

Improving the Mental Health of Northern Ireland's Children and Young People:

Priorities for research

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Ministerial Foreword

I am pleased to commend to you this Research Review that is one of a series focussing on priorities identified through the Action Plan that supports the Executive's response to the Bamford Review Recommendations. The Bamford Action Plan (2009-2011) is driving much-needed change in how we care for people affected by mental health or intellectual disabilities. One in six of our population has a mental health need at any one time, and it is estimated that between 1-2% of our population, that is around 24,000 people, have an intellectual disability. In addition, there are many others who have or will develop dementia in the future.

Our highly committed staff who deliver health and social care services have expertise and skills that must be supported by the best up-to-date knowledge. Through research, new knowledge is created. But it is now recognised that, for a variety of reasons, essential knowledge does not always reach the people who most need to use it. The knowledge can vary from better understanding of the causes of poor mental health or intellectual disabilities through to evidence on which services bring about the greatest improvements to the lives of people or their carers. To bring together this knowledge we have commissioned five Research Reviews.

Each Review was written by a team of experts in academia, clinical services and care who have collected the most up-to-date evidence from research done locally or globally. All of the review teams were based in Northern Ireland so we know that the Reviews are relevant to our local situation. The quality of each Review has also been assured through input from experts who are based in other parts of the UK or internationally.

The priority areas addressed by the Reviews are:

- Children & Young People including early interventions, the needs of looked-after children and the development of resilience;
- Patient Outcomes including the measurement of recovery and the capture of patient feedback;
- Intellectual Disability including the management of challenging behaviours;
- Psychological Therapies including how to embed these in services for children and adults across the lifespan and including those with intellectual disability and severe mental health problems;
- Primary Care including aspects important to the prevention, recognition and management of mental health in the community.

As well as providing accessible knowledge and information, each Review has highlighted gaps in our knowledge. We will commission new research projects aiming to fill those gaps.

My final acknowledgement is of contributions made by local people, patients and their carers who assisted in the selection of the priority areas covered by the Reviews and provided extremely helpful feedback to the review teams. Some of those people also serve through their membership of our Bamford Monitoring Group.

I dedicate these Reviews to the people who are affected by mental health or intellectual disabilities. I urge our health and social care staff, education professionals, members of voluntary organisations and others to use these Reviews so that all members of our community may receive the best possible support to live their lives with dignity.

Edwin Poots MLA

Minister for Health, Social Services and Public Safety

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EXECUTIVE SUMMARY

SECTION A – INTRODUCTION

Chapter 1 - Background and scope of the review

This report is one of five rapid reviews commissioned by the Health and Social Care Research and Development Division of the Public Health Agency (PHA). It presents a series of overviews of effectiveness research relevant to the mental health of children and young people in Northern Ireland. This review covers the subgroups identified as priority areas of research by the PHA following consultation with policy makers, practitioners and commissioners, namely:

- Early Interventions;
- Mental Health of Looked After Children; and
- Development of Resilience.

The review also covers two additional areas of importance highlighted by the Bamford report, namely:

- Children with Autism Spectrum Disorders and Complex Needs; and
- Gay, Lesbian, Bisexual and Transgender Youth.

The overall purpose of this report is to map the current evidence base in relation to ‘what works’ in each of the five identified areas, by considering the available literature, identifying policy implications, examining specific subthemes, and identifying the key research questions requiring attention in future research. This executive summary highlights some of the substantive findings emerging from the review, but focuses primarily on implications for research.

Chapter 2 – Review methodology

It was agreed that the most effective way in which to conduct this report was to provide a systematic overview of systematic reviews in each of the identified priority areas. The review was conducted to an agreed protocol which set out, a priori, the eligibility/inclusion criteria, search strategy, and the approach to data management and critical appraisal.

To be eligible for this review, reviews had to address at least one of the research questions of interest and have systematically searched a minimum of two electronic databases. Each specific research question had an individual search strategy designed for its purpose (see Appendix 1) to be entered into an agreed list of databases and websites. Results were restricted to reviews published during or after 2005, and in English only. Reviews from low- and middle-income countries were also excluded. Disagreement among review authors was resolved by retrieving the full paper and/or discussion in one of the regular team meetings. Data was extracted from the included reviews using a standard data extraction form. The quality of each included review was appraised through use of the AMSTAR Quality Assessment Tool (Shea et al., 2009).

Stakeholders from within the area of Child and Adolescent Mental Health were identified and consulted with, both at the outset of the review process, and towards the concluding stages. This was to ensure that priority areas had been identified, and that the resulting review was of maximum relevance to Northern Ireland.

SECTION B – CHILD AND ADOLESCENT MENTAL HEALTH PROBLEMS

Chapter 3 - The mental health of children and young people in Northern Ireland

The evidence suggests that the Troubles may have contributed to poor mental health within Northern Ireland, both through their impact on the social and economic circumstances of individuals and neighbourhoods, and more directly via trauma, bereavement and violence. This may limit the generalizability of existing prevalence studies of child and adolescent mental health conducted in Great Britain, neither of which included Northern Ireland. Key findings include:

- A prevalence study specific to Northern Ireland should be commissioned;
- The methodology of a Northern Ireland study should be designed so that it supports international comparisons.

SECTION C – EARLY INTERVENTIONS

Chapter 4 - Recognising and facilitating help-seeking behaviour

This chapter reviews the evidence relating to what works in helping professionals and lay workers to foster and to recognise help seeking behaviour from young people and their parents. Just four reviews were deemed eligible for inclusion. Key findings include:

- More is known about the barriers to help seeking than what facilitates it. Stigma and embarrassment, worries about confidentiality and the response they might receive, are amongst the barriers known to deter many young people;
- There is a need for the development and rigorous evaluation of initiatives designed to encourage help-seeking behaviour. Considering the particular problem of youth suicide in Northern Ireland, this is a high priority area for research;
- Mental health literacy programmes, though potentially effective, are thin on the ground and poorly evaluated.

Chapter 5 – Interventions to prevent the factors that contribute to poor mental health and self-harm

In considering the question of what we know about how best to intervene to prevent the factors that contribute to poor mental health and self-harm, we identified nineteen reviews that met our eligibility criteria. Interventions that have been evaluated focus primarily on reducing or preventing bullying, alcohol and substance misuse, poor social skills and low self-esteem, bereavement and exposure to traumatic events or war and conflict. Key findings include:

- Many anti-bullying programmes are school based. Reviews provide somewhat conflicting evidence, which may be attributable to differences in inclusion criteria etc. There is some evidence that whole-school programmes are more effective than curriculum based programmes;
- School-based interventions designed to enhance skills have been found significantly to reduce drug use and improve decision-making skills and self-esteem, compared to other school-based programmes. Behavioural and cognitive-behavioural interventions generally outperform others, but overall the evidence base needs to be stronger. One review suggested that parenting programmes can be effective in preventing substance abuse.
- Evidence from three reviews indicate that cognitive-behavioural therapies appear significantly to reduce the psychological harm among symptomatic children and adolescents affected by one or more traumatic events, but that school-based group interventions are not sufficient for reducing distress in children exposed to the traumas of war. Evidence of the effectiveness of bereavement interventions is lacking.
- Improved reporting of the studies is recommended, including detailing the exact implementation of interventions and full description of participant's characteristics;
- Long-term follow-up, costs-benefit analyses, and participants views are also absent from the literature and strongly required.

Chapter 6 – Interventions to prevent attachment and other behavioural disorders

We identified six reviews that dealt with this aspect of mental health, most of which were concerned with either school-based or parenting programmes. Key findings include:

- There is evidence that 'whole-school' programmes promoting social and emotional health are more effective than brief, class based programmes aimed at preventing mental health problems. However, longer term, more rigorous research of school-based interventions is needed to assess the impact of whole-school and targeted approaches in the UK;
- The effectiveness of home visiting programmes comes from studies with persuasive findings, but with some question marks as to their applicability to the UK context. Evaluations of the Nurse Family Partnership are currently under way in the UK;
- There is a strong evidence base for the effectiveness of parent training programmes, but these require further research to determine their long-term effectiveness.

Chapter 7 – Interventions addressing the support needs of carers

The final area of early intervention research examined was that relating to interventions for supporting parents and other carers. Ten reviews were deemed eligible for inclusion. Key findings include:

- Parenting programmes are available that target the needs of parents, including learning disabled parents and parents with mental health problems. Some programmes, such as *Incredible Years* and *Triple P*, have demonstrated an ability to improve parenting, and outcomes for both parents and children, in the short and medium term. More generally, rigorous evaluations and long term follow up are rare.

- Programmes targeting learning disabled parents, parents with mental health problems, whose children have mental health problems are fewer in number and less well evaluated. The same is true of interventions for substitute carers and fathers.
- Research must address which interventions are best suited to different groups of people, including parents with learning disabilities, parents of children with mental health problems, foster carers, and fathers.

SECTION D – MALTREATED AND LOOKED AFTER CHILDREN

Chapter 8 - Models of service that provide timely and effective help to children looked after

Only three reviews relevant to this important topic were judged eligible. These suggested that:

- Kinship care is a potentially effective strategy, but requires further exploration in higher quality studies of longitudinal designs;
- Treatment Foster Care was identified as a potentially effective intervention, but one that requires more in-depth evaluation, with more diverse locations and populations.

In relation to the research agenda, there is a need for:

- longitudinal designs to investigate the outcomes for children of kinship care and other out-of-home placements;
- the development of psychometrically sound instruments of family and child functioning to enable more reliable comparisons between groups;
- to identify and control for the forms of bias commonly associated with studies of out-of-home care e.g. selection bias, and
- to replicate studies in a variety of socio-demographic and policy contexts.

Chapter 9 - Interventions for children traumatised through maltreatment and disrupted relationships with their primary carers

Ten eligible reviews were identified that examined the evidence for what interventions were most likely to address the consequences of maltreatment and/or disrupted relationships with primary carers. Key findings include:

- Most attention has been directed at the outcomes following child sexual abuse, leaving physical abuse and neglect relatively ignored areas of research;
- Children who have experienced sexual abuse and who are symptomatic i.e. have one or more of the difficulties commonly associated with sexual abuse appear to benefit from receiving therapy, and the weight of evidence favours cognitive-behavioural therapy. Both individual and group-based approaches can be useful.
- More generally, there is a need for studies that: use more robust, experimental designs; that provide better baseline information, including the co-occurrence of other types of abuse (in order to enable conclusions to be drawn about the differential effectiveness of interventions

for specific forms of maltreatment); that are better reported, and use a multidimensional approach to the assessment of outcomes.

- Other research gaps include the prevention of maltreatment in high risk populations and promoting parental sensitivity and infant-parent attachment.

Chapter 10 - Effective approaches to multidisciplinary and multi-agency working

The final issue covered in Section D focused on effective approaches of multidisciplinary and multi-agency work. The dearth of evidence available in this area is reflected in the fact that only one review was deemed eligible for inclusion. Key findings for the research agenda are:

- There is little further need for studies of the barriers and facilitators to multi-agency and multi-disciplinary working.
- More is required on the relative effectiveness of the different interventions designed to promote multi-agency and multi-disciplinary practice.
- The end point of delivery, and difference made to the children's lives, must be a key consideration in such research.
- Controlled before and after, and interrupted time series designs, should be considered as potential opportunities for rigorous evaluation.

SECTION E – THE DEVELOPMENT OF RESILIENCE

Chapter 11 – Promoting and nurturing the development of resilience

Six reviews were identified that met the inclusion criteria. None of the included studies focus solely on the development of resilience, but rather on interventions targeting adverse events (including depression, anxiety, and maltreatment), only some of which incorporate the development of resilience. Five of the six reviews were concerned with addressing depression, and anxiety in young people, with only one addressing treatment following child neglect or maltreatment. Key findings include:

- The Penn Resiliency programme, based on cognitive-behavioural theories of depression, features prominently across the results of the reviews as a promising intervention. It aims to assist participants to adapt positively to adverse events (and prevent depression);
- The prominence of one programme could be considered an indicator of the relative lack of other programmes available. This programme should be trialled in other policy contexts by independent trialists;
- Variability in reported effect sizes has been attributed to variability in the conduct of the programmes, therefore future research should explore which aspects of the programme are most supportive to the programme;
- Interventions with a more explicit focus on nurturing resilience are needed, but may not be possible without a better understanding of the nature of resilience.

- One possible area of research might be that of assessing the impact of using peers for resilience training.

Chapter 12 – Interventions to address the mental health needs of gay, lesbian, bisexual and transgendered young people

Only 2 reviews were judged eligible for inclusion. Key findings include:

- A significant gap in research was immediately apparent in this area, particularly regarding those diagnosed with gender identity disorder;
- The limited research that does exist in the area requires further attention to areas including coping with minority stress, and addressing the diversity of participants.
- There is a need to improve the methodological quality of studies in this area. For example, researchers should try to move beyond convenience samples, and to incorporate more prospective longitudinal work.

Chapter 13 – Preventing self-harm and suicide

Twenty four reviews were deemed eligible for inclusion. Key findings include:

- The complexity of the issues involved suggest that a ‘one size fits all’ approach to preventing suicide or self-harm is unlikely to be feasible;
- The priorities for this area should include the development of conceptually and empirically sound interventions evaluated through larger trials;
- Additional priorities for this area include studies examining the socio-economic gradient and the wider structural barriers to mental health, studies of the effectiveness of help lines, and greater focus on high risk groups, impact of self-harm and suicide awareness training.

Chapter 14 – Helping parents with mental health problems

Eleven reviews were identified that assessed the evidence relating to interventions designed to help parents with mental health problems to be good enough parents. Key findings include:

- There is an evident need for a prevalence study of parental mental health problems in Northern Ireland;
- Potential tools must be piloted and their effectiveness evaluated, subjecting new initiatives to evaluation studies from their outset;
- An ignored but essential area to address may be the experiences and needs of fathers with mental health problems.

Chapter 15 - Interventions aimed at supporting the children of parents with mental health problems.

Four reviews were included in this chapter, though only one met the inclusion criteria. Key findings include:

- There are a number of barriers to effective practice by mental health workers, including lack of policy and practice guidelines; inadequate resource allocation; lack of clarity around role boundaries, and concern about undermining their relationship with a patient by raising issues regarding their parenting;
- Interventions that combine work with the parent with direct support for the child are well received.
- The quality of the relationships between professionals and the families they supported appears to be an essential lever for change across a range of services, such as the Family Nurse Partnership and Home-Start.
- There is some evidence on the effectiveness of early interventions, yet interventions targeting older children remain relatively ignored.
- The mechanisms involved in the associations between parental mental health and children's safety, health and well-being need also to be better understood.
- As the vast majority of research focuses on parental depression involving the mother, further attention should be paid to effects on children of depressed fathers.

SECTION F – THE MENTAL HEALTH AND WELL-BEING OF THOSE WITH COMPLEX NEEDS / AUTISM SPECTRUM DISORDERS

Chapter 16 – Effective interventions for assertive outreach/intensive treatment/day unit treatment for young people with complex needs

In this area, only one review was deemed eligible for inclusion. Key findings from this single review are:

- There is a need for well-designed, adequately powered RCTs examining which services result in the best outcomes, although the ethical limitations of such studies are acknowledged;
- There is a need for in-depth qualitative research exploring the experience of service users, parents and professionals.

Chapter 17 – Improving the social and communication skills of children with Autism Spectrum Disorders

Twenty three reviews were deemed eligible for inclusion. Key findings include:

- The social and communication skills of children and young people with ASD can be enhanced by social interventions, but it is not possible to draw conclusions about the superiority of one intervention over another.
- Future research should not merely determine whether a treatment is effective, but it must also specify clearly for whom and in what context the intervention is effective;
- Future research should also include direct comparisons of various types of interventions, in addition to using placebo or no treatment as comparators, in order to provide evidence that will assist patients and practitioners in choosing among many treatment options.

- Increased use of experimental group designs would be of particular use;
- It would also be of considerable benefit to conduct direct comparisons of one intervention against another, to aid in choosing among the different options;
- It is important to explore application of interventions to older children and adolescents over 5 years of age.

SECTION G – OVERALL SUMMARY

Chapter 18 – Improving the social

The breadth and quality of the included reviews in each of the topics varied greatly. There are some issues that appeared particularly common across many of the chapters including:

- The need to improve the methodological quality of many of the studies involved;
- The question over how applicable many findings are to a Northern Ireland context specifically; and
- The need for a greater use of more diverse populations in studies of intervention effectiveness.

While some promising work has been highlighted by the results of many of the searches, each of the topics under investigation are equally deserving of more attention and investigation.

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SECTION A

BACKGROUND AND METHODOLOGY

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CHAPTER 1

Background and Scope of the Review

Background

This report is one of five Rapid Reviews commissioned by the Public Health Agency (PHA) in Northern Ireland. The Health and Social Care Research and Development Division of the PHA identified each review as a priority area following consultation with researchers and users of research (policy makers, practitioners and commissioners; patients, clients and carers). The purpose of the reviews is to inform calls for primary research, by considering the available literature, identifying policy implications, examining specified subthemes, and identifying key research questions. The reviews were expected also to provide ‘immediate outputs for use by policy makers, practitioners and commissioners’ (HPA 2010).

This review focuses on the mental health of children and young people in Northern Ireland. The other four reviews cover: learning disabilities; patient outcomes; primary care; and psychological therapies. We have sought to minimise duplication of effort in the scope of this review, though some overlap may be inevitable given the timescale for completion and the absence of detailed information on other reviews being undertaken.

Scope of the review

This review covers the subgroups specified in the commissioning brief, namely:

- Early interventions, including the recognition of help seeking behaviours;
- Mental health of looked after children, and
- The development of resilience among young people, including those who self harm.

