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Research Reviews on prevalence, detection and interventions in parental mental health and child welfare: Summary report

Professor Gillian Parker, Dr Bryony Beresford, Ms Susan Clarke,
Ms Kate Gridley, Ms Rachel Pitman, Ms Gemma Spiers
Social Policy Research Unit

Kate Light
Centre for Reviews and Dissemination

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Sally Pulleyn produced this summary report from our electronic files with her usual care and attention to detail, for which we are very grateful.

Finally, we wish to acknowledge the forbearance and patience of our colleagues in SPRU, who have dealt with our virtual 'absence' from other work as we have worked our way through a task that was both larger and more complex than could have been imagined at the outset.

Abbreviations used in text

CBT	Cognitive Behavioural Therapy
EPOC	Effective Practice and Organisation of Care Cochrane Collaboration
EPPI	Evidence for Policy and Practice Information Coordinating Centre
MHPs	Mental health problems
NICE	National Institute for Health and Clinical Excellence
PMHPs	Parents with mental health problems/parental mental health problems
RCT	Randomised controlled trial
SCIE	Social Care Institute for Excellence
SEU	Social Exclusion Unit
SPRU	Social Policy Research Unit

Potential conflicts of interest

None known for review team.

Both specialist advisers have written in this area.

Background

The Social Care Institute for Excellence (SCIE) is carrying out a project that aims to publish practice guidelines for local authority and health services about how they should plan, deliver and evaluate services to support parents with mental health problems (PMHPs) and their children. This project arose from a Social Exclusion Unit report (SEU 2004) that highlighted the need for evidence to inform such guidelines. The National Institute for Health and Clinical Excellence (NICE), the National Collaborating Centre for Mental Health, and SCIE's Parental Mental Health and Child Welfare Network are partners in this project.

SCIE asked the University of York Social Policy Research Unit (SPRU) to search for and review evidence to underpin the practice guidelines, by carrying out the work (systematic reviews) summarised here.

Research shows a strong link between parental mental health problems (MHPs) and outcomes for parents, their children and other members of their family. However, many factors may influence the relationship between PMHPs and better or worse outcomes. These factors include the type of MHP, the parents' or children's age, sex, additional health problems, ethnicity, marital status, social exclusion, discrimination, coping and parenting skills.

There has been much research in recent years about the link between these factors and the impact of parental MHPs. By contrast, there has been less research about how many PMHPs there are, or about how they and their families can best be identified and supported. The reviews described here have tackled these issues by trying to identify the most relevant research and summarising its findings.

Aims and objectives

The overall objectives of the work were to review and present research evidence to underpin the practice guidelines; to identify gaps in knowledge; and to judge how strong the existing evidence was both in general and specifically in relation to marginalised families and those from black and minority ethnic communities.

The reviews asked four questions, and identified and summarised evidence for each separately. The four questions were:

1. What do we know about the numbers and types of parental mental health problems in the UK?
2. What systems, tools and opportunities are there in services for children, adults and families, both the UK and elsewhere, for detecting parental mental health problems? Who uses these, where and how?

3. How accessible and acceptable are services or interventions that support children, families, parenting or couple relationships when a parent has a mental health problem, in both the UK and elsewhere?
4. What outcomes do these types of services or interventions have for parents, children, families, parenting or couple relationships?

User/stakeholder involvement

As described earlier, these reviews contributed to a wider SCIE project on parental mental health problems. This project had its own advisory structure, with members that included service users and carers, as well as practitioners and senior managers from a range of services. SCIE asked the York team to use this group for advice, rather than establish an additional advisory group.

The York team also used two specialist advisers for the reviews. The specialist advisor for questions one and two was Professor Howard Meltzer of the University of Leicester. He is a researcher in the field of large-scale, surveys and has particular experience in research about the numbers and types of MHPs in the population. The specialist advisor for questions three and four was Dr Harriet Clarke of the University of Birmingham. She is a researcher in the field of PMHPs, particularly in relation to parenting, as well as having relevant personal experience

Methods

The methods of the review followed a protocol agreed between SCIE and the University of York team after SCIE commissioned York to carry out the work. The protocols can be viewed at http://php.york.ac.uk/inst/spru/research/summs/pmh.php.

Searching

The reviews used an existing ‘systematic map’ of identified literature on parental mental health problems, created by SCIE in partnership with the Evidence for Policy and Practice Co-ordinating Centre (EPPI) some time before the reviews reported here started – see http://eppi.ioe.ac.uk/webdatabases/Intro.aspx?ID=9.

The York team also carried our further searches for relevant literature. This included rerunning the searches carried out to identify material for the systematic map, to bring them up to date, and carrying out completely new searches to identify research about the numbers and types of PMHPs in the UK. Full details of all the searches carried out, the places searched, and the results of the searches are in the two technical reports on the reviews. These are available at http://php.york.ac.uk/inst/spru/research/summs/pmh.php

The York team also found additional, potentially relevant publications as the review progressed, usually from the reference lists at the end of the publications that were included in the review. These were not reviewed but are listed in the technical reports.

Screening and selection

The literature identified from the systematic map and from the extra searches went through two stages before it was reviewed and summarised. First, we screened the titles and, when available, summaries of the publications. For this stage, we used inclusion and exclusion criteria, developed before the review started, to screen the material for its relevance to the reviews as a whole. The full protocols and the technical reports list the criteria used.

We then obtained the publications that passed through the first stage and read them in full, to decide whether they should be included in the review. For this stage, we used four different sets of inclusion and exclusion criteria, developed specially to identify material relevant to each of the four questions. Members of the team worked separately and then together in pairs to reach agreement about the publications screened and selected.

Figure 1 shows the process for screening and selection and Figure 2 shows the outcome. Five thousand, seven hundred and five publications were identified (728 from the systematic map and 4,977 from the updated and new searches) and screened for relevance. Of these, we screened out 4,857 at stage 1. We then read 848 publications in full and selected 171 for review. In several cases, the results of single studies were reported in more than one publication. Table 1 shows the numbers of studies and publications we selected for data extraction and review, for each question. The full references for all included studies are on pp 25-40.

Data extraction

Information from each publication that was relevant to a specific question was typed into Excel spreadsheets. In all cases, single members of the team extracted the data from the publications into the spreadsheets and then another member checked the data again. Appendix 1 lists the information extracted for each question.

Judging the quality of the publications

The reviews covered very different types of questions, and included very different types of studies, with a wide range of ways of doing the research. We therefore had to use different ways of assessing the quality of the material included in the review. There is no agreed way of assessing quality for studies of the sort reviewed for question one, so we created our own, based on those developed by others for similar types of research. For question two, we used parts of a framework developed to judge the quality of surveys (see Petticrew and Roberts, 2006). For question three, where all the material included was qualitative, we did not formally assess quality. Finally, we used two different approaches for question four. For publications that reported randomised controlled trials (RCTs) we used two well-known methods of assessing quality of these types of studies (Jadad, 1998; EPOC, 2002). For publications that reported studies that were not RCTs, we used the Downs and Black (1998) quality checklist.

We did not use quality assessment to exclude studies from the review but to allow us to give proper weight to their findings when we summarised the results.

Figure 1: Screening and selection

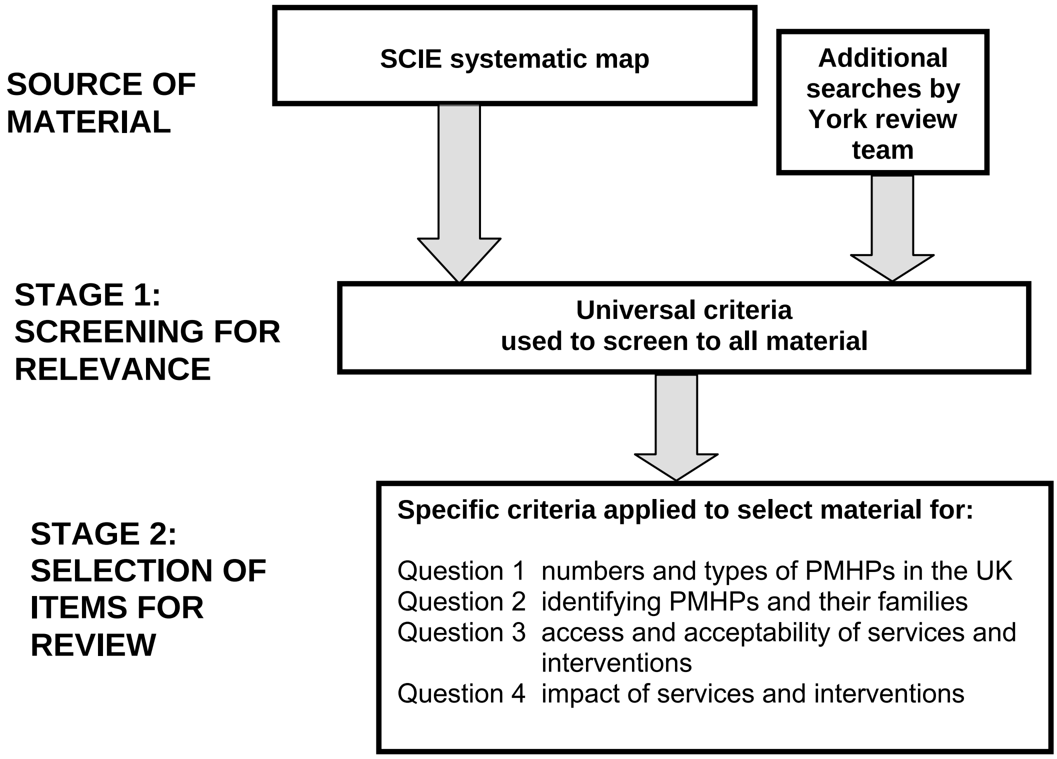
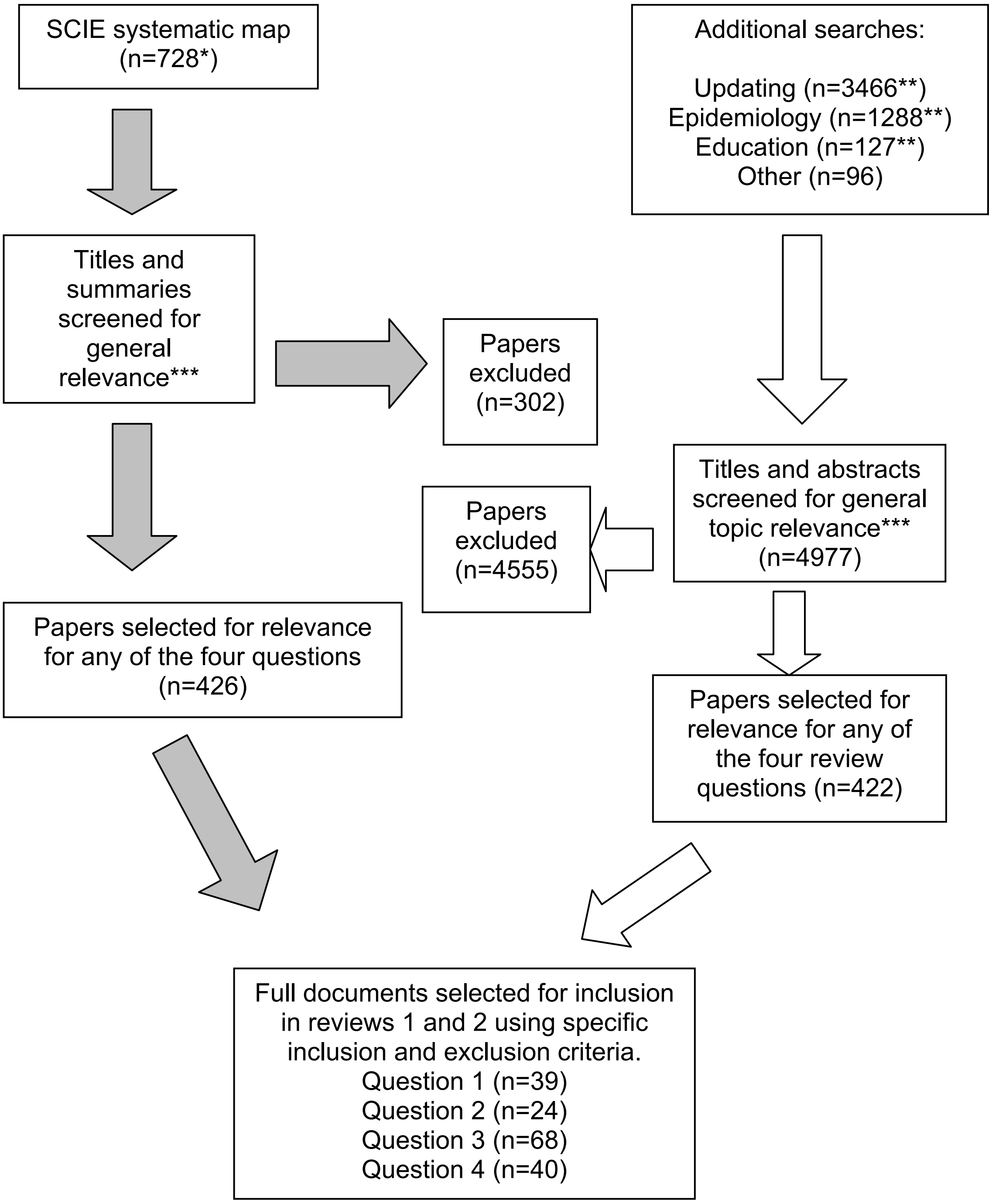


Figure 2: Filtering of publications from searching to selection to review



* The number of papers in the systematic map to which the York team had access.
** After removing duplicate publications.
*** All screened for relevance for **all four** review questions.

