - examines the effects of treatment in occupational health practice by Dutch occupational physicians trained in using the Dutch national guideline on the management of employees with mental health problems by occupational physicians. Around 200 participants from two police departments have been recruited, results were also due in 2006 (Rebergen et al., 2006).

The other two studies evaluate supported employment and it may emerge that they are more focused on people with severe mental health problems, both originate from the US. 'The impact of Vocational Rehabilitation for Mentally Ill Veterans' is a participant-level RCT comparing supported employment with standard vocational rehabilitation for veterans with posttraumatic stress disorder (Davis et al., 2006). This study has just started recruitment and is due for completion in 2009. 'A process and outcome evaluation of a recovery center that integrates employment and education services with wellness and recovery' is a before and after study of The Training for the Future program for people with psychiatric disabilities (Furlong-Norman, 2006). Sixty-one participants took part in the evaluation which is due to be published in 2007.

4.5 Treatment of common mental health problems

Given that one of the findings suggests that improving people's mental health can improve their employment outcomes, it is important to acknowledge the existence of current mental health treatment guidelines. Evidence on the effectiveness of interventions on improving mental health problems has been evaluated in recent NICE guidelines on mental health and behavioural conditions. The depression (NCCMH, 2004) and anxiety (McIntosh, 2004) guidelines are of particular relevance to this SREA. Key recommendations for treatment are detailed in the Quick Reference Guides for each condition (http://www.nice.org.uk/page.aspx?o=cg22&c=mental and http://www.nice.org.uk/page.aspx?o=cg023&c=mental).

With regard to improving primary care treatment by implementing these guidelines and the National Service Framework for Mental Health, there is evidence supporting the effectiveness of audit and feedback on improving practice and interventions designed to improve recognition and management of mental health problems in primary care on improving diagnosis, treatment, clinical outcome and functional status (Contributors to the Cochrane Collaboration and the Campbell Collaboration, 2000).

In addition, in *A Guide for Medical Practitioners: Medical Evidence for Statutory Sick Pay [SSP], Maternity Pay and Incapacity Benefit Purposes*, the DWP (2004) recommends that 'In some cases where the patient's condition could lead to prolonged sickness absence, you may wish to seek early specialist help from Jobcentre Plus, part of the Department for Work and Pensions, or another agency' (p 22).

4.6 Strengths and weaknesses of this SREA

While being a systematic examination of the evidence base in this area, this rapid evidence assessment is not a full systematic review and differs from a full systematic review in one important way: the scope and depth of its searches. Searching for a full systematic review can often take more than three months (more than the total time allocated to the SREA), while the searches for this report took less than three weeks. The searches conducted depended almost exclusively on electronic databases and were not accompanied by the usual practice of searching key journals by hand. More specific search terms than usual were used, screening by hand only a few hundred references, rather than the many thousands (or tens of thousands) that would normally be screened for a full systematic review.

The fact that studies were excluded based on their abstract alone is also a potential weakness of this SREA. Usually, the full report of all potentially relevant studies would be retrieved, whereas for this, only those which were clearly connected with mental health and employment were retrieved. This may have led to, for example, some mental health studies, with a minor focus on employment, being excluded.

However, even though the search strategy was necessarily limited, the fact that previous systematic reviews in the area did not find more studies suggests that the small number of studies in our SREA reflects a lack of research in this area, rather than significant deficiencies in the searches. Apart from the search strategy, this SREA followed all the stages and adhered to the principles that one would expect of a full systematic review.

While it is difficult to estimate whether a full systematic review would have found more studies, a larger piece of work would have been able to examine a greater range of outcomes and consider other issues, such as the appropriateness and acceptability of the interventions it included.

Despite the fact that this is not a full systematic review, a fairly large number of relevant studies for the map (155 in total) were found. However, it was possible only to include eight in the in-depth analysis. Of the studies that were about evaluating an intervention for people with mental health problems, most were excluded because they did not measure change in employment status (58/157 exclusions); this was also the main reason for excluding studies from the reviews discussed above (11/25 exclusions).

PART TWO - TECHNICAL DESCRIPTION OF THE SYSTEMATIC RAPID EVIDENCE ASSESSMENT

CHAPTER FIVE
Methods

5.1 User involvement

The SREA was carried out in a way that allowed potential users of the findings to be involved in its development. User involvement was built in to the process from the beginning with meetings and email contact between the CSR Policy Review Team, the Government Social Research Unit and the research team at the EPPI-Centre. The CSR Policy Review Team set the agenda for the mapping exercise and, once the results of the map were available, set the focus for the in-depth part of the SREA. Initially, the scope of the map was set broadly, including people with all types of mental health problems. Once the results of the map had been discussed with the Policy Team, it was decided that the priority should be on those people with common mental health problems, and this became the focus of the in-depth review. The CSR Policy Review Team also shared their developing framework for the comprehensive spending review with the research team to enable the research to follow a similar conceptual framework.

5.2 Mapping exercise

Following recommendations for a two-stage commissioning process for systematic reviews in health promotion by Peersman et al. (1999), the SREA was carried out in two stages: a mapping exercise followed by an in-depth examination of a subset of studies. The mapping exercise identifies and describes the range of relevant research activity that has been undertaken in terms of its substantive characteristics (e.g. type of intervention, type of population) and methodological characteristics (e.g. study design). Based on policy and practice needs, a subset of studies are chosen for in-depth examination, which assesses their quality and synthesises their findings. Since the initial specifications of systematic reviews within public policy are often broad, the mapping and quality-screening exercise is designed to enable the review's (or SREA's) commissioners and potential users to be involved in further specifying the precise scope and/or prioritising the questions for the in-depth examination. This also ensures that the work is manageable within the timescale.

The mapping phase of the SREA asked the following question:

> *What research measures the impact of interventions among people with mental health problems on employment outcomes?*

Many different topic areas of research are included in the map and the aim is simply to describe the broad extent of research activity in this area. The quality of studies in the map was not assessed and their findings are not reported. The map was used to inform decisions taken with regard to the remainder of the SREA. In line with developing thinking in the CSR Policy Review Team, the map was used to determine the focus of the in-depth phase of the SREA.

5.2.1 Inclusion and exclusion criteria for mapping exercise

Inclusion criteria

- Studies which include people who have a mental health problem (see Appendix 1.2 for definitions)
- Studies which include people with learning disabilities and/or substance/alcohol abuse as well as a mental health problem
- Studies which evaluate an intervention
- Studies which include employment outcomes

Exclusion criteria

- Studies which do not include any people with mental health problems

- Studies which include only people with substance or alcohol abuse (who have not been diagnosed with a mental health problem)
- Studies which include only people who are not of working age (i.e. under 16 or over 65)
- Studies which are not evaluating an intervention
- Studies which do not include any people in or returning to competitive employment (defined as a full or part-time position held by the client in an ordinary work setting, for which they were receiving payment at the market rate (Crowther et al., 2001))
- Studies which do not report on a change in employment status (gaining competitive employment, retaining or losing competitive employment, returning to work from sick leave)

  Studies where no outcome data is reported (exclude any studies where no data, either numerical or textual on outcomes from the intervention, are reported)
- Studies which score 1 on the Maryland Scale of Scientific Methods (Sherman et al., 1998, described below)
- Abstract of study not published in English
- Studies published before 1993

The SREA was restricted to studies published in English. This was because members of the team did not speak additional languages, did not have access to or the ability to search databases in other languages, and did not have the time or resources to screen and translate documents in other languages.

5.2.2 Identification of studies for the mapping exercise

(a) Search strategy

Systematic searches were conducted on 14 major databases (PsycInfo, ASSIA, Econlit, ERIC, National Criminal Justice reference Service Abstracts, PAIS International, PAIS Archive, Social Services Abstracts, Sociological Abstracts Embase, Medline, Social Science Citation Index, Conference Abstract Index and the International Bibliography of the Social Sciences) and a thorough search of the internet was carried out. Specific searches were developed, tailored to each database (see appendix 2.1). Searches were carried out between 26 June and 3 July 2006, methodological filters were not used. When the topic area for the in-depth SREA was decided, an additional search of PsycInfo was conducted using specific terms for common mental health problems. Studies found in this search are not included in the map findings.

(b) Screening process

All records identified in the above process were downloaded, with their citations and abstracts where available, into EPPI-Centre reviewing software: EPPI-Reviewer (Thomas, 2002) and screened for relevance against the above inclusion criteria.

Where the downloaded citation did not contain enough information on which to base a decision, the study was included at this stage.

5.2.3 Classification of studies for the mapping exercise

Relevant titles and abstracts were then coded on EPPI-Reviewer software using a standardised keywording system developed by the EPPI-Centre (Peersman and Oliver 1997). The titles and abstracts were classified in terms of type of study (e.g. RCT, cohort study), the country where the study was carried out, the study population (e.g. general population, young people), and the focus of the study (e.g. mental health, alcohol). Titles and abstracts describing or evaluating interventions were assigned additional keywords about the intervention site, intervention type and provider.

Each study was also coded with 'review-specific' keywords which described the type of mental health problems experienced by the participants, the interventions being evaluated and the outcomes reported.