It also covers two additional issues highlighted in the Bamford Report:

- Children with autistic spectrum disorders (ASD), and
- Gay, lesbian, bisexual and transgender youth.

The review sought to map the evidence base relating to ‘what works’ in each of these five areas, at primary, secondary and tertiary level. Each of these areas was further specified at the proposal stage, and agreed after consultation with a group of stakeholders. The scope of the report was determined as follows. Paragraph numbers refer to the relevant sections of the 2006 Bamford report, unless otherwise stated. The review also set out to address two more general questions:

- What is known about the mental health issues of children in NI?, and
- Does NI need a prevalence survey child and adolescent mental health?

Early interventions The *Bamford Report* recognised that use was being made of evidence-based programmes, such as *Incredible Years*, but recommended a broad review of the available evidence on early interventions with reference to NI policy and service context (para 5.13). This review covers the following areas of early intervention:

- What helps professionals and lay workers to identify help seeking behaviours (from parents, children and others)?

- What interventions best address factors known to contribute to poor mental health and self-harm, such as bullying (para 5. 17-20)?
- What primary and secondary prevention strategies/interventions are most likely to help prevent attachment and other behavioural difficulties amongst children and young people (Bamford 2007, para 5.13)?

Mental health of maltreated and looked after children In relation to maltreated and looked after children, the Bamford review identified the following questions, which provide the structure for this section of the review:

- How can a coherent service response best be developed that does not rely on the presence of symptoms as a basis of referral (e.g. proactive and comprehensive approaches to the assessment of the physical, educational and mental health needs of LAC) (para 5.21)?
- What interventions are most likely to provide effective support to children traumatised through maltreatment or disrupted relationships with their primary carers? (para 5.17-20)
- What models of services are most likely to ensure that children looked after receive timely and effective help?
- What approaches to multi-disciplinary and multi-agency work are most effective?

The development of resilience, including those who self harm Here we focused on the following questions:

- What interventions best promote/nurture the development of resilience? (*Bamford* notes the importance of pursuing infant mental health and early interventions services as a preventative strategy (para 5.12)).
- What interventions/strategies are most likely to help address the mental health issues relevant to gay, lesbian, bisexual and transgendered young people (paras 5.6 and 5.7)?
- What interventions show most promise / evidence of effectiveness in preventing self-harm and suicide?
- What interventions are best placed to help parents with mental ill health provide good enough parenting to their children (para 5.22)?
- How can services support their parenting whilst remaining mindful of the needs of children and young people themselves?

Mental health and wellbeing of those with complex needs/Autistic Spectrum Disorders Here we focused on:

- What are the most effective approaches for assertive outreach/intensive treatment/ day unit treatment for young people with complex needs?
- How can we improve the social and communication skills/enhance social inclusion of children with Autism Spectrum Disorders (para 5.23)?

CHAPTER 2

Review methodology

The breadth of this priority area, the constrained timescale, and our knowledge of the field indicated that the most cost-effective and useful approach to this rapid review would be systematically to search for, critically appraise, and draw conclusions from existing reviews. In order to ensure relevance to Northern Ireland, we sought advice and information from a range of stakeholders, some of whom submitted written information and some of whom provided advice on the review at the outset and at the drafting stage.

There is no agreed methodology for rapid reviews, either in relation to process or validity (Watt *et al.* 2008; Ganaan *et al.* 2010), but there is consensus that transparency and explicitness are key, along with care in interpreting and using the evidence. This section summarises our approach as per the protocol submitted to the HPA. Changes made from the protocol originally proposed are set out below. One related to the search strategy and the other to the selection of reviews.

Eligibility criteria

Reviews that address at least one of the questions identified above (page 2-3) were included. No design criteria were imposed in relation to the study designs included in a systematic review. A minimal threshold was used for identifying systematic reviews, namely that the authors had systematically searched at least two electronic databases.

Search strategy

For each specific question, we conducted a comprehensive and systematic search strategy of databases and websites, including: the Cochrane Library, Campbell Library, DARE, HTA, Clinical Evidence, EPPI-Centre MEDLINE, CINAHL, EMBASE, PsychINFO, PsychLit, ReFeR, TRIP, NETSCC website, NIHCE, MRC and ESRC Websites, National Guidelines Clearing House, SIGLE, Sociological Abstracts, Psychological Abstracts, and Social Science Citation Index.

Unusually for a systematic review, we restricted our inclusion criteria to reviews published during or after 2005, and in English only. We also excluded reviews from low- and middle-income countries. We used a very low threshold for inclusion, namely that reviews should have systematically searched at least two databases. Search strategies are provided in Appendix 1.

Whilst the search strategy adopted entailed some duplication of effort, it was considered to be the most efficient approach given the timescale. We took the decision to limit the searches to 2005 and beyond after piloting one or two of the searches, because of the volume of citations involved. Although we did not search for reviews that were not systematic reviews (minimally defined), we noted non-systematic reviews, when identified, with the intention of drawing on these in areas where we found no systematic reviews. All citations were downloaded to REFWORKS, as this was the only software common to all review authors.

The reference lists of included reviews were carefully scrutinised for other eligible reviews.

One author (NL) oversaw the quality of the search strategies and undertook some independent checks on the work of other colleagues on the author team.

Data management

Disagreements were resolved by discussion and/or by retrieving the full paper where necessary. The processes of review, study selection and exclusion were carefully documented.

One person reviewed the results of those questions for which he or she held the primary responsibility, in consultation with a second for those reviews where there was any uncertainty. Uncertainty about a paper's eligibility was resolved by obtaining the full paper. If some uncertainty remained, this was discussed with another team member and or in regular team meetings (n=9 during the 12 week process).

One person conducted data extraction for each included review, with around 10% random quality checks by Macdonald or Livingstone. Data were recorded in a series of tables relevant to particular interventions/issues/questions. For each included review, the data extracted covered: location/setting, date of publication, sample characteristics, intervention characteristics (including theoretical underpinning or services, delivery, duration, outcomes and within-intervention variability), comparisons (if relevant), outcomes, information on process, and implementation.

Critical Appraisal of the evidence

Two people independently assessed the quality of each included review and the reliability/validity of its conclusions. Quality appraisal of intervention reviews was assessed using AMSTAR (Shea *et al.* 2009). Preliminary evidence suggested that AMSTAR has good agreement, reliability, construct validity and feasibility. It was felt that AMSTAR adequately captured the features of quality set out by the HDA Evidence Base (Swann *et al.* 2005), namely transparency, 'systematicity' and quality, so these were not separately scored as originally proposed.

AMSTAR comprises eleven components relevant to the quality of systematic reviews. For each component a review is judged 'Yes', 'No', 'Can't answer', or 'Not applicable' (See Table 2). The intention was that the AMSTAR profile would inform the conclusions drawn from the evidence pertinent to each question. The AMSTAR judgements are included in this report, but they proved to be of limited use. A review could score well on descriptive elements (such as including a list of included and excluded studies, providing details of the characteristics of included studies, assessing and documenting the quality of studies, and stating conflicts of interest), but these did not necessarily impact on the quality of the methods or conclusions drawn. Whilst AMSTAR allows for that, the measure did not appear to adequately differentiate amongst the included reviews.

Reporting the evidence In each section, we report the extent, range and quality of the existing evidence in 'at a glance' tables. In addition, we discuss the weight of evidence about the effectiveness of particular interventions, and we consider the quality of that evidence, the nature of any conflicting evidence, and the possible explanations for this. Adverse effects or unintended consequences are also identified. Where available, we have drawn on reviews of qualitative research, process and implementation research to complement or interpret the findings of intervention reviews. Each section concludes with an overview of what appear to be significant gaps in our knowledge base. These sections were informed by discussions with stakeholders (see below).

Table 2 AMSTAR Quality Assessment Tool

Quality components	Description
Was an “a priori” design provided?	The research question and inclusion criteria should be established before the conduct of the review. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.
Was there duplicate study selection and data extraction?	There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.
Was a comprehensive literature search performed?	At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated, and where feasible, the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.
Was the status of publication (i.e. grey literature) used as an inclusion criterion?	The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review) based on their publication status, language, etc.
Was a list of studies (included and excluded) provided?	A list of included and excluded studies should be provided.
Were the characteristics of the included studies provided?	In an aggregated form, such as a table, data from the original studies should be provided on the participants, interventions, and outcomes. The ranges of characteristics in all the studies analyzed (e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported).
Was the scientific quality of the included studies assessed and documented?	‘A priori’ methods of assessment should be provided (e.g. for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo-controlled studies, or allocation concealment as inclusion criteria); for other types of studies, alternative items will be relevant.
Was the scientific quality of the included studies used appropriately in formulating conclusions?	The results of the methodological rigor and scientific quality should be considered in the analysis of the review, and explicitly stated in formulating recommendations.
Were the methods used to combine the findings of the studies appropriate?	For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e.. chi-squared test for homogeneity, I^2). If heterogeneity exists, a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (i.e. is it sensible to combine?)
Was the likelihood of publication bias assessed?	An assessment of publication bias should include a combination of graphical aids (e.g. funnel plot, other available tests) and/or statistical tests (e.g. Egger regression test)
Was the conflict of interest stated?	Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.

Consultation with stakeholders

As a means of ensuring that the resulting review was maximally relevant to the Northern Ireland context, we combined evidence from published and unpublished reviews with evidence from key stakeholders in the field of Child and Adolescent Mental Health. The purpose of drawing on key stakeholders was to ensure that we did not duplicate work already done, and that the identification of priorities for research reflected gaps in the evidence and clinical priorities. The involvement of key stakeholders also helped address some of the limitations of a 'review of reviews', which often exclude local data and project evaluations and expert and practitioners opinions (see Bamba *et al.* 2010; Bull *et al.* 2004).

Using our networks, we identified stakeholders within the broad field of Child and Adolescent Mental Health, including those who use services. As per protocol, we met with stakeholders at the outset of the review process to ensure that we were not missing any important issues, and again in week eleven.

SECTION B

MENTAL HEALTH OF CHILDREN AND YOUNG PEOPLE IN NORTHERN IRELAND

CHAPTER 3

Mental health problems among children and young people in Northern Ireland

In this chapter, we consider what we know about the mental health problems of children and young people in Northern Ireland, and whether or not a Northern Ireland prevalence study is needed. We begin by setting out the meaning of prevalence, incidence and epidemiology. We then provide a detailed outline of three recent summaries of current data about the mental health of children and young people in Great Britain (Department of Health 2011a) and Northern Ireland (Bamford Review 2006; DHSSPS 2011), before summarising the available evidence, both from reviews and from single studies. In contrast to other chapters, there is a greater emphasis on the methodologies used to estimate prevalence as this may help inform the approach to any research that might be undertaken in Northern Ireland and may facilitate international comparison.

Terminology: prevalence, incidence and epidemiology

In this chapter, ‘prevalence’ refers to the overall level of mental health problems, amongst children and young people, at any one time. Prevalence is sometimes expressed as a ratio (calculated by dividing the number of people with mental health problems by the number of people in the population) and sometimes as a percentage (the ratio multiplied by 100), but these figures will generally not be the focus here. When measured on one day, prevalence is sometimes referred to as point prevalence. Less commonly, prevalence can be measured over time - often a year – when it is referred to as period prevalence (Crichton 2000).

It is important to distinguish prevalence from incidence, which, in this context, would be the number of children and young people who develop a mental health problem over a particular period of time. Again, incidence is sometimes expressed as a proportion or percentage, calculated by dividing the number of new cases by the population. Some of the studies referred to in this chapter are also described as epidemiological studies. Epidemiology is the broad term for the study of the distribution and determinants of health, which includes the consideration of both prevalence and incidence (Sedgwick 2010).

Background

Depending on environment and circumstances, up to 20% of children in Great Britain may experience a clinically defined mental health problem at some time (Meltzer *et al.* 2000). The prevalence of mental health problems has risen steadily for over 50 years (Collishaw *et al.* 2004). Children looked after are particularly vulnerable because of maltreatment, disruptions in, or poor quality relationships with, their families of origin (Meltzer *et al.* 2004).

There is evidence that the Troubles have contributed to poor mental health within Northern Ireland (NI), both through their impact on the social and economic circumstances of individuals and neighbourhoods (Bamford 2006b) and more directly via trauma, bereavement and violence (see Tomlinson 2007a,b; Fay *et al.* 1999; OFMDFM 2002; Duffy 2004; Ferry *et al.* 2008; Leavey *et al.* 2009). The Commission for Victims and Survivors (2010) has highlighted that:

..there are limitations and gaps in the research relating to trans-generational issues of the Conflict and their impact on present and future generations of young people...The

potential impact of trans-generational issues on the lives of past, present and future generations of young people in Northern Ireland could emerge as one of most enduring consequences of the Conflict. (Commission for Victims and Survivors 2010: 141).

Despite improvements in socio-economic and environmental factors, social inequalities persist, and many continue to live lives exposed to violence and intimidation (Cairns *et al.* 2003; Ferry *et al.* 2008). The impact of the Troubles on rates of suicide is less clear, but notwithstanding the problems associated with the official statistics, NI appears to have higher-than-average rates of attempted and completed suicide amongst young people, at least in certain areas (Largey *et al.* 2009). We know that socio-economic disadvantage places children at increased risk of exposure to poor parental health, including mental ill health, and that such children are themselves at increased risk (Buchanan and Brinke 1997; Emerson 2007). We know less about the ways in which the Troubles (may) have affected post-1998 generations of children (see Smyth 1998; Smyth *et al.* 2004; DHSSPS 2004), but we know that NI has higher rates of both socio-economic deprivation and psychological morbidity amongst adults. Amongst the gaps in research highlighted in Bamford was the need for a prevalence survey of the mental health needs of children and young people in NI.

Three recent summaries provide a more detailed indication of what is currently known about the mental health of children and young people. In the GB context, one of the supporting reports (DoH 2011a) for the current policy document *No Health without Mental Health* (DoH 2011b) provides an overview of prevalence but also explores some of the underlying associations with inequality. It states that:

One in ten children and adolescents between the ages of one and 15 has a mental disorder, which can be divided into the following categories:

- Conduct Disorders: 6% of 5-16 year olds have a conduct disorder although 18% have sub-threshold conduct problems. Conduct disorders are more common in boys than in girls.
- Emotional Disorders: 4% of 5-16 year olds have an emotional disorder. They are more common in girls and include anxieties, depression and phobias.
- Hyperkinetic Disorders: 2% of 5-16 year olds have a hyperkinetic disorder.
- Less Common Disorders: 1% of all 5-16 year olds suffer from less common disorders such as autism, eating disorders, tics and selective mutism.
- Autistic Spectrum Disorders: These are more common in boys. The spectrum ranges from Asperger's Syndrome to more extensive forms of learning disability and difficulties in interacting and communicating with others.
- Eating Disorders: Eating disorders are more common in young women. Up to 1% of women in the UK between the ages of 15 and 30 suffer from anorexia nervosa, and about 2-3% develop bulimia nervosa.

Research also suggests that 20% of children have a mental health problem in any given year, and about 10% at any one time. The UK also came bottom of the rank for children's wellbeing compared with North America and 18 European countries and 24th out of 29 European countries in more recent survey (DoH 2011: 3-4).

This report also highlights that risk factors for mental health problems during childhood and adolescence are associated with a broad range of those factors linked to inequality, including: alcohol, drug or tobacco use during pregnancy; maternal stress during pregnancy; poor maternal mental health; poor parenting skills; deprivation; and three or more adverse childhood

experiences. The report acknowledges that inequality affects certain groups more than others, with looked after children experiencing a five-fold increased risk of any childhood mental health problem, young offenders a three-fold increased risk of mental health problems and children of prisoners a three-fold increase in the risk of antisocial behaviour. Homeless young people are also disproportionately affected (page 6).

In the Northern Ireland context, the Bamford Report (2006) acknowledged that:

Very little epidemiological study of child mental health problems has been carried out in Northern Ireland and the rates of many problems and disorders have to be extrapolated from British and international studies. The influential study of 10,000 children aged 5-15 published by the Office of National Statistics (ONS) [Green *et al.* 2005] was only carried out in England, Wales and Scotland and did not extend to NI...However NI is distinguished by higher levels of socio economic deprivation, ongoing civil strife and higher prevalence of psychological morbidity in the adult population. It is likely therefore that the prevalence of mental health problems and disorders in children and young people will be greater in NI than in other parts of the United Kingdom (UK). The Chief Medical Officer's report, *Health of the public in Northern Ireland*, estimated that more than 20% of young people are suffering "significant mental health problems" by their 18th birthday. (Bamford Review 2006: 5).

One of the conclusions of the Bamford report was, as indicated above, that 'A study of the mental health needs of children in Northern Ireland should be commissioned as soon as possible' (p.25).

In 2011, the DHSSPS issued, for consultation, a draft *Service Framework for Mental Health and Wellbeing*. In addition to the statistics above, the report notes that in 2008, 29% of respondents to the Young Life and Times Survey (a survey of 941 children aged 16 years) recorded scores on the General Health Questionnaire (GHQ-12) that indicated they were potential sufferers of a psychiatric disorder (Schubotz 2010). The recently completed, but not yet published, Northern Ireland Study of Health and Stress (NISHS) (www.science.ulster.ac.uk/research/psychology/nishs) is one of the largest population studies of mental health in Northern Ireland. NISHS is part of the ongoing World Mental Health Survey Initiative (Kessler and Ustun 2008) that is being conducted in over 28 countries under the auspices of the World Health Organisation (WHO) (Ferry *et al.* 2008). It used the Composite International Diagnostic Interview (CIDI) (Kessler and Ustun 2004) for data collection. Although children were not included in the study in Northern Ireland, young people were included in some countries and lifetime prevalence is considered. The NISHS will provide an important foundation and possible methodological direction for any prevalence study of the mental health problems of children and young people in Northern Ireland.