Table 1: Number of studies and publications selected for data extraction and review

Question	Number of studies*	Number of publications*
One	31	39
Two	23	24
Three	61	68
Four	12 RCTs 25 non-RCTs	13 27
Total	152	171

* Some studies/papers were included for more than one question.

Summarising the evidence

We analysed and summarised evidence for all four questions using a 'narrative synthesis' approach. Narrative synthesis is a way of reviewing and combining findings from different studies, and relies mainly on the use of words and text (rather than numbers) to summarise and explain the findings. It can involve using statistics and numbers as well, but its main feature is using a written approach to combining findings, in order to 'tell the story' from the included studies (Popay et al, 2006: 5).

For some studies, we carried out **additional** quantitative analysis, mostly to explore findings in a way that allowed us to see results for PMHPs separately from other groups.

Findings

Quality of included studies

The large scale, representative sample surveys of all adults identified for question one were mainly of high quality. Studies of populations of people with MHPs and other sub-groups (for example, of people from black and minority ethnic communities) were usually of poorer quality. For question two, few of the studies reviewed were of high quality, although several were feasibility rather than full studies. For question three, there was no formal assessment of quality. For the RCTs selected for question four, quality of the reporting of study details was mainly poor, and was even poorer for the non-RCTs. Full details about the quality of the studies included are in the technical reports.

Types of studies included

Tables A1 to A5 in Appendix 2 give brief details of the studies included for the four questions in the reviews.

Question one included only material about the UK, as the review was not designed to identify information about the numbers and proportions of PMHPs in other countries. For questions two, three and four, however, we looked for international as well as UK-based evidence. For question two, 13 out of 22 studies were from the USA, six the UK, two Australia, and one each from Canada and Greece. For question three, 25 of the 61 studies were from the USA, 20 from the UK, 10 from Australia, and the rest from Canada (1), Denmark (1), Greece (1) and various countries of Europe, including England (1). For question four, eight of the 12 RCTs and 16 of the 25 non-RCT studies had been carried out in the USA. Only one RCT and five non-RCT studies were from the UK.

Overall, then, existing evidence about how to identify and support PMHPs and their families is predominantly USA-based. This raises a question about how relevant this evidence might be for the UK, with its very different health and social services systems.

Studies included in question one fell into three main groups and nine sub-groups:

1. General population studies
   - Nationally representative sample surveys
   - Longitudinal and cohort studies
   - Other population studies.

2. Studies of sub-populations of people with MHPs
   - Acute hospital populations
   - Community populations
   - Acute hospital and community populations.

3. Studies of other sub-populations
   - Homeless families
   - Black and minority ethnic communities
   - Other sub-populations.

Studies included in question two fell into four main groups:

- Studies of professionals’ reported experiences of identifying PMHPs.
- Studies that assessed how and why PMHPs are identified in practice.
- Studies of methods or systems for identifying PMHPs.
- Studies reporting qualitative material about parents’ or children’s views about identifying PMHPs.

For question three, studies fell into two main groups:

- Studies identifying factors associated with access to services by PMHPs and/or their families.
- Studies identifying factors associated with PMHPs’ engagement with and use of services.

For question four, we analysed the RCT studies and the non-RCT studies separately, sometimes dividing them into smaller groups, where this was helpful for summarising evidence.

Results

The technical reports report full details of the ways in which we combined and summarised the study findings are in the technical reports and include detailed tables of the data we used to come to our conclusions. Here, we summarise the main findings only, basing our conclusions on the best of the evidence available. **Readers should not use these summaries of findings to develop practice or services without also reading the full technical reports.**

Question one: What do we know about the numbers and types of parental mental health problems in the UK?

Based on findings from high-quality, large, national surveys of psychiatric conditions, it is probable that, in a population of non-elderly adults, at any given time, around 9 to 10 per cent of women and 5 to 6 per cent of men in Great Britain will be PMHPs. Within this, most will have ‘common mental disorders’ such as depression or anxiety. A very small proportion (0.5 per cent or fewer) will have any kind of psychotic disorder such as schizophrenia. However, the symptoms of MHPs tend to come and go over time, so it is likely that a higher proportion of people will, in their lifetime, experience being a parent whilst also having a MHP. These surveys were of adults so they will have missed any young people under the age of 16 who are PMHPs.

Again based on a high-quality, large, national survey, this time of children aged 5 to 15, it is possible that as many as one in four such children have mothers who would be classed as at risk for common mental health problems.

The national surveys show that a higher proportion of women than men are PMHPs, and that there are more MHPs among mothers than among fathers. However, there are large differences between lone parents and those who are in couples. Both lone mothers and lone fathers are more likely to have MHPs than are mothers or fathers who live in couples. It is also possible that younger mothers are more likely to have a MHP than older ones.

Among groups of people with common mental disorders, around a third or just above live in couples with children – similar to the population as a whole. However, there are higher proportions of lone parents – both women and men – among people with common mental disorders than in the population as a whole. By contrast, adults with psychotic disorders are half as likely as the population as a whole to be in couples with children and a little less likely to be lone parents. However, it is still the case that, in 2000, 17 per cent of adults with psychotic conditions were in couples with children and 7 per cent were lone parents.

The evidence from the smaller studies of people with MHPs shows that a high proportion of adults in acute psychiatric hospital settings may be parents – at least 25 per cent and probably substantially more, especially among young women. However, the studies of users of both acute and community mental health services were generally of poor quality or relied on the review of health care records which, in turn, relied on professionals asking about and recording whether patients were parents. This suggests a gap both in the research literature and in professional practice.

Interpreting the findings from the studies of sub-groups of the population is difficult. Lone mothers from black and minority ethnic communities who have young children may be less likely to have anxiety-related problems than White mothers do, while some may be a little more likely to be depressed. Among parents from these communities as a whole, patterns are difficult to discern and interpret. There are completely different patterns for men and women; different levels of lone mothers in the different communities may be part of the explanation for this. Overall, there is no robust conclusion about the prevalence of PMHPs among different minority communities.

As is clear from above, lone parenthood, particularly among women, seems to be a risk factor for MHPs. This is especially so among those with less severe MHPs. However, studies that use sophisticated statistical analysis suggest that this pattern of MHPs among lone mothers is associated with their socio-economic disadvantage, compared to other adults. Once these disadvantages are ‘washed out’ of the analysis, parenthood does not seem to be associated independently with MHPs. In other words, parents experience MHPs to the same extent as other people in similar circumstances.

Of course, this tells us nothing about the direction of the relationship between parenthood, MHPs and disadvantage. People may experience some types of MHPs because they are in poor socio-economic circumstances or they may find themselves in poor socio-economic circumstances because they have MHPs. However, the fact that lone mothers experience higher levels of MHPs than mothers in couples shows that we need to understand that the circumstances people are in, including being a parent, can interact with any tendency to MHPs, making some people more prone to them than others.

Question two: What systems, tools and opportunities are there, both in the UK and elsewhere, for detecting parental mental health problems?

The quality of the studies reviewed for question two was variable, and many of the studies were about limited groups. However, several were studies exploring whether it was feasible to identify PMHPs in health care settings, or testing systems that would allow identification. Overall, these types of studies provide a useful base for developing further research, particularly in UK service settings.

The overall conclusion of the research reviewed for this question is that professionals who work with adults, if left to their own devices, are probably not very good at identifying PMHPs or their children. This seems particularly so among those who work with adults with MHPs in health care settings. By contrast, those used to working with children, whether in mental health care or in general children and families services, may be better at picking up and responding to parental MHP issues.

There seem to be several factors that influence whether professionals look for and identify PMHPs. First, there is how the professionals' see their competence, training and knowledge. For those who work mainly with children, or outside mental health services, this is about their expertise in adult mental health. For those who work mainly with adults it is about their expertise in relation to children. Secondly, there is how professionals view their role. This is particularly an issue for those who work with adults with mental health problems, where the adult seems to remain the focus of their work, regardless of whether or not he or she is a parent. Thirdly, those working in primary care settings (in the USA) report time for proper consultation with parents as a barrier to identifying and working with PMHPs.

Another barrier to professionals identifying PMHPs is whether parents or their children want to be identified. Both qualitative and quantitative studies showed that the main barrier was anxiety about what happens afterwards. Both parents and children worry that if they reveal mental health problems or parenting stresses there will be a 'rush to judgement' that could lead to child protection processes. Parents and children see identification, even when there are real needs to be addressed, as a potentially high-risk move. Parents are also sceptical about professionals' or services' competence in parenting issues. By contrast, if they have a continuous relationship with a trusted professional this can make all the difference in being willing to admit problems.

Similar issues influence whether parents choose to take up help after being identified. In studies about formal methods of identifying PMHPs, professionals responded to the information they received about parents' MHPs by discussing the results and referring parents for specialist support. However, only small proportions of parents then followed up the referral. Again, anxieties about child protection processes played a large part in their decision-making. Some parents simply could not see the relevance of the referral. Mothers may see dealing with their poor social or financial circumstances as more important than any underlying factors that might be treatable by drugs or therapy.

Using very simple screening tools for depression in primary care and other settings seems feasible, and they do prompt professionals to work with PMHPs. However, all the evidence about this is from the USA, where health care settings (and parents' and children's access to them) are different from those in the UK.

Whether being identified means that parents receive support is a more complex issue, which was explored in detail in question three.

Question three: How accessible and acceptable are services or interventions for parents with mental health problems and their families, in the UK and elsewhere?

The first task for this question was to define what was meant by access and acceptability. Existing theoretical writing about access is largely about access to certain types of discrete health services. As a result, it is not entirely suitable for exploring the ways PMHPs and their families might be accessing support services. We therefore developed a framework to help us understand the issue of access, in particular to identify the various points at which individual and organisational/service factors may intervene when PMHPs and their families are trying to access support.

The definition of 'acceptability of services' in research is also ambiguous, with no obvious consensus about its meaning among researchers. Indeed, researchers rarely use the term acceptability related to services. However, there was clear evidence, although based on a small number of studies, about factors that affect whether a parent or family member engages with or uses a service, once they have accessed it. This broadened the definition of acceptability of services but did allow us to draw a more complete picture of the factors that support or hinder use of services.

The evidence reviewed for this question was wide-ranging in terms of topic and quality. Most research was concerned with mothers or 'parents' and we identified nothing that was exclusively about fathers. In addition, whilst many studies were interested in support services for children, few had directly involved children in the research.

There are further reasons why the current evidence base is weak and we therefore need to be cautious about drawing firm conclusions. First, there is the quality or robustness of the evidence. Whilst we used no formal way of assessing the quality of evidence used for this question, the quality of **reporting** was obviously poor. This was particularly so in relation to sampling, the nature and representativeness of the sample, and data analysis. In addition, many of the studies had small sample sizes. Secondly, we were often limited to a handful of, sometimes diverse, research projects, some of which were of questionable quality, for evidence about a particular sub-topic or issue. Finally, the evidence was predominantly about mental health service support and parenting support for mothers. Evidence identified by the searches about other support services was restricted to one or two studies. Therefore, the current evidence base is skewed towards evidence about access and acceptability of **certain** support services, as opposed to any support services that may be used by parents with mental health problems.

With these limitations in mind, the review of the evidence identified a number of factors that appear to act as barriers or facilitators to PMHPs and their children getting access to and then using support services (Figure 3).

A clear pattern that emerges is that strategies to improve access and/or to ensure parents or their children continue to use services need to intervene in a number of different ways:

- At an organisational or strategic level.