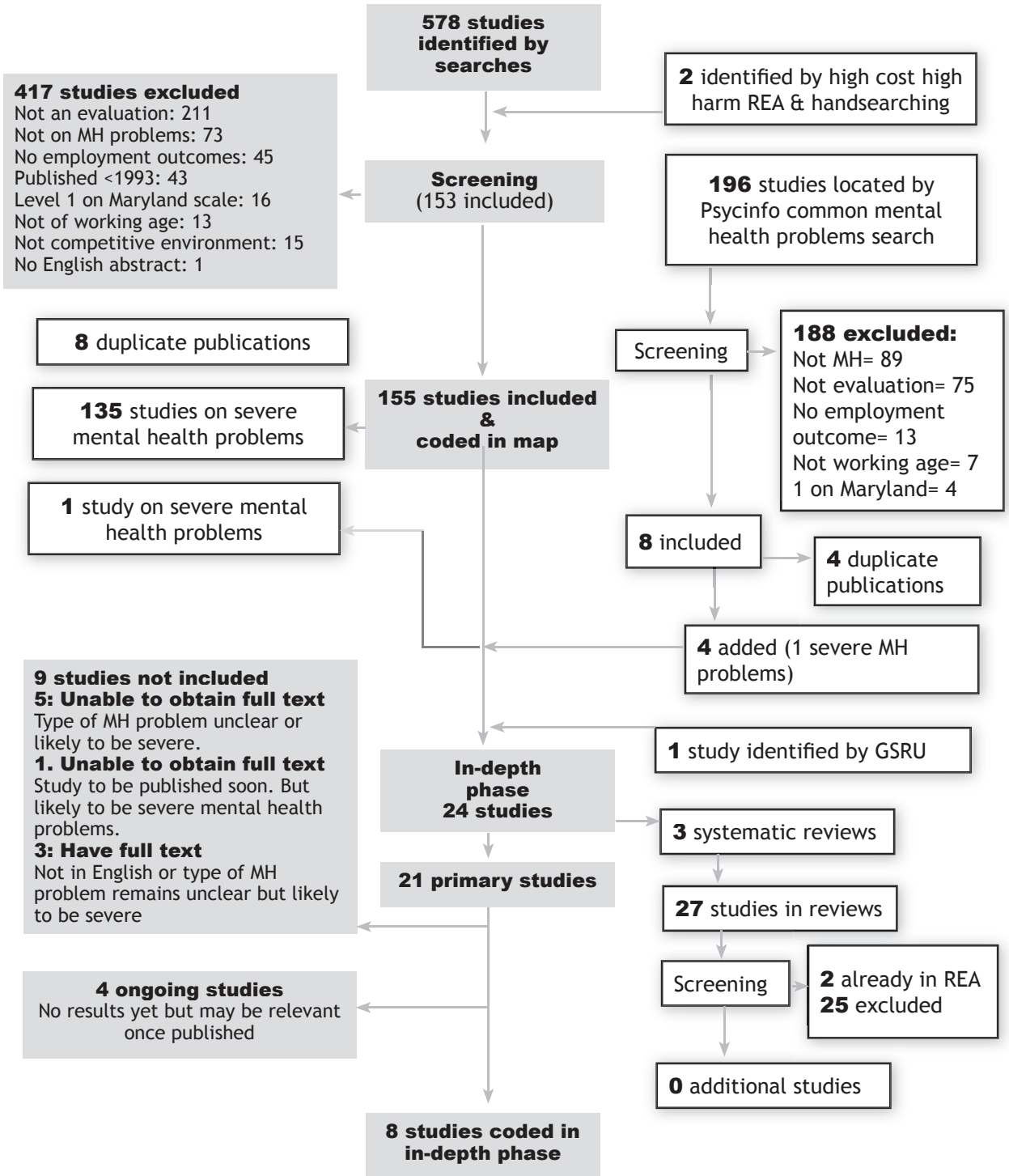
The classification of titles and abstracts is a departure from our usual practice of retrieving full papers before embarking on classification. This modification to the usual methods was required in order to fit with the more compressed timeline necessitated by the SREA. The process was a success, in that it was possible to complete the map much more quickly than is usually the case and, while there was a less detailed map, there was still enough detail to inform the decision regarding the in-depth phase of the SREA. However, it may have lead to the exclusion of potentially relevant studies, if they did not mention the use of employment outcomes in the title or abstract.

5.3 In-depth phase of the SREA

5.3.1 Moving from broad characterisation (mapping) to in-depth SREA

Final decisions about which studies to include in the in-depth phase of the SREA, and thus the inclusion and exclusion criteria for in-depth assessment, were made after consultation with the CSR Policy Review Team on the basis of the results of the mapping exercise and their on-going policy review. The map contained studies focusing on people with any mental health problem, whereas the in-depth phase concentrated on people with common mental health problems (see Appendix 1.2).

Figure 1 Flow chart of studies through the REA



The in-depth phase of the SREA asked the following question:

What is the evidence for the effectiveness of interventions among people with common mental health problems on employment outcomes?

The additional exclusion criteria for the in-depth phase were as follows:

- Studies in which the majority of participants have severe mental health problems
- Studies for which a full report, in English, is not available
- Systematic or other types of review (where reviews appeared relevant included studies were obtained and screened against the SREA criteria)

A graphic showing the flow of studies through the SREA is shown in Figure 1.

5.3.2 Detailed description of studies in the in-depth SREA

All studies which were not classified as being on severe mental health problems entered into the in-depth phase of the SREA. Full text of the studies, and where necessary additional information from study authors, was obtained in order to properly assess eligibility and enable detailed coding.

The EPPI-Centre has standard frameworks to collect data from many different study designs, which have been used in previous reviews examining both effectiveness and the barriers to and facilitators of health behaviour change (e.g. Harden et al., 2001; Rees et al., 2004). Items from two previous frameworks were combined and adapted to structure the extraction of data of studies in this SREA.

5.3.3 Assessing the quality of studies, data extraction and weight of evidence

Before the results of the studies were used to draw conclusions for the SREA, all studies were examined for threats to their reliability and validity. All data extraction and quality assessment was conducted electronically using another part of the same software used in screening and categorisation, EPPI-Reviewer (please see Appendix 4.1 for the full tool). Agreed versions were entered onto the EPPI-Centre's computer database for analysis and storage. An adapted version of the Maryland Scale was used in order to assess the quality and reliability of our studies' findings. Studies at Level 1 were excluded, while Level 2 studies were rated as 'low' and their findings with regard to effectiveness treated with caution. See Appendix 4.1 for ratings of the included studies.

Tools

The Maryland Scale of Scientific Methods (Sherman et al., 1998) was developed originally for appraising the quality of criminal justice research and was adapted for use in this study. Using the scale, each study was assessed and ranked (1-5) for its internal validity to answer 'What works?' types of questions. Assessing the quality of studies to answer other types of questions, such as the acceptability or appropriateness of an intervention, would require a completely different tool. The scale takes account of causal direction, 'history' (the possibility that passage of time could have caused intervention results rather than the intervention itself), chance factors, and selection bias. Our rating of studies mapped on to research designs in the following way:

Level 1: Single group single point (post-test only or correlational study)

Level 2: Single group pre- and post-test OR non-equivalent control group (with no adjustment in analysis)

Level 3: Cluster randomised trial with only one cluster in each arm OR non-random cluster OR non-equivalent control group pre- and post-test design where outcome = change in pre-test / post-score (with no other adjustment in analysis)

Level 4: Non-randomised controlled trial where groups are demonstrated to be equivalent on important variables (includes studies where post-hoc analyses are used to create equivalent groups, e.g. path analysis or structural equations modelling)

Level 5: Randomised controlled trial with cluster or individual allocation of multiple individuals / clusters into groups

Methods

Two researchers worked on each study, comparing their decisions and coming to a consensus. Each researcher independently completed the data extraction and quality assessment tool, and selected those parts of the findings which addressed our research questions. They met (in person or by phone) and compared responses to all questions and agreed a final version of the data extraction. Studies were judged to be of high, medium or low methodological quality, based on the answers given to the tool described in the previous paragraph. In addition, each study was judged to be very useful, quite useful, or not useful in helping to answer the SREA question. For example, a study could meet all the inclusion criteria but not present findings by the relevant population group. A judgment about the overall weight of evidence was reached by consensus. This was based on a combination of how useful the study was in helping to answer research question and the quality of the study. In terms of overall weight of evidence, studies were considered to be high (i.e. high quality and very

useful), medium high (i.e. high quality and quite useful or medium quality and very useful), medium (i.e. medium quality and quite useful), or low (low quality and any level of usefulness, or not useful and any quality). The results of studies judged to have a low overall weight of evidence were treated with caution and, when their results are reported in the evidence statements (see below), the possibility that their results are not due to the intervention is stated.

5.3.4 Methods for synthesis

Following guidance from a recent ESRC Methods Programme project, the theoretical mechanisms underlying the types of interventions included in this SREA (Popay et al., 2006) were examined. The studies fell naturally into two camps: those that were concerned with improving employment and those concerned with improving mental health. Given the data that was available and the highly heterogeneous nature of the interventions, populations and research designs of the studies in our review, it would not have been appropriate to undertake a statistical meta-analysis. Instead, a narrative synthesis was conducted, based on the division of studies described above.

After data extraction and quality assessment, two researchers (LU and JT) tabulated details of the context, population and outcomes of the studies and drew up 'evidence statements' which summarised the results of each study individually. These statements took into account:

- the specific issues relevant to this SREA (i.e. the relevance of the findings of each study)
- the reliability of each study (in terms of their ability to address the issues relevant to this SREA)

The evidence statements were then translated between studies within the two overall types of interventions identified above in order to produce more generalised conclusions.

CHAPTER SIX

Map results

6.1 Flow of literature through the map

A total of 580 studies were identified and abstracts of all these studies were screened for relevance according to the agreed criteria. This resulted in a selected list of 163 studies. A systematic map based on the titles and abstracts of 155 of these included studies has been produced; the remaining 8 were duplicate publications of studies already in the map. The map was constructed using a specially developed keywording tool (Appendix 2.2) and an in-house health promotion keywording strategy.

6.2 Characteristics of studies in the map

6.2.1 Type of study

The studies were searched to provide evidence of effectiveness: evaluations of interventions and systematic reviews of these types of study.

Of the 155 studies that were retrieved, 14 were systematic reviews and 22 were other types of review. Together, these reviews cover a wide scope of interventions (described below). Fifty-two of the studies were randomised controlled trials (RCTs), 18 non-randomised trials, 30 one-group 'pre- and post-test' studies, three economic evaluations, ten were other types of evaluation and, in six abstracts, the type of study was not stated.

6.2.2 Type of mental health problem

Despite common mental health problems (such as depression) being far more widespread than severe mental health problems (such as schizophrenia), the number of studies concerning people with severe mental health problems outnumbered those examining people with common mental health problems by more than ten to one.

Table 1.1 Types of mental health problem (N=155)

Type of MH problem	No. of studies
Common MH problems	4
Mixed MH problems	5
Severe MH problems	135
Unclear or not stated	11

One-hundred and thirty-five studies concern people with severe mental health problems; in 11 studies, it is either not stated or not clear what type of mental health problem participants had.

Five studies are on people with any mental health problem; one is a systematic review of reviews which looks at severe and common mental health problems separately, one is an RCT and three others are before and after studies.

There are only four studies solely on people with common mental health problems: one is a systematic review of workplace interventions and three are RCTs. The RCTs cover Quality Improvement Programs for Depression in Managed Primary Care Practices, a Minimal Intervention Strategy for patients with common mental disorders on sick leave (results were due at the end of 2006); and supported employment compared with standard vocational rehabilitation programme for Veterans with PTSD.