Results of the search

The search strategy (see Appendix 1, p.213) identified 468 records, of which 51 were duplicates leaving 417. Of these, 398 were judged irrelevant as they were not directly concerned with the general prevalence of mental health problems among children and young people. Amongst these were papers that focused on the specific mental health problems, sub-populations (e.g. children with disabilities), and associated factors (e.g. abuse and adversity) and interventions. A further seven reviews were identified through Google and Google Scholar keyword searches, resulting in a total of 26 reviews that were considered in further detail. The inclusion criteria were very broad and these are listed in Box 3. We identified only one systematic review (Goodman *et al.* 2009). Given the paucity of systematic reviews, we included two other review papers, one of which was

a narrative literature review (Baumeister and Härter 2007) and the other a review of three studies conducted in the UK. The last was included because of its potential relevance to NI.

BOX 3: Inclusion criteria – reviews of prevalence studies

POPULATION: children and young people with mental health problems

INTERVENTION: assessment of general prevalence

COMPARISON: no comparison required

OUTCOME: estimates of prevalence

Included studies

Table 3.2 sets out the characteristics of included studies. The coverage of the included studies offers some consideration of the benefits, issues and possible methods for a prevalence study in Northern Ireland.

The review by Baumeister and Härter (2007) currently provides the most comprehensive review of the international literature on general prevalence surveys. Described by the authors as a ‘non-systematic review’, it nonetheless was clear about its inclusion criteria, was focusing on national surveys (which suggests the search strategy was comprehensive), and provided information on included (though not excluded) studies. Whilst the authors do not make explicit whether they assessed the quality of the included studies, their discussion suggests that they were mindful of this, and the conclusions they draw are cautious, recognising the differences between methodological approaches used in each of the included studies.

Collishaw *et al.* (2004) reviewed three general population prevalence studies of adolescents to consider possible time trends. Two of the studies covered the UK (the National Child Development Study and the 1970 Birth Cohort Study); the third covered Great Britain (the Adolescent Mental Health Survey). This review was included, as it was immediately relevant. Its focus on UK studies meant that its search did not extend beyond these (known) studies. However, methodologically, its strengths are that: it has an explicit set of aims and approach; provides information on the included studies; addresses their scientific quality, and uses these judgments appropriately to compare data across the studies. This was possible as comparable questionnaires were used by the studies across the three time points (1974, 1986 and 1999).

The third included review was a rigorous, high quality systematic review by Goodman and his colleagues (Goodman *et al.* 2008) but its focus was on comparing prevalence of mental health problems among children and young people across different ethnic groups in Britain, and exploring how these findings may relate to mental health service use.

Quality of reviews

The quality of the included studies and reviews was assessed using the AMSTAR criteria and the results are presented in Table 3.1. Although this tool was designed to examine systematic reviews and there was only one systematic review identified for this area, the AMSTAR criteria provide a consistent approach for presenting some of the methodological characteristics of the included studies.

Table 3.1: AMSTAR ratings - reviews of prevalence studies

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Baumeister and Härter 2007	Y	N	Y	N	N	Y	CA	CA	N/A	N	N
Collishaw <i>et al.</i> 2004	Y	N/A	N/A	N/A	N/A	Y	Y	Y	Y	N	N
Goodman <i>et al.</i> 2008	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Findings

Knowing the prevalence of a particular phenomenon is important for identifying met and unmet need; specifying correlates and possible risk/protective factors; informing policy development; and facilitating resource prioritisation and service planning. As Baumeister and Härter (2007) put it, the identification of under-treatment, over-treatment, and inadequate treatment of the population demonstrates the usefulness of ascertaining prevalence rates.

Baumeister and Härter (2007) conclude that a ‘considerable proportion of the population ... (has) .. a mental disorder’, with the most frequent within the 12 months preceding data collection being mood disorders (6.6%-11.9%) and anxiety disorders (5.6% - 18.1%). Substance misuse disorders and somatoform disorders were also very frequent (3.8%-11.2% and 11% respectively). They conclude that important risk factors are being female, unmarried and unemployed, and having low social status. However, for the purpose of this rapid review, it is important to note that, as well as not being a systematic review, only 13 of the 29 included surveys included young people.

Methodologically, Baumeister and Härter’s review (2007) reinforces the need to consider approaches that will enable international comparison as well as provide country-specific data. They suggest that there should be some consideration of what appropriate thresholds are for mental health problems in such surveys (at present usually diagnostic thresholds), and possibly some exploration of the prevalence of mental health problems that may not meet such thresholds, but have an important impact on people’s lives.

Table 3.2: Reviews of studies of the prevalence of mental health problems in children and young people.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To provide a comprehensive overview of knowledge about the prevalence of mental disorders (non systematic review).	Baumeister and Härter 2007	34 General population surveys using DSM-III-R, DSM-IV or ICD-10 criteria and including at least frequent mood and anxiety disorders	Wide range of countries including Northern Ireland – (McConnell <i>et al.</i> 2002 prevalence in Derry but the focus was on adults (18-64))	Mainly 18 and over but some studies (13) included young people	Range of instruments used. The World Health Organization (WHO)'s Composite International Diagnostic Interview (CIDI) highlighted.	Representative epidemiological surveys demonstrate their usefulness in the results of surveys of under-treatment, over-treatment, and inadequate treatment of the population. Specific future tasks of prevalence research of mental disorders are: i) Need for country-specific and international prevalence data; ii) threshold explorations and sub-threshold disorders, and iii) Coverage of disorders not yet assessed.
To assess the extent to which conduct, hyperactive and emotional problems have become more common over a 25-year period in 3 general population samples of UK adolescents.	Collishaw <i>et al.</i> 2004	3 general population prevalence studies of adolescents	Two UK - National Child Development Study (NCDS) and the 1970 Birth Cohort Study (BCS) One GB – Adolescent Mental Health Survey (BCAMHS) (Meltzer <i>et al.</i> 2003)	Adolescent sweeps of the NCDS, 1970 BCS and the 1999 BCAMHS. Comparable questionnaires completed by parents of 15–16-yr. olds at 1974, 1986, and 1999).	NCD and 1970 BCS used the Rutter A scale (Rutter <i>et al.</i> 1970; Elander and Rutter 1996) BCAMHS used the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997).	Evidence of i) a substantial increase in conduct problems over the 25-year study period across gender, class and family types' and ii) a rise in emotional problems. Mixed evidence in relation to rates of hyperactive behaviour. Analyses using longitudinal data from the first two cohorts indicate that long-term outcomes for adolescents with conduct problems were closely similar, suggesting that observed trends were unaffected by possible changes in reporting thresholds.
To compare the population-based prevalence of child mental disorders between ethnic groups in Britain, and relate these findings to ethnic differences in mental health service use.	Goodman <i>et al.</i> 2008	58 included studies covered 49 independent samples of children. 31-population-based. 18-clinic-based.	Britain	Living in Britain; aged 0–19 years; sampled from the general population or from mental health clinics serving the general population	Twenty-two of the 31 population-based studies in this review relied exclusively on brief mental health questionnaires which may not sufficiently consider cultural/ethnic issues.	Improvements needed in measurement of ethnicity and the evaluation of mental health outcomes. A more rigorous and systematic approach needed for the challenges posed by cross-cultural research, such as using detailed interview-based measures in addition to questionnaires. The prevalence of common mental health problems in the main minority ethnic groups in Britain seems to be similar to or, in some minorities, lower than that of White British children.

Collishaw *et al.*'s (2004) focus was specifically on the extent to which conduct, hyperactive and emotional problems have become more common over a 25-year period (data collection in 1974, 1986 and 1999) in three general population samples of UK adolescents. The review was designed to inform the often expressed view that young people are more badly behaved and have more emotional difficulties than those in the past. They reported a substantial increase in conduct problems over the 25-year period, and some evidence for a recent rise in emotional problems. They concluded there is an urgent need to explore the underlying reasons for these increases, in order to inform individual and societal level interventions.

Goodman *et al.* (2009) found that, for common disorders, 'the population-based studies suggest that Black African and Indian children may enjoy better mental health than White British children, while the mental health of Mixed race, Black Caribbean, Pakistani and Bangladeshi children is similar' (p7). They note that there may be higher rate for some less common disorders, but that the causes of these patterns need to be explored. They suggest that to do so would include more in-depth consideration of ethnic and cultural issues in prevalence studies.

Implications for research and practice

These studies and reviews reinforce the Bamford (2006) recommendation that a study of the mental health needs of children in Northern Ireland is needed, and should be commissioned as soon as possible. The fact that, within the UK, the two most commonly cited surveys - which did not include Northern Ireland - were completed in 1999 and 2004, strengthens the case (Meltzer *et al.* 2000; Green *et al.* 2005). Further, there is ongoing debate about the possible trends in the mental health of children and young people (Costello *et al.* 2006b; Maughan *et al.* 2008; Dorling 2009) and some uncertainty about this. There are issues about the Northern Ireland context, which mean that relying on data from other countries could be misleading. The most obvious is the conflict and, as the Commission for Victims and Survivors (2010) has highlighted, the extent and nature of the direct and especially trans-generational impact of the Troubles needs to be further investigated.

Other important Northern Ireland specific factors are the nature of service provision, including wider issues such as housing and education, and the unique demographics. A Northern Ireland prevalence study would also allow the exploration of some important developing themes from the research literature, such as inequalities in mental health and the nature and extent of parental mental health problems.

It would be extremely important to carefully consider the methodology of a Northern Ireland prevalence study to enable international comparison, but also to provide an important contribution to the epidemiology of mental health problems amongst children and young people. The two large national surveys of children aged 5–15 in Great Britain, mentioned above (Meltzer *et al.* 2000; Green *et al.* 2005), are repeatedly referred to in the local, national and international literature, and a central methodological consideration for a Northern Ireland study.

There do seem to be some instruments which are very commonly used and so would facilitate comparison. These include: the Strengths and Difficulties Questionnaire (Goodman 1997), which has been used in the Northern Ireland context with looked after children (Whyte and Campbell 2008); the Composite International Diagnostic Interview (CIDI) (Kessler and Ustun 2004), which was used in the World Mental Health Survey Initiative that includes the Northern Ireland Study of Health and Stress; the Child Behavior Checklist (CBCL) (Achenbach 1991); and the Development and Well Being Assessment (DAWBA) (Goodman *et al.* 2000). Srinath *et al.* (2010) appealed for a consensus in the use of common instruments and suggested using the SDQ or CBCL for a first stage with multiple informants, and then for the second stage using DISC or DAWBA. The need to

include consideration of cultural and ethnic issues (Goodman *et al.* 2008) was also emphasized, and the importance of, in combination with structured interviews, to enable consideration of the subjective experiences of children and young people (Williams 2005).

Not addressed in this review

There are two further specific research areas that should be considered in terms of prevalence and needs but are not specifically addressed in this review. They are the needs of young people moving or transitioning from Child and Adolescent Mental Health Services to adult mental health services; and the mental health needs of children with learning disabilities.

In terms of the transition between services, the Bamford Review (2006) reported that ‘The transfer of care between child and adolescent services and adult services usually occurs around the age of 18. Arrangements in NI at present could be considered informal and too dependent on local networks and professional relationships. Clearer guidelines and greater flexibility are required.’ (p.17). In the *Service framework for mental health and wellbeing: Consultation document* (DHSSPS 2010), it was acknowledged that transition between services can cause anxiety for the young person, their family and carers and thresholds for accessing services can be variable. It therefore proposes that the standard should be that ‘A young person approaching their 18th birthday (between 3–6 months) receiving treatment and care for a significant health problem from CAMHS or a Paediatric service should be assessed, their need for services identified and where appropriate, arrangements should be made for transition to adult services. These arrangements should be made in partnership with the young person and their family/carers.’ (Standard 31, p.132). Early involvement, careful planning and close inter-agency working are needed to ensure that the transition between services works well and this process should be the subject of local research. Singh *et al.* (2010) concluded that “there are two basic and contrasting approaches to improving care for young people undergoing transition from CAMHS to AMHS. We can improve the interface between CAMHS and AMHS as they currently exist, or we can develop a completely new and innovative service model of integrated youth mental health services” (p.173) and research is needed to identify the local issues and inform how services should develop. It is also important to consider how this area may be relevant to and overlap with the other rapid reviews, perhaps especially in terms of early intervention (Marshall and Rathbone, 2011), as these services are intended to work with young people through early adulthood (typically from ages 14-35, Department of Health, 2001).

The mental health needs of children with learning disabilities should be considered in more depth for a number of reasons. The first is that “Over one in three children and adolescents with a learning disability in [Great] Britain (36%) have a diagnosable psychiatric disorder. Children and adolescents with learning disabilities are over six times more likely to have a diagnosable psychiatric disorder than their peers who do not have learning disabilities” (Emerson and Hatton, 2007, p.iii). The Bamford Review (2005) reported that: the specific needs of children with learning disabilities are often not addressed in wider policy developments for children and young people; these families are more likely to experience other forms of disadvantage; and, in general people with learning disabilities should have equal access to specialist mental health services rather than having their mental health needs addressed within learning disability services. A further issue is that people with learning disabilities are often excluded from mental health research on the basis of their learning disability and so there is an increased need for research in this area.

References: included studies

- Baumeister, H. and Härter, M. (2007) Prevalence of mental disorders based on general population surveys. *Social Psychiatry and Psychiatric Epidemiology*, 42, 7, 537-546.
- Collishaw, S. Maughan, B. and Pickles, A. (2004) Affective problems in adults with mild learning disability: the roles of social disadvantage and ill health. *British Journal of Psychiatry*, 185, 350 -351.
- Goodman, A. Patel, V. and Leon, D. A. (2008) Child mental health differences amongst ethnic groups in Britain: A systematic review. *BMC Public Health*, 8, 258.
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SECTION C

EARLY INTERVENTIONS

CHAPTER 4

Recognising and facilitating help-seeking behaviour

In this chapter, we report the results of 4 reviews of factors that help professionals and lay workers identify help-seeking behaviours from children and young people. We found no reviews that assessed interventions designed to promote the early identification of help seeking behaviours from either parents, young people or others, despite this being a focus of attention in the literature, seeking to understand how young people do or do not get the help they need (Zwaanswijk *et al.* 2003).

Over-represented in need, under-represented in services.

Young people aged 15 to 24 years are more likely to have mental health and substance abuse problems and more unmet care needs than adults older than 25 years old (Anderson and Lowen 2010). Although, worldwide, it is estimated that up to 20% of children and adolescents experience poor mental health, only a minority receive any kind of mental health care or are formally diagnosed (see Anderson and Lowen 2010; Shandley *et al.* 2010; Zwaanswijk *et al.* 2003). Amongst the possible reasons for this, some have argued that young people might avoid seeking help and may experience delayed referral (Rothi and Leavey 2006).

In an earlier overview published in 2003, Zwaanswijk *et al.* identified 47 studies concerned with parental and adolescent problem recognition and help seeking, and problem recognition by general practitioners. The focus of the studies was emotional and behavioural problems. A number of factors lead to help-seeking by children and adolescents for mental health and behavioural problems. Evidence from two and seven studies respectively, indicated that co-morbidity and severity of problems increased the likelihood of them seeking help for their child. The data from seven included studies indicate that parents are more likely to seek help for young children and those in early adolescence, and for boys rather than girls, but this reverses in late adolescence, probably reflecting the changing nature of presenting problems from externalising to internalising problems.

Data from four included studies suggested that help-seeking was increased for children with additional medical or school-related problems, but this was not associated with increased problem recognition by parents, suggesting that teachers are potentially important sources of identification and referral for children and adolescents with mental health problems. Three included studies indicated that parental problem recognition and help seeking appears to be influenced by: the distress/burden experienced by parents in raising the child; parental attitudes and beliefs; their education level, and family stress.

Three studies suggest that the presence of siblings is associated with a reduction in the likelihood of parents recognising a child's problem, but not with a decrease in the chances of parental help-seeking. For children in foster care, help is more likely to be sought for the consequences of sexual and physical abuse ('active' abuse) than of neglect or caretaker absence. The evidence for the impact of maltreatment on help-seeking comes from only two studies.

Single studies suggest that training and interview techniques impact on problem recognition by GPs, as does the availability of and use of screening measures (two studies). Unsurprisingly, evidence from two studies indicate that knowing children and /or longer contacts increase GP's identification of problems.

Results of the search

The search strategy identified 34 records. A further 4 were identified through a Google search. Of the 38 records, 23 were either book reviews or editorials, or were related only to physical health problems and/or did not include help-seeking behaviours. Of the remaining 15 publications, 11 were judged irrelevant and thus excluded. Table 4.4 sets out the reasons for their exclusion. In total, 5 reviews met the inclusion criteria, which are listed in Box 4.

Box 4: Inclusion criteria - reviews of help seeking behaviours

- POPULATION: children, young people, and their parents; lay and professional workers
- INTERVENTION/Topic: help-seeking behaviours for mental health problems in children and young people
- COMPARISON: any comparison

Included reviews

Table 4.1 sets out the characteristics of included reviews. One review is concerned with the barriers and facilitators to help-seeking (Gulliver *et al.* 2010). A second deals with interventions aiming to improve health literacy as a strategy to aid early treatments for mental health problems (Kelly *et al.* 2010). The other two focus on ways to make primary health care services more youth-friendly and accessible (Anderson and Lowen 2010; Tyler *et al.* 2007). There are considerable gaps in the research as discussed below.