- In terms of services provided and the way they are delivered.
- In the way that individual staff work, their skills and the way they relate to service users.

In addition, the evidence suggests that services need to work more holistically with families. The lack of collaboration and service coordination, and ambiguities with regard to roles and responsibilities of different professionals mean that needs remain unmet and families fall through the ‘service net’.

The evidence also points to the need for services to take greater account of parents’ priorities and desired outcomes, their perceptions about the cause of their mental distress, and to be more sensitive to the sometimes complicated, chaotic and straitened lives some of these families lead. In particular, the findings from some research suggests that, among families where the parents’ mental health problem is not very severe or at crisis, there are other more pressing needs which the family wants to or has to deal with. In these situations, solely dealing with mental health problems runs the danger of being seen as ‘tinkering at the edges’.

At best, the findings from this question can act as a resource that alerts readers to the range of processes and factors that may influence PMHPs’ and their families’ access to and use of services. It is important to bear in mind that there will be yet unidentified or unreported factors that also affect access and use. In addition, there are factors which we know from other practice arenas are important in terms of support services for PMHPs, but which are currently under-researched (for example, race and ethnicity).

Figure 3: Barriers or facilitators to parents with mental health problems and their families accessing and using services

BARRIERS AND FACILITATORS TO ACCESSING SERVICES	
Individual factors	**Service/organisational factors**
Socio-demographic factors Race/ethnicity factors Knowledge and belief factors o *Understanding and acceptance of mental health problem* o *Individual beliefs about help-seeking* o *Knowledge of services* o *Fears about losing custody* o *Stigma* 'Life circumstance' factors o *Conflicting demands on parents* o *The presence of other stresses and difficulties* Mental health factors Other	Staff factors o *Perceived roles and responsibilities* o *Professional's view of the case* o *The relationship between parent and professional* o *Staff skills and expertise* o *Staff time* Service delivery factors o *Ways of working* o *Availability of worker* o *Availability of services* Organisational factors o *Case level mechanisms and procedures* o *Eligibility criteria* o *Coordination and collaboration* Other
BARRIERS AND FACILITATORS TO USING SERVICES	
Mental health factors 'Use-ability' factors o *Transport and childcare* o *The 'fit' with existing schedules and demands on parents' time* Acceptability factors o *Sensitivity to ethnicity* o *Appropriateness of the setting* o *The therapeutic approach* o *Sensitivity to parents' other needs and priorities* o *Parents' acknowledgement of the need for support* Staff factors o *The parent-professional relationship* o *Staff skills and expertise* Other	

Question four: What are the outcomes of services or interventions intended to support parents with mental health problems and their families?

RCT studies

We could draw few firm conclusions from the 12 RCTs that explored the impact of interventions to support PMHPs, their children and family members. This was mainly because of the limitations of the studies themselves, which are discussed in detail in the full technical report. The main weaknesses were the reporting of the studies, their small size, and the lack of adequate comparison or 'control' conditions.

There was also very little overlap of the results reported in the reviewed trials. Some outcomes were reported only in one or two trials, and even the most often reported outcome (parental mental health) in only six. This limited the opportunity for secure conclusions even based on narrative synthesis.

If we limit ourselves to outcomes reported in more than one trial, and take some account of quality of the studies, what conclusions can we draw from the RCTs reviewed for question four?

1. Impact on parental depression or depressive symptoms

Two RCTs reviewed for this question suggest that cognitive-based interventions may reduce depressive symptoms in mothers screened as 'at risk' for depression, compared to nothing else. However, with no comparison, it is difficult to know whether it was the intervention itself or simply the attention generated by receiving the intervention that caused the effect.

By contrast, compared against both a comparison and 'no intervention' in one trial, cognitive behavioural therapy (CBT) appears to have had no significant effect on depression in mothers whose children had behavioural problems. Indeed, a mother and toddler club appeared as effective in addressing depression in this trial. Similarly, another trial showed that when it was delivered alongside an existing family-focussed intervention, CBT appeared to add little to improved outcomes for depressed mothers whose children have behaviour difficulties.

With a completely different focus, one trial suggested that delivering psychiatric and psychotherapeutic care for depressed mothers while their children were with them in an in-patient setting might impede their progress towards recovery.

2. Impact on children's mental health

A relatively high-quality trial of CBT for the children of depressed parents who were themselves at risk for depression suggested that it might improve their overall mental health and reduce the risk of depression in the future. However, there was no comparison condition in this trial so it is impossible to know whether this effect is due to the intervention itself or simply to giving the children some form of attention. A related trial of CBT for children already over the clinical threshold for depression suggested that it had no effect over and above ‘normal care’, which could include other forms of mental health input.

3. Impact on children’s behaviour

None of the RCTs that measured changes in child behaviour showed any difference between children in the intervention and control groups, although in one case the study was comparing different ways of delivering of a psycho-educational intervention. In two RCTs of CBT alongside another intervention, targeted at depressed mothers of children who had behaviour problems, the behaviour of children in the intervention groups improved no more than that of children in the control group(s). Similarly, among the children of depressed parents who were themselves depressed or ‘at risk’ for depression, CBT appeared to have no additional effect on child behaviour.

4. Impact on parenting

There is some suggestion from a pilot RCT and secondary analysis of a larger trial that a ‘depressive symptom intervention’ and a parenting programme, respectively, may improve aspects of mothers’ parenting behaviour. However, this conclusion is tentative because of the pilot status of the first study, and some limitations of the analysis in the second.

Non-RCT studies

Most of the non-RCT studies included for question four were not evaluations of one intervention compared to another, or even of an intervention compared with no intervention or ‘usual care’. Most seemed to be testing if a particular intervention had any sort of effect at all. In other words, they were simple efficacy studies. The problem with such studies is that it is impossible to judge whether it was the intervention, rather than other factors, including the simple passing of time, that caused any apparent changes.

Several of the studies did describe themselves as pilot or feasibility studies, but we have found little evidence that they ever progressed to full evaluation with adequate comparisons. The most that can be said of all but one of the studies is that the interventions were associated with some changes in outcomes over time, but not that the intervention **caused** these changes.

Most of the studies were assessed as poor quality and they were also mostly very small. Only one involved more than 100 parents or families, and this included those who did not have MHPs as well as those who did. In all, 11 studies involved 25 or fewer parents or families.

Given these limitations, the studies reviewed can provide little robust evidence to guide practice. Here, we limit discussion to outcomes that were reported in more than two studies, where the studies were above a stated minimum quality (see the full technical reports).

1. Impact on parental mental health problems

Three studies of slightly higher quality reported parental mental health as an ‘outcome’. Only one of these reported that parents’ MHPs improved over time when the mothers received interpersonal psychotherapy. However, without a comparison or no intervention group, this study cannot tell us whether change over time would have taken place for these parents anyway, or whether the intervention studied was any better or worse than any other intervention or ‘usual care’.

2. Drop-out

Three studies of relatively higher quality reported whether or not parents continued with the intervention throughout the study. Drop-out rates in these better designed studies were high – ranging between 12.5 per cent and 32 per cent of participating parents.

3. Impact on aspects of children’s social functioning

Two studies of relatively higher quality reported whether there was any impact on aspects of children’s social functioning. One reported no change in the two measures of social functioning, used for children whose mothers had received interpersonal psychotherapy. The other study reported extra analysis of results from a much larger, longitudinal study and compared children whose depressed mothers had and had not received psychotherapy or children whose mothers were not depressed. The analysis showed that children whose depressed mothers had received psychotherapy were more accurate in recognising and reporting language that portrayed negative emotion. However, they were no more accurate in recognising and reporting language that portrayed positive emotion.

This summary of outcomes from the slightly higher quality non-RCT studies does not add anything to our conclusion from the RCT studies that there is little robust evidence to guide the choice of interventions to support PMHPs and their families.

Messages for practice and research

In this final section of this summary, we pull together the messages for practice from all four reviews, and highlight the gaps in knowledge that we have observed.

One in 10 non-elderly women and 1 in 20 non-elderly men are likely to be parents of dependent children and to have mental health problems. This is a high proportion and has implications for all professionals in contact with adults in general health services, particularly in primary care, in being able to identify those who need support and providing access to that help.

Perhaps one in four children between the ages of 5 and 16 has a mother who is at risk for a common mental health problem such as depression or anxiety. In an average primary school class of 26[1], this might mean six or seven children living with a mother with a MHP. In classes were there is a high proportion of children living with lone mothers, the numbers are likely to be even higher. Given the evidence about the impact of parental MHPs on children, this has implications for all those who work with children, particularly schools and general health services, in detection and providing access to support.

At least one in four adults in contact with mental health services is likely to be a parent and the proportion may be even higher, particularly among younger women. Parental status is not always recorded routinely when adults are in contact with these specialist services, with the obvious result that parents are not offered the most appropriate support. Those who work with adults seem less likely to address parenting and mental health issues than are those who work with children. The research we reviewed suggests that issues of perceived competence and professional roles and focus, in relation to parenting and mental health, need to change if PMHPs and their families are to be helped. Both initial professional training and subsequent professional development seem sensible routes for achieving this sort of change.

It is impossible to tell from existing evidence whether patterns of parental mental health problems in black and minority ethnic (BME) communities are similar to those found in the total UK population. Overall, however, it seems unlikely that the proportions of parents from minority communities with MHPs will be significantly lower overall, once differences such as age and household structure are account for. However, other research evidence, not reviewed here, suggests that adults in some BME communities may be particularly reluctant to identify themselves as having MHPs. Again, this has implications for practice that aims to identify and support PMHPs and their families.

A very simple screening tool for identifying MHPs among parents in health care settings in the USA seems acceptable to parents and prompts professionals to discuss issues with the identified parents and refer them for specialist support. Research could test this tool in the different health care settings in the UK that parents and children use to see if it has similar effects.

There is a clear association between poor socio-economic circumstances and mental health problems and this seems to explain in large part the higher proportions of lone parents with MHPs. This means that those who work with parents and families in poor conditions should be aware that they are likely to be dealing with a higher than average proportion of parents with MHPs. However, it is also clear from the evidence we have reviewed that parents in poor circumstances may have different priorities about support. Dealing with parents' financial or housing problems may be necessary before or alongside intervention aimed at managing their MHPs clinically.

A strong message from the evidence reviewed is that both parents with MHPs and their children can be anxious about the likely consequences of identifying themselves to professionals. Parents need to feel sure that identifying a need for support with a MHP (when they are a parent) or with parenting (when they are an adult with a MHP) is a way of *avoiding* rather than precipitating child protection proceedings. A continuous, flexible relationship with a trusted professional is one way that PMHPs and their children can feel empowered to discuss difficulties without feeling that they risk being judged wanting.

The lack of collaboration or poor co-ordination between service and agencies that should be supporting PMHPs and their families is a common and strong message, from both UK research and that carried out elsewhere. At the same time, individual professionals' may have limited views about their role in relation to parents (and their children) within adult mental health services, or their role in relation to PMHPs within general services. Together, these suggest that multi-disciplinary teams that cut across traditional service or agency boundaries, and which allow professionals properly to understand and draw on each other's expertise, might be a better way of ensuring that both adults and their children have access to acceptable support. Unfortunately, we found no research evidence about such models of service delivery and their outcomes.

Overall, there were no secure messages from our review about which interventions or ways of providing services would best support PMHPs and their children. There is a clear need here for investment in good quality interventions and service development and good quality evaluation of their effects.

After we had finished selecting material for the review the Family Welfare Association published a 'before and after' evaluation of its **Building Bridges** model of support targeted at families affected by parental MHPs (Morris, 2007). The Family Welfare Association built routine evaluation into its development of this model by using validated outcome measures with all families. A similar approach when developing other services or interventions to support PMHPs and their families would help to transform the evidence base in this under-researched area.

There is also a need to tackle other research gaps that we found as we reviewed evidence for the four questions. We identify the main ones as:

- Are the experiences and needs of fathers with MHPs different? The literature is dominated by research on mothers or undefined 'parents', who are usually mothers.

- Are the experiences and needs of PMHPs from black and minority ethnic communities different from those of PMHPs in majority communities and, if so, how best can they be identified and supported?
- What is the direction of the relationship between socio-economic disadvantage and common mental health problems among parents, particularly lone parents?
- What role can and should employment, housing and education services play in identifying and supporting PMHPs and their families?
- How can service providers ensure that their services are what PMHPs and their families want and, when they are, they are able to use the support that is on offer?

Notes

1. http://www.dcsf.gov.uk/rsgateway/DB/SFR/s000744/SFR30_2007_LAtables_2.xls.