6.2.3 Interventions

Sixty-five studies are on non-vocational interventions, including assertive community treatment, antipsychotic treatment, other medication, enhanced care and psychosocial/psychiatric rehabilitation.

Table 1.2 Types of intervention

Types of intervention	No of studies
Non vocational interventions	65
Non vocational interventions	69
Training and supported education	25
Sheltered employment	7
Other, unclear or not stated	40

Sixty-nine studies are on supported employment, 25 on training and supported education and seven are on sheltered employment. In 40 studies, the type of intervention is unclear or not stated, mainly because the term 'vocational rehabilitation' is used to describe the intervention; some studies may report on more than one type of intervention, so the total is higher than 155.

6.2.4 Outcomes

One-hundred and seven studies appear to report on change of competitive-employment status. Forty-nine studies were retained where it was unclear or not stated whether they reported on change of employment status.

6.2.5 Country in which the study was carried out

Ninety-eight of the studies were carried out in the United States, with only 29 carried out in the UK. The remaining studies were carried out in Australia, Canada, the Netherlands, Germany, New Zealand, China, Hong Kong, Israel and Switzerland. It was not possible to find out where two of the studies were carried out.

Table 1.3 Study country (N=155)

Study country	No. of studies
USA	98
UK	29
Other	26
Not stated	2

6.3 Main findings of the map

- A wide variety of interventions have been researched; the single most studied intervention is supported employment (including seven systematic reviews).
- Almost all the primary studies concern people with severe mental health problems. This group has also been well covered by several systematic reviews
- The effectiveness of interventions to support people with common mental health problems is less well covered in research; there are far fewer primary studies dealing with this issue and a similar lack of systematic reviews on the subject.
- There are, however, some studies which may contain useful information regarding the potential for certain interventions to help people with common mental health problems back into work.

6.4 Conclusions and implications

- It is possible that there are few studies concerning people with common mental health problems because there are few interventions: people with common mental health problems may simply be given medication and not offered any further support.
- Most evidence on 'what works' concerns people with severe mental health problems. However, since there are far more people with common mental health problems, any significant reduction in the number of people on IB will need to include this group of people. Moreover, as interventions targeted at people with severe mental health problems are specific to that group, they may not be appropriate for people with common mental health problems.
- Since some studies were found concerning people with common mental health problems, there would appear to be an urgent need for a systematic review which looks comprehensively at all the available evidence on the effectiveness of interventions to support this group of people back into work.

To enable consistent coding of studies and to ensure compatibility with the assessment's aims and objectives, systematic reviews which appeared relevant went into our in-depth phase but were not coded. Instead, the full text of the primary studies they included were obtained and screened against the inclusion criteria. Statements made by the reviews and the studies they were based on were also investigated to see whether they were relevant to the in-depth phase and could be looked at in various discussions.

CHAPTER SEVEN

From mapping to in-depth phase

Twenty studies from the map went through to the in-depth phase; these were all studies that did not focus mainly on people with severe mental health problems.

Following the mapping stage, an additional, more specific, search of PsycInfo was carried out in an attempt to find more studies of participants with common mental health problems. One hundred and ninety-six studies were found and the full texts of eight potentially relevant studies were obtained. Three studies contained participants with mainly common or mixed mental health problems, one study contained participants with severe mental health problems (and was excluded), and four studies were duplicate publications of a study already in the SREA. A further study on people with mixed mental health problems was brought to the team's attention by the Government Social Research Unit (GSRU).These studies are not included in the mapping stage.

Therefore, in total, there are 24 studies potentially relevant to the in-depth evidence assessment (20 from the map and four from the additional search): seven have participants with common mental health problems, six have participants with a mixture of severe and common mental health problems and, in 11 studies, the type of mental health problem is unclear or not stated.

Thirteen of these studies were potentially relevant but not included in the in-depth evidence assessment. For the majority, this was because the studies are only available in abstract form as they are either ongoing or have not been fully published. Five are complete but likely to be on people with severe mental health problems, one is due to be published soon but is also likely to be on people with severe mental health problems. Another three studies were not included because one was in German; one was a review in which studies either had majority of participants with severe mental health problems or not enough patients with mental health problems; another contained studies that either would not have met our inclusion criteria or contained mainly people with a history of hospitalisation and probably mostly severe mental health problems. The remaining four are ongoing studies and may be relevant to this SREA once published.

Eleven studies were entered into the in-depth assessment; these comprised three reviews and eight primary studies.

Twenty-seven studies on people with common mental health problems were included in the three reviews found by the searches but all, except two studies, which were already included (Simon et al., 2000, and Schoenbaum et al., 2001, included in the SREA as Wells et al., 2000), were excluded from the in-depth evidence assessment following screening of abstracts or full text against the inclusion criteria. Six studies were not about people with mental health problems, three were not evaluating an intervention, one was not available in English, three were published before 1993, one did not meet the necessary criteria on the Scientific Methods (Maryland) Scale and eleven had no change of employment status outcome.

Therefore, just eight primary studies went on to be analysed in the in-depth phase of the review.

CHAPTER EIGHT

Characteristics of studies in the in-depth SREA

The characteristics of the interventions have been described in Part I of this report. This section describes the characteristics of their evaluations which fall into two categories on the Maryland Scale: *randomised controlled trials and before and after studies*.

8.1 Randomised controlled trials

Four of the studies included in the in-depth evidence assessment were randomised controlled trials. Smith et al. (2002) and Wells et al. (2000) employ quite similar methods and interventions in the two cluster-randomised trials carried out in the US. Wells et al. (2000) compared two quality improvement interventions with usual care and tried to 'replicate naturalistic practice conditions, including usual care providers and full choice of treatment' (p 219). Forty-six primary care practices were randomised providing data on 1,356 participants with depression. Employment status at one year was a secondary, exploratory outcome. Some process implications are discussed. Smith et al. (2002) also randomised primary care practices; 479 participants with depression, in 12 practices, received enhanced or usual care. The 262 participants, who were employed at baseline, were followed up at one year to measure subsequent employment and workplace conflict, although only 219 participants were included in the analyses which were carried out at patient level (in both these trials).

The only RCT carried out in the UK in the set of studies is the Job Retention and Rehabilitation Pilot (JRRP) (Purdon et al., 2006), a participant-randomised trial which tested three interventions (health, workplace and combined) versus usual care. All interventions aimed to increase the return-to-work rate of those employed but off-work sick for six weeks or more. Around 30% of the 2,845 participants gave mental or behavioural disorders as the primary reason for being off-work sick. The primary outcome was a return to fulltime work for a period of at least 13 weeks, but the study also reports on the proportion of participants with a spell out of work or in receipt of incapacity benefit.

Drebing et al. (2005) was a 16-week patient-randomised controlled trial. This study is not included in the synthesis since both its population and intervention are not considered sufficiently relevant to the aims and objectives of this SREA. Participants were dually diagnosed (US) veterans with mixed mental health problems (affective disorders, anxiety and psychosis) and alcohol/ substance abuse or dependence. The trial compared a compensated work therapy (CWT) programme with enhanced (cash) incentives with CWT alone. The small sample size (21 in total) makes it difficult to draw any conclusions from the study's results.

8.2 'Before and after' studies

Four of the evaluations included in the in-depth evidence assessment were one-group studies in which outcomes were measured before and after the intervention (also known as pre- / post-test studies). These tended to be much smaller than the RCTs and were often more focussed on qualitative evaluation of process than on outcome.

Grove and Seebohm (2005) was a process evaluation and audit, over nine months, of an employment retention project in Walsall, UK. Overall 229 clients received services from the project; 23 people with common mental health problems entered the GP strand; 47 people with severe mental health problems entered the mental health strand; and a depression and anxiety service was attended by 134 people from any strand. The primary outcome measure was a return to work from sick leave but the study also reported numbers known to have lost their employment or taken long-term sick leave.

In a very similar study, Thomas et al. (2003) was an evaluation of a job retention pilot in Avon and Wiltshire, UK. In total, the project worked with 29 clients, the 13 participants for whom sufficient

data is available had mixed mental health problems (anxiety, depression, bipolar disorder, eating disorders and brain injury). Employment status was classified as retained job, new job, terminated but temping and redundancy / not working. The study discusses process issues and explored the perspectives and experiences of clients, case managers, employers and GPs.

McCrum et al. (1997) aimed to describe and evaluate the first 15 months of a job clinic in Northern Ireland. Seventy-seven, mainly unemployed, participants with mixed mental health problems (depressive disorders, schizophrenia, adjustment reaction, neurosis, other psychotic disorders, bipolar disorders) enrolled in the project between September 1992 and December 1993. The study reports on the numbers who entered full-time paid employment, government job training, vocational rehabilitation training, sheltered employment, further education and voluntary work.

Originally a patient-randomised trial of 536 participants comparing the efficacy of three antidepressants (fluoxetine, imipramine and desipramine), in primary care, over two years (Simon et al., 1996). Simon et al. (2000) conducted a secondary analysis by pooling data from the three treatment arms for the 290 participants with major depressive disorder who completed a 12-month assessment. The aim was to determine whether clinical outcome was related to employment status. Participants were classified as having persistent, improved or remitted depression; the primary outcome was the proportion of each group reporting paid employment at 12 months. Unfortunately, employment outcomes for the original trial are not reported and this can therefore only be included as a before and after study, with the three treatment arms in one ‘anti-depressant’ group.

CHAPTER NINE

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Acknowledgements:

The work described in this report was undertaken by the EPPI-Centre, which received funding from HM Treasury (UK) to undertake the work, and the Government Social Research Unit (GSRU). The views expressed in the report are those of the authors and not necessarily those of the Treasury.

Special thanks are due to Phil Davies, Theo Lorenc, John Scott-Cree and Jan Tripney for their assistance at various stages of the SREA, and to Sandra Horsell and her colleagues from the HMT library for obtaining references for the SREA so efficiently. The researchers working on the project appreciated the active engagement of the CSR Policy Review Team.

Conflicts of interest

There were no conflicts of interest in the writing of this report

Appendix 1.2: Defining common mental health problems

Studies on any mental health problem were included in the map phase of the SREA; however, only those in which the majority of participants had common mental health problems went on to the in-depth phase.

Mental health problems included in the in-depth rapid evidence assessment

Depression, anxiety disorders, panic disorder, agoraphobia, phobias, obsessive-compulsive disorder, insomnia/sleep disorders, dysthymia, stress, eating disorders, body dysmorphic disorders, adult ADHD, post-traumatic stress disorder, post-natal depression, cyclothymia

It was anticipated that studies might be found which include patients with other mental health problems not listed here, an inclusive, negative definition of what constitutes a 'common mental health problem' was adopted, similar to that employed by other studies (Seymour and Grove, 2005; Waddell and Burton, 2004); studies were provisionally included unless they were mainly on people with severe mental health problems and were then assessed on a study-by-study basis.