Scope and Quality of reviews on help-seeking behaviours for children and young people's mental health problems

Table 4.2 provides an overview of how each of the included reviews scored on the AMSTAR criteria. All reviews provide evidence that the inclusion criteria for their reviews were established before undertaking the work. All provided information about the search strategy, though most did not go beyond that i.e. whilst all searched more than one database and provided information about these, three provided key words and /or MESH terms (Gulliver *et al.* 2010; Anderson and Lowen 2010; Tylee *et al.* 2007) and none provided the search strategy (though this may have been a journal limitation). Only two searched other sources (Kelly *et al.* 2010; and Anderson and Lowen 2010). Although unable to make an assessment based on the publications, it is unlikely that double data extraction was conducted in any of the reviews (one explicitly discussed the identification and exclusion of duplicates). Only one review included a list of excluded studies and none assessed publication bias or the issue of conflict of interest.

Gulliver *et al.*'s review was not an effectiveness review, but was the only one to conduct a meta-analysis. This was appropriate given the heterogeneity implicit in the inclusion criteria of the intervention reviews. The review by Anderson and Lowen (2010) has a particularly poor quality profile, but all have serious methodological shortcomings. What follows is a summary of the findings drawn by the authors of the four reviews. The absence of meta-analysis, combined with the sources of potential bias summarised in Table 4.4, mean that these are based on some form of 'vote counting' at best; at worst, they are rather impressionistic and subjective.

Table 4.1: Systematic reviews on help-seeking behaviours from parents, children and young people

Objective	Author/Year	Number /type of study included	Setting ¹	Participants
To identify models of health care delivery that support youth access to health and mental health care.	Anderson and Lowen 2010	23 studies, including reviews, and a wide range of primary research, including qualitative studies, expert opinion and consensus statements.	USA (8); Canada (6) Australia (5); UK (3) Norway (1) South Africa (1) Ghana (1) Switzerland (1)	Youth aged 12-25.
To summarise the reported barriers and facilitators of help-seeking in young people.	Gulliver <i>et al.</i> 2010	22 studies, of which 15 were qualitative and 7, were quantitative (surveys).	Australia (10) USA (9) UK (2) China (1)	Children and young adults aged 11-31 years.
To review studies of the mental health literacy of young people and their carers, and way in which this might be improved	Kelly <i>et al.</i> 2007	14 studies. Range of studies: <ul style="list-style-type: none"> • randomised (1) • pseudo-randomised (2) • non-randomised, case-control and cohorts studies (5), and • case-series evidence (6) 	Australia (8) UK (3) USA (2) Germany (1)	From whole-of-community interventions to school-based interventions, so a wide range of participants.
To review key models of youth-friendly health provision, and their effects on young people's health.	Tylee <i>et al.</i> 2007	<ul style="list-style-type: none"> • 25 studies (varied methodology: surveys, randomised trials, etc) 	USA (14) Australia (4) Africa (3) Bangladesh (1) Bolivia (1) China (1)	Young people (10-24 year olds)

Table 4.2 AMSTAR ratings - reviews of help-seeking behaviour

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Anderson and Lowen 2010	Y	CA	Y	CA	N	Y	N	NA	NA	N	N
Gulliver <i>et al.</i> 2010	Y	N	Y	CA	Y	Y	N	NA	NA	NA	N
Kelly <i>et al.</i> 2007	Y	CA	CA	CA	N	Y	Y	Y	NA	N	N
Tylee <i>et al.</i> 2007	Y	CA	Y	CA	N	Y	Y	Y	NA	N	N

¹ Some studies/reviews covered more than one country

Findings

Table 4.3 provides an overview of the kinds of interventions reviewed and the conclusions drawn by review authors. We then consider the implications for help-seeking, models of service delivery, and mental health literacy interventions.

Table 4.3: Interventions and Authors' Conclusions - Reviews of help seeking behaviour

Author/Year	Interventions	Authors' Conclusions
Anderson and Lowen 2010	Sources of youth health care (the role of parents/family; family physicians; schools; community-based health care centres; and other access points).	Little systematic integration or application of adolescent health and mental health practice. School based health centres and community- based settings might be better positioned to address the unique health and mental health needs of adolescents.
Gulliver <i>et al.</i> 2010	N/A	Stigma and embarrassment, poor mental health literacy, and a preference for self-reliance were the most prominent <i>barriers</i> to help-seeking for mental health problems. <i>Facilitators</i> were less well researched, but evidence points to positive past experiences, social support and encouragement from others.
Kelly <i>et al.</i> 2007	<ul style="list-style-type: none"> • Public awareness campaigns; • Community-awareness campaign targeted at young people; • School-based interventions; • Programs training individuals to intervene. 	Few interventions to improve mental health literacy of young people/ their helpers have been evaluated, and fewer still have been well evaluated. Despite the limitations of the evidence, it is clear that mental health literacy can be improved through planned interventions.
Tylee <i>et al.</i> 2007	A variety of interventions including: <ul style="list-style-type: none"> • School based health services; • Preventive care; • Nurse-led general practice wellness visits; • Quality improvement for management of depression. 	Only one study reported the effect of an intervention on the outcome of a disorder. Two randomised control trials showed evidence of improved provider performance in addressing youth health issues, with appropriate training in adolescent health given to primary-care practitioners.

1. Barriers to help-seeking

All reviews touch on what are perceived to be the barriers to help-seeking behaviour. The review by Gulliver *et al.* (2010) concludes that the most prominent barrier to help-seeking for mental health problems among young people has been found to be stigma and embarrassment about seeking help. Other barriers include:

- fear about lack of confidentiality regarding the potential source of help;
- difficulty in identifying the symptoms of mental illness (poor mental health literacy);
- poor accessibility, in terms of time, transport or cost, especially for rural populations;
- self-reliance;
- concern about characteristics of the provider (e.g. their ability to provide help or their credibility);
- lack of knowledge about mental health services, and
- fear about the act of help-seeking or the source of help (e.g. that the health practitioner will scold them or ask difficult questions).

Gulliver *et al.* 2010; Anderson and Lowen 2010; Tylee *et al.* 2007.

Anderson and Lowen (2010) argue that another important barrier is insufficient youth-related training for health care providers.

2. Facilitating help-seeking

Much less is known from these reviews about what *facilitates* help-seeking. Gulliver *et al.* (2010) conclude from their review that the most prominent facilitator to help-seeking is positive past experiences with help-seeking, which in turn might increase mental health literacy. Another facilitator would be social support and encouragement from others.

Evidence from the included reviews suggests that young people are not likely to consult family physicians or GPs for help for personal or emotional problems (Anderson and Lowen 2010). In the UK, delays in securing appointments in some facilities may exacerbate a natural disinclination. Young people are most likely to seek help for mental health problems from friends and family, rather than turn elsewhere for help. Thus, parents continue to play a crucial role in identifying mental health problems in young people, and helping them seek health care (Anderson and Lowen 2010; Tylee *et al.* 2007).

It is possible that locating services in places that are more accessible to young people, such as locating health care centres in schools (Anderson and Lowen 2010), may improve help-seeking behaviour. In places like Australia, schools have been found to be a key setting for the delivery of health care to youth, as health clinics in schools are used by most of the pupils. For instance, a school-based, physician-led programme that trained GPs in ‘youth-friendly’ practice, and helped students understand what family doctors do and how to access them, resulted in an increase students’ intentions to seek help, reduced perceived barriers to seeking help, and lead students who intended to seek help to actually do so (p782).

In their review of studies of the impact of different models of ‘youth friendly health provision’, Tylee *et al.* (2007) report that family care practitioners have expressed a need for better training in youth health care, to help them recognise and deal with mental health problems, and there is some evidence of improved performance outcomes when appropriate training is provided.

Although there is a diversity of youth-friendly health initiatives developing around the world, such as the school-based programme mentioned above, the evaluations of these programmes are poorly designed and implemented, with results that are prone to bias (Tylee *et al.* 2007). Robust evaluations of these initiatives are needed. In addition, Anderson and Lowen (2010) reinforce this with their conclusions that there appears to be little systematic integration, application, and evaluation of adolescent health and mental health practice, thus more research needs to be conducted identifying the gaps in care and service.

3. Interventions to improve mental health literacy

It has been argued that mental health literacy can improve children and young people’s emotional wellbeing, ‘either by facilitating early help-seeking by young people themselves, or by helping adults to identify early signs of mental disorders and seek help on their behalf’ (Kelly *et al.* 2007: s26). Jorm *et al.* (1997, p182) defined mental health literacy as:

..knowledge and beliefs about mental disorders which aid their recognition, management or prevention. Mental health literacy includes the ability to recognize specific disorders; knowing how to seek mental health information; knowledge of risk factors and causes, of self-treatments, and of professional help available; and attitudes that promote recognition and appropriate help-seeking.

Unfortunately, poor mental health literacy is prevalent among young people (and adults), making it likely that many will fail to recognise mental illnesses, and / or seek appropriate professional help and treatments (ibid). Schools are a key setting for interventions aimed at improving mental health literacy among children and young people, and have a fundamental role to play in primary prevention (Bamford 2006).

The one review that examined studies of the effectiveness of mental health literacy programmes concluded that these were thin on the ground and not well evaluated (Kelly *et al.* 2007). Some of the interventions evaluated sought to increase the mental health literacy of the whole community (whole-of-community campaigns). Others specifically targeted young people, via community campaigns aimed at a youth audience; school-based interventions teaching help-seeking skills, mental health literacy or resilience; and training programmes on how to intervene in a mental health crisis. Despite the limitations of the evidence available, Kelly *et al.* (2007) concluded that we could improve mental health literacy through carefully planned interventions.

Northern Ireland

We found no examples in Northern Ireland of initiatives especially designed to promote help-seeking behaviour, other than anti-stigma campaigns. A number of these have been launched, aimed at encouraging people to change their attitudes to mental illness. They include:

- a Rethink anti-stigma campaign in 2007, that included a TV commercial titled ‘Down the Pub’;
- the film festival ‘Movies in Mind’ at the QFT, and
- the NICCY ‘Make it Right Campaign’ in October 2010 for ‘emotional health and wellbeing’.

The impact of these campaigns on attitudinal or behavioural change is unclear. An absence of evaluation means that there is, as yet, no evidence base to steer policy or practice.

In Northern Ireland, among representatives from statutory, voluntary and community sectors involved in the promotion of mental health, there is support for a renewed focus on school-based mental health promotion (Leavey *et al.* 2009). For instance, the Public Health Agency funds and supports the delivery of the *Aware Mood Matters Programme*, delivered by the charity Aware Defeat Depression, and offered to young people in post-primary schools. The programme, launched in 2000, aims to enhance understanding of depression as well as promoting positive mental health. Each year, presentations are delivered across Northern Ireland to young people in schools, colleges and other youth organisations, and teachers’ resources are supplied to enable staff to discuss the material before and after each presentation.

In addition, internet-based sources of help, such as Heads Away (<http://www.heads-away-just-say.com/>), are increasingly being used by young people, with some evidence of potential effectiveness (Christensen *et al.* 2004).

Implications for practice

Mental health literacy Gulliver *et al.* (2010) suggest that policies aimed at improving mental health among young people should address young people’s wish for self-reliance by:

- i) providing evidence-based self-help material;
- ii) providing programmes designed to increase young people’s mental health literacy, in particular, knowledge of their own symptoms; and

- iii) providing programmes designed to reduce the stigma associated with mental illness and mental health help-seeking.

Anti-stigma campaigns Regarding anti-stigma campaigns and mental health literacy interventions, the components that appear to be particularly promising are:

- Appropriately tailored messages designed to appeal to different groups (achieved by carrying out preliminary qualitative research with the audience to whom the messages will be directed; and dividing the intended audience into relatively homogenous groups, so that messages address the needs and preferences of these groups);
- An established theoretical base on which to build up the campaign;
- Use of appropriate types of media to place messages (e.g. cinema advertising and youth media – rather than newspapers – with appropriate channels for messages directed at adolescents);
- Evaluations built into the campaign and conducted in order to ensure that the messages are reaching the target audience, and to find out whether the campaign has been successful in changing behaviours and attitudes or not (Kelly *et al.* 2007).

Service development In terms of service development, there is ‘a need for a rational, comprehensive and integrated approach’, as well as ‘sustainable resources and youth involvement in design and development of services’ (Anderson and Lowen 2010: 783; see also Rothi and Leavey 2006). Seven key principles have been identified to improve the access and the quality of health and mental health care for young people. These are:

- Facilitating young people’s access, by ensuring services are flexible, affordable, relevant and responsive to the needs of all young people;
- Offering evidence-based practice, by regularly reviewing and developing services and programmes according to evidence of best practice;
- Involving young people in the development, implementation, review and evaluation of series and programmes;
- Making collaboration possible among service providers, both within and across services, fostering common service goals and target groups (i.e networking, communicating and working together);
- Offering those working with young people adequate and ongoing professional development, support and supervision;
- Developing and implementing strategies for services and programmes to optimise funding, where appropriate, and
- Conducting regular evaluations of services, using appropriate evaluation methods that examine the relevance and quality of programmes as well as their outcomes (Kang *et al.* 2006 – cited by Anderson and Lowen 2010).

Evidence coming from these reviews suggests that we should provide GPs with the support and training they (and other primary health care providers) need to deliver adequate mental health care to children and adolescents.

In addition, mental health care services located in schools and community-based settings may be best placed to address the mental health needs of children and young people (Anderson and Lowen 2010). A non-systematic review by Rothi and Leavey (2006) suggest that an increase in the availability of mental health professionals to schools, plus the provision of appropriate mental health-related training for existing school staff, could improve access of children and young people

to mental health services. They also argue that youth workers are well placed to play a key role in linking marginalised youth with mental health services, if they are given proper ‘additional training to better identify mental health problems and to more effectively refer and collaborate with other services’ (Rothí and Leavey 2006: S38). Finally, Northern Ireland (and other countries) should develop policies to encourage provision of innovative and well-assessed youth-friendly services (Tylee *et al.* 2007).

Gaps in Evidence

Given our long-standing awareness of the under-recognition of mental health problems by young people, their parents, and professionals – particularly teachers and general practitioners – the dearth of research in this area is striking, particularly in relation to what might bring about change. The same is true of interventions designed to prevent or overcome the barriers to help seeking behaviour. The singular problem of youth suicide in Northern Ireland makes this a high priority area for research.

Table 4.4: Excluded Studies – Help-seeking behaviours from children and young people

Study	Reasons for Exclusion
Christensen <i>et al.</i> 2011	Not a systematic review. A qualitative review exploring the barriers to the use of e-health applications for anxiety and depression by young people and the methods by which these might be overcome.
Dennis and Chung-Lee 2006	A qualitative systematic review of postpartum depression help-seeking barriers and maternal treatment preferences. No focus on children and young people’s mental health.
Goldston <i>et al.</i> 2008	A discussion of the cultural context of suicidal behaviour among different ethnic groups of adolescents in the USA, and the implication of these contexts for suicide prevention and treatment. Does not focus on their help-seeking behaviours.
Lindert 2008	Non-system review of the literature on mental disorders of migrants and their access to health care and psycho-social services. No particular focus on children.
Mukolo 2010	A review of the literature on stigma associated with children’s mental disorders. Although stigma is considered one of the barriers to help-seeking, the review did not focus on help-seeking per se.
Omigbodun 2008	Not a systematic review. An analysis of possible barriers to the development of child mental health services in developing countries.
Rickood <i>et al.</i> 2007	A broad narrative review on young people’s reluctance to seek professional help for mental health problems, factors facilitating seeking help, barriers to help-seeking, who do young people turn to, and how schools, general practice, specialist services and youth services reach out to young people.
Rothí and Leavey 2006	Not a systematic review. A broad review examining the needs and help-seeking behaviours of young people in psychological distress.
Salokangas and McGlashan 2008	Not a systematic review. A review on the early detection and intervention of psychosis
Simpson <i>et al.</i> 2007	A Cochrane systematic review on the effectiveness of screening children in the first four years of life for early treatment for otitis media with effusion (OME)
Yung <i>et al.</i> 2007	A broad review on preventive interventions of schizophrenia.

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CHAPTER 5

Interventions to prevent factors that contribute to poor mental health and self harm

In this chapter, we report the results of 19 reviews of interventions designed to address factors known to contribute to poor mental health and self-harm. There are many factors associated with, or leading to, poor mental health and self-harm. Those addressed in the interventions reviewed here are: bullying, alcohol and substance misuse, poor social skills and low self-esteem, bereavement, and exposure to traumatic events or war and conflict. Although abuse and neglect are known to contribute to poor mental health, reviews concerned with interventions addressing these factors are dealt with in Chapter 9.

This chapter begins with an overview of the nature and extent of these problems in children's lives, and how they are affected by them.

Bullying

There are multiple definitions of bullying, and differences have been found in how pupils and teachers define bullying (O'Brien 2009). As defined by Adi *et al.* (2007, see Included Studies), bullying is 'a form of aggression in which one or more children repeatedly and intentionally intimidate, harass or physically harm a victim who cannot easily defend him or herself' (p.8).

Prevalence data on school bullying rely mostly on self-report surveys (Adi *et al.* 2007). One prevalence study conducted in 25 countries (one of which was Northern Ireland) reported that, on average, 10% of children reported having bullied others in that school term, and 11% reported being the victims of bullying (Nansen *et al.* 2004). In Northern Ireland, the mean figure for school bullying appears to be slightly higher than that reported for the 25 countries.