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Appendix 1 Data extraction headings

Data extracted for question one

Study details

- Aim of study
- Study design
- Population
- Nature of sample sought
- How sample identified or sampled
- Size of original sample
- Sample size actually studies
- Follow-up rate.

Ascertainment

- How was parenting ascertained?
- Who reported parenting status?
- How was diagnosis ascertained?
- Who ascertained diagnosis?
- Diagnostic criteria used
- Direct collection of data?

Results

- Sample age
- Sample gender
- Sample marital status
- Sample SES
- Sample ethnicity
- Prevalence figures
- Incidence figures
- Any adjustment of figures?

Data extracted for question two

Study details

- Aim of study
- Study design
- Population
- Nature of sample sought
- How sample was identified or sampled
- Sample characteristics
- Size of original sample
- Sample size actually studied
- Response rate/follow-up rate
- Country
- Comments.

Identification processes

- Who was being identified?
- Objectives of identification
- Who was doing identification?
- Where?
- Method used
- How recorded
- Comments.

Outcomes

- Adults' or children's views about need to be identified
- Level of identification achieved
- Did identification lead to intervention?
- Evidence about factors that increase identification
- Evidence about factors that decrease identification
- Opinions about factors that increase identification
- Opinions about factors that decrease identification
- Recommendations of research subjects
- Recommendations of researchers
- Comments.

Data extracted for question three

Detailed description of the service or intervention

- Type of service or intervention
- Details of service of intervention (aims, staffing, specialist or mainstream etc)
- Intended users
- Content and frequency/intensity of service or intervention
- Location
- Country.

Design of the research

- Research questions/hypotheses relevant to access and accessibility
- Nature of access/acceptability issue being researched
- Research design and methods (relevant to access/acceptability only)
- Was access/acceptability identified as a research question at the outset?
- For which family member(s) is access/acceptability being explored?
- Mental health problems of parents
- Representativeness of parents
- Drop out rates from research
- Dates of study
- Details of qualitative analysis.

Sample details

- Family status of research participants
- Sample size
- Any SES information about sample
- Other.

Sufficiency of services available and levels of use

- Evidence on whether sufficient services exist
- Evidence on whether PMHPs are using MH support services
- Evidence on whether children/other family members are using MH support services.

Individual barriers to **accessing** the service/intervention

- Mental health factors
- Beliefs about health seeking
- Understanding/acceptance of illness
- Beliefs about services
- Knowledge of services
- Family issues/family responsibilities
- Demographic or socio-economic factors
- Material resources
- Cultural views on MHPs or help-seeking
- Language/ethnicity issues
- Child custody issues
- Family difficulties/circumstances
- Time/schedules
- Other.

Service level barriers or facilitators to **accessing** the service/intervention

- Geographical/location factors
- Organisational factors
- Exclusions/eligibility
- Staff factors
- Availability of services
- Therapeutic approach/ways of working.

Individual level barriers to **using** the service/intervention

- Mental health factors
- Being a parent/family factor
- Nature of relationship between user and staff
- Language/ethnicity
- Socio-economic factors
- Material resources
- The fit between what user wants and services on offer
- Motivation/perceived needs
- Other.

Service level barriers to **using** the service/intervention

- Geographical/location factors
- Ways of working

- Environment/ambience/facilities
- Effectiveness of interventions
- Staff factors
- Other

Data extracted for question four

Detailed description of the service intervention

- Name of service/intervention
- Aims of service/intervention
- Content of the service/intervention
- Intended users of the service/intervention (e.g. type of mental health problem and family status)
- Frequency, intensity, duration of intervention/service
- Practitioners delivering the intervention
- Theoretical approach underpinning/focus of intervention (e.g. psycho-educational, psychodynamic)
- Underlying ethos/driver of the service (e.g. attachment; risk, functional etc)
- Specialist vs. mainstream
- Stand-alone or co-delivered with other services/interventions (e.g. intervention is part of care package)
- Context – single or multi-agency
- Lead agency
- Physical setting of service/ intervention or where the service/ intervention is delivered (e.g. clinic, community centre, home-based)
- Location: town, country, rural, urban, mixed
- Status of service/ intervention (pilot, short-term project, stable)
- Funding arrangements
- Country.

Design of evaluation

- Research questions/research evaluations
- Basic research design (including when service outcomes were assessed)
- Mental health problem(s) of parents represented in/the focus of the research (including how 'diagnosed'/assessed) including where possible severity and duration (i.e. acute/chronic) and presence of dual diagnosis
- Extent to which the research/evaluation participants represent the users of the service and/or covered the service itself?
- Drop out rates from research
- Date(s) during which study was conducted/data collected.

The sample

- Family status of research participants (e.g. parent, partner, spouse)
- Sample size
- Relevant socio-demographic information about sample e.g. age, gender, BME)
- Control group details
- Sample size of control group
- Relevant socio-demographic information about control group.

Quantitative data on mental health/well-being outcomes for parent

- Hospital admission/readmission
- Depression
- Anxiety
- Stress
- Self-esteem
- Negative outlook
- Substance abuse
- Psychiatric morbidity
- Other.

Quantitative data on other individual level outcomes for parent

- Self-reported response to intervention
- Quality of life
- Coping strategies
- Perceived social support (including faith in people)
- Social functioning
- Education and employment
- Access to support services
- Food skills
- Independent living - including housing and income
- Individualised treatment goals
- Adherence/ drop out rates
- Other.

Quantitative data on parenting outcomes

(Practices, attitudes, skills, parent stress, expectations, sense of competence, satisfaction)

- Parenting outcomes.

Quantitative data on family level outcomes

Mother father relationship

- Marital adjustment
- Marital alliance
- Interpersonal conflict in relation to parenting.

Family functioning

- Family adaptability
- Family cohesion
- Family conflict
- Change in where child lives /child custody
- Other.

Quantitative data on mother-child relationship outcomes

- Mother-child interaction
- Attachment behaviours
- Mothers' use of affective language and affective understanding.

Quantitative data on psychological well-being of child outcomes

- Psychological well-being/mental health
- Depression
- Anxiety
- Judgements of self
- Psychiatric admissions.
-

Quantitative data on other child outcomes

- Understanding of parent's condition
- Health beliefs
- Cognitive development (including language)
- Social adjustment /social functioning/ life skills (including peer relationships, school problems)
- Behaviour
- Health behaviours and activities
- Access to support services
- Health.

Factors identified as affecting outcomes

- Factors affecting outcomes.

Qualitative data on outcomes for service user

- Service user views
- Other family member views
- Professional views.

Qualitative data on outcomes for other family members

- Service user views
- Other family member views
- Professional views.

Costs

- Costs of providing the service
- Costs of using the service.

Conclusions

- Conclusions drawn by authors
- Conclusions drawn by reviewers.

Appendix 2

Table A1: Details of studies included for question one

Author and date	Type of study	Nature of sample and location	Achieved total sample size [1]
Nationally representative sample surveys			
Macran et al, 1996	Nationally representative sample survey	Adults 18 and over in private households in GB	2,353
Meltzer et al, 1995 and associated papers	As above	Adults 16-64 in private households in England, Wales and Scotland south of the Caledonian Canal	10,108
Singleton et al, 2001; Singleton and Lewis, 2003	As above	Adults 16-74 in private households in England, Wales and Scotland	8,450 first stage 638 second stage
Cox et al, 1987	As above	Adults 18 and over in private households in England, Wales and Scotland	9,003
Meltzer et al, 2000	As above	Children 5-15 registered for child benefit and living in private households in England, Wales and Scotland	10,438
Longitudinal cohort studies			
Paykel et al, 2001; Rodgers, 1991	Longitudinal cohort study	Single, legitimate births in England, Wales and Scotland, 3-9 March 1946	2,980
Weich et al, 1998, 2001, 2003	As above	Adults 16 and over in private households in England, Wales and Scotland	8,979
Other studies of general populations			
Coleman et al, 1986; Wolkind, 1985	Survey of random sample of mothers identified at hospital ante-natal clinics	British born women, 16 and over, having first baby in London borough	124
Mortimer et al, 1992	Cross-sectional survey of mothers of children registered in a general practice	Children aged 3-11, not clear where	1,083[2]
Thompson et al, 1996	Cross-sectional survey of mothers of children registered in general practices	Children aged 3 between July 1990 and June 1991 in area of Hampshire	1,047
Studies of acute psychiatric hospital patients			
Coleman and Cassell, 1994	Case note review of admissions	Acute psychiatric hospital in-patients	47

Author and date	Type of study	Nature of sample and location	Achieved total sample size [1]
Hatfield, Webster and Mohamad, 1997	Analysis of monitoring forms	Adults being assessed for compulsory admission under the 1983 Mental Health Act	3,554
Manderson and McCune, 2004	Retrospective case note audit	Acute psychiatric hospital inpatients in two hospitals in Northern Ireland	100
Stormont et al, 1997	Not clear	Acute psychiatric hospital in-patients in West Lambeth	193
Tamarit and Yin-Har Lau, 1999	Retrospective case note audit	Acute psychiatric hospital in-patients in Redbridge	100
Studies of community samples of people with MHPs			
Howard et al, 2001	Case identification using standardised procedures	Representative sample of people with psychotic disorders in south London	246
Howard et al, 2002	Analysis of fertility data from GP records	Women aged 15-44 with psychotic disorders in general practices	6,303
Webster, 1990	Retrospective case note review	Women with schizophrenia in a north-west metropolitan borough	115
Studies of acute hospital and/or community samples of people with MHPs			
Iddamalgoda and Naish, not dated	Case note survey	People with schizophrenia and/or bipolar affective disorder using in-patient and out-patient psychiatric services in West Lambeth	Impossible to tell
Studies of homeless families			
Cumella et al, 1998	Survey of consecutive entrants of families with children to hostel	Parents in homeless families in Birmingham	113
Tischler et al, 2004	Survey of consecutive referrals to family support worker	Families receiving family support worker services in homelessness hostel in Leicester	49 families
Study of black and minority ethnic communities			
Mavreas and Bebbington, 1987	Survey of random sample of people with apparently Greek names	Greek Cypriot adults 18-65 in Camberwell	291
Nazroo, 1997	National, cross-sectional sample survey	Adults in black and minority ethnic communities, but only results for parents reported were for female lone parents with children under 11	2,867 ‘White’ 1,205 ‘Caribbean’ 1,273 ‘Indian’ 728 ‘African Asian’ 1,185 ‘Pakistani’ 591 ‘Bangladeshi’ 214 ‘Chinese’

Author and date	Type of study	Nature of sample and location	Achieved total sample size [1]
Sonuga-Barke et al, 1998	Survey of mothers of children identified via schools and community centre	Mothers in Muslim families in North and East London, with three generations co-habiting and at least one child aged 5-10	54 families
Sonuga-Barke and Mistry, 2000	Survey of mothers and grandmothers of children identified via primary schools	Mothers and grandmothers of Asian Hindu and Muslim children aged 6-11 in four primary schools in Newham	86 families
Sproston and Nazroo, 2002	Follow-up study from cross-sectional, national sample survey (1999 Health Survey for England)	Households containing adult 16-74 and children (not defined), from black and minority ethnic communities	838 ‘White’ 733 ‘Irish’ 695 ‘Black Caribbean’ 650 ‘Bangladeshi’ 641 ‘Indian’ 724 ‘Pakistani’
Studies of other sub-populations			
Dowdney et al, 1999	Survey of families identified via death certificates and GP records	Parents in families where the other parent has died, in two adjacent health authorities	31 mothers 12 fathers
Kim-Cohen et al, 2005	Survey of probability sample of mothers identified from birth register	Mothers of same-sex twins. Followed up when twins 5 and 7 years old	1,116
Verduyn et al, 2003	Survey of mothers identified from community health records	Mothers of disturbed children aged 2 years 6 months and 4 years in Manchester	2,248

1. Sample size on which prevalence figures are based.
2. Calculated by us.

Table A2: Details of studies included for question two

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Studies of professionals						
Bibou-Nakou 2003, 2004	Identification in the classroom	Focus groups and semi-structured interviews	Various	Teachers	68 female, 52 males. Teaching experience 6 to 18 years in both rural and inner city schools	Greece
Beiber, 2004	State policies about identification	Survey and telephone interviews	Various	Directors of state mental health authorities	Directors of state mental health authorities not otherwise described	USA
Nicholson, 1993	State policies about identification	Survey	Various	Directors of state mental health authorities	As above	USA
Olson, 2002	As part of normal practice	Random sample survey	Maternal depression	Primary care paediatricians	37% female, in practice for median 15 years, 22% had sub-specialty training, 12% in rural locations, 56% suburban, 32% urban, 16% in solo practice, 60% in group practice, 11% in 'staff model health maintenance organisation', 13% in other clinical settings	USA
Mayberry, 2006	As part of normal practice	Not entirely clear – qualitative development stage and questionnaire stage	Various	Not entirely clear – mental health workers and ‘other’ welfare workers	At qualitative stage: 60 mental health and other welfare workers. 42 women, 11 men and 7 who did not indicate their sex. At second stage: 20 mental health workers and 12 other mental health 'welfare' professionals. 27 women, 5 men	Australia
Crofts, 2003	As part of normal practice	Qualitative and questionnaire	Various	Family therapy workers and children’s workers	No details given	UK