Mental health problems excluded from the in-depth rapid evidence assessment

Schizophrenia, other psychotic disorders, psychotic depression, bi-polar disorder, dementia/ cognitive disorders, personality disorders, manic disorders, adjustment disorders, sexual disorders.

Some of the disorders categorised as common mental health problems have severe forms (particularly depression). If a study described its participants as having severe mental health problems, it would be excluded; even if those participants had disorders classified as common. If the study did not mention severity, it was assumed that most participants could be classified as having a common mental health problem.

Appendix 2.1: Search strategy

CSA Illumina (ASSIA, Econlit, ERIC, National Criminal Justice reference Service Abstracts, PAIS International, PAIS Archive, Social Services Abstracts, Sociological Abstracts)

(mental* and (ill or dis* or handicap*) and (employ or work or job)) and systematic review

(mental* and (ill or dis* or handicap*) and (employ or work or job)) and cost benefit

((mental* or psychiatric) and (ill* or disorder or handicap*) and (employ* or work or vocation* or occupation or incapacity benefit)) and (experimental or random* control* trial or clinical trial)

((mental* or psychiatric) and (ill* or disorder or handicap*) and (employ* or work or vocation* or occupation or incapacity benefit)) and (compar*tive stud* or intervention stud* or evaluation stud*)

((mental* or psychiatric) and (ill* or disorder or handicap*) and (employ* or work or vocation* or occupation or incapacity benefit)) and and (control* evaluation or interrupted time series or (pretest posttest or pre test post test))

(mental* or psychiatric) AND (ill* or disorder or handical*) AND (employ* or work or vocation* or occupation or “incapacity benefit”) And cost AND (effectiveness or benefit or utility)

Psychinfo

S1 3789 VOCATIONAL()REHABILITATION/DE
S2 36767 MENTAL()DISORDERS/DE
S3 5173 PSYCHIATRIC()SYMPTOMS/DE
S5 354 S1 AND (S2 OR S3)
S6 408318 RANDOM? OR CLINICAL OR PRETEST OR (PRE()TEST) OR POSTTEST OR (POST()TEST) OR EXPERIEMNTAL
S7 94 S5 AND S6

Embase and Medline

S8 344273 MENTAL? OR PSYCHIATRIC
S9 3035792 RANDOM? OR TRIAL? OR EXPERIMENTAL OR PRETEST OR (PRE()TEST) OR POSTTEST OR (POST()TEST) OR META OR RCT
S10 95 S7 AND S8 AND S9
S11 78 RD S10 (unique items)

Social Science Citation Index

S1 1038 VOCATIONAL()REHABILITATION
S2 132103 MENTAL OR PSYCHIATRIC
S3 270 S1 AND S2

S4 133789 S3 AND RANDOM? OR CLINICAL OR RCT OR EXPERIMENTAL OR PRETE-
ST OR (PRE-TEST) OR POSTTEST OR (POST()TEST)
S5 74 S3 AND S4

Conference abstracts index

((mental disorder*) or (mental health) or (mental ill*)) or ((mentally ill) or (psychiatric disorder*))) AND ((employ* or work* or vocation*) or (occupation* or job or (incapacity benefit))

International Bibliography of the Social Sciences 1951 to June Week 04 2006

From 1 [((mental$ or psychiatric) and (ill$ or disorder or handicap$) and (employ$ or work or vocation$ or occupation or job or "incapacity benefit")).mp. [mp=abstract, title, subject heading, geographic heading]] keep 2, 19, 22, 26-27, 29, 35-36...
Results available: 45

The following websites were searched

AHRQ http://www.ahrq.gov/
National Guideline clearinghouse http://www.guideline.gov/
APA website http://www.psych.org
National Alliance on Mental Illness http://www.nami.org
Center for Psychiatric Rehabilitation at Boston University http://www.bu.edu
National Mental Health Association http://www.nmha.org
Bandolier (NELH) http://www.jr2.ox.ac.uk/bandolier/index.html
Clinical evidence http://www.clinicalevidence.com/ceweb/conditions/index.jsp
MRC http://www.mrc.ac.uk
Institute of Psychiatry http://www.iop.kcl.ac.uk
ESRC http://www.esrc.ac.uk
NIMHE http://nimhe.csip.org.uk/home
Care Services Improvement Partnership http://www.csip.org.uk
Durham University School of Applied Social Sciences http://www.dur.ac.uk/sass/
Current controlled trials http://controlled-trials.com/
Research findings register http://www.refer.nhs.uk
National Research Register http://www.update-software.com/national/
NHS Economic Evaluation Database
NIMH http://www.nimh.nih.gov
Clinical Trials http://www.clinicaltrials.gov
Remploy http://www.remploy.co.uk/
Institute of Employment Studies www.employment-studies.co.uk/main/index.php
The CBI http://www.cbi.org.uk
The TUC http://www.tuc.org.uk/
British Occupational Health Research Foundation http://www.bohrf.org.uk/
MIND http://www.mind.org.uk/
SANE http://www.sane.org.uk/
Joseph Rowntree Foundation http://www.jrf.org.uk/
Sainsbury's Centre for Mental Health http://www.scmh.org.uk/
Nuffield Foundation http://www.nuffieldfoundation.org/
National Institute of Economic and Social Research http://www.niesr.ac.uk
SAMHSA's National Mental Health Information Center http://www.mentalhealth.samhsa.gov
National Rehabilitation Information Center http://www.naric.com/
NICE guidance www.nice.org.uk

Search terms used in the additional search of PsycInfo specifically for studies on common mental health problems

Title, subject, abstract and keyword search restricted to study published after 1993

(common mental health OR depress* OR anxiety OR common psychological OR common psychiatric) AND employment AND (clinical trial* OR randomi?ed controlled trial* OR comparative stud* OR eval* OR random* allocate* OR controlled trial* OR meta?analy* OR systematic review* OR cost?effectiveness OR outcome OR prospective OR experiment*) AND (therap* OR treat* OR intervention OR manag* OR program* OR initiative OR counsel* OR prevent* OR primary care OR support* OR medication OR pharmacol* OR traini* OR traine* OR education OR skills OR information OR guidance OR rehab*)

Appendix 2.2: Keywording tools

EPPI-Centre health promotion keywording strategy: Peersman and Oliver (1997)

What is the status of the report? [published/unpublished]
Which language is the study in?
How were the keywords allocated? [title/abstract/full text]
What type of study does this report describe?
In which country/countries was the study carried out?
Focus of the report
Characteristics of the study population
Cost indication
Intervention site(s)
Person(s) providing the intervention
Type(s) of intervention

Rapid evidence assessment: mental health and employment outcomes map keywording

Section A: Participants

A.1 What setting were patients recruited from?	A.1.1 Not stated
	A.1.2 Workplace
	A.1.3 Primary care
	A.1.4 Secondary care
	A.1.5 Inpatient care
	A.1.6 Social or community care (Specify.)
	A.1.7 Mixed setting (Specify.)
	A.1.8 Other (Specify.)
	A.1.9 Unclear
A.2 Ethnicity *Write in as described by the study (give percentages if appropriate).*	A.2.1 Not stated
	A.2.2 Stated (Write in.)
A.3 Employment status at baseline	A.3.1 Not stated
	A.3.2 Employed
	A.3.3 Employed but on sick leave
	A.3.4 Unemployed
	A.3.5 Mixed employed and unemployed
	A.3.6 Unclear

Section B: Diagnosis/es of mental health problems

B.1 What were the inclusion criteria of the study? *Main focus of this question is the diagnostic criteria but other criteria should be listed as well*	B.1.1 Not stated
	B.1.2 Stated *(Write in as stated by the study.)* *Mention any exclusion criteria if relevant*
	B.1.3 Unclear

B.2 What mental health problems were patients diagnosed with? *(Tick all that apply.)* *Tick a condition if particular mental health problems are stated by the study, if no particular mental health problems are stated tick Not stated*	B.2.1 Not stated
	B.2.2 Adult ADHD Attention Deficit Hyperactive Disorder
	B.2.3 Ante-natal or post-natal mental health problems *Includes post-natal depression, ante-natal depression* *Excludes puerperal psychosis*
	B.2.4 Anxiety disorders *Includes general anxiety disorder*
	B.2.5 Bipolar disorders *Includes manic-depressive disorders, mania*
	B.2.6 Body dysmorphic disorders
	B.2.7 Cognitive disorders *Includes dementia, Alzheimer's, Lewy's body* *Excludes any brain damage or injury, learning disabilities*
	B.2.8 Depressive disorders *Includes depression, affective disorder, dysthymia, atypical depression* *Does not include psychotic depression*
	B.2.9 Eating disorders *Includes anorexia, bulimia*
	B.2.10 Obsessive-compulsive disorders *Includes obsessive disorders, compulsive disorders*
	B.2.11 Other psychotic disorders *Excludes schizophrenia, psychotic depression*
	B.2.12 Panic disorders
	B.2.13 Personality disorders
	B.2.14 Phobias *Includes agoraphobia, social phobia*
	B.2.15 Post-traumatic stress disorder
	B.2.16 Psychotic depression *Also known as depression with psychotic features*
	B.2.17 Schizophrenia
	B.2.18 Sexual disorders
	B.2.19 Sleep disorders *Includes insomnia*
	B.2.20 Stress
	B.2.21 Other *(Specify.)*
	B.2.22 Unclear *(Write in as described by the study.)*

B.3 What type of mental health problem(s) were the majority of patients diagnosed with? *Choose based on study's description or because of the particular mental health problems included.*	B.3.1 Not stated
	B.3.2 Common mental health problems *Includes depression, anxiety disorders, panic disorder, agoraphobia, phobias, obsessive-compulsive disorder, insomnia/sleep disorders, dysthymia, stress, eating disorders, body dysmorphic disorders, adult ADHD, post-traumatic stress disorder, post-natal depression, cyclothymia*
	B.3.3 Severe mental health problems *Includes schizophrenia, other psychotic disorders, psychotic depression, bi-polar disorder, dementia/ cognitive disorders, personality disorders, manic disorders, adjustment disorders, sexual disorders*
	B.3.4 Mixed mental health problems
	B.3.5 Unclear