There have been a number of surveys of bullying conducted in NI. In 2002, Collins *et al.* reported that 40% of primary school children and 30% of post-primary pupils said they had been bullied in the few months prior to data collection, and 25% of primary school children and 28% of post-primary pupils admitted that they had bullied another child (Collins *et al.* 2002). A survey of 819 16-year olds published in 2005 reported that 30% of respondents said they had been bullied. Of these, 28% claimed it had happened 'a lot' or 'a little' during the previous two months, while 72% said it had happened 'not at all' (Burns 2006). A larger survey of 2312 pupils (Livesay *et al.* 2007) found that 26% of participating Year 6 pupils and 21% of Year 9 pupils said they had been bullied once or twice in the two months prior to data collection; and 17% of participating Year 6 pupils and 8% of Year 9 pupils said that it had happened twice a month or more. These findings are of concern, since research evidence suggests that bullying behaviour and cyber-bullying can increase the risk of suicidal ideation and/or suicide attempts among children and young people (Brunstein *et al.* 2010). It is also associated with, and contributes independently to children's mental health problems, with effects that can continue until late adolescence (Arseneault *et al.* 2010).

In 2003, concern about the extent of bullying and an increasing recognition of children's rights led the Department of Education in Northern Ireland (DENI) to release a Statement on Bullying. This highlighted the need for every school to have a plan to prevent all types of bullying among pupils, and to consult with pupils on bullying policies (Burns 2006). Research indicates that most pupils are aware of an anti-bullying policy in their school, but fewer than three quarters (67%) of 16-year olds were aware that there were particular staff members in their school to whom students could go for help regarding bullying, and only 15% said that they would talk to them, while 68% said 'it depends' (ibid).

Services in Northern Ireland Prevention interventions and strategies have received increasing attention in recent years, in the UK and other countries (McElearney *et al.* 2008). Currently, there is an umbrella organisation in Northern Ireland, funded by the Department of Education, whose main aim is to identify and champion future anti-bullying priorities for children and young people. As of June 2010, the NI Anti-Bullying Forum (NIABF) – launched in 2005 by Save the Children - had a membership of over 25 regional statutory and voluntary organisations. It supports schools in the development of effective anti-bullying strategies.

Substance abuse

Adolescent alcohol and other drug (AOD) misuse are both associated with poor mental health. The prevalence of substance misuse has been described as ‘striking’ (Engle and Macgowan 2009). For instance, in the UK, since 1990, the amount of alcohol consumed by adolescents aged 11-15 has doubled, and the number of children admitted to hospital as a direct result of their alcohol intake has also increased (Donaldson 2009).

Despite being considered an area with relative low levels of drug use during the Troubles, the level of drug use in NI seems both to be increasing and happening at an earlier age (McCrystal and Winning 2009) The most common preferred drug for children aged 11 and 12 is alcohol, followed by tobacco (*ibid*). In 2007, local news headlines reported ‘Eight-year-olds “abusing drink”’. The report went on to say that children as young as eight were being treated for alcohol and substance abuse in Northern Ireland (BBC news 2007). In 2009, the Medical Chief Officers of England and Wales and Northern Ireland responded to growing concerns by issuing ‘Draft Guidance on the Consumption of Alcohol by Children and Young People’. They highlighted the need for support services to be available for children and young people with alcohol-related problems and their parents (Donaldson 2009).

Schools are frequently the setting for drug prevention programmes. In fact, all schools in the UK are required to provide a drugs education programme, which includes the provision of appropriate information on the risks associated with drug use (McCrystal and Winning 2009). The Government has highlighted the need to target preventive interventions at those young people most in need, i.e.those most vulnerable to drug use (Home Office 2002). Targeted interventions are thus considered as particularly beneficial.

Services in Northern Ireland In addition to school-based interventions, there are a number of specialist services in Northern Ireland that target young people who misuse alcohol or other drugs. Within the statutory sector, examples include: dedicated services within the Belfast and South Eastern Health and Social Care Trusts (HSCCT) (the Drug and Alcohol Mental health Service).Community-based projects aimed at reducing drug and alcohol misuse among children/young people include:

- Drugs awareness training and education in schools and youth centres;
- Counselling, such as DAYS (Drug and Alcohol Youth Service), offering one-to-one counselling to young people aged 8-18 in the Western HSC Trust. In 2007, ASCERT (Action on Substance through Community Education and Related Training) organised a one day conference (‘Why Wait?’), in partnership with Opportunity Youth, where findings of an evaluation on the Lifematters programme pilot were presented. The organisers concluded that the programme was successful in reducing substance misuse (Torney 2007).

- Training for parents, such as CODA (Community Drug Awareness), the Community Drug Project (Falls Community Council) and FASA (Forum for Action on Substance Abuse) in the HSC Belfast Trust, or the Divert Project in the Western HSC Trust, and
- Mentoring services, such as CHILL (the Drugs and Alcohol Counselling and Mentoring Service), which is a partnership project between Opportunity Youth and Contact Youth, a mentoring and counselling service for young people aged 8-17 that are affected by drugs or alcohol. It gives young people an opportunity to talk about issues related to drug and alcohol consumption, and receive support.

Bereavement

In the UK, it has been estimated that 15 children every day are bereaved of a parent before the age of 16, and approximately 4-7% of children will lose a father or a mother (Kennedy *et al.* 2008). Bereavement in childhood is a painful experience, which can lead to later depression or anxiety. Because of this potential impact, there is a sizeable therapeutic literature on how to help bereaved children (Rosner *et al.* 2010). However, although there is a tendency to 'pathologise' grief, only a minority of bereaved children display lasting grief complications (Currier *et al.* 2007).

Services in Northern Ireland In the UK, there is a large charity (i.e. Cruse Bereavement Care), with branches established throughout Northern Ireland, dedicated to promoting the well-being of bereaved people, by providing free care and offering information, support and training services to those looking after them. This charity has a website designed by young people to help children and young people after the death of someone close to them (<http://www.rd4u.org.uk/>), as well as a helpline for bereaved children, a leaflet with information tailored to young people (<http://www.rd4u.org.uk/YouthBooklet.pdf>), and a guide on how to support children and young people through bereavement (<http://www.crusebereavementcare.org.uk/PDFs/SupportChildGrief.pdf>). Barnardo's Northern Ireland has also had a service since 1998 (i.e. The Child Bereavement Service), designed to provide a wide range of therapy, training and consultancy to support bereaved children. Both services are listed in the UK 'Childhood Bereavement Network' (CBN). None of these services have been rigorously evaluated.

Self-esteem

Low self-esteem is associated with poor mental health (Bos *et al.* 2006). Self-esteem is related to a range of important outcomes for children and young people, such as academic achievement and social functioning, and therefore many interventions have been developed in different settings aimed at improving children's self-esteem (ibid). However, interventions for children and young people tend not specifically to target low self-esteem, which accompanies multiple other difficulties and problems.

Results of the search

The search strategy identified 227 records. A further 20 records were found in a Google search. Of the 247 records, 220 were judged irrelevant as they were either not concerned with treatment, were concerned with the treatment of mental disorders rather than factors known to contribute to poor mental health), were book reviews, or did not include children and young people. Amongst these were papers that focused on: interventions treating childhood depression or general mental health problems, hyperactivity disorder, ADHD, helping victims of domestic violence, PTSD, aggression and violence, conduct disorder and autism.

Of the remaining 27 records, 19 met the inclusion criteria listed in Box 5. Eight papers were excluded and Table 5.7 sets out the reasons for their exclusion.

Box 5: Inclusion criteria - factors associated with poor mental health

- POPULATION: children and young people
- INTERVENTION: any intervention that aims to address factors known to contribute to poor mental health and self-harm (except for abuse and neglect, and more general factors such as poverty or genetic factors), i.e. bullying, poor self-esteem, substance misuse, bereavement and exposure to traumatic events/violence
- COMPARISON: any comparison
- OUTCOME: desired changes in factors contributing to poor mental health; reductions in poor mental health

Included reviews

Table 5.1 sets out the characteristics of included reviews. Most are concerned with school-based interventions aimed at reducing bullying (n=6), and treatments and programs aimed at reducing or preventing substance abuse (n=6). Other reviews looked at interventions addressing: bereavement (n=3), low self-esteem (n=2) and exposure to trauma (n=2).

Quality of reviews

Table 5.2 provides an overview of how each of the included reviews scored on the AMSTAR criteria. The quality profile of the included reviews varied, although generally it was better than most areas. Ten out of the 19 reviews had duplicate study selection and data extraction, and that was made explicit in the article or report. The vast majority did not include a list of the excluded studies in the review. All but one used at least two databases for their searches and included unpublished literature. No reports provided information about excluded studies, and this criterion was scored as 'No', as there was no evidence to the contrary. Fifteen of the 19 provided information about the included studies. There were 11 meta-analyses presented in the reviews.

Table 5.1: Characteristics of systematic reviews of interventions targeting factors associated with poor mental health in children and young people.

Objective	Author/Year	Number /type of study included	Setting	Participants
To review the effectiveness of primary school-based interventions aimed at promoting mental wellbeing, focusing primarily on the prevention of violence and bullying	Adi <i>et al.</i> 2007	17 studies reported in 23 papers: <ul style="list-style-type: none"> • 11 RCTs • 6 CCTs 	<ul style="list-style-type: none"> • USA (14) • Netherlands (2) • Canada (1) 	Children aged between 4 and 11 years
To review studies on the effectiveness of whole-school behavioural interventions, aimed at promoting emotional and social-wellbeing among young people in secondary education	Blank <i>et al.</i> 2010	39 studies of varying designs	Australia 5; USA 21 UK 3; Canada 1 Germany 2; Italy 2 Norway 1; Japan 1 Netherlands 1; Finland 1 USA + Canada 1	Young people in secondary education.
To evaluate the general effectiveness of bereavement interventions (i.e. grief therapy) with children	Currier <i>et al.</i> 2007	13 randomised and non-randomised control trials	Information not provided. Majority appear to have been conducted in the USA.	8-13 year-old children bereaved of a loved one 2.5- 64.6 months previously.
To conduct a meta-analysis of after-school programmes aimed at enhancing the personal and social skills of children and adolescents.	Durlak and Weissberg 2010	75 reports (published 1979-2008) evaluating 69 different programmes (35% randomised design)	Information not provided. Majority appear to have been conducted in the USA.	Children and young people in primary and secondary education.
To determine if exercise alone or as part of a comprehensive intervention can improve self-esteem in children and young people	Ekeland <i>et al.</i> 2005	23	Information not provided.	1821 children and young people aged 3-20 years old
To review the effectiveness of adolescent alcohol and other drug (AOD) abuse group treatments.	Engle and Macgowan 2009	12 outcome studies evaluating 13 group treatments.	Information not provided	Adolescents aged 12-18 years diagnosed with a substance use disorder or who that had just used an illicit substance.
To evaluate the effectiveness of school-based interventions in preventing or reducing drug use	Faggiano <i>et al.</i> 2008	29 RCTs	<ul style="list-style-type: none"> • USA (28) • London, UK (1) 	School-aged children aged 7-17 years old.
To review the effectiveness of programmes designed to reduce school bullying perpetration and victimization.	Farrington and Ttofi 2009 and 2010. See also Ttofi and Farrington 2011	89 reports included in the review of various designs. 44 used meta-analyses.	<ul style="list-style-type: none"> • USA (13) • Scandinavia (10) • England (5) • EU - other (20) • Canada (3) • Australia (2) 	School-aged children in primary and secondary education.
To examine the effectiveness of school-based anti-bullying programmes	Fergusson and Roussea 2009.	45 RCTs (published 1995-2006)	Not reported.	School-aged children

Table 5.1: Continued

Objective	Author/Year	Number /type of study included	Setting	Participants
To review the effectiveness of behavior therapies, motivational interviewing interventions, and combined psycho-therapies in reducing mild to serious AOD use among adolescents.	Macgowan and Engle 2010	34 experimental studies, with outcome assessment measures	Not reported	Adolescents with mild to serious AOD use
To conduct a meta-analytic study of school bullying intervention research between 1980 and 2004	Merrell <i>et al.</i> 2008	16 studies using an experimental or quasi-experimental group design	<ul style="list-style-type: none"> • Belgium (2) • Canada (2) • UK (4) • Italy (1) • Norway (1) • USA (6) 	Children and young people in primary and secondary education.
To evaluate the effects of interventions to support adults and children bereaved through suicide	McDaid <i>et al.</i> 2008	8 studies: <ul style="list-style-type: none"> • 4 RCTs • 1 controlled study; • 3 observational studies + control 	Not reported, but none in the UK.	<ul style="list-style-type: none"> • Adults (4) • Children (1) • Adults+ children (3)
To assess the effects of mental health school-based interventions (targeted and general programmes) for children in war-exposed countries	Persson and Russeau 2009	7 studies: <ul style="list-style-type: none"> • 2 x RCT • 1 x Quasi-exp • 4 uncontrolled design 	<ul style="list-style-type: none"> • Bosnia (2) • Gaza • Indonesia • Croatia • Kosovo • Sierra Leone 	School-aged children
To systematically review controlled studies of parenting programmes aimed at preventing tobacco, alcohol or drug abuse in children under 18 years of age.	Petrie <i>et al.</i> 2007	46 reports on 20 studies: <ul style="list-style-type: none"> • 16 RCTs • 3 CBAs • 1 controlled trial 	<ul style="list-style-type: none"> • USA (17) • Russia (1) • Australia (1) • Norway (1) 	Children aged 5-18 years old.
To provide an evaluation of existing treatments for bereavement and grief reactions in children and adolescents	Rosner <i>et al.</i> 2010	27 treatment studies: <ul style="list-style-type: none"> • 16 with control group; • 11 without control group 	Not reported	Bereaved children and young people aged 3-18
To assess the effectiveness of substance abuse interventions in reducing adolescent alcohol use.	Tripodi <i>et al.</i> 2010	16 studies: <ul style="list-style-type: none"> • Experimental (14) • Quasi-exp (2) 	USA	Adolescents between 12-19 years old.
To conduct a systematic review of school-based interventions aimed at reducing bullying	Vreeman <i>et al.</i> 2007	26 studies: RCTs, control group designs, quasi-experimental designs, and cohort studies.	<ul style="list-style-type: none"> • USA (10) • UK (6) • Other EU (7) • Canada • South Africa • Australia 	Children in kindergarten, primary and secondary education.
To conduct a meta-analysis to review the effectiveness of treatments for adolescent substance abuse.	Waldron and Turner 2008	17 studies with group designs involving comparisons of 2+ conditions.	Not reported	Adolescents, aged 11-19, engaged in substance abuse.
To evaluate interventions to reduce psychological harm in children exposed to traumatic events in high-income economies (to March 2007)	Wethington <i>et al.</i> 2008	34 studies (RCTs, controlled studies and cohort studies)	Not reported but the majority in the USA	Children and young people under 21 years.

Table 5.2 AMSTAR ratings – reviews of interventions targeting factors associated with poor mental health in children and young people

	'A priori' design provided?	Duplicate study selection and data extraction?	Comprehensive Literature Search?	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was conflict of interest stated?
Adi <i>et al.</i> 2007	Y	Y	Y	Y	N	Y	Y	Y	NA	NA	N
Blank <i>et al.</i> 2010	CA	CA	CA	CA	CA	CA	CA	CA	CA	CA	N
Currier <i>et al.</i> 2007	Y	CA	Y	Y	N	Y	Y	Y	Y	N	N
Durlak and Weissberg 2010	Y	CA	Y	Y	N	N	Y	Y	Y	Y	N
Ekeland <i>et al.</i> 2005	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Engle and Macgowan 2009	Y	CA	Y	Y	N	Y	Y	Y	NA	NA	N
Faggiano <i>et al.</i> 2008	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Farrington and Ttofi 2009	Y	N	Y	Y	N	Y	N	CA	CA	Y	N
Ferguson <i>et al.</i> 2007	Y	CA	Y	Y	N	N	Y	Y	Y	CA	N
Macgowan and Engle 2010	Y	CA	Y	N	N	N	Y	Y	NA	NA	N
Merrell <i>et al.</i> 2008	Y	CA	Y	Y	N	Y	Y	Y	Y	CA	N
Persson and Rousseau 2009	Y	CA	Y	N	N	Y	Y	N	NA	NA	N
Petrie <i>et al.</i> 2007	Y	Y	Y	Y	N	Y	Y	Y	NA	NA	N
Rosner <i>et al.</i> 2010	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Tripodi <i>et al.</i> 2010	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Vreeman <i>et al.</i> 2007	Y	Y	Y	Y	N	Y	Y	Y	NA	N	N
Waldron and Turner 2008	Y	CA	Y	Y	N	Y	Y	Y	N	CA	N
Wethington <i>et al.</i> 2008	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N

Findings

Bullying interventions:

Table 5.3 summarises the authors' conclusions from six reviews of interventions for bullying. For children of primary and secondary school age, reviews in this area have focused exclusively on school-based interventions. There is debate about the effectiveness of these programmes. Reviews by Ferguson *et al.* (2007) and Merrell *et al.* (2008) did not find it possible to conclude that school-based anti-bullying interventions were effective. In contrast, those by Farrington and colleagues concluded that the results were clearly encouraging (Farrington and Ttofi 2009; Ttofi and Farrington 2011). These differences might be attributable at different search strategies and inclusion criteria: Farrington *et al.* (2009; 2011) included published and unpublished reports (from 1983-2009) of experimental designs; Ferguson *et al.* (2007) only included randomised studies (from 1995-2006); and Merrell *et al.* (2008) included experimental and quasi-experimental designs of evaluations (from 1980-2004) of programmes where bullying was their primary focus of intervention.