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
McCue Horwitz, 2007	As part of normal practice	Sample survey	Maternal depression	Paediatricians	745/832 were not trainees and 687 were involved in direct patient care After weighting to compensate for non-response: 52% female mean (SD) age 45.4 (10.4) 72% white; 15% Asian; 4% black; 4% Hispanic; 6% other 44% urban practice; 43% suburban; 13% rural 36% paediatric group practice 31% have 75+% white patients 34% have 50-74% white; 19% have 25-49% white; 17% have 0-24% white	USA
Heneghan, 2006	As part of normal practice	In-depth, telephone interviews	Maternal depression	Primary care paediatricians	14/21 female age range 26-61 5/21 white, 5 black, 2 other 5 practicing under 2 years, 12 2-8 years; 6 more than 8 years 16 in hospital-based practice, 1 solo private practice, 6 group private practice spend under 5 hours per week in primary care, 13 between 5 and 20 hours, 9 over 20 hours	USA

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Studies of detection/identification systems						
Feinberg, 2006	Patient Health Questionnaire -2, followed up for mothers with a high score, by PHQ -9 and other questions	Focus groups and key informant interviews	Maternal depression	Mothers in 'inter-natal' period, health care providers and community-based professionals who provide services to mothers of young children	Not given	USA
Olson, 2006	Patient Health Questiionnaire -2	Descriptive implementation study	Maternal depression	Paediatricians and nurse practitioners	Practices were in rural communities, with populations of 6,000 to 15,000 Medicaid was payer for 25% of patients Median household income for communities ranged from $35,600 to $49,000 95% of communities were white	USA
Flynn, 2004	CES-D and RAND 3-item screening instrument	Questionnaire survey including screening instruments	Maternal depression	Women attending emergency department with child ≤7 years	Mean (SD) age 30.4 (7.3) Mean (SD) age of child 2.6 (2.2) Mean (SD) no of children at home 2.1 (1.2) 40% college educated and beyond 83% married or cohabiting 74% White 74% privately insured	USA

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Kemper, 1994	RAND 8-item screening instrument	Inclusion of screening instrument in normal well-child clinic records	Maternal depression	Parents of children under 6 being seen at well-child clinics, but only data for mothers reported	Mean age from 23.9 to 34.6 at different sites % white ranged from 45% to 95% Years of maternal education ranged from 11.4 to 15.9 Household income ranged from $12,468 to $53,736 % married ranged from 34% to 92%	USA
Detection studies						
Sheppard, 1997	Depression Social Assessment Schedule	Use of depression measures in wider study of social work practice with mothers receiving child and family services	Maternal depression	Mothers in care managed families and their social workers	Mother's age: 2% under 19; 30% 19-30; 53% 31-44; 15% over 44 'Family' employment status: 53% no paid employment; 24% skilled manual or partly skilled, or unskilled; 10% professional intermediate; 2% skilled non-manual; 11% unknown 72% reliant on state benefit Housing status: 26% owner occupied; 50% council; 15% private rented; 4% hotel/B&B; 5% other	UK
Vanharen, 1993	Research interview, compared against case notes	Structured interviews	Various	In- and out-patients of mental health services	None reported other than parental status - 47/100 had children, 37 had two or more and 15 (32%) had children under the age of 18	Canada

Author and date	**Method of identification studied**	**Study design or methods**	**Mental health problems included**	**Who was researched**	**Study participants**	**Country**
Needlman, 1999	Clinical interview and observation of mothers' behaviour by social worker. CES-D self-completion	Prospective, uncontrolled intervention study	Maternal depression	Mothers 18+ (and including grandmothers and other carers) referred to paediatric social workers for psychosocial assessment and intervention	Mothers' mean age 26 years Child's mean age 4 years 1 month 53% of children female 87% of children attending clinic were Medicaid or Medicaid-managed care insurance 92% African-American 13% receiving ongoing services from a MH professional and 29% history of past or present drug or alcohol abuse	USA
Gross, 1989	Normal record keeping	Chart (record) review	Various	Women admitted to acute psychiatric hospitals, aged 18-45 and with children under 6 years	21 women identified with children under 6 Mean age 31 (range 26-40) Mean parity 2.24 (range 1-6) Mean age of children 6.03 years (range 2 weeks to 21 yrs) 12 depression; 2 schizophrenia; 2 substance abuse; 6 'other' (=22 so presumably one dual diagnosis?)	USA
Iddamalgoda, nd	Normal record keeping	Case note survey for in- and out-patient, postal survey of community-based workers, semi-structured interviews	Psychotic conditions	Parents with psychotic conditions	See R1Q1, not relevant to this part of the review	UK

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Hatfield, 1997	Monitoring forms for assessment for compulsory admission	Analysis of data on monitoring forma	Schizophrenia affective psychoses, other psychoses	Adults being assessed for compulsory admission under the 1983 Mental Health Act	Of those assessed: 54% were women 34% were living alone 11% were in households with a partner and at least one child under 18; 4.5% were living alone and with at least one child under 18 54% were not 'in employment'; 21% were 'retired' 30% lived in owner-occupied housing 90% were: 'European/Caucasian'; 3.5% African-Caribbean; 2.7% Pakistani; 1.1% Indian; 0.3% African; 0.3% Bangladeshi Remainder (all <1%) various and other ethnicity. *Of men assessed:* 71% were aged 44 or under 31% of assessed men were or had been married *Of women assessed*: 54% were 44 or under 65% were or had been married	UK
Qualitative studies – views about identification						
Gilbert, 2002	n/a	Audit of data on child referrals to project. Focus groups with children of PMHPs – one for adults one for children	Various	Child users of project and adults known to project workers who had, as children, experienced PMHPs	Adults: six women, one man Children: five girls, two boys	UK

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Fudge, 2004	n/a	Focus groups and peer interviews	Various	Children of PMHPs aged 7-12 years and 13-20 years	33 children aged 7-12 14 male, 13 female, 6 not recorded 25 young people aged 13-20 8 male, 15 female, 2 not recorded	Australia
Anderson, 2006	Patient Health Questionnaire and Beck Depression and Anxiety Inventories	Qualitative sub-study	Various	Mothers of children with mental health problems who themselves screened positive for significant mood and anxiety disorder	Average age 37.8 56% White; 40% African American; 4% other 83.5% high school education or greater. 38% married or living with a partner 43.3% working ft or pt an average of 36.2 hrs per week Over half had household income of 'under $15,000 while supporting a mean of 2.6 children under the age of 18'	USA
Heneghan, 2004	n/a	Focus groups	Maternal stress and depression	Mothers bringing children for routine paediatric care in community and hospital-based practices	Mean age 27 years 70% black; 30% white 61% single 50% educated beyond high school 43% received public assistance Mean score on Psychiatric Symptom Index (PSI) was 26.3 (high ≥20) Mean no of children 2, with mean age of 6 years	USA

Author and date	Method of identification studied	Study design or methods	Mental health problems included	Who was researched	Study participants	Country
Slattery, nd	Normal record keeping	Focus groups and postal survey	Severe and enduring mental health problems	Women who use community mental health services and who have dependent children	One focus group with white mothers, one with mothers from BME communities. All said to 'share similar socio-economic background' (p.21). Samples said to have been 'matched along broad racial groups' (ibid). Details of postal q. sample not given	UK

Table A3: Description of studies included for question three

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Studies concerned with accessing services						
Ackerson, 2003	To identify recurring issues and concerns among PMHPs which may inform service delivery	Unstructured and semistructured interviews with parents	Consumer and family support groups and community mental health centres	13 parents (12=mothers)	'Serious and persistent mental illness'	USA
Ackerson and Venkataraman, 2003	To compare and integrate what is currently known by experts in the field with regard to assessments and services for PMHPs and their families	Survey of experts who have written and conducted research on the topic of parenting with MHPs using telephone interviews	Academic disciplines of social work, psychiatry and psychology	8 experts	Range	USA
Aldridge and Becker, 2003	To further understand the nature of young caring in the context of parental mental health, including family - professional relationships	Semi-structured interviews with young carers and parent with MHP	AMHS	40 dyads	'Severe and enduring mental health problem'	England
Anderson, Robins, Greeno, Cahalane, Copeland and Andrews, 2006	To explore mothers' perceptions of their own distress and their children's problems, their treatment experiences, and views of the formal mental health delivery system	Qualitative interviews with mothers whose children were using community MH services	Child Community Mental Health centres	127 mothers	Range	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Bassett, Lampe and Lloyd, 1999	To examine mothers' perceptions of mental health services and areas in need of improvement (part of an evaluation of a particular service)	Focus group with users (mothers); focus group and individual interviews non-users (mothers) of a service	'Living with under 5's' project (support for PMHPs and their children)	Sample sizes for focus groups not stated. 4 interviews	'A mental illness'	Australia
Bibou-Nakou, 2003	To identify the roles teachers could play in identifying children with a parent with MHP in need of support	Focus group discussions with teachers	Teachers attending in-service training on parental mental health issues	120 teachers	Parents with mental health problems in general	Greece
Blanch, Nicholson and Purcell, 1998	To identify the needs of parents with MHP raising young children, to recommend ways of addressing their needs, to anticipate and overcome impediments to the implementation of suggested solutions	Public hearings attended by parents and by adult children who had had a PMHP	Statewide review of service needs and provision for PMHPs	23 parents 6 MH providers 5 social service representatives	Any MHP	USA
Boyd, Diamond and Bourjolly, 2006	To explore mothers and practitioners views about a potential support service	Focus groups with mothers and with staff working in community MH agencies	Community Mental Health agencies	18 mothers 10 MH providers	Depressed mothers	USA
Cardemil, Kim, Pinedo and Miller, 2005	To look at recruitment and retention of mothers to a support programme, and factor affecting recruitment and retention	Recruitment, enrollment and treatment retention rates. Interviews with mothers	Family Skills Coping Programme (depression prevention programme for low income Latina mothers)	137 mothers	'At risk of depression'	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Cowling, 1996, 1999	To identify factors which discourage parents from seeking help and support.	Parent and provider surveys; focus groups and interviews with parents	Providers: health, welfare, government and non-government agencies involved with parents with a psychiatric illness. Parents: community MH services or psychosocial rehabilitation settings	70 parents (survey or focus groups) 13 parents (interviews) 136 service providers	'Diagnosed psychotic disorder'	Australia
Cowling, Luk, Mileshkin and Birleson, 2004	To study parents' help-seeking and service use for their children	Structured interviews (including completion of measures) with parents	Community team teams and inpatient facilities	61 parents	Users of community and inpatient MHS	Australia
Darlington,Feeney and Rixon, 2004; Darlington, Feeney and Rixon, 2005a	To examine structures and systems which support/hinder collaboration between child protection, adult MH and child MH services	Self-administered cross-sectional survey of practitioners (social work, mental health, health)	Child protection, adult and child MH (community and inpatient) services	122 respondents reporting on 200 cases	Parents with ‘mental illness’ (significant impairment) or ‘mental health problems’ (diminished abilities)	Australia