Section C: Intervention

C.1 What intervention was used in the study?	C.1.1 Not stated
	C.1.2 Stated *(Write in as described by the study.)*
	C.1.3 Unclear
C.2 What type of intervention was used in the study?	C.2.1 Not stated
	C.2.2 Non-vocational intervention *Includes psychosocial interventions, skills training, work readiness training, medication and symptom management*
	C.2.3 Sheltered employment *Projects, paid or unpaid, in which participants are brought into contact mainly with other people with MH problems and staff members. Includes Clubhouse programmes, workshops, work crew/ enclaves, social firms*
	C.2.4 Training and supported education *Training designed to lead directly to competitive employment*
	C.2.5 Supported employment *Includes Individual Placement and Support (IPS), User Employment (SE)*
	C.2.6 Other (Specify.)
	C.2.7 Unclear

C.3 What was the aim of the intervention?	C.3.1 Not stated
	C.3.2 Non-vocational *(Specify aim.)*
	C.3.3 Full-time employment
	C.3.4 Part-time employment
	C.3.5 Preparation for work *interviewing techniques, job applications, programmes that aim to do this*
	C.3.6 Supplemented work (e.g. linked to benefits such as working while on benefits, supported while working)
	C.3.7 Apprenticeship
	C.3.8 Other (Specify.)
	C.3.9 Unclear

Section D: Outcome

D.1 What employment related outcomes were measured by the study?	D.1.1 Not stated
	D.1.2 Gained competitive employment
	D.1.3 Retained competitive employment
	D.1.4 Held employment for up to 6 months
	D.1.5 Held employment for 6 months or more
	D.1.6 Returned to work from sick leave
	D.1.7 Job satisfaction
	D.1.8 Level of pay
	D.1.9 Promoted positive attitudes to employment
	D.1.10 Gained non-competitive employment
	D.1.11 Gained job interview
	D.1.12 Other (Specify.) *List any other employment or vocational related outcomes*
	D.1.13 Unclear
D.2 What non-employment outcomes were measured by the study?	D.2.1 Not stated
	D.2.2 Stated *(List all outcomes.)*
	D.2.3 Unclear

APPENDIX 4.1 Summary tables

Table 4.1: Employment studies

	Grove and Seebohm (2005)	McCrum et al. (1997)	Purdon et al. (2006)	Thomas et al. (2003)
Population	All who entered the mental health strand had 'severe' mental health problems; they were using specialist mental health services. All who entered via the GP strand had 'common' mental health problems. The depression and anxiety service was for both, whoever needed it.	'Clients must have or have had a mental health problem and are currently experiencing difficulties with employment' (p 507). Neurosis 10.5%, bipolar disorders 5%, depressive disorders 31%, eating disorders 1%, other psychotic disorders 8%, [ersonality disorders 4%, schizophrenia 23.5%, adjustment reaction 13%, alcohol/drug dependence 4%	Clients needed to have been employed previously but off work sick for 6-26 weeks and not too close to retirement. Participants thought to be more than 50% likely to lose their job with no intervention were 'screened-in'. Approximately 30% of participants were off sick because of mental or behavioural disorders.	The majority of clients were referred from two GP practices and were invited to participate if either 'the JRT had completed its work with them or the JRT had worked with them for at least three months, there had been a job outcome (e.g. job termination, job retention or starting a new job) and they were continuing to receive ongoing JRT support' (p 10). 'Four clients had severe and enduring mental health problems, while nine had mild to moderate problems' (p 4).
Intervention	'The Project currently operates within the Walsall Primary Care Trust (PCT) boundary...The Project Advisers work alongside clinicians and offer an individual support service to clients, liaising with their employers, mediating and, where necessary, advocating on their behalf, to ensure the best possible outcome for the client. The Project Coordinator gives talks and disseminates information through the Chamber of Commerce to employers on workplace legislation, mental health in the workplace and sources of help. (p 49)	Job clinic which aimed to 'emphasise careful assessment and treatment planning processes, job tailoring, interventions to assist work adjustment and continuing support and involvement from the vocational rehabilitation team' (p 503). 'Following assessment an individual action plan is agreed. This always includes advice about and introductions to suitable work / training opportunities.	A workplace intervention group, a health intervention group, a combined health and workplace intervention, and a control group. Intervention was tailored to individuals. The most common intervention for those with mental and behavioural disorders was counselling and CBT. Some participants with mental and behavioural disorders will have received additional health intervention, such as physiotherapy and complementary therapy and workplace intervention such as ergonomic assessment and employer liaison / mediation.	Job retention team (JRT) 'JRT operates on a case management model, employing two case managers who offer a free service to employees currently experiencing mental health problems and at risk of losing their jobs as a result' (p 8). The client-focused interventions provided by the JRT included general supportive counselling, problems at work, job preferences, disclosure of mental health problems, time off work and its implications, return to work plans and support, mental health issues, ongoing support at work, family support, financial issues...

		In addition help can be offered with job applications, rehearsal for job interviews, training in work, job-related and interpersonal skills and of course support during their vocational experiences.' (p 508)		The work-focused interventions delivered by the JRT included advocating for the client within the workplace, assistance with legal issues, negotiating adjustments and return to work plans, facilitating natural supports, providing information and support to employers, keeping all parties informed (p 5).
Study type	One-group before and after study	15 month one-group before and after study	RCT with accompanying process evaluation run in six areas of the UK	One group before and after evaluation of an existing intervention. 'Semi-structured interviews were… used to explore the perspectives and experiences of four stakeholder groups: clients, their employers, their GPs and their JRT case managers' (p 5).
Classification of study on Maryland Scale and overall weight of evidence	Level 2; low WoE	Level 2; low WoE	Level 5; high WoE	Level 2; low WoE
Results	GP strand: Clients who have retained employment or returned to employment March - December 2004: 9/23 (39% or 41% of those employed when referred = 9/22) Clients still using the service or outcome unknown March - December 2004: 8/23 (35% or 32% of those employed when referred = 8/22) Clients known to have lost their employment or taken long term sick leave March – December 2004: 5 took long-term sick leave. (pp 32-33)	13/77 clients (17%) gained full-time employment (Table 9)	The study found almost identical return-to-work rates for all groups. The intervention also showed no effect on a range of other employment-related outcomes 'such as number of weeks in work, number of weeks out of work, receipt of IB, and pay' (p 5). In addition, 'for those with mental and behavioural disorders (59 per cent of the control group returned to work, compared to just 47 per cent of those in one of the intervention groups).' (p 5) (The small sample size means this should be treated cautiously.)	Retained job 54% (7) New job (of equal level) 23% (3) Terminated but temping 8% (1) Redundancy – not working 15% (2) (p.13) 'The interview data provided considerable support for the view that a job retention service is a valuable addition to the other services available to people experiencing mental health problems while in employment, particularly in view of the need for early intervention.

				'The overall response from clients, GPs, employers and case managers was that the outcomes for clients, both in relation to their job and their mental health, were improved as a result of the JRT intervention. The majority of employers who participated in the research also reported positive outcomes for themselves in terms of feeling better informed and more able to manage mental health issues. Similarly, in addition to positive outcomes for their patients, GPs valued the impact of the service in decreasing demands on their own time. (p 5)

Table 4.2: Mental health studies

	Simon et al. (2001)	Smith et al. (2002)	Wells et al. (2000)
Population	'Adults with [DSM-IIIR] major depression beginning antidepressant treatment' (p 153) who participated in a randomised controlled trial comparing desipramine, fluoxetine and imipramine and who completed the 12- month assessment.	Patients with 'a positive depression screen...i) >+1 of the 2 depression items from the DSM-IV and ii) >=5 depression symptoms in the prior 2 weeks on the Inventory to Diagnose Depression' (p 44) who were employed and <64 years old at baseline	'Patients were eligible if they were depressed and intended to use the clinic as a source of care for the next 12 months' (p 213).
Intervention	Antidepressant treatment (desipramine, fluoxetine or imipramine)	The Quality Enhancement by Strategic Teaming (QuEST) intervention. '…an innovative approach for integrating evidence-based depression treatment into routine primary care' (p 44) 'All enhanced care physicians and nurse care managers received training on the Agency for Healthcare Research and Quality guidelines...This training encouraged the primary care team to provide high quality depression treatment, but did not assign patients to specified treatments.' (p 44)	'2 QI [quality improvement] programs that involved institutional commitment to QI, training local experts and nurse specialists to provide clinician and patient education, identification of a pool of potentially depressed patients, and either nurses for medication follow-up or access to trained psychotherapists' (p 212) '2 similar interventions, one with enhanced resources for supporting medication management (QI meds) and the other with enhanced resources for providing psychotherapy for depression (QI therapy)' (p 213)
Study type	Secondary analysis of pooled data from eligible patients in three groups of a randomised controlled trial.	Cluster randomised controlled trial with one-year follow-up	Cluster randomised controlled trial
Classification of study on Maryland Scale and overall weight of evidence	Level 2: low WoE	Level 5; medium WoE	Level 5; medium WoE

Results	Figure 1 shows the 'proportion of patients reporting paid employment over time according to clinical status at the 12-month assessment' (p 157) at baseline, year 1 and year 2 Approximate readings from this graph show that the number of participants reporting paid employment was 226/290 (78%) at baseline, 240/290 (83%) at 12 months and 244/290 (84%) at 24 months. Probability of paid employment was 70.1% (SD4.3%) for those with persistent depression, 83.8% (SD2.2%) for those who improved and 85.4% (SD2.3%) for those who remitted (Table 2, p 158). Patients with greater clinical improvement were more likely to maintain paid employment (p = 0.007) and reported fewer days missed from work due to illness (p <0.001) (p 153)	'Multivariate analyses indicated that enhanced and usual care patients had identical subsequent employment outcomes at six months' 'Intervention significantly increased subsequent employment at one year by 10.1% (x2=4.42, p=0.04, 90% CI 2.8% to 17.4%) reduced unemployment by 5.8% (90% CI 1.6% to 10.0%) reduced underemployment by 4.3% (90% CI 1.2% to 7.4%)' (p 46) Adjusted rates of subsequent employment at one year were: Met subsequent employment criteria [remaining employed at or above baseline employment level at one year (i.e. employed fulltime at baseline, employed fulltime at follow-up or employed part-time at baseline employed part- or full-time at follow-up)] 92.1% (N=102) intervention/82% (N=117) usual care Unemployed at one year 5.9% (N=102) intervention/11.7% (N=117) usual care Underemployed at one year [shift from full-time status at baseline to part-time status at one year] 2% (N=102) intervention/6.3% (N=117) usual care (Figure 1, p 47)	'Among patients initially employed, 89.7% of intervention patients and 84.7% of control patients worked at 12 months (t=1.96, p=0.05). Among those initially not working, 16.4% of intervention patients and 11.4% of control patients were working at 6 months (p>.10) by 12 months, 17% to 18% of intervention and control patients started working' (p 217). '…intervention patients were significantly more likely to be working at the 12-month follow-up survey (65.7& in QI vs. 60.8% in usual care; 95% CI 0.01 to 0.09;p=0.03' (Schoenbaum et al., 2001, p 1329)

Appendix 4.2: Data-extraction tool

Section A: Administrative details

Use of these guidelines should be cited as: EPPI-Centre (2003) Review Guidelines for Extracting Data and Quality Assessing Primary Studies in Educational Research. Version 0.9.7. London: EPPI-Centre, Social Science Research Unit.