The reviews used different approaches to categorising interventions:

- Adi *et al.* (2007) classified interventions into: 1) curriculum-only programmes; 2) school and classroom behaviour management programmes; 3) bullying prevention programmes; and 4) multi-component programmes involving parent education.
- Vreeman and Carroll (2007) used a similar classification: curriculum interventions; whole-school multi-disciplinary interventions; social and behavioural skills group training interventions; and other interventions (i.e. an increase in the number of social workers dealing specifically on problem behaviours, and a mentoring programme for 'at-risk' children).
- Farrington and Ttofi did not use any classification and described each programme individually.

Vreeman *et al.* (2007) found that the whole-school interventions (i.e. programmes including multiple disciplines and complementary elements targeting different levels of the school organisation) were usually more effective in reducing bullying than the curriculum interventions and the social skills groups. A similar finding was reported by Adi *et al.* (2007), who concluded that multi-component programmes were effective, as was the PeaceBuilders programme and – in the short-term - the Olweus anti-bullying (prevention) programme. The PeaceBuilders programme is a whole-school, broad behaviour management programme, which includes peer mentoring, school staff training, and parents' involvement. The Olweus anti-bullying (prevention) programme is a whole-school, multi-level programme targeting the pupil, the school, the classroom and the community level, which comprises of an 18-month intervention period and a less resource-intensive maintenance period.

Farrington and Ttofi (2009; 2011) found an association between certain programme elements and a decrease in bullying. These were: parent training and meetings, firm disciplinary methods, improved playground supervision, the duration of the programme (i.e. larger number of days) for children and teachers, and the intensity of the programme (i.e. larger number of hours) for children and teachers. Perhaps counter intuitively, the formal engagement of peers in tackling bullying (e.g. peer mediation and mentoring) was associated with an *increase* in bullying victimization (Farrington and Ttofi 2009).

Farrington and Ttofi (2009) argue that current evidence suggests that anti-bullying programmes are promising interventions, ripe for a long-term research strategy of their effectiveness. They conclude

that attention should be given to the development of new anti-bullying programs, drawing on those elements that appear to be most strongly associated with effective programmes. These should then be evaluated, accredited and ‘supervised by an international body, such as the International Observatory on Violence in Schools.

There is some evidence to suggest that the effects of interventions differ with the characteristics of children. In general, there is suggestive evidence that programmes might have more effect on boys than girls (Adi *et al.* 2007), on white children than black children (ibid), on high risk than low risk children (ibid; Ferguson *et al.* 2007), and on older (age 11 or older) than younger children (Farrington and Ttofi 2009).

Table 5.3: Interventions and authors’ conclusions - reviews of interventions for bullying.

Author/Year	Interventions	Authors’ Conclusions
Adi <i>et al.</i> 2007	Primary school-based interventions for the prevention of violence and bullying	Six of the 17 trials showed a clearly positive impact, and 8 showed a possibly positive impact in terms of reducing behaviour problems and bullying, and increasing social competence.
Blank <i>et al.</i> 2010	Whole school behavioural interventions	The evidence of these interventions in terms of preventing bullying and disruptive behaviour is varied.
Farrington and Ttofi 2009 (updated 2010); Ttofi and Farrington 2011	<ul style="list-style-type: none"> • Bulli and Pupe (Italy) • Project Ploughshares Puppets for Peace (Canada) • Short Video Intervention (England) • Friendly Schools (Australia) • Social Skills Group Intervention (USA) • Dutch Anti-bullying Programme • Etc. 	Overall, the meta-analysis showed that school-based anti-bullying programmes are effective in reducing bullying and victimization. Particular programme elements were associated with a decrease in bullying and victimization. The review also showed that the intensity and duration of a programme was directly linked to its effectiveness.
Ferguson <i>et al.</i> 2007	School-based anti-bullying programmes.	Results from the meta-analysis suggested that overall anti-bullying programmes produced little discernible effect on youth participants. The effect for programmes targeted specifically at at-risk young people was slightly better.
Merrell <i>et al.</i> 2008	A diversity of school-based anti-bullying interventions.	The authors concluded that there is some evidence supporting the effectiveness of school anti-bullying interventions in increasing students’ social competence, self-esteem and peer acceptance, and to a lesser extent in reducing bullying and victimization in schools.
Vreeman <i>et al.</i> 2007	School-based anti-bullying interventions: <ul style="list-style-type: none"> • Curriculum interventions • Multi-disciplinary or ‘whole school’ interventions • Social skills groups • Mentoring • Social worker support 	Many school-based interventions are effective in reducing bullying. Those involving multiple disciplines are especially effective, while curricular changes less often affect bullying behaviours.

Alcohol and substance abuse interventions

School-based prevention programmes for drug use are varied, and some appear more effective than others. Table 5.4 summarises the authors’ conclusions from their reviews of interventions for substance misuse. For instance, skills-based interventions have been found to significantly reduce drug use, as well as improve decision-making skills and self esteem, more than any other type of school-based intervention (Faggiano *et al.* 2008). Group treatment interventions for adolescents

abusing alcohol and other drugs appear to have positive outcomes, although the evidence of effectiveness is slightly weak, as only a few robust evaluations have been conducted (Engle and Macgowan 2009). Across interventions, most behaviour therapies (e.g. CBT, CT, etc.) and motivational interviewing have showed improved outcomes from pre-tests to follow-ups for the treatment of adolescent substance abuse, although only a few could be described as effective (Macgowan and Engle 2010). Despite that, behaviour-oriented treatments were found to result in significant reductions in alcohol use at 12-months follow-up (Tripodi *et al.* 2010). Individual-only treatments for reducing alcohol abuse among adolescents appeared to be more effective than family-based interventions (Tripodi *et al.* 2010). Although not specifically aimed at substance use prevention, it has been argued that ‘parenting programmes can be effective in reducing or preventing substance use’ among children less than 18 years of age (Petrie *et al.* 2007). The most effective ones appear to be those emphasising the development of social skills and a sense of responsibility among young people, and that include active parental involvement.

Table 5.4: Authors’ conclusions - reviews of interventions for substance misuse.

Author/Year	Interventions	Authors’ Conclusions
Engle and Macgowan 2009	<ul style="list-style-type: none"> • Motivational Enhancement Therapy +CBT; • Behavioural-based Family and Coping Skills • Cognitive-Behavioural Group Therapy • Interactional Therapy • Psycho-Educational Therapy • Student Assistant Programme • Group-Based Treatment • Adolescent Group Therapy • Supportive Counselling Group • Minnesota Model 12-Step 	Ten out of the 13 treatments appeared to significantly reduce use rates of one or more substances, although only 2 met the criteria for ‘possible efficacy’. The authors highlight the need for descriptions and analyses of group treatment factors, since that was lacking in these studies.
Faggiano <i>et al.</i> 2008	School-based interventions (skills, affective, and knowledge focused): <ul style="list-style-type: none"> • Alcohol and Substance Abuse Prevention Programme (ASAP) • Life Skills Training Programme • Drug Abuse Resistance Education (DARE) • Positive Alternatives for Youth 	The review shows that programmes that develop individual social skills are the most effective school-based interventions for the prevention of early drug use. Little is known about the long-term effect of interventions.
Macgowan and Engle 2010	<ul style="list-style-type: none"> • Behavioural therapies • Motivational interviewing • Behaviour therapies combined with psycho-social approaches 	Most BT interventions were judged ‘probably efficacious’ for substance misuse. MI treatments met the criteria for ‘promising’ intervention. Combined interventions only marginally classified as ‘promising’ interventions.
Petrie <i>et al.</i> 2007	<ul style="list-style-type: none"> • Parenting skills training groups • Homework tasks requiring parental participation • Mailed booklets • Home visiting • A mixture of these approaches 	Parenting programmes can be effective in reducing/preventing substance abuse. Programmes focusing on active parental involvement and developing skills in social competence, self-regulation and parenting seemed to be the most effective.
Tripodi <i>et al.</i> 2010	Substance abuse interventions, including: <ul style="list-style-type: none"> • Behavioural and CB therapies. • BSFT (brief strategic family therapy) • IF-CBT (integrated family and CBT) • MDFT (multidimensional family therapy) 	Interventions were effective in reducing alcohol use. Individual interventions seemed more effective than family-based. Effectiveness diminished as length of follow-up increased. Behaviour-oriented treatments appeared promising in attaining long-term effects.
Waldron and Turner 2008	Outpatient treatments for substance misuse: <ul style="list-style-type: none"> • 8 family-based interventions; • Variations of group and individual CBT; etc. 	Multi-dimensional family therapy (FT), functional FT and group CBT are well-established substance abuse treatments. Other models might be effective.

Bereavement interventions: Table 5.5 provides a summary of the findings from studies of five bereavement interventions. While Currier *et al.*'s (2007) review did not find a significant impact of these interventions on the child's psychological wellbeing and adjustment, Rosner *et al.*'s (2010) two meta-analyses indicated a small to moderate treatment effect. The difference might be attributable to the inclusion of different studies: Currier *et al.* included two unpublished dissertations; and Rosner *et al.* included two studies not included in that of Currier *et al.*. Database overlap between the two studies was 73% (Rosner *et al.* 2010).

Older children appeared to benefit more from treatment than younger children (Rosner *et al.* 2010), and interventions appeared to deliver better outcomes when: the treatment followed closely the time of loss, and the intervention targeted 'high-risk' children or children already showing signs of difficulty (Currier *et al.* 2007). Rosner *et al.* (2010) identified music therapy interventions as having the largest effects on children and adolescents (Hilliard 2001; Dalton and Krout 2005). Another effective treatment was 'trauma/grief-focused school-based brief psychotherapy' for a very specific subgroup of severely and multiple-traumatised young people. There is not much information available regarding interventions for children bereaved through suicide, and the available evidence suggests that there are no significant positive effects of interventions when compared with no intervention. However, it has been argued that 'psychology-led group therapy for children may reduce anxiety and depression' (McDaid *et al.* 2008: 442).

Interventions for traumatised children: Review findings suggest that CBT significantly decrease psychological harm among symptomatic children and adolescents who had experienced one or more traumatic events (Wethington *et al.* 2008). In war-exposed countries, school-based interventions do not appear to be effective in reducing children's mental distress (Persson and Rousseau 2009).

Table 5.5: Authors' conclusions -reviews of interventions for bereavement and related trauma.

Author/Year	Interventions	Authors' Conclusions
Currier <i>et al.</i> 2007	Bereavement interventions, including: <ul style="list-style-type: none"> • Peer counselling; • Support groups; • Weekend retreats; • Group, individual and family therapy 	Children who received a bereavement intervention did not appear to show better outcomes than bereaved children who did not receive an intervention.
McDaid <i>et al.</i> 2008	Bereavement group intervention; grief therapy; CBT etc.	6 of the 8 studies showed some evidence of benefit on at least one measure, but evidence was not robust.
Persson and Rousseau 2009	<ul style="list-style-type: none"> • Group based intervention • Trauma/grief focused psycho-therapy • Trauma healing recreational activities • Psycho-educative expressive groups • Mind-body experiential psycho-educative groups 	Although a feasible, low-cost alternative to individualized therapy, school-based group interventions for traumatized children may not be enough to reduce mental distress and might even increase it.
Rosner <i>et al.</i> 2010	Diverse bereavement/grief preventive and psychotherapeutic interventions: from home-based family sessions to group workshops with several families; bereavement camps to more traditional group meetings.	Results suggest that interventions for symptomatic children /adolescents were more effective than those for those bereaved without symptoms. Music therapy and trauma/grief-focused school based brief psychotherapy are promising treatment models.
Wethington <i>et al.</i> 2008	<ul style="list-style-type: none"> • Individual CBT / Group CBT • Play therapy • Art therapy • Psycho-dynamic therapy • Pharmacological therapy (symptomatic children) • Psychological debriefing 	Results suggest that individual and group CBT can decrease psychological harm among symptomatic children and adolescents exposed to trauma.

Interventions improving self-esteem: There is evidence from a Cochrane systematic review that exercise may be effective in securing short-term improvements in children’s self-esteem, although more research is needed to find out what kind of exercise might give positive effects and in which setting (Ekeland *et al.* 2005). After school programmes designed to promote personal and social skills may also improve children’s self-esteem, although the evidence is at best suggestive (Durlak *et al.* 2010). Table 5.6 summarises the interventions covered and the review authors’ conclusions.

Table 5.6: Authors’ conclusions - reviews of interventions for improving self-esteem.

Author/Year	Interventions	Authors’ Conclusions
Durlak and Weissberg 2010	After-school programmes: <ul style="list-style-type: none"> • 21st Century Community Learning Centres; • Programmes conducted by kids and 4-H Clubs; • Local community and civic initiatives. 	ASPs had an overall positive impact on the young people participating in these studies, particularly in terms of increased self-esteem, but not all ASPs were effective. Only the group of SAFE ² programmes showed significant effects on any outcomes.
Ekeland <i>et al.</i> 2005	Exercise as a single intervention, or as part of a comprehensive intervention	Results suggest that exercise can improve self-esteem in children and young people in the short-term. However, the authors highlight the need for well-designed RCTs with long-term follow-up.

Implications for practice

Schools are where many of these prevention interventions take place, and in Northern Ireland (and the rest of the UK), schools are already required to have programmes in place to address bullying and educating pupils on the risk of substance abuse. However, the type of programmes used need to be chosen considering the evidence available. There is evidence that supports the development of certain programmes rather than others, and certain components of programmes as being especially helpful:

- Anti-bullying school-based interventions, such as befriending peer support programmes, have been developed in schools in Northern Ireland (McElearney *et al.* 2008), but there needs to be some robust research on how effective these are in reducing and preventing bullying.
- Regarding bereavement, some interventions are currently being used in Northern Ireland (see Service in NI). However, they need to be subject to rigorous evaluation.
- The timing of interventions seemed to be of particular relevance in the prevention of substance abuse, where it appears that the transition from primary to secondary school appears a particularly optimum time to intervene (Petrie *et al.* 2007). The same appears to be the case in relation to bereavement, in terms of the time that there should be between the loss and the start of the intervention (Rosner *et al.* 2010).
- In the case of anti-bullying programmes, the evidence suggests that these need to be intensive and long-lasting to have an impact, and to target high risk children (Farrington and Ttofi 2009).

Implications for research

One of the recommendations made in a number of reviews was the need for evaluation studies to detail how the programmes/interventions were implemented and what their different components

² programmes that met all the four criteria of recommended practices for skill training (sequenced, active, focused and explicit), which were 41 out of the 68 reviewed in that study.

were, ‘in order to enable researchers to know whether effects are related to key features of the intervention or key features of the evaluation’ (Farrington and Ttofi 2009: 70). In addition, Engle and Macgowan (2009) highlight the need for evaluations to include details of the participant characteristics and/or associations between such characteristics and intervention outcomes. Many studies lack long-term follow-up assessments (Engle and Macgowan 2009; Currier *et al.* 2007; Rosner *et al.* 2010), which are key to determining how effective an intervention is in the long-term. Cost-benefit analyses have yet to be conducted, and these are particularly pressing for school anti-bullying programmes, given their widespread adoption (Farrington and Ttofi 2009). Finally, the views of participants have been noticeably absent for most of these studies, although they could be crucial in order to identify the effective components of interventions (McDaid *et al.* 2008).

Table 5.7: Excluded Studies –factors to poor mental health and self-harm

Study	Reasons for Exclusion
Biglan and Hinds 2009	Not a systematic review. No search strategy and no specific focus on children and young people. Review of RCTs of community interventions to affect health, such as community interventions preventing alcohol and drug use.
Ehnholt and Yule 2006	Not a systematic review. Literature review on the mental health difficulties of refugee children and adolescents, associated risk and protective factors, and effective interventions designed to reduce war-related PTSD.
Kearney 2008	Not a systematic review (no search strategy) A review on school absenteeism prevalence as a mental health concern, interventions and their outcome.
Nordahl <i>et al.</i> 2008	Not a systematic review. Literature review of the relationship between children’s age and the implementation of school-based bullying intervention programmes.
Peltonen and Punamäki	Not a systematic review (no clear search strategy) Literature review to evaluate the effectiveness of interventions in preventing emotional distress and promote positive emotional development among children exposed to trauma of armed conflict.
Ryan and Smith 2009	Systematic review of evaluations of anti-bullying programmes in schools that focuses on the quality of evaluations rather than their effectiveness.
Wisner <i>et al.</i> 2010	Not a systematic review. Literature review on the benefits and challenges of offering meditation to adolescents in a school-based setting, in terms of improving self-esteem and coping abilities.
Velleman <i>et al.</i> 2005	Not a systematic review (no search strategy) A review of the evidence for family involvement in young people using alcohol and other drugs, and interventions aimed at helping the family prevent substance use and misuse among young people.