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Darlington, Feeney and Rixon, 2005b	To supplement above research with depth accounts from staff on collaboration issues	Interviews with practitioners (social work and mental health)	Child protection, adult and child MH services	17 child protection workers 14 adult MH workers 4 child MH workers	Parents with 'mental illness' (significant impairment) or 'mental health problems' (diminished abilities)	Australia
DeChillo, Matorin and Hallahan, 1987	To explore how/whether parenting status and children's needs are explored and recorded for psychiatric inpatients patients, To explore the nature of social workers' contacts with and on behalf of the children? To identify whether children in need of support are being provided with help	Interviews with inpatient social work staff and case note review	Inpatient.	121 cases reviewed Size of interview sample not stated	Range. Inpatients	USA
Diaz-Caneja and Johnson, 2004	To explore mothers' views of the services they receive	Qualitative interviews with mothers	Community Mental Health teams	22 mothers	Schizophrenia, bipolar affective disorder, and severe depression with psychotic symptoms	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Elliot, 1992	To look at what support was available to children of parents with mental health problems and what support the young carers would have wanted	Interviews with ex-young carers of parents with mental health problems	Ex young carers	9 ex-young carers	Range	England
Feldman, Stiffman and Jung, 1987	To explore use of formal support services by families	Semistructured interviews with parents	Children using recreational programme for 'at risk children of mentally ill parents'	'178 families'	Parents 'diagnosed as mentally ill'	USA
Finkelstein, Rechberger, Russell, VanDeMark, Noether, O'Keefe, Gould, Mockus and Rael, 2005	To evaluate a parent and child support intervention, including looking at barriers to participation	Evaluation of support intervention for mother and children	Project supporting women with a history of physical or sexual abuse, substance abuse and mental illness	115 children	Histories of sexual and/or physical abuse, substance abuse AND mental illness	USA
Fudge and Mason, 2004	To identify what should be included in practice guidelines for services working with children of parents with a mental illness	Focus groups and peer interviews with children and young people	COPMI (Children of Parents with a Mental Illness) support programme	33 children (7-12 yr olds) 25 young people (13-20 yr olds)	Not specified	Australia
Gilbert, Legg, Irons, Olsen and Palmer, 2002	To identify the support needs of children parents or other carers suffer from MH problems, and experiences of services	Focus groups with young carers and ex-young carers	AMHS	7 young carers 7 ex-young carers	Not specified	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Gillam, Crofts, Fadden and Corbett, 2003	To provide insight into interface and collaborative practices between CAMHS, AMHS and children's services, and factors affecting those processes	Participant observation in CAMHS, survey of AMHS workers and a survey of children's services workers	CAMHS, AMHS, children's services	1 CAMHS 28 AMHS workers 27 children's services workers	Range	England
Gopfert, Harrison and Mahoney, 1999	To establish whether services for adults experiencing MHP also met the needs of their family network	Qualitative interviews with parents (with MHP or partner), focus groups with children	AMHS	13 parents 3 children	Range	England
Green et al, 1997	To explore families views of AMH services	Semi-structured interviews with mothers, children and a nominated (referring or key) professional	AMH services	18 mothers 10 children 19 referring/key professional	Range (severe)	England
Gross and Semprevivo, 1989	To describe the parenting issues recorded in charts of hospitalised mentally ill mothers	Review of inpatient charts and notes re in-patients (mothers)	Inpatient psychiatric wards	21 charts reviewed	Inpatient. Range	USA
Grunbaum and Gammeltoft, 1993	To study of the functioning and shortcomings of casework performed by local social agencies to assist the children of a group of schizophrenic mothers	Retrospective analysis of social agencies' casework, examination of inpatient case-notes; consultation with child specialists and other health profs.	Social agencies	11 children's case notes	Inpatients. 'Diagnosed as schizophrenic'	Denmark

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Handley, Farrell, Josephs, Hanke and Hazelton, 2001	To identify types of support perceived to be needed by parents, children and service providers; and to identify the current level of support available with particular emphasis on identifying service gaps	Survey of staff and users of statutory mental health service in a governnment region. Follow-up interviews/focus groups with parents and children	Adult mental health services	74 staff 29 parents (questionnaire) 8 parents (interviews/focus groups) 4 children (interviews/focus groups)	'Most of the parents interviewed had major affective disorder'	Australia
Hearle, Plant, Jenner, Barkla and McGrath, 1999	To explore support needs of parents with a psychotic disorder, child care use and barriers to accessing child care services	Semi-structured questionnaire to parents using inpatient and outpatient services	Community MH services and extended care psychiatric hospital	124 parents	'Individuals with a chart diagnosis of a psychotic disorder'	Australia
Heneghan, Mercer and DeLeone, 2004	To explore maternal beliefs and perceptions about discussing the parenting and depressive symptoms with child's paediatrician	Focus groups with mothers	Community and hospital based paediatric practices	44 mothers	Depressive symptoms	USA
Heneghan, Morton and DeLeone, 2006	To assess paediatricians' beliefs about discussing maternal depressive symptoms; to identify barriers paediatricians face in discussing maternal depression; and to identify strategies paediatricians use to assist mothers	In-depth telephone interviews with 23 primary care paediatricians	Primary paediatric health care	23 paediatricians	Depressive symptoms	USA
Hetherington and Baistow, 2001; Hetherington, 2001	Inter-country study into the responses of mental health and child welfare systems to children who have a mentally ill parent	Focus groups with AMH & CMH professionals and child welfare professionals	AMH, CMH and child welfare	Not stated	MHP in general	Europe including England

Author and date	**Main aim of research in relation to access and use of services**	**Basic research design and sample**	**Service/setting from which sample recruited**	**Achieved sample size**	**MHP of parents represented in the research**	**Country**
Hinden, Biebel, Nicholson and Mehnert, 2002; Hinden, Biebel, Nicholson and Mehnert, 2005	To explore views and experiences of service users and staff	Interviews with parents, care workers and case managers	The Invisible Children's Project (private agency providing intensive case management services for parents where family at high risk for child custody loss)	9 parents (representing 8 families) 6 practitioners	Not specific to diagnostic groups rather: mental illness and where family at highest risk for child custody loss	USA
Hugman and Phillips, 1993	To describe parent's experiences of MH difficulties and its impact on parenting and their experiences of professional support with regard parenting	Interviews with users of MH facilities	Outpatient and community AMHS	24 parents	'All had formal psychiatric diagnoses'	England
Hussain and Gerrard, 2001	To explore service users and practitioners views of a support service and access to and use of other MH services	Evaluation of a support service for Asian women with MHP using questionnaires completed by professionals and users	Voluntary sector support service for Asian women with MHP	Not stated	'MHP beyond the scope of the average primary health care team'	England

Author and date	**Main aim of research in relation to access and use of services**	**Basic research design and sample**	**Service/setting from which sample recruited**	**Achieved sample size**	**MHP of parents represented in the research**	**Country**
Iddamalgoda and Naish, 1995	To looking at whether an NHS Trust is meeting the needs of children of parents with MHP's	Semi-structured interviews with professionals (AMHS, child health, social work), service users, review of case notes, postal survey of CPNS	Professionals: AMHS, child health and social work Case notes: Outpatient and inpatient MH services Postal survey: community psychiatric nurses	14 AMHS staff 10 child health service staff 13 community child health staff 2 social work staff	Range: inpatient and outpatients	England
Kearney, Levin and Rosen, 2000	To map approaches to working with children and families where the adults have MHP or substance misuse problems; to identify effective practice and management and the structures that facilitate and mitigate against it; to identify the composite skills and expertise required for effective assessment and support of families	Interviews with senior managers and frontline staff working in social care	Social services	84 managers and staff	Range	England & Wales
Libby, Orton, Barth, Webb, Burns, Wood and Spicer, 2006	To assess disparities in access to health care by comparing experiences of American Indian (AI) parents and those who are White, Black and Hispanic	Uses a subsample of a national survey of children involved in child welfare systems, looking at assessment and referral history and service use	National Study of Child and Adolescent Wellbeing (NSCAW)	3,425 children	Range	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Manderson and McCune, 2004	Access	Retrospective review on female inpatient case notes	Inpatient psychiatric units	100 sets of case notes	Inpatients	Northern Ireland
Maybery and Reupert, 2006	To identify the barriers adult MH workers face in discussing parenting issues with adult patients and working with their children	Interviews with mental health and welfare workers, and small scale survey using structured questionnaire	Adult MH and family support services	92 workers	Parental mental health problems in general	Australia
McCue Horwitz, Kelleher, Stein, Stofer-Isser et al, 2007	To identify factors which act as barriers to children and mothers accessing support/intervention services	Cross-sectional sample survey of paediatricians	Paediatricians	687 paediatricians	Maternal depression	USA
Montgomery, Tompkins and Forchuk, 2006	To describe the parenting experiences of mothers with servious mental ilness (SMI), including support needs and service experiences	Unstructured interviews with mothers	AMHS	20 mothers	'Major mental illness'	Canada
Montoliu Tamarit and Yin-Har, 1999	To explore children's access to support services occurring through mothers' admission to an inpatient unit	Retrospective review of case notes of women	Inpatient psychiatric units	100 sets of case notes	Inpatients	England
Mowbry, Schwartz, Bybee, Spang, Rueda-Riedle and Oyserman, 2000	To describe parents experiences of services and unmet needs	Structured interviews with mothers who are AMHS users (including inpatients)	Community MH services and inpatient psychiatric units	379 mothers	'Psychiatric disorder of more than one year's duration'	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Needlman, Walders, Kelly, Higgins, Sofranko and Drotar, 1999	To assess take-up of refrerrals to MHS by mothers screened as having a MHP, and the factors associated with accepting referral and keeping appointments	Data collected by post-referral 'follow-up' calls to mothers	Paediatric primary care clinics	130 mothers	Depression	USA
Nicholson, Sweeney and Geller, 1998; Nicholson and Henry, 2003	To explore mothers' perceptions of their needs and the needs of their children and their preferences regarding services and relationships with providers	Focus groups with mothers and AMH case managers	AMH case management services	42 mothers 55 case managers	'Severe mental illness"	USA
Olson, Dietrich, Prazar and Hurley, 2006	To explore how paediatricians and mothers respond to depression screening information	Service-based audit and tracking of outcomes of screening for mental health problems among mothers	Paediatric practices	1398 maternal screenings	Depression	USA
Shachnow, 1987	To explore whether mothers' inpatient admission results in better meeting of children's needs through access to new support services	Interviews with patient, 'well' parent and child(ren)	Inpatient psychiatric unit	22 patients 21 well parents 36 children	Inpatients	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Sheppard, 2001	To explore how social workers worked with depressed mothers? To explore MH service involvement and the role of social workers in accessing this support. To explore mothers' experience of social work support	Interviews with mothers and their social workers	Social services	67 mothers and their social workers	Depression	England
Singer, Tang and Berelowitz, 2000	To establish what input children of PwMHP had received from adult MHS, social services, education and other agencies	Interviews with mothers and children	Outpatient and community AMHS	12 mothers 14 children	Range. Current users of AMHS	England
Slattery, 2006	To explored the experiences and support needs of mothers with sever and enduring mental illness	Focus groups and postal survey of mothers	Community MH services	54 mothers	‘Severe and enduring mental illness’	England
Sleath, Jackson, Thomas, Galloway, Dumain, Thorpe, Rollins and Morrissey, 2006	To explore how African American race was related to the use of antidepressants and counselling among homeless depressed women; and whether depressed homeless women felt they needed MH services but did not receive them hs	Interviews with mothers	Mothers using homeless shelters	92 mothers	‘Major depression’	USA

Author and date	**Main aim of research in relation to access and use of services**	**Basic research design and sample**	**Service/setting from which sample recruited**	**Achieved sample size**	**MHP of parents represented in the research**	**Country**
Stanley, Penhale, Riordan, Barbour and Holden, 2003a, 200b	To examine interagency working in cases where there are child protection concerns and PMHPs. To explore parents' views as service users and their needs (met and unmet)	Postal survey of practitioners (mental health and child protection) Interviews with mothers	Practitioner: various agencies and settings where encounter PMH and child protection issues Mothers: via ‘key informants in health and social services’	500 practitioners 11 mothers	‘Enduring mental health difficulties’	England
Stormont, Craig, Atakan, Loader and Williams, 1997	To explore parents views about their their child’s support needs	Structured interviews with parents admitted to acute psychiatric wards	Inpatient psychiatric wards	19 parents	Inpatients (majority psychotic)	England
Thomas and Kalucy, 2002	To describe practical (managing family needs) issues associated with hospital admission; to explore parents views of their children’s support needs and how need should be met	Semi-structured interviews with parents	Inpatient and outpatient MH services and community groups	35 parents	Severe (bipolar disorder, major depressive disorder, schizo-affective disorder, schizophrenia, personality disorder)	Australia