A.1 Name of the reviewer	A.1.1 Details
A.2 Date of the review	A.2.1 Details
A.3 Please enter the details of each paper which reports on this item/study and which is used to complete this data extraction. *(1): A paper can be a journal article, a book, or chapter in a book, or an unpublished report.* *(2): This section can be filled in using bibliographic citation information and keywords 1, 2, and 4 from the EPPI-Centre Core Keywording Strategy (V0.95)*	A.3.1 Paper (1) *Fill in a separate entry for further papers as required.*
	A.3.2 Unique Identifier:
	A.3.3 Authors:
	A.3.4 Title:
	A.3.5 Source *(Website owner)*:
	A.3.6 Status *(published or unpublished)*:
	A.3.7 Language:
	A.3.8 Identification of report:
	A.3.9 Paper (2)
	A.3.10 Unique Identifier:
	A.3.11 Authors:
	A.3.12 Title:
	A.3.13 Source:
	A.3.14 Status:
	A.3.15 Language:
	A.3.16 Identification of report:
A.4 Main paper. Please classify one of the above papers as the 'main' report of the study and enter its unique identifier here. *NB(1): When only one paper reports on the study, this will be the 'main' report.* *NB(2): In some cases the 'main' paper will be the one which provides the fullest or the latest report of the study. In other cases the decision about which is the 'main' report will have to be made on an arbitrary basis.*	A.4.1 Unique identifier:

A.5 Please enter the details of each paper which reports on this study but is NOT being used to complete this data extraction. *NB (1): A paper can be a journal article, a book, or chapter in a book, or an unpublished report.* *NB (2): This section can be filled in using bibliographic citation information and keywords 1, 2, and 4 from the EPPI-Centre Core Keywording Strategy (V0.95).*	A.5.1 Paper (1) *Fill in a separate entry for further papers as required.*
	A.5.2 Unique Identifier:
	A.5.3 Authors:
	A.5.4 Title:
	A.5.5 Source:
	A.5.6 Status:
	A.5.7 Language:
	A.5.8 Identification of report:
	A.5.9 Paper (2)
	A.5.10 Unique identifier:
	A.5.11 Authors:
	A.5.12 Title:
	A.5.13 Source:
	A.5.14 Status:
	A.5.15 Language
	A.5.16 Identification of report:
A.6 If the study has a broad focus and this data extraction focuses on just one component of the study, please specify this here.	A.6.1 Not applicable *(whole study is focus of data extraction)*
	A.6.2 Specific focus of this data extraction *(Please specify.)*

Section B: Study aim(s) and rationale

B.1 What are the broad aims of the study? *Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation. Other, more specific questions about the research questions and hypotheses are asked later.*	B.1.1 Explicitly stated *(Please specify.)*
	B.1.2 Implicit *(Please specify.)*
	B.1.3 Not stated/unclear *(Please specify.)*
B.2 Which of the following groups were consulted in working out the aims of the study, or issues to be addressed in the study? *Please write in authors' description if there is one. Elaborate if necessary, but indicate which aspects are reviewers' interpretation. Please cover details of how and why people were consulted and how they influenced the aims/issues to be addressed.*	B.2.1 Researchers (Please specify.)
	B.2.2 Funder *(Please specify.)*
	B.2.3 Head teacher/Senior management *(Please specify.)*
	B.2.4 Teaching staff *(Please specify.)*
	B.2.5 Non-teaching staff *(Please specify.)*
	B.2.6 Parents *(Please specify.)*
	B.2.7 Pupils/students *(Please specify.)*
	B.2.8 Governors *(Please specify.)*
	B.2.9 LEA/Government officials *(Please specify.)*
	B.2.10 Other education practitioner *(Please specify.)*
	B.2.11 Other *(Please specify.)*
	B.2.12 None / Not stated
	B.2.13 Coding is based on: authors' description
	B.2.14 Coding is based on: reviewers' inference
B.3 Do authors report how the study was funded?	B.3.1 Explicitly stated *(Please specify.)*
	B.3.2 Implicit *(Please specify.)*

	B.3.3 Not stated/unclear *(Please specify.)*
B.4 When was the study carried out? *If the authors give a year, or range of years, then put that in. If not, give a 'not later than' date by looking for a date of first submission to the journal, or for clues like the publication dates of other reports from the study.*	B.4.1 Explicitly stated *(Please specify.)*
	B.4.2 Implicit *(Please specify.)*
	B.4.3 Not stated/unclear *(Please specify.)*

Section C: Participants

C.1 What setting were patients recruited from?	C.1.1 Not stated
	C.1.2 Workplace
	C.1.3 Primary care
	C.1.4 Secondary care
	C.1.5 Inpatient care
	C.1.6 Social or community care *(Specify.)*
	C.1.7 Mixed setting *(Specify.)*
	C.1.8 Other *(Specify.)*
	C.1.9 Unclear
C.2 Ethnicity *Write in as described by the study (give percentages if appropriate)*	C.2.1 Not stated
	C.2.2 Stated *(Write in.)*
C.3 Employment status at baseline	C.3.1 Not stated
	C.3.2 Employed *If all participants were employed at the start of the study*
	C.3.3 Employed but currently on sick leave *If all participants were employed but currently on sick leave at the start of the study*
	C.3.4 Unemployed *If all participants were unemployed at the start of the study*
	C.3.5 Mixed employed and unemployed *Give percentages of participants who were employed or unemployed*
	C.3.6 Unclear
C.4 What was the total number of participants in the study (the actual sample)? (If more than one group is being compared, please give numbers for each group.) *If more than one group is being compared, please give numbers for each group.*	C.4.1 Not applicable (e.g. study of policies, documents, etc.)
	C.4.2 Explicitly stated *(Please specify.)*
	C.4.3 Implicit *(Please specify.)*
	C.4.4 Not stated/unclear *(Please specify.)*
C.5 What is the sex of the individuals in the actual sample? *Please give the numbers of the sample that fall within each of the given categories. If necessary refer to a page number in the report (e.g. for a useful table).* *If more than one group is being compared, please describe for each group.*	C.5.1 Not applicable (e.g. study of policies, documents, etc.)
	C.5.2 Single sex *(Please specify.)*
	C.5.3 Mixed sex *(Please specify.)*
	C.5.4 Not stated/unclear *(Please specify.)*
	C.5.5 Coding is based on: Authors' description
	C.5.6 Coding is based on: Reviewers' inference

C.6 What is the socio-economic status of the individuals within the actual sample? *If more than one group is being compared, please describe for each group.*	C.6.1 Not applicable (e.g. study of policies, documents, etc.)
	C.6.2 Explicitly stated *(Please specify.)*
	C.6.3 Implicit *(Please specify.)*
	C.6.4 Not stated/unclear *(Please specify.)*
C.7 Is there any other useful information about the study participants?	C.7.1 Not applicable (e.g. study of policies, documents, etc.)
	C.7.2 Explicitly stated *(Please specify numbers.)*
	C.7.3 Implicit *(Please specify.)*
	C.7.4 Not stated/unclear *(Please specify.)*
C.8 If the study involves studying samples prospectively over time, what proportion of the sample dropped out over the course of the study? *If the study involves more than one group, please give drop-out rates for each group separately. If necessary refer to a page number in the report (e.g. for a useful table).*	C.8.1 Not applicable (e.g. study of policies, documents, etc.)
	C.8.2 Not applicable (not following samples prospectively over time)
	C.8.3 Explicitly stated *(Please specify.)*
	C.8.4 Implicit *(Please specify.)*
	C.8.5 Not stated/unclear *(Please specify.)*
C.9 For studies that involve following samples prospectively over time, do the authors provide any information on whether and/or how those who dropped out of the study differ from those who remained in the study?	C.9.1 Not applicable (e.g. study of policies, documents, etc.)
	C.9.2 Not applicable (not following samples prospectively over time)
	C.9.3 Not applicable (no dropouts)
	C.9.4 Yes *(Please specify.)*
	C.9.5 No
C.10 If the study involves following samples prospectively over time, do authors provide baseline values of key variables such as those being used as outcomes and relevant socio-demographic variables?	C.10.1 Not applicable (e.g. study of policies, documents, etc.)
	C.10.2 Not applicable (not following samples prospectively over time)
	C.10.3 Yes *(Please specify.)*
	C.10.4 No

Section D: Diagnosis/es of mental health problems

D.1 What were the inclusion criteria of the study? *Main focus of this question is the diagnostic criteria but other criteria should be listed as well* *N.B. This question will be used in the tabular analysis*	D.1.1 Not stated
	D.1.2 Stated *(Write in as stated by the study.)* *Mention any exclusion criteria if relevant*
	D.1.3 Unclear