Included studies

- Adi, Y., Killoran, A., Schrader McMillan, A. and Stewart-Brown, S. (2007) *Systematic review of interventions to promote mental wellbeing in primary schools. report 3: Universal approaches with focus on prevention of violence and bullying*. London, UK: National Institute of Health and Clinical Excellence (NICE)
- Blank, L., Baxter, S., Goyder, E., Naylor, P., Guillaume, L., Wilkinson, A., *et al.* (2010) Promoting well-being by changing behaviour: A systematic review and narrative synthesis of the effectiveness of whole secondary school behavioural interventions. *Mental Health Review Journal*, 15, 2, 43-53.
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- Durlak, J., Weissberg, R. and Pachan, M. (June 2010) A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology*, 45, 294-309 (16)
- Ekeland, E., Heian, F. and Hagen, K. B. (2005) Can exercise improve self esteem in children and young people? A systematic review of randomised controlled trials. *British Journal of Sports Medicine*, 39, 11, 792-798.
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- Farrington, D. P. and Ttofi, M. M. (2009) *School-based programs to reduce bullying and victimization*. Oslo: Campbell Collaboration.
- Ferguson, C. J., Miguel, C. S., Kilburn, J. C. and Sanchez, P. (2007) The effectiveness of school-based anti-bullying programs. *Criminal Justice Review*, 32, 4, 401-414.
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- McDaid, C., Trowman, R., Golder, S., Hawton, K. and Sowden, A. (2008) Interventions for people bereaved through suicide: Systematic review. *The British Journal of Psychiatry*, 193, 6, 438-443.
- Merrell, K. W., Gueldner, B. A., Ross, S. W. and Isava, D. M. (2008) How effective are school bullying intervention programs? A meta-analysis of intervention research. *School Psychology Quarterly*, 23, 1, 26-42.
- Persson, T. J. and Rousseau, C. (2009) School-based interventions for minors in war-exposed countries: A review of targeted and general programmes. *Torture*, 19, 2, 88-101.
- Petrie, J., Bunn, F. and Byrne, G. (April 2007) Parenting programmes for preventing tobacco, alcohol or drugs misuse in children < 18: A systematic review. *Health Education Research*, 22, 177-191.
- Rosner, R., Kruse, J. and Hagl, M. (2010) A meta-analysis of interventions for bereaved children and adolescents. *Death Studies*, 34, 2, 99-136.
- Tripodi, S. J., Bender, K., Litschge, C. and Vaughn, M. G. (2010) Interventions for reducing adolescent alcohol abuse: A meta-analytic review. *Archives of Pediatrics and Adolescent Medicine*, 164, 1, 85-91.
- Ttofi, M. and Farrington, D. (2011) *Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review* Springer Netherlands.
- Vreeman, R. C. and Carroll, A. E. (2007) A systematic review of school-based interventions to prevent bullying. *Archives of Pediatrics Adolescent Medicine*, 161, 1, 78-88.
- Waldron, H. B. and Turner, C. W. (2008) Evidence-based psychosocial treatments for adolescent substance abuse. *Journal of Clinical Child and Adolescent Psychology*, 37, 1, 238-261.
- Wethington, H. R., Hahn, R. A., Fuqua-Whitley, D. S., Sipe, T. A., Crosby, A. E., Johnson, R. L., et al. (2008) The effectiveness of interventions to reduce psychological harm from traumatic events among children and adolescents: A systematic review. *American Journal of Preventive Medicine*, 35, 3, 287-313.

Excluded studies:

- Biglan, A. and Hinds, E. (2009) Evolving prosocial and sustainable neighborhoods and communities. *Annual Review of Clinical Psychology*, 5, 169-196.
- Ehnholt, K. A. and Yule, W. (2006) Practitioner review: Assessment and treatment of refugee children and adolescents who have experienced war-related trauma. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 47, 12, 1197-1210.
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- Nordahl, J. K., Poole, A., Stanton, L., Walden, L. M. and Beran, T. N. (2006) A review of school-based bullying interventions. *Democracy and Education*, 18, 1, 16-20.
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- Ryan, W. and Smith, J. (2009) *Antibullying programs in schools: How effective are evaluation practices?* Springer Netherlands.
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CHAPTER 6

Interventions to prevent attachment and other behavioural difficulties

In this chapter, we report the results of six reviews of primary and secondary interventions aimed at preventing attachment and other behavioural difficulties amongst children and young people.

Attachment and behavioural difficulties in children and young people

In Great Britain, about one in ten children between the ages of 5 and 15 has a mental health problem; the most common being emotional disorders, hyperactivity, and conduct disorders (Meltzer *et al.* 2000). Behaviour problems in early childhood are often associated with negative, inconsistent parental behaviour, as well as high levels of family adversity (Campbell 1995). Emotional and behavioural problems in children are, then, common, and they can lead to mental health problems, such as depression (Barlow *et al.* 2010).

Services in Northern Ireland

A number of parenting programmes and home visiting interventions are designed to prevent behavioural difficulties among children and young people.

Home visiting and parenting programmes The DHSSPS (2010) in Northern Ireland has acknowledged that ‘Health visitors have a critical role to play in promotion of infant mental health (and) in early identification of poor bonding and attachment’, and highlighted that ‘attention should be prioritised to the importance of attachment, nurturing and emotionally attuned responsiveness’ (p22). However, to date, there has been no evaluation of the impact of health visitors on attachment outcomes for infants and children in Northern Ireland. In the South Eastern Trust, the New Parents’ Partnership Programme is working with vulnerable groups of mothers to improve parenting. This programme has a particular focus on attachment. The Western Trust is providing the Nurse Family Partnership Programme (Olds 2006), a programme which has provided evidence of impressive effects in the three studies undertaken in the USA, and currently being evaluated in Great Britain (Barnes *et al.* 2006). Examples of parenting programmes include the *Parenting Matters* and *Incredible Years* programmes provided by Barnardo’s, and NIACRO’s *Child and Parent Support (CAPS)* programme, delivered to families whose children (aged 8 to 13) are at risk of anti-social and offending behaviour; or *Da Young Fathers Project* in the Western HSC Trust. Some of these programmes are being monitored through feedback of parents and professionals.

School-based programmes promoting pupils’ emotional and social wellbeing Whole-school approaches to pupils’ wellbeing are increasingly popular, and are recommended in a number of policy documents in Northern Ireland (e.g. Leavey *et al.* 2009). This type of approach engages students, teachers, parents, families and whole communities in the curriculum and the ethos and environment of the school. Two particular initiatives are being promoted. The *Health Promoting Schools* initiative (delivered by the HSC Public Health Agency and supported by the DHSSPS and the Department of Education) ‘aims to enable schools to provide an environment where the physical and mental wellbeing, health and safety of staff and pupils are supported, in partnership with family, community and external agencies’ (HPA 2002). The *Extended Schools Programme (ESP)* is particularly targeted at schools in deprived and disadvantaged areas, and aims to help

‘foster the health, well-being and social inclusion of children and young people’ by offering a diversity of activities such as sport, drama, art, ICT, and programmes for parents (ETI 2006).

Results of the search

The search strategy identified only two records, both of which were deemed relevant. A further three records were found as part of other searches, and a Google search identified two reports (grey literature) and one article. Of these eight citations, six met the inclusion criteria in Box 6. Two papers were excluded, and Table 6.3 sets out the reasons for their exclusion.

Box 6: Inclusion criteria – interventions aimed at factors associated with poor mental health

POPULATION: children and young people, parents and carers.

INTERVENTION: any primary or secondary intervention aimed at preventing attachment and behavioural difficulties in children and young people.

COMPARISON: any comparison

OUTCOME: behaviour change, attachment

Included reviews

Table 6.1 sets out the characteristics of included reviews. Most are concerned with either school-based programmes or parenting programmes. One review focuses on parenting programmes for children in their first three years of life. Another looks at a broader range of preventive interventions for behavioural and emotional problems of children 8 years and younger. Three reviews focus on school-based interventions promoting pupils’ mental wellbeing and social and emotional skills, and the sixth is a review of mental health promotion and preventive interventions, including interventions for infants/toddlers and families, and school-based mental health promotion and prevention.

Quality of reviews

All reviews described the included studies, but only one included details of excluded studies, and just two explicitly discussed the identification and exclusion of duplicates. There were two meta-analyses presented in the reviews. See Table 6.2 for further information.

Table 6.1: Systematic reviews of interventions aimed at preventing behavioural problems

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To review the effectiveness of school-based interventions aimed at promoting mental wellbeing amongst children in primary education	Adi <i>et al.</i> 2007	31 studies: • 15 RCTs • 16 CCTs	<ul style="list-style-type: none"> • USA (23) • Germany (3) • Australia (2) • Canada (1) • UK (1) • Netherlands (1) 	Children aged 4-11 years in primary education	School-based interventions aimed at promoting mental health	Evidence favour long-term, multicomponent programmes by teachers trained to deliver a curriculum that focuses on mental health, emotional and social development and behaviour management and teacher-child relationships. Teaching skills such as relaxation, conflict resolution and coping with stress, and those teaching social skills and emotional literacy are promising, but these need rigorous testing.
To explore the effectiveness of group-based parenting programmes in improving the emotional and behavioural adjustment of children three years old or less.	Barlow <i>et al.</i> 2010 (update of Barlow <i>et al.</i> 2005)	8 controlled trials	<ul style="list-style-type: none"> • USA (5) • UK (2) • Canada (1) 	Children up to 5 years of age (most under 3) (and their parents)	Group-based parenting programmes	There is some support for group-based parenting programmes to improve the emotional and behavioural adjustment of infants and toddlers. Insufficient evidence to reach solid conclusions regarding their role in the primary prevention.
To provide a synthesis of the international evidence on the effectiveness of interventions to promote mental health and prevent mental health problems	Barry <i>et al.</i> 2009	35 Reviews	Information not provided	Children and adults	<ul style="list-style-type: none"> • Parenting programmes • School-based interventions • Early Years interventions 	Home visiting programmes can reduce behaviour problems. School-based mental health promotion programs, when implemented effectively, can produce long-term benefits for pupils in emotional and social functioning.
To identify evidence-based preventive interventions for behavioural and emotional problems of children aged 0-8. A particular focus on delivery in the Australian contexts.	Bayer <i>et al.</i> 2009	58 RCTs of 50 interventions.	<ul style="list-style-type: none"> • USA, UK • Canada • Netherlands • Australia • New Zealand • Turkey 	Children aged 0-8	<ul style="list-style-type: none"> • NFP • Early Start • Incredible Years • And others 	Effective preventive interventions exist primarily for behavioural, and to a lesser extent, emotional problems. 3 US programs have the best balance of evidence; and 3 targeted parenting programmes in England and Australia are also worthy of highlight.
To identify the impact of school-based universal interventions in improving social and emotional skills, attitudes, behaviour and academic performance.	Durlak <i>et al.</i> 2011	213 studies: • Randomised (99) • Non-randomised (114)	<ul style="list-style-type: none"> • USA (186) • Outside USA (27) 	270,034 students aged 5-18 years with no identified adjustment or learning problems.	School-based universal Social and Emotional Learning (SEL) programmes	SEL programmes in all educational levels are effective in improving social-emotional competencies and attitudes about self, others, and school; increasing pro-social behaviours and reducing conduct and internalising problems.
To investigate the effectiveness of interventions to improve the social and emotional well-being of primary school-aged children.	Green <i>et al.</i> 2005	8 reviews covering 322 studies	Information not provided	Children in primary education	A variety of school-based interventions	Interventions remain poorly evaluated, but school-based mental health promotion appears to be effective, with combinations of universal and targeted programmes for high-risk groups representing the optimum approach.

Table 6.2: AMSTAR ratings – reviews of interventions addressing factors associated with poor mental health

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Adi <i>et al.</i> 2007	Y	Y	Y	Y	N	Y	Y	Y	NA	N	N
Barlow <i>et al.</i> 2010	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Barry <i>et al.</i> 2009	Y	CA	CA	CA	N	Y	CA	Y	NA	N	N
Bayer <i>et al.</i> 2009	Y	CA	Y	Y	N	N	Y	Y	NA	N	N
Durlak <i>et al.</i> 2011	Y	CA	Y	Y	N	N	Y	Y	Y	Y	N
Green <i>et al.</i> 2005	Y	CA	Y	NA	N	Y	Y	Y	NA	N	N

Findings

School-based programmes: School-based multi-component programmes, which include parenting support and teacher training, appear to have a positive impact on measures of pupils' mental health, in contrast to uni-component curricular interventions, such as the Rochester Social Problem Solving programme, covering emotional literacy and problem solving, where there is no evidence of their efficiency (Adi *et al.* 2007). Some evidence has been found of the effectiveness of the universal Good Behaviour Game programme (i.e. a 'whole-of-school' two-year approach to behaviour management) in reducing problem behaviour (i.e. aggression and conduct problems) (Adi *et al.* 2007; Bayer *et al.* 2009), but not depression (Adi *et al.* 2007). School-based universal SEL programmes (i.e. programmes promoting students' social and emotional development) have been found significantly to enhance pupils' behavioural adjustment, by increasing pro-social behaviours and reducing conduct problems (Durlak *et al.* 2011). These positive effects, despite some apparent 'wash out' in follow-up assessments, have been found to remain statistically significant for at least 6 months after the intervention (ibid). Thus, in general, it appears that 'comprehensive programmes that target multiple health outcomes in the context of a co-ordinated whole school approach are the most consistently effective strategy', in terms of producing long-term positive social and emotional outcomes for children and young people (Barry *et al.* 2009:6). Green *et al.*'s (2005) findings from their review of reviews would agree, in terms of long-term whole-school approaches promoting social and emotional health appearing to be more effective than brief class-based programmes aimed at preventing mental health difficulties. Although its efficiency has not been as clearly shown, peer-led approaches and mentoring programmes have been found to be potentially useful approaches (ibid). Selected and indicated programmes focused on reducing disruptive and aggressive behaviour appear to be more effective for high-risk children than for low-risk children (ibid). Short-term conflict resolution programmes delivered by teachers and involving peer mediations have been shown to be effective in the short-term, but not in the long-term (Adi *et al.* 2007). This is not surprising, as it has been

acknowledged that short-term interventions are unlikely to produce long-term effects (Barry *et al.* 2009).

Home visiting programmes: Reviews have shown robust evidence of the effectiveness of home visiting programmes in reducing behavioural problems and improving child development, as well as improving parenting skills and maternal mental health (Barry *et al.* 2009). Within these programmes, programmes specifically focused on improving parental bonding and secure infant attachment have been shown to be effective in enhancing maternal sensitivity and infant attachment security (*ibid.*). Early Start, a 2-3 year home visiting programme in New Zealand for at-risk and stressed mothers, and the two-year US-based Nurse Home Visitation Programme, delivered to low-income, unmarried, first-time mothers, have been found to be particularly effective in reducing emotional (in the case of Early Start) and behavioural (in the case of the US programme) problems from infancy (Bayer *et al.* 2009). UK-based initiatives of family support services run by the voluntary sector, such as the Home-Start and Newpin (New Parent Infant Network), have been replicated in other countries, and evaluations have demonstrated positive effects on mothers and volunteers, but to-date no long-term outcomes have been identified (Barry *et al.* 2009). A US brief targeted family support programme (the US Family Check Up), offering individually at home or community centres to mothers of toddlers, has been identified as effective in reducing child behaviour problems.

Group-based parenting programmes: Group-based parenting programmes aimed at improving the emotional and behavioural adjustment of children aged up to 4 years appear to be effective in the short-term, but there is a lack of follow-up data available that would help establish their long-term effectiveness (Barlow *et al.* 2010). There are certain programmes that appear to be effective in preventing and reducing behavioural and emotional problems in young children, which are the Triple P Positive Parenting programme and the Incredible Years Series (Barry *et al.* 2009; Bayer *et al.* 2009). Another group-based parenting programme that appeared to be effective in reducing emotional problems was the Parent Education Programme, a three-month programme for parents with shy/inhibited pre-school children (Bayer *et al.* 2009).

Implications for practice

Preventing interventions should begin early, be kept in the long-term and target risk and protective factors (Barry *et al.* 2009).

Findings of the reviews reported here suggest that school-based programmes should:

- adopt a whole school approach, which includes changes not only to the curriculum but also to the school environment, and involves parents and the local community;
- employ an integrated approach, i.e. use universal and targeted interventions, so the needs of all children in a school are addressed;
- be comprehensive, i.e. target multiple protective and risk factors rather than target single, topic-specific issues, and use a social competence approach, focusing on the promotion of competence skills and coping outcomes rather than the prevention of specific problems;
- use interactive methodologies that involve a more participatory approach for pupils;
- include opportunities to encourage the application of learned skills throughout a range of contexts outside the school, e.g. in the home;

- be grounded on a strong theoretical base;
- use sustained interventions over multiple years, as these are more likely to cause long-term positive outcomes than once-off interventions would;
- involve high quality implementation, i.e. high level of engagement and cooperation from students, teachers and parents, high level of support from the school organisation and management, appropriate teacher training and provision of support resources, good quality of materials, and optimum general readiness of the school to implement the programme, and
- incorporate systematic evaluation methods, so that programmes are continuously improved, and the quality and quantity of implementation is periodically assessed (Barry *et al.* 2009).

Building partnerships with parents is indispensable when promoting children's emotional and behavioural wellbeing. These partnerships are particularly vital when working with vulnerable children and families living in disadvantaged communities. These are the families in most need of such programmes, although they are also the least likely to avail of them. That is why community-based initiatives should be encouraged, as they are more likely to reach high-risk families (Barry *et al.* 2009). Intensive home visiting and centre-based support should be provided, as there is evidence to suggest that this type of interventions are successful in improving resilience and competence in children and parents, helping prevent mental health problems (*ibid*). Particular well-established parenting programmes have been found to be effective, and one is already being delivered in Northern Ireland by Barnardo's: the Incredible Years programme. Evaluations here have also shown positive effects (McDaniel *et al.* 2010). The Triple P Parenting Programme is currently being offered in Scotland, in particular in the East Dunbartonshire Council, and in the Greater Glasgow and Clyde and Glasgow City Council (BBC 2010), where some evaluations have been conducted that have shown positive outcomes (Burley *et al.* 2005). Some research should be conducted into whether the Triple P Parenting Programme could actually offer some benefits in the Northern Irish context.