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Wang and Goldschmidt, 1996	To looked at psychiatric inpatients' views of professionals, particularly in terms of improving cooperation between parents and professionals in order to better meet of patients' children	Semi-structured interviews with inpatients with children 0-10 years olds	Inpatient psychiatric units	50 parents	Range. All inpatients	Denmark
Studies concerned with using services						
Alder, 2005	To establish how well a service is achieving its aims and meeting clients' needs	Evaluation of a outreach support service for mothers with MHPs	The Peace Outreach Project	13 mothers	Schizophrenia, depression, post-natal depression, bi-polar disorders and personality disorder	England
Anderson, Robins, Greeno, Cahalane, Copeland and Andrews, 2006	To explore mothers' perceptions of their own distress and their children's problems; their treatment experiences; and views of the formal mental health delivery system	Qualitative interviews with mothers whose children were using community MH services	Child Community Mental Health centres	127 mothers	Range	USA
Baydar, Reid and Webster-Stratton, 2003	To explore the impact of mental health risk factors on attendance and engagement with a parent training programme	Evaluation of a parenting support intervention	The Incredible Years Training Program (parenting support intervention)	482 mothers	Low income mothers at risk of mental health problems	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Beeber, Holditch-Davis, Belyea, Funk and Canuso, 2004	To explore recruitment and engagement in the intervention, and to access mothers views about the acceptability of the intervention	Evaluation of an intervention	Early Head Start (intervention for mothers with depressive symptoms who do not typically seek traditional MHS)	16 mothers (8 receiving intervention, 8 usual care/waiting list)	Depressed mothers	USA
Boyd, Diamond and Bourjolly, 2006	To explore mothers and practitioners views about a potential support service	Focus groups with mothers and with staff working in community MH agencies	Community Mental Health agencies	18 mothers 10 MH providers	Depressed mothers	USA
Cardemil, Kim, Pinedo and Miller, 2005	To look at recruitment and retention of mothers to a support programme, and factor affecting recruitment and retention	Recruitment, enrollment and treatment retention rates. Interviews with mothers	Family Skills Coping Programme (depression prevention programme for low income Latina mothers)	137 mothers	'At risk of depression'	USA
Diaz-Caneja and Johnson, 2004	To explore mothers' views of the services they receive	Qualitative interviews with mothers	Community Mental Health teams	22 mothers	Schizophrenia, bipolar affective disorder, and severe depression with psychotic symptoms	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Finkelstein, Rechberger, Russell, VanDeMark, Noether, O'Keefe, Gould, Mockus and Rael, 2005	To evaluate a parent and child support intervention, including looking at barriers to participation	Evaluation of support intervention for mother and children	Project supporting women with a history of physical or sexual abuse, substance abuse and mental illness	115 children	Histories of sexual and/or physical abuse, substance abuse AND mental illness	USA
Fudge and Mason, 2004	To identify what should be included in practice guidelines for services working with children of parents with a mental illness	Focus groups and peer interviews with children and young people	COPMI (Children of Parents with a Mental Illness) support programme	33 children (7-12 yr olds) 25 young people (13-20 yr olds)	Not specified	Australia
Garley, Gallop, Johnston and Pipitone, 1997	To explores the needs, children of parents with a mood disorder in order to inform service development	Focus group with children	Adult outpatient MHS	6 children	'Parent or family had been assessed or treated for a mood disorder'	Canada
Green, 1997	To explore families views of AMH services	Semi-structured interviews with mothers, children and a nominated (referring or key) professional	AMH services	18 mothers 10 children 19 referring/key professional	Range (severe)	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Grunbaum and Gammeltoft, 1993	To study of the functioning and shortcomings of casework performed by local social agencies to assist the children of a group of schizophrenic mothers	Retrospective analysis of social agencies' casework, examination of inpatient case-notes; consultation with child specialists and other health professionals	Social agencies	11 children's case notes	Inpatients. 'Diagnosed as schizophrenic'	Denmark
Handley, Farrell, Josephs, Hanke and Hazelton, 2001	To identify types of support perceived to be needed by parents, children and service providers; and to identify the current level of support available with particular emphasis on identifying service gaps	Survey of staff and users of statutory mental health service in a governnment region. Follow-up interviews/focus groups with parents and children	Adult mental health services	74 staff 29 parents (questionnaire) 8 parents (interviews/focus groups) 4 children (interviews/focus groups)	'Most of the parents interviewed had major affective disorder'	Australia
Hanrahan, McCoy and Cloninger, 2005	To explore levels of engagement in a project and factors affecting engagement	Retrospective review of case notes	Threshold Mothers' Project (provides psychosocial rehabilitation and intensive care management)	24 case notes (mothers and their children)	Range (severe)	USA
Hawes and Cottrell, 1999	To identify the practical consequences of mothers' admissions to acute psychiatric wards	Semistructured interviews with mothers and case note review	Acute psychiatric wards	26 mothers (interview) 51 mothers (case note review)	Inpatients (psychotic and non-psychotic)	England

Author and date	**Main aim of research in relation to access and use of services**	**Basic research design and sample**	**Service/setting from which sample recruited**	**Achieved sample size**	**MHP of parents represented in the research**	**Country**
Hinden, Biebel, Nicholson and Mehnert, 2002; Hinden, Biebel, Nicholson and Mehnert, 2005	To explore views and experiences of service users and staff	Interviews with parents, care workers and case managers	The Invisible Children's Project (private agency providing intensive case management services for parents where family at high risk for child custody loss)	9 parents (representing 8 families) 6 practitioners	Not specific to diagnostic groups rather: mental illness and where family at highest risk for child custody loss	USA
Hugman and Phillips, 1993	To describe parent's experiences of MH difficulties and its impact on parenting and their experiences of professional support with regard parenting	Interviews with users of MH facilities	Outpatient and community AMHS	24 parents	'All had formal psychiatric diagnoses'	England
Hussain and Gerrard, 2001	To explore service users and practitioners views of a support service and access to and use of other MH services	Evaluation of a support service for Asian women with MHP using questionnaires completed by professionals and users	Voluntary sector support service for Asian women with MHP	Not stated	'MHP beyond the scope of the average primary health care team'	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Iddamalgoda and Naish, 1995	To looking at whether an NHS Trust is meeting the needs of children of parents with MHP's	Semi-structured interviews with professionals (AMHS, child health, social work), service users, review of case notes, postal survey of CPNS.	Professionals: AMHS, child health and social work Case notes: Outpatient and inpatient MH services Postal survey: community psychiatric nurses	14 AMHS staff 10 child health service staff 13 community child health staff 2 social work staff	Range: inpatient and outpatients	England
Montgomery, Tompkins and Forchuk, 2006	To describe the parenting experiences of mothers with serious mental illness (SMI), including support needs and service experiences	Unstructured interviews with mothers	AMHS	20 mothers	'Major mental illness'	Canada
Mowbray, Scwartz, Bybee, Spang, Rueda-Riedle and Oyserman, 2000	To describe parents experiences of services and unmet needs	Structured interviews with mothers who are AMHS users (including inpatients)	Community MH services and inpatient psychiatric units	379 mothers	'Psychiatric disorder of more than one year's duration'	USA
Needlman, Walders, Kelly, Higgins, Sofranko and Drotar, 1999	To assess take-up of refrerrals to MHS by mothers screened as having a MHP, and the factors associated with accepting referral and keeping appointments	Prospective, uncontrolled intervention study of take-up of referral to MH services by mothers, data collected by post-referral 'follow-up' calls to mothers	Paediatric primary care clinics	130 mothers	Depression	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Nicholson, Sweeney and Geller, 1998; Nicholson and Henry, 2003	1. Mothers' perceptions of their needs and the needs of their children 2. Mothers' preferences regarding services and relationships with providers	Focus groups with mothers and AMH case managers	AMH case management services	42 mothers 55 case managers	'Severe mental illness'	USA
Schwab, Clarke and Drake, 1991	Looking at service users and providers views and experiences of the service	Ethnographic study of clients and mental health centre staff members	Community AMHS	Not stated	Not specified: mental health problems plus substance abuse	USA
Shachnow, 1987	To explore whether mothers' inpatient admission results in better meeting of children's needs through access to new support services	Interviews with patient, 'well' parent and child(ren)	Inpatient psychiatric unit	22 patients 21 well parents 36 children	Inpatients	USA
Sheppard, 2001	To explore how social workers worked with depressed mothers? To explore MH service involvement and the role of social workers in accessing this support To explore mothers' experience of social work support	Interviews with mothers and their social workers	Social services	67 mothers and their social workers	Depression	England
Singer, Tang and Berelowitz, 2000	To establish what input children of PwMHP had received from adult MHS, social services, education and other agencies	Interviews with mothers and children	Outpatient and community AMHS	12 mothers 14 children	Range. Current users of AMHS	England

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Slattery, 2006	To explore the experiences and support needs of mothers with sever and enduring mental illness	Focus groups and postal survey of mothers	Community MH services	54 mothers	‘Severe and enduring mental illness’	England
Stanley, Penhale, Riordan, Barbour and Holden, 2003a, 2003b	To examine the extent to which different professionals work together in cases where there are child protection concerns within a family where there is a parent with MHPs. To explore parents' experiences as service users and their perceived needs (met and unmet)	Postal survey of practitioners (mental health and child protection) Interviews with mothers	Practitioner: various agencies and settings where encounter PMH and child protection issues Mothers: via ‘key informants in health and social services’	500 practitioners 11 mothers	‘Enduring mental health difficulties’	England
Swartz, Zuckoff, Frank, Spielvogle, Shearm Fleming and Scott, 2006	Open label pilot study to evaluate the feasability and acceptability of delivering this intervention	Attendance rates and a semi-structured 'exit interview' of users of a pilot service for mothers	Service providing Brief Interpersonal Psychotherapy	17 mothers	Depression	USA

Author and date	Main aim of research in relation to access and use of services	Basic research design and sample	Service/setting from which sample recruited	Achieved sample size	MHP of parents represented in the research	Country
Thomas and Kalucy, 2002	To describe practical (managing family needs) issues associated with hospital admission; to explore parents views of their children's support needs and how need should be met	Semi-structured interviews with parents	Inpatient and outpatient MH services and community groups	35 parents	Severe (bipolar disorder, major depressive disorder, schizo-affective disorder, schizophrenia, personality disorder)	Australia
Wang and Goldschmidt, 1996	To look at psychiatric inpatients' views of professionals, particularly in terms of improving cooperation between parents and professionals in order to better meet needs of patients' children	Semi-structured interviews with inpatients with children 0-10 years olds	Inpatient psychiatric units	50 parents	Range. All inpatients	Denmark

Table A4: Description of randomised controlled trials included for question four

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Baydar et al, 2003	Parenting training programme plus Headstart	Low income mothers	Certified parenting clinic leader plus Headstart family service worker	'At risk' for maternal mental health problems	Intervention – 607 66% white Control – 275 56% white	USA
Beardslee et al, 2003	Clinician-facilitated psycho-educational intervention	Parents and children aged 8-15	Psychologists, social workers, nurses – all specifically trained	Parental depression	Clinician intervention: 59 families – 106 parents, 78 children Lecture intervention: 46 families – 84 parents, 60 children *Both groups at final follow-up:* *94% white* *78% mothers with parental mood disorder* *17% single parent* *52% annual family income $65,000 or more* *64% of families in top two SES categories*	USA
Beeber et al, 2004	Depressive symptom intervention	Mothers in Early Headstart programmes with children 6 weeks to 30m	Master's 'prepared' mental health nurses	Maternal depression	Intervention – 8 Control – 8 Both groups: 14/16 not married 6/16 white Average years of schooling - 11 11/16 in paid work Average annual household income: $11,642	USA

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Butler et al, 2000	Video-based psycho-educational intervention	Families where at least one parent has depression and there is at least one child aged 7-12	Self-administered	Parental depression	Intervention: 40 families Waiting list control: 34 families Total of 76[3] depressed parents: 93% white 78% female 24% single parent 78% in paid work 55% college/graduate education	USA
Clarke et al, 2001	Cognitive behavioural therapy	'At risk' children aged 13-18 of depressed parents	Master's level therapists	Parental depression	Intervention – 45 *22/40 girls* *31/40 white* Control– 49 *31/47 girls* *47/49 white*	USA

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Clarke et al, 2002	As above	Depressed children aged 12-18 of depressed parents	As above	Parental and child depression	Intervention – 41 Children: 63% girls Parents: 78% mothers 3% minority community 78% married 23% college graduate 75% employed Control – 47 Children: 75% girls Parents: 87% mothers 6% minority community 77% married 23% college graduate 75% employed	USA

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Nickel et al, 2005	In-patient, psychiatric psychotherapeutic treatment in mother and child ward	Mothers aged 20-30 with 1 or 2 children aged 5-12	Psychiatrists and psychotherapists	Maternal depression	Admitted with child – 21 9/21 single parent 6/21 'homemaker' 6/21 blue collar 9/21 white collar Admitted without child – 22 8/22 single parent 7/22 'homemaker' 7/22 blue collar 8/22 white collar	Germany
Peden et al, 2005	Cognitive behavioural therapy	Low income single mothers living with at least one child 2-6 years	Master's educated psychiatric nurses experience in leading groups	'At risk' for maternal depression	Intervention – 62 Control – 74 Both groups: 52% white 55% some post-secondary education 57% in paid work 80% annual household income $15,000 or less 42% divorced or separated, remainder never married	USA