D.2 What mental health problems were patients diagnosed with? (Tick all that apply and specify percentages) *Tick a condition if particular mental health problems are stated by the study, if no particular mental health problems are stated tick Not stated*	D.2.1 Not stated
	D.2.2 Adult ADHD *Attention Deficit Hyperactive Disorder*
	D.2.3 Ante-natal or post-natal mental health problems *Includes post-natal depression, ante-natal depression* *Excludes puerperal psychosis*
	D.2.4 Anxiety disorders *Includes general anxiety disorder*
	D.2.5 Bipolar disorders *Includes manic-depressive disorders, mania*
	D.2.6 Body dysmorphic disorders
	D.2.7 Cognitive disorders *Includes dementia, Alzheimer's, Lewy's body* *Excludes any brain damage or injury, learning disabilties*
	D.2.8 Depressive disorders *Includes depression, affective disorder, dysthymia, atypical depression* *Does not include psychotic depression*
	D.2.9 Eating disorders *Includes anorexia, bullimia*
	D.2.10 Obsessive-compulsive disorders *Includes obsessive disorders, compulsive disorders*
	D.2.11 Other psychotic disorders *Excludes schizophrenia, psychotic depression*
	D.2.12 Panic disorders
	D.2.13 Personality disorders
	D.2.14 Phobias *Includes agoraphobia, social phobia*
	D.2.15 Post-traumatic stress disorder
	D.2.16 Psychotic depression *Also known as depression with psychotic features*
	D.2.17 Schizophrenia
	D.2.18 Sexual disorders
	D.2.19 Sleep disorders *Includes insomnia*
	D.2.20 Stress
	D.2.21 Other *(Specify.)*
	D.2.22 Unclear *(Write in as described by the study.)*

D.3 What type of mental health problem(s) were the majority of patients diagnosed with? *Choose based on study's description or because of the particular mental health problems included.*	D.3.1 Not stated
	D.3.2 Common mental health problems *If all participants had common mental health problems* *Includes depression, anxiety disorders, panic disorder, agoraphobia, phobias, obsessive-compulsive disorder, insomnia/sleep disorders, dysthymia, stress, eating disorders, body dysmorphic disorders, adult ADHD, post-traumatic stress disorder, post-natal depression, cyclothymia*
	D.3.3 Severe mental health problems *Includes schizophrenia, other psychotic disorders, psychotic depression, bi-polar disorder, dementia/ cognitive disorders, personality disorders, manic disorders, adjustment disorders, sexual disorders*
	D.3.4 Mixed mental health problems *If any patients had severe mental health problems*
	D.3.5 Unclear

Section E: Methods

E.1 What is the method used in the study? *Please use codes F3.18 or F.3.19 to indicate whether your answer is based on author report or your interpretation*	E.1.1 Randomized controlled trial
	E.1.2 Non-randomized controlled trial
	E.1.3 One group pre-/post-test
	E.1.4 One group post-test only
	E.1.5 Interrupted Time Series*
	E.1.6 Cohort studies
	E.1.7 Case-control studies
	E.1.8 Surveys
	E.1.9 Views studies
	E.1.10 Ethnography
	E.1.11 Systematic review
	E.1.12 Other review (non-systematic)
	E.1.13 Case study
	E.1.14 Document study
	E.1.15 Action research
	E.1.16 Methodology study
	E.1.17 Secondary analysis
	E.1.18 Coding is based on: Authors' description
	E.1.19 Coding is based on: Reviewers' inference

E.2 If comparisons are being made between two or more groups, please specify the basis of any divisions made for making these comparisons. *Please give further details where possible.*	E.2.1 Not applicable (not more than one group)
	E.2.2 Prospective allocation into more than one group *(e.g. allocation to different interventions, or allocation to intervention and control groups)*
	E.2.3 No prospective allocation but use of pre-existing differences to create comparison groups *(e.g. receiving different interventions, or characterised by different levels of a variable such as social class)*
	E.2.4 Other *(Please specify.)*
	E.2.5 Not stated/unclear *(please specify)*
E.3 How do the groups differ?	E.3.1 Not applicable (not more than one group)
	E.3.2 Explicitly stated *(Please specify.)*
	E.3.3 Implicit *(Please specify.)*
	E.3.4 Not stated/unclear *(Please specify.)*
E.4 Number of groups *For instance, in studies in which comparisons are made between groups, this may be the number of groups into which the dataset is divided for analysis (e.g. social class, or form size), or the number of groups allocated to, or receiving, an intervention.*	E.4.1 Not applicable (not more than one group)
	E.4.2 One
	E.4.3 Two
	E.4.4 Three
	E.4.5 Four or more *(Please specify.)*
	E.4.6 Other/unclear *(Please specify.)*
E.5 If prospective allocation into more than one group, what was the unit of allocation? *Please indicate all that apply and give further details where possible.*	E.5.1 Not applicable (not more than one group)
	E.5.2 Not applicable (no prospective allocation)
	E.5.3 Individuals
	E.5.4 Groupings or clusters of individuals (details) *(e.g. classes of schools)*
	E.5.5 Other (e.g. individuals or groups acting as their own controls) *(Please specify.)*
	E.5.6 Not stated/unclear *(Please specify.)*
E.6 Study design summary *In addition to answering the questions in this section, describe the study design in your own words. You may want to draw upon and elaborate the answers you have already given.*	E.6.1 Details *Specify whether the study was a randomised controlled trial, non-randomised trial, cohort study, one group before-after study* *You could also mention how many groups were studied, whether it was carried out retrospectively or prospectively, whether it was a cluster randomised trial, or any other detail the study mentions about it's design* *N.B. This questions will be used in the tabular analysis*
E.7 Planned sample size *If more than one group, please give details for each group separately.*	E.7.1 Not applicable *(please specify)*
	E.7.2 Explicitly stated *(Please specify.)*
	E.7.3 Not stated/unclear *(Please specify.)*
E.8 Which methods are used to recruit people into the study ? *e.g. letters of invitation, telephone contact, face-to-face contact.*	E.8.1 Not applicable *(Please specify.)*
	E.8.2 Explicitly stated *(Please specify.)*
	E.8.3 Implicit *(Please specify.)*
	E.8.4 Not stated/unclear *(Please specify.)*

E.9 Was consent sought? *Please comment on the quality of consent if relevant*	E.9.1 Not applicable *(Please specify.)*
	E.9.2 Participant consent sought
	E.9.3 Parental consent sought
	E.9.4 Other consent sought
	E.9.5 Consent not sought
	E.9.6 Not stated/unclear *(Please specify.)*
E.10 Details of data-collection methods or tool(s). *Please provide details including names for all tools used to collect data, and examples of any questions/items given. Also, please state whether source is cited in the report.*	E.10.1 Explicitly stated *(Please specify.)*
	E.10.2 Implicit *(Please specify.)*
	E.10.3 Not stated/unclear *(Please specify.)*
E.11 Do the authors describe any ways they addressed the reliability of their data-collection tools/methods? *(e.g. test - re-test methods)* *(Where more than one tool was employed, please provide details for each.)*	E.11.1 Details *(e.g. Did they look at inter-rater reliability? Or re-test a sample of results to see if they got the same answers?)*
E.12 Do the authors describe any ways they have addressed the validity of their data collection tools/methods? *e.g. mention previous validation of tools, published version of tools, involvement of target population in development of tools.* *(Where more than one tool was employed, please provide details for each.)*	E.12.1 Details
E.13 Was there concealment of study allocation or other key factors from those carrying out measurement of outcome – if relevant? *Not applicable (e.g. analysis of existing data, qualitative study)* *No (e.g. assessment of reading progress for dyslexic pupils done by teacher who provided intervention)* *Yes - e.g. researcher assessing pupil knowledge of drugs - unaware of pupil allocation.*	E.13.1 Not applicable *(Please say why.)*
	E.13.2 Yes *(Please specify.)*
	E.13.3 No *(Please specify.)*
E.14 Which methods were used to analyse the data? *Please give details eg. for in-depth interviews, how were the data handled? Details of statistical analysis can be given next.*	E.14.1 Explicitly stated *(Please specify.)*
	E.14.2 Implicit *(Please specify.)*
	E.14.3 Not stated/unclear *(Please specify.)*
E.15 For evaluation studies that use prospective allocation, please specify the basis on which data analysis was carried out. *'Intention to intervene' means that data were analysed on the basis of the original number of participants as recruited into the different groups.* *'Intervention received' means data were analysed on the basis of the number of participants actually receiving the intervention.*	E.15.1 Not applicable (not an evaluation study with prospective allocation)
	E.15.2 'Intention to intervene'
	E.15.3 'Intervention received'
	E.15.4 Not stated/unclear (Please specify.)
E.16 Please comment on any other analytic or statistical issues, if relevant.	E.16.1 Details

Section F: Intervention

F.1 What intervention was used in the study? *Give a detailed description of the intervention beginning with its formal name if appropriate*	F.1.1 Not stated
	F.1.2 Stated (Write in as described by the study.)
	F.1.3 Unclear
F.2 What type of intervention was used in the study?	F.2.1 Not stated
	F.2.2 Non-vocational intervention *Includes psychosocial interventions, skills training, work readiness training, medication and symptom management*
	F.2.3 Sheltered employment *Projects, paid or unpaid, in which participants are brought into contact mainly with other people with MH problems and staff members. Includes Clubhouse programmes, workshops, work crew/enclaves, social firms*
	F.2.4 Training and supported education *Training designed to lead directly to competitive employment*
	F.2.5 Supported employment *Includes Individual Placement and Support (IPS), User Employment (SE)*
	F.2.6 Other (Specify.)
	F.2.7 Unclear
F.3 What was the focus of the intervention?	F.3.1 Not stated
	F.3.2 Mental health intervention *An intervention focussed on people with mental health problems whose primary goal is clinical efficacy*
	F.3.3 Mental health intervention with employment component *An intervention focussed on people with mental health problem which incorporates components aimed at improving employment outcomes as well as clinical efficacy*
	F.3.4 Employment intervention *An intervention which is focussed on improving employment outcomes and could be applied to populations other than those with mental health problems*
	F.3.5 Other *(Specify.)*
	F.3.6 Unclear

F.4 What was the aim of the intervention?	F.4.1 Not stated
	F.4.2 Non-vocational *(Specify aim.)*
	F.4.3 Full-time employment
	F.4.4 Part-time employment
	F.4.5 Preparation for work *interviewing techniques, job applications, programmes that aim to do this*
	F.4.6 Supplemented work *(e.g linked to benefits such as working while on benefits, supported while working)*
	F.4.7 Apprenticeship
	F.4.8 Other *(Specify.)*
	F.4.9 Unclear
F.5 Which services/agencies are part of the service delivery?	F.5.1 Not stated
	F.5.2 Health services
	F.5.3 Social services
	F.5.4 Employment services
	F.5.5 Voluntary/community services
	F.5.6 Other *(Specify.)*
	F.5.7 Unclear
F.6 What are the characteristics of the service providers/agencies?	F.6.1 Not stated
	F.6.2 State/Government/Public service
	F.6.3 Private company
	F.6.4 Not for profit organisation *(e.g. Charity, NGO and/or private company but uses paid staff to provide services)*
	F.6.5 Voluntary organisation *Service is provided by a volunteer*
F.7 Who provided the service(s)?	F.7.1 Not stated
	F.7.2 Employment worker
	F.7.3 Health care worker *(i.e. GP, nurse, psychiatrist, occupational therapist)*
	F.7.4 Community/outreach worker
	F.7.5 Counsellor/therapist *Doesn't include psychiatrists or psychologists*
	F.7.6 Social worker
	F.7.7 Teacher/Education support worker
	F.7.8 Psychologist
	F.7.9 Other *(Specify.)*
	F.7.10 Unclear