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Sanders et al, 2000	Cognitive behavioural therapy plus behavioural family intervention (CBFI)	Mothers with children with behavioural problems	Therapists trained in the intervention – clinical psychologists, trainee clinical psychologists or others with clinical experience with children and families	Maternal major depression	CBFI – 23 8/23 single parent Socio-demographic disadvantage index = 1.64 (SD 1.26) Behavioural family intervention only – 24 7/24 single parent Socio-demographic disadvantage index = 1.56 (SD 1.06)	Australia
Toth, 2006; Cichetti, 2000	Toddler Parent Psychotherapy	Mothers with child aged c. 18m	Master's or PhD level therapists	Maternal major depression	Depressed intervention group – 66 15% not married Depressed controls – 64 20% not married Non-depressed controls – 68 2% not married All three groups: 93% white 73% in top two SES categories 55% college graduates	USA

Author and date	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants (numbers randomised[1]) and socio-economic status[2]	Country
Tritt et al, 2004	In-patient, psychiatric psychotherapeutic treatment in mother and child ward	Mothers aged 20-35 with 1 or 2 children aged 5-12	Not stated explicitly	Maternal generalised anxiety disorder	Admitted with child – 16 *7/15 single parent* *9/15 'housewife'* *4/15 blue collar* *1/15 white collar* Admitted without child – 17 *6/14 single parent* *7/14 'housewife'* *4/14 blue collar* *3/14 white collar*	Germany
Verduyn et al, 2003	Cognitive behavioural therapy and psycho-education	Mothers with pre-school children with behaviour problems	Clinical psychologists with support from nursery nurses	Maternal clinical depression	Intervention – 47 26% single parent 68% education to 16 years 81% not in paid work Placebo control – 44 20% single parent 84% education to 16 years 82% not in paid work No treatment control – 28 15% single parent 69% education to 16 years 86% not in paid work	UK

1. The number of subjects randomised was not always reported. Figures in italics are for numbers who participated in research.
2. Where reported in the papers we extracted data on sex, age, ethnicity, working status, income, education, and overall socio-economic status. Reporting varied substantially and details were not always given for the intervention and control groups separately. Where reported in the papers, details are given for the samples randomised. In some papers, details were given only for samples actually studied or followed up; these are reported in italics.
3. In two families, two parents were depressed.

Abbreviations

BDI	Beck Depression Inventory
DIS-III-R	Diagnostic Interview Schedule III-R
SCI	Structured Clinical Interview
DSM-III-R	Diagnostic and Statistical Manual of Depressive Disorders (3rd edition, revised)
DSM IV	Diagnostic and Statistical Manual of Depressive Disorders (4th edition)
ICD	International Classification of Disease
CES-D	Center for Epidemiologic Studies – Depression Scale
PMHPs	Parents with mental health problems
SES	Socio-economic status

Table A5: Description of non-RCT studies included for question four

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Bogard et al, 1999	Shelters for homeless families	Homeless mothers	Varied from shelter to shelter	MHP not a criterion for inclusion in study	340 initially recruited, 298 women interviewed at wave 1, 225 women at wave 2 12% white 85% lone parent 17% in paid work in last month 32% some college or technical education	Observational, longitudinal study with comparative data	USA
Brownrigg et al, 2004; Place et al, 2002	Psycho-education intervention for children and parents	Children (7-14) of parents with MHP and the parents	Social work and nurse workers experienced working with children with MHPs	Parental significant depression	24 No socio-economic details given	Single group, before and after study	UK
Brunette et al, 2004	Integrated family treatment	Parents with severe psychiatric difficulties and their families	Family specialist clinician	Parental severe psychotic or mood disorder	8 8/8 white 5/8 high school or graduate education 3/8 lone parent Median monthly income per child in home $935	Single group, before and after study	USA

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Cowell et al, 2000	Problem solving nursing intervention	Mexican American parents and children of elementary school age	School nurse and nursing students	Maternal risk of MHP	8 mothers, 17 children No other socio-economic details given	Single group, before and after study	USA
Not given 2003 FSS/PACE programme	Family support service – multi-component	Parents with MHPs and their children under 18	Clinical social workers (case managers)	Various, iIncludes MDD, bipolar disorder, schizophrenia, GAD, PTSD, dysthymia, OCD	Not clear Of 80 adults served since programme began: 60/80 white 'Most' live in own homes or apartments	Single group, descriptive programme evaluation	USA
Croake and Kelly, 1985	Adlerian Family Therapy	Fathers with MHPs and their families with at least one 'school age' child at home	Family therapist	Paternal schizophrenia or depression	60 families No socio-economic details given	Single group, before and after study but with some comparative data	USA
Free et al, 1996	Psychotherapy	Mothers of pre-school children	Not recorded	Depression - unipolar and bipolar	43 depressed mothers who had received psychotherapy 10 depressed mothers who had not received psychotherapy 31 mothers without psychiatric diagnosis or psychotherapy All three groups:	Secondary analysis of data from depressed sub-groups in large survey	USA

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
					85% white 'Predominantly middle to upper-middle class' 'Most' mothers were high school or college educated		
Hanrahan et al, 2005	Care management and problem solving	Homeless mothers with MHPs and their children (mean age 6 years)	Care managers Psychiatrist	Includes schizophrenia, other psychotic disorders, major depression, bipolar disorder, dysthymia, adjustment disorder	24 mothers, 43 children 17% white 'Less than half' completed high school 'Two-thirds' had never been married None were in paid work	Single group, retrospective chart review with before and after data	USA
Hawes and Cottrell, 1999	Psychiatric hospital admission	Mothers but exploring impact on children aged 0-16 years	Not stated	Psychotic and non-psychotic conditions not otherwise described	26 interviewed 25 data from case notes only Interview group: 15/26 white 9/26 lone parent Case note group: 10/25 white 10/25 lone parent 'Few' in either group in paid work	Two group, descriptive study, supplemented by record review	UK

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Kendall and Peterson, 1996	Mental health services, including psychotherapy	Teenage mothers with MHPs	Psychiatric nurses and nursing students Psychiatrist	Includes PTSD, MDD, dysthymia, PD, GAD/panic disorder, adjustment disorder, bipolar disorder, schizophreniform disorder	38 27/38 white	Single group, descriptive programme evaluation	USA
Hye Ha and Ja Oh, 2006	Cognitive Behavioural Group Therapy	Depressed mothers of children with behavioural problems	Professor of Child Welfare and psychology 'resident'	Maternal depression	17 in CBT group 17 in waiting list group No socio-economic details given	Two group intervention study with waiting list control	Korea
Waldo et al, 1987	Mother and Children's parenting and early intervention project	Mothers with schizophrenia and at least one preschool child	Psychologists Child development specialist Social worker Volunteers (mothers)	Maternal schizophrenia	31 initially recruited 25 attended regularly No socio-economic details given	Single group, descriptive programme evaluation – professionals' views only	USA
Papworth et al, 2001	Group meetings – psycho-educational in type	Mothers	Not stated	Maternal risk of MHP	11 All lone parents All 'full-time carers'	Single condition, repeated measures, before and after study	UK

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Nielsen, 2005	Family therapy	Families with family problems and at least one parent with simultaneous MHP. All children living at home under 18 years	Psychotherapists	Includes affective disorders, anxiety disorders, reaction to stress and adjustment disorders, eating disorders, personality disorders	58 families/101 patients initially in study 31 families/53 patients participated: 8/53 lone parents13/53 higher education or currently student 45/53 in paid work 28 families / 48 patients dropped out: 7/48 lone parents 11/48 higher education or currently student 30/48 in paid work	Single group, before and after study with comparative data	Denmark
Swartz et al, 2006	Brief interpersonal psychotherapy	Depressed mothers of children 12-18 years receiving psychiatric treatment	Clinical psychologist and trained mental health clinicians	Maternal depression	13 4/13 lone parent 10/13 white 5/15 college or graduate diploma	‘Open-label’, single group, before and after pilot study	USA

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Cardemil et al, 2005	Family coping skills programme	Low-income, 'Latina' mothers	Group leaders not otherwise described	Maternal depression	33 recruited initially 12/33 lone parent 10/33 in paid work 21/33 annual household incomes < $25,000 24 completed programme	Single group, before and after study	USA
Alder, 2005	Assertive outreach programme	Parents with severe and enduring MHPs and 'dependent' children	Project co-ordinator and group worker not otherwise described	Largest group schizophrenia, also includes depression, post-natal depression, bipolar disorder, personality disorder	13 39% white	Single group, descriptive programme evaluation	UK
Not given 2000 Emerson-Davis Family Development Center	Family residential development centre	Mothers with MHPs and history of homelessness. Children 1 wk to 15 years	Social worker, counsellor, clinical child psychologist, family development specialist, substance abuse counsellor, case managers, child care workers	Mostly schizophrenia or mood disorder, plus 'other'	Not given – typical numbers in residence 85-95 15% white 66% never married 64% did not complete high school	Single group, descriptive programme evaluation	USA

Study	**Nature of service or intervention**	**Who for**	**Who delivers**	**Mental health problem**	**Study participants**	**Study design**	**Country**
Not given 2002 Arkansas CARES	Residential treatment of dual diagnosis conditions, with intensive aftercare	Low-income mothers with dual diagnosis and their children, under 13 years at one site, under 19 years at another	Paediatricians, family physicians, psychiatrists, nurses, social workers, psychologists, early years special education specialists, alcohol and drug abuse treatment counsellors, nutritionists, physio- and occupational therapists, speech and language pathologists, toxicology professionals	Maternal dual diagnosis, Co-morbid MHPs include depression, schizophrenia, bipolar disorder, PTSD	72 No socio-economic details given	Single group, descriptive programme evaluation	USA
Pasquariella, 1996	Therapeutic unit	Parents with severe and chronic MHPs, their families and children 0-5 years	Psychotherapist, psychiatrist and clinicians with extensive experience in child and adult psychotherapy, clinical supervisor	Maternal severe and chronic mental illness	34 parents, 45 children 'Modal family' is white, low income (public assistance and/or social security subsidised), and lone mother	Single group, before and after study	USA

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Pitman and Matthey, 2004	Psycho-educational programme	Children 8-16 years who have a parent or sibling with MHPs	Social worker (first author) and co-facilitators not otherwise described	MDD with or without anxiety or bipolar disorder, or schizophrenia	25 children from 18 families 66% girls 11/25 'English-speaking background'	Single group, before and after study	Canada Australia
Verdeli et al, 2004	Interpersonal psychotherapy	Depressed mothers of children (mean age 14.1) being treated for depression	Experienced clinician trained in interpersonal psychotherapy	Maternal, unipolar, non-psychotic depression	12 initially recruited 17% white 66% lone parent 67% completed high school 58% in paid work 60% annual household income ,$10,000 9 completed intervention	Single group, before and after study	USA
Bassett et al, 2001, 2003	Parenting skills programme with activities for children and monitoring	Parents with major MHP and their children under 5 years	Occupational therapists Guest speakers	Major mental illness	34 parents referred in 2 years No socio-economic details given except all able to read and write	Single group, qualitative programme evaluation with some before and after data	Australia
Orel et al, 2003	Psycho-educational intervention	Children (8-13 years) of PMHPs	Mental health professionals Volunteer mentors	Includes bipolar disease, MDD, schizophrenia	11 children 8/11 girls 9/11 white	Single group, before and after study	USA

Study	Nature of service or intervention	Who for	Who delivers	Mental health problem	Study participants	Study design	Country
Sheppard, 2004	Direct social work and indirect work through other agencies	Mothers in care managed families who have screened positively for depression	Social workers	Maternal depression	87, but data for 85 No socio-economic details reported	Single group, descriptive survey with post-hoc comparison	UK

Abbreviations

BDI	Beck Depression Inventory
CES-D	Center for Epidemiologic Studies – Depression Scale
DSM IV	Diagnostic and Statistical Manual of Depressive Disorders (4th edition)
HAM-D	Hamilton Rating Scale for Depression
ICD	International Classification of Disease
MINI	Mini-International Neuro-Psychiatric Interview
PSI	Parenting Stress Index – short form
SADS	Symptoms of Anxiety and Depression Scale
SCI	Structured Clinical Interview
GAD	Generalised anxiety disorder
MDD	Major depressive disorder
OCD	Obsessive compulsive disorder
PD	Personality disorder
PMHPs	Parents with mental health problems
PTSD	Post-traumatic distress disorder