F.8 Please describe in more detail the specific phenomena, factors, services or interventions with which the study is concerned. *The questions so far have asked about the aims of the study and any named programme under study, but this may not fuly capture what the study is about. Please state or clarify here.*	F.8.1 Details
F.9 Intervention site *Mark as many as appropriate*	F.9.1 Not stated
	F.9.2 Unclear
	F.9.3 Community *(Specify.)*
	F.9.4 Correctional institution *(Please specify.)*
	F.9.5 Day care centre
	F.9.6 Educational institution (not specified)
	F.9.7 Educational institution - pre-school
	F.9.8 Educational institution - primary education
	F.9.9 Educational institution - secondary education
	F.9.10 Educational Institution - tertiary education
	F.9.11 Family centre
	F.9.12 Health care unit (not specified)
	F.9.13 Health care unit - primary care
	F.9.14 Health care unit - hospital
	F.9.15 Health care unit - specialist clinic
	F.9.16 Home
	F.9.17 Hospice
	F.9.18 Outreach
	F.9.19 Residential care
	F.9.20 Workplace (Please specify.)
	F.9.21 Other (Specify.)
F.10 Length of the intervention *Choose the relevant category and write in the exact intervention length if specified in the report. If the intervention is ongoing, tick 'other' and indicate the length of the intervention as the length of the outcome assessment period.*	F.10.1 Not Stated
	F.10.2 Not applicable
	F.10.3 Unclear
	F.10.4 One day or less
	F.10.5 1 day to 1 week
	F.10.6 8 days to 1 month
	F.10.7 More than 1 month to 3 months
	F.10.8 More than 3 months to 6 months
	F.10.9 More than 6 months to 1 year
	F.10.10 More than 1 year to 2 years
	F.10.11 More than 2 years to 3 years
	F.10.12 More than 3 years to 5 years
	F.10.13 more than 5 years
	F.10.14 Other *(Please specify.)*

F.11 Medium of intervention *Tick as many as appropriate*	F.11.1 Not stated
	F.11.2 Unclear
	F.11.3 Curriculum materials
	F.11.4 Discussion group session(s)
	F.11.5 Incentives
	F.11.6 Mass media *(Please specify.)*
	F.11.7 One to one communication
	F.11.8 Outreach
	F.11.9 Practising practical skill
	F.11.10 Presentation / lecture
	F.11.11 Printed materials / posters
	F.11.12 Role play
	F.11.13 Theatre/film/video/slides *(Please specify.)*
	F.11.14 Other *(Specify.)*
F.12 Person(s) providing the intervention *Tick as many as appropriate*	F.12.1 Not stated
	F.12.2 Unclear
	F.12.3 Not relevant (e.g. mass media)
	F.12.4 Community
	F.12.6 Counsellor
	F.12.7 Health professional *(Specify.)*
	F.12.8 Health promotion/education practitioner
	F.12.9 Lay therapist
	F.12.10 Parent
	F.12.11 Peer *(Specify.)*
	F.12.12 Psychologist
	F.12.13 Researcher
	F.12.14 Residential worker
	F.12.15 Social worker
	F.12.16 Teacher/lecturer
	F.12.17 Other *(Specify.)*

Section G: Outcome

G.1 What employment related outcomes were measured by the study?	G.1.1 Not stated
	G.1.2 Gained competitive employment
	G.1.3 Retained competitive employment
	G.1.4 Held employment for up to 6 months
	G.1.5 Held employment for 6 months or more
	G.1.6 Returned to work from sick leave
	G.1.7 Job satisfaction
	G.1.8 Level of pay
	G.1.9 Promoted positive attitudes to employment
	G.1.10 Gained non-competitive employment
	G.1.11 Gained job interview
	G.1.12 Other (Specify.) *List any other employment or vocational related outcomes.*
	G.1.13 Unclear *Employment outcomes are mentioned but it is not possible to tell from the abstract whether the study measured change in employment status*
G.2 What non-employment outcomes were measured by the study?	G.2.1 Not stated
	G.2.2 Stated *(List all outcomes.)*
	G.2.3 Unclear
G.3 What are the results of the study as reported by authors? *Please give details and refer to page numbers in the report(s) of the study, where necessary (e.g. for key tables).*	G.3.1 Details *Only give the results for a change in employment status (i.e how many participants were employed/unemployed at endpoint)* *You may give sub-group analyses if these were carried out.* *You may include other results if they are particularly significant (e.g. adverse effects)*
G.4 Are there any obvious shortcomings in the reporting of the data?	G.4.1 Yes *(Please specify.)*
	G.4.2 No
G.5 Do the authors report on all variables they aimed to study as specified in their aims/research questions? *This excludes variables just used to describe the sample.*	G.5.1 Yes *(Please specify.)*
	G.5.2 No
G.6 What do the author(s) conclude about the findings of the study? *Please give details and refer to page numbers in the report of the study, where necessary.*	G.6.1 Details
G.7 Timing(s) of pre-intervention measurements	G.7.1 Not stated
	G.7.2 Unclear *(Please specify.)*
	G.7.3 Stated *(Please write in.)*
	G.7.4 Not relevant

G.8 Timing(s) of post-intervention measurements *Choose one of the categories and indicate the exact timings if specified.* *NB. 'Immediately after the intervention' is at the bottom of the list!*	G.8.1 Not stated
	G.8.2 Unclear
	G.8.3 Up to 1 month
	G.8.4 Up to 3 months
	G.8.5 3 to 6 months
	G.8.6 6 to 12 months
	G.8.7 1 to 2 years
	G.8.8 2 to 3 years
	G.8.9 3 to 5 years
	G.8.10 More than 5 years
	G.8.11 None
	G.8.12 Immediately after intervention
G.9 Number of outcome assessment periods *ie how many times were data on outcome variables collected after the intervention?*	G.9.1 Not stated
	G.9.2 Unclear
	G.9.3 One
	G.9.4 Two
	G.9.5 Three
	G.9.6 Four or more *(Specify.)*
G.10 Unit of data analysis *Were the results reported according to the unit of allocation? e.g. if individual people were allocated to different groups, results from individuals should be analysed and reported; whereas if schools were allocated to different groups, results from each school should be analysed and reported.*	G.10.1 Not relevant (study not a trial)
	G.10.2 Not stated
	G.10.3 Unclear *(Please specify.)*
	G.10.4 Same as unit of allocation
	G.10.5 Different from unit of allocation *(Please specify.)*
G.11 What were the aims of the evaluation? Tick ONE ONLY	G.11.1 To compare different interventions
	G.11.2 To evaluate a single intervention
	G.11.3 To compare different intensities/levels of an intervention
	G.11.4 To evaluate the generalisability of an intervention
	G.11.5 Other *(Specify.)*

Section H: Quality of the study - Reporting

H.1 Do the authors avoid selective reporting bias? (e.g. Do they report on all variables they aimed to study as specified in their aims/research questions?)	H.1.1 Yes *(Please specify.)*
	H.1.2 No *(Please specify.)*

Section I: Quality of the study - Methods and data

I.1 Are there ethical concerns about the way the study was done? *Consider consent, funding, privacy, etc.*	I.1.1 Yes, some concerns *(Please specify.)*
	I.1.2 No concerns
I.2 Were students and/or parents appropriately involved in the design or conduct of the study?	I.2.1 Yes, a lot *(Please specify.)*
	I.2.2 Yes, a little *(Please specify.)*
	I.2.3 No *(Please specify.)*
I.3 What is the quality of the study according to the Maryland Scale?	I.3.1 Details
I.4 Weight of evidence - A: Taking account of all quality assessment issues, can the study findings be trusted in answering the study question(s)? *In some studies it is difficult to distinguish between the findings of the study and the conclusions. In those cases, please code the trustworthiness of this combined results/ conclusion.* *** Please remember to complete the weight of evidence questions B-D which are in your review specific data extraction guidelines. ***	I.4.1 High trustworthiness *(Please specify.)*
	I.4.2 Medium trustworthiness *(Please specify.)*
	I.4.3 Low trustworthiness *(Please specify.)*
I.5 Have sufficient attempts been made to justify the conclusions drawn from the findings so that the conclusions are trustworthy?	I.5.1 Not applicable (results and conclusions inseparable)
	I.5.2 High trustworthiness
	I.5.3 Medium trustworthiness
	I.5.4 Low trustworthiness
I.6 In light of the above, do the reviewers differ from the authors over the findings or conclusions of the study? *Please state what any difference is.*	I.6.1 Not applicable (no difference in conclusions)
	I.6.2 Yes *(Please specify.)*
I.7 Weight of evidence B: Appropriateness of research design and analysis for addressing the question, or sub-questions, of this specific systematic review. *Please specify basis for this judgement.*	I.7.1 High
	I.7.2 Medium
	I.7.3 Low
I.8 Weight of evidence C: Relevance of particular focus of the study (including conceptual focus, context, sample and measures) for addressing the question or sub-questions of this specific systematic review. *Please specify basis for this judgement.*	I.8.1 High
	I.8.2 Medium
	I.8.3 Low
I.9 Weight of evidence D: Taking into account quality of execution (Question M.11), appropriateness of design and relevance of focus, what is the overall weight of evidence this study provides to answer the question of this specific systematic review? *Please specify basis for this judgement.*	I.9.1 High
	I.9.2 Medium
	I.9.3 Low

The results of this systematic review are available in four formats:

SUMMARY	Explains the purpose of the review and the main messages from the research evidence
REPORT	Describes the background and the findings of the review(s) but without full technical details of the methods used
TECHNICAL REPORT	**Includes the background, main findings, and full technical details of the review**
DATABASES	Access to codings describing each research study included in the review

These can be downloaded or accessed at **http://eppi.ioe.ac.uk/reel/**

First produced in 2007 by:

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ISBN: 978-0-9556026-4-1

The **Evidence for Policy and Practice Information and Co-ordinating Centre** (EPPI-Centre) is part of the Social Science Research Unit (SSRU), Institute of Education, University of London.

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