Effective parenting programmes, and other preventive interventions, have been recommended to follow these principles:

- have properly trained staff that adhere to the programme content;
- provide out-of-hours sessions for working parents and on-site childcare, where possible;
- be sensitive to different cultures and at-risk populations;
- have proven effective or/and cost-effective outcome data;
- agree with the participant's values, past experiences and perceived needs;
- be easy to understand;
- be simple to adapt into the organisation;
- be transferable to other contexts, and
- provide training and a help-desk (Giesen *et al.* 2007 – cited in Bayer *et al.* 2009: 706).

Implications for research

Parent training Future research needs to focus on whether or not reported gains associated with parent training programmes improve behaviour endure over time, and generalise to other children or situations. To date, the evidence has little or nothing to say about whether or not parenting programmes are cost effective as a primary prevention programme, or are best suited to secondary prevention. In both areas, studies need to be larger and address a wider range of outcomes over a longer period of time. Given the evidence regarding the importance of the parent-infant relationship to future mental health and social adjustment, this should be a research priority.

Home visiting The evidence base underpinning home visiting is mixed. The programme reporting the best results to date are those of the Nurse Family Partnership (Olds 2006), and this is currently being trialled in the UK, and introduced to Northern Ireland. The evidence base is persuasive, but the evidence rests on three studies, conducted in a policy context quite different to that of the UK, and about which some researchers have expressed some concerns, not least of all in the lack of access to the primary data. There is a scope for the rigorous evaluation of other forms of parenting support programmes, such as that being rolled out in the South Eastern Health and Social Care Trust.

School based interventions Despite the number of reviews and studies exploring the effectiveness of school-based programmes and interventions, further research needs to be conducted, especially longitudinal designs and good quality CCTs in the UK to assess the impact of whole-school and targeted approaches (Adi *et al.* 2007; Barry *et al.* 2009). This kind of approach is especially vulnerable to ‘policy fads’, and there are already indications that such interventions may no longer be a political imperative. Not to evaluate the potential of these interventions would represent a missed opportunity within the UK.

Table 6.3: Excluded Studies – Interventions aimed at preventing behavioural problems

Study	Reasons for Exclusion
Bauer and Webster-Stratton 2006	Not a systematic review (no search strategy). A literature review of several parenting prevention programs for children aged 2-8 years old aimed at promoting young children’s social and emotional competence and reduce behavioural problems.
Cooper 2011	Not a systematic review (no search strategy). A literature review on teacher strategies for effective interventions with students presenting social, emotional and behavioural difficulties (SEBD).

Included studies

Adi, Y., Killoran, A., Janmohamed, K. and Stewart-Brown, S. (2007) *Systematic review of the effectiveness of interventions to promote mental wellbeing in children in primary education. report 1: Universal approaches which do not focus on violence or bullying.* London, UK: Centre of Public Health Excellence, NICE.

Barlow, J., Parsons, J. and Stewart-Brown, S. (2005) Preventing emotional and behavioural problems: The effectiveness of parenting programmes with children less than 3 years of age. *Child: Care, Health and Development*, 31, 1, 33-42.

Barlow J, Smailagic N, Ferriter M, Bennett C, Jones H. Group-based parent-training programmes for improving emotional and behavioural adjustment in children from birth to three years

old. *Cochrane Database of Systematic Reviews* 2010, Issue 3. Art. No.: CD003680. DOI: 10.1002/14651858.CD003680.pub2.

Barry, M. M., Canavan, R., Clarke, A., Dempsey, C. and O'Sullivan, M. (2009) *Review of evidence-based mental health promotion and Primary/Secondary prevention. Report prepared for the Department of Health, London.* Galway: Health Promotion Research Centre, National University of Ireland.

Bayer, J., Hiscock, H., Scalzo, K., Mathers, M., McDonald, M., Morris, A., *et al.* (2009) Systematic review of preventive interventions for children's mental health: What would work in Australian contexts? *Australian and New Zealand Journal of Psychiatry*, 43, 8), 695-710.

Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D. and Schellinger, K. B. (2011) The impact of enhancing students' Social and Emotional Learning: A meta-analysis of school-based universal interventions. *Child Development*, 82, 1, 405-432.

Green, J., Howes, F., Waters, E., Maher, E. and Oberklaid, F. (2005) Promoting the social and emotional health of primary school-aged children: Reviewing the evidence base for school-based interventions. *The International Journal of Mental Health Promotion*, 7, 30-36, 7.

Excluded studies

Bauer, N. S. and Webster-Stratton, C. (2006) Prevention of behavioral disorders in primary care. *Current Opinion in Pediatrics*, 18(6), 654-660.

Cooper, P. (2011) Teacher strategies for effective intervention with students presenting social, emotional and behavioural difficulties: Implications for policy and practice. *European Journal of Special Needs Education*, 26, 1, 87.

CHAPTER 7

Interventions addressing the support needs of carers

In this chapter, we report the results of 10 reviews of interventions that address the support needs of carers. These reviews, and some of the interventions they cover, overlap with previous chapters, as parenting programmes, family support services, and school-based interventions are included. However, in the previous chapter, the focus was on their effectiveness in preventing behavioural and emotional difficulties among children and young people. This chapter focuses on the extent to which these interventions are specifically helping parents and carers.

Support needs of carers

Parents and carers often report high levels of stress and worry in dealing with their child's mental health needs and behaviour, and accessing services (Hoagwood *et al.* 2010). Their most commonly reported needs are for advice and emotional support (C4EO 2010), but evidence suggests that parental support needs actually differ for different groups of parents and carers (Ghate and Hazel 2002).

Parenting programmes

In recent policy documents, the UK government has underlined the key role of parenting programmes as a means to support parents and improve parenting (Kane *et al.* 2007). Parenting programmes are interventions that use a structured format to work with parents, often in groups, and that aim to improve parenting practices and family functioning. Evaluations of these interventions suggest that they can be effective in improving a number of outcomes for families and children, but that we currently know little about what factors make parenting programmes meaningful and helpful to parents (*ibid.*).

Some specific parenting programmes feature in both this and the previous chapter, namely: the *Incredible Years* and the *Triple P Positive Parenting* programmes.

The *Incredible Years Parents, Teachers and Children Training Series* were developed in the USA by Carolyn Webster-Stratton. They aim to 'thwart and treat behavior problems when they first begin (infant/toddler through elementary school age) and to intervene in multiple areas through parent, teacher, and child training' (The Incredible Years, Inc. 2011). The programmes help parents and teachers provide children from birth to 12 years old with a robust emotional, social and academic foundation. The parent training intervention is a series of programs focused on strengthening parenting competencies and enhancing parents' involvement in children's school experiences, in order to reduce behavioural problems (The Incredible Years, Inc. 2011).

The Triple-P-Positive Parenting Programme was developed in Australia. It is a multi-level, parenting and family support strategy, delivered to parents of children from birth to age 16, individually or in groups. It aims to prevent behavioural, emotional and developmental problems in children by enhancing the knowledge, skills and confidence of parents, and addresses the differing needs of parents through its different levels (Triplep.net 2011).

Both *Triple P* and *Incredible Years* are currently offered in different parts of the world. The context of parenting programmes in Northern Ireland has been addressed in the previous chapter (Chapter 6).

Results of the search

The search strategy identified 256 records, and a further 6 records were identified through a Google search. Of the 262 records, 248 were judged irrelevant as they were not concerned with interventions, did not focus on parents/carers of children and young people, or were book reviews. Of the remaining 14 records, 10 met the inclusion criteria listed in Box 7. Four papers were excluded and Table 7.3 sets out the reasons for their exclusion.

Box 7: Inclusion criteria – interventions addressing the support needs of carers

- POPULATION: parents and carers.
- INTERVENTION: any intervention aimed at addressing the support needs of parents or carers.
- COMPARISON: any comparison
- OUTCOME: effective support to parents/carers e.g. increased confidence, competence, wellbeing.

Included reviews

Table 7.1 sets out the characteristics of included reviews. These cover parenting programmes, school-based programmes, interventions delivered by practitioners, and a mixture of these. One review was a systematic review of reviews (Barlow *et al.* 2010), one was a broad review that included reviews and individual studies (C4E0), and one was a review and synthesis of qualitative research (Kane *et al.* 2000).

Table 7.1: Systematic reviews of interventions to support parents/carers

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To review the effectiveness of <i>health-led</i> interventions in supporting parents, parenting and parent-infant relationships.	Barlow <i>et al.</i> 2010	24 systematic reviews	Information not provided	Parents and children aged 0-3 years.	A diversity of health-led interventions	A range of interventions and ways of working during the perinatal period to support parents is supported by evidence.
To review the evidence on the effect of parent training to support the parenting of parents with learning disabilities.	Coren <i>et al.</i> 2011	3 RCTs	<ul style="list-style-type: none"> • Canada (1) • USA (1) • Australia (1) 	107 parents with a learning disability.	<ul style="list-style-type: none"> • Home-based individual training • STARS – weekly, small groups • Home Learning Programme 	The evidence indicates that parenting programmes may lead to improved parenting skills, but the quality of the evidence is moderate to low. Larger studies needed.
To identify what works in terms of giving support and intervention with parents and carers of 7-19-year-olds in order to improve children's and young people's attainment, behaviour, and emotional outcomes	C4EO 2010	50 studies: <ul style="list-style-type: none"> • 12 RCT • 11 surveys • 10 reviews • 4 Case studies • 3 controlled studies • 16 qualitative • 3 analyses of secondary data 	<ul style="list-style-type: none"> • UK (32) • USA (11) • Canada (1) • 6 reviews including a variety of countries 	Parents and carers of children and young people aged 7-19 years.	School- and community-based interventions: <ul style="list-style-type: none"> • Counselling • Education • Vocational training • Parenting skills training • Help-lines • Financial support 	Some evidence that interventions that include support for parents and carers are often effective in improving outcomes, although there are not enough rigorous evaluations. School-based programmes that work with parents/carers improve key outcomes.
To assess the effectiveness of Triple P (a parenting programme) Level 4 interventions on parenting styles and parental competency.	De Graaf <i>et al.</i> 2008	19 controlled studies (using pre-test and post-test data)	<ul style="list-style-type: none"> • Australia (16) • Switzerland • Germany • Hong Kong 	Parents of children with more severe behavioural difficulties.	Triple P Level 4 interventions.	Findings of this meta-analysis indicated that the Triple P Level 4 interventions were effective in reducing dysfunctional parenting styles in parents and in improving parental competency.
To identify typologies of family support services for which evaluation data existed and identify research gaps	Hoagwood <i>et al.</i> 2010	<ul style="list-style-type: none"> • RCTs 28 • Quasi Exp (2) • Prepost (7) • Post-test (5) • Feasibility (2) • Reviews (1) • Other (4) 	Information not provided, but the majority in the USA	Parents and caregivers of children	Peer-to-Peer (Family-Led) Programmes (11), such as Parent Empowerment classes. Clinician-led Programmes (33), such as CBFT, STEPP, etc. (Clinician and family member) Team-led Programmes (6)	Programmes led by clinicians or clinician-family teams have been more rigorously studied than family-led models. In terms of clinician-led programmes, the results demonstrated the value of family support services. Parent support was efficient in improving mental health and wellbeing and reducing stress for parents.

Table 7.1: Systematic reviews of interventions to support parents/carers (continued)

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To examine parents' experience and perceptions of parenting programmes using the meta-ethnographic method.	Kane <i>et al.</i> 2007	4 qualitative studies	Information not provided	Parents of children with emotional and behavioural difficulties	Parenting programmes: <ul style="list-style-type: none"> • Family Links Programme (school-based) • Webster-Stratton programme 	Parenting programmes may lead to a reduction in parental feelings of guilt and social isolation, increased empathy with children and confidence in dealing with their behaviour.
To review the effectiveness of interventions for fathers with infants and toddlers	Magill-Evans <i>et al.</i> 2006	14 studies describing 12 interventions: <ul style="list-style-type: none"> • 7 RCTs • 6 cohort studies • 1 before and after case studies 	Information not provided	Mothers and fathers of very young children, including babies.	<ul style="list-style-type: none"> • Infant massage • Observation and modelling behaviour with infant • Kangaroo care • Discussion groups • Parent training programmes; etc. 	Results showed that interventions involving active participation might be effective in enhancing father's interactions with child. More research is needed.
To review the effectiveness of cognitive-behavioural training interventions in improving foster children's behaviour, and foster carers' psychological wellbeing and functioning, family functioning and agency outcomes.	Turner <i>et al.</i> 2007	6 controlled trials.	<ul style="list-style-type: none"> • USA (2) • UK (4) 	463 foster carers	Cognitive-behavioural training interventions for foster carers	Results showed no evidence of effectiveness of CB training interventions in terms of improving foster children's and carers' outcomes. There is a need for further research in this area.
To evaluate and compare the outcomes of two parenting interventions	Thomas and Zimmer-Gembeck 2007	24 studies: <ul style="list-style-type: none"> • 20 RCTs • 2 cohort studies • 2 non-randomised controlled trials 	Information not provided, but most in the USA and Australia	Caregivers and 3 to 12-year-old children	<ul style="list-style-type: none"> • Parent-Child Interaction Therapy • Triple P-Positive Parenting Programme 	The authors concluded that PCIT met the criteria for a 'well-established treatment' and Triple P met the criteria for a 'probably efficacious treatment'.
To assess the effectiveness of infant massage in promoting infant physical and mental health.	Underdown <i>et al.</i> 2009	23 RCTs	<ul style="list-style-type: none"> • China (13) • Korea • Etc (info not provided) 	Infants	Infant massage	Some evidence was found of the benefits of infant massage on mother-infant interaction, sleeping and crying, and on hormones influencing stress levels.

Quality of reviews

The reviews were generally of good quality in relation to the domains assessed by AMSTAR. All decided the inclusion criteria for their reviews before underrating the work, provided information about the search strategy, and had double data extraction. Only three of the 10 included a meta-analysis. Three were Cochrane reviews (Tuner *et al.* 2007; Underdown *et al.* 2009; and Coren *et al.* 2011) and one was a review of qualitative research (Kane *et al.* 2007).

Table 7.2: AMSTAR ratings – reviews of interventions to support parents/carers

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Barlow <i>et al.</i> 2010	Y	Y	Y	N	N	N	NA	NA	NA	NA	N
Coren <i>et al.</i> 2011	Y	Y	Y	Y	Y	Y	Y	Y	NA	NA	N
C4EO 2010	Y	Y	Y	N	N	N	Y	N	NA	NA	N
De Graaf <i>et al.</i> 2008	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Hoagwood <i>et al.</i> 2010	Y	Y	Y	N	N	Y	N	Y	NA	NA	N
Kane <i>et al.</i> 2007	Y	Y	Y	Y	N	Y	Y	Y	NA	NA	Y
Magill-Evans <i>et al.</i> 2006	Y	Y	Y	Y	N	Y	Y	Y	NA	NA	N
Turner <i>et al.</i> 2007	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Thomas and Zimmer-Gembeck 2007	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	N
Underdown <i>et al.</i> 2009	Y	Y	Y	Y	Y	Y	Y	Y	NA	NA	N

Findings

Parenting skills training and programmes:

Anticipatory guidance (i.e. provision of preventive advice by health care professionals in health care settings) and written instructions given to parents of babies have been found to be effective in reducing stress, and increasing parents' confidence in the child's two first months of life (Barlow *et al.* 2010). For many parents, this is a non-stigmatising means of finding out key information.

The evidence suggests that parenting programmes, such as *Incredible Years* (for parents of children with conduct problems), *Triple P* (adaptable to the families' needs), and *Strengthening Families, Strengthening Communities* (developed particularly for minority ethnic groups), can

improve parent outcomes (e.g. mental wellbeing), and family relationships, as well as children's behaviour, as measured by self-report (C4EO 2010). In particular, the results of a meta-analysis of *Triple P Level 4* interventions (i.e. an intensive training programme of 8-10 sessions for parents of children with severe behavioural difficulties) concluded that these interventions were effective in improving the parenting styles and competence of parents, as measured by self-report (de Graaf *et al.* 2008). Another meta-analysis of *Triple P* also reported positive effects, in terms of reducing negative parenting (medium to large effects), and the effects continued up to 3 months after the intervention (Thomas and Zimmer-Gembeck 2007).

In terms of programmes for parents of youth with disruptive and anxiety disorders, enhanced *Parent Management Training (PMT)* with a *Problem-Solving Intervention (PPS)* has been found to decrease parental depression and stress (Hoagwood *et al.* 2010). The *Strategies to Enhance Positive Parenting (STEPP)* programme for single mothers of youth aged 5-12 with ADHD has been shown to improve parent and family impairment and stress, although these effects were not long-term, and the *Incredible Years Advance Parent training programme* has been found to improve communication and problem-solving skills (*ibid.*).

Parents with a learning disability For parents with a learning disability, evaluations of parent training interventions suggest that it is possible to improve their care-giving, although the quality of evidence is moderate to low (Coren *et al.* 2011). Barlow *et al.*'s (2010) review suggests that these interventions were especially helpful when they incorporated specific skill assessment and training, using direct observational techniques and modelling. Programmes often incorporate home-based, individual parenting interventions, sometimes combined with weekly, small group meetings with a family service worker.

Parents of children with mental health problems For parents whose children have mental health problems, the evidence base for family-led family support programmes has been described as thin by Hoagwood and colleagues (Hoagwood *et al.* 2010). These are programmes led by parents, providing advocacy, information and training. Most of the evaluations have taken place in the USA. Examples of these are: the Parent Empowerment Program - a 40-hour training programme for family support workers offering one-to-one support to parents of children with mental health problems; and the NAMI Visions for Tomorrow programme - a 12-session programme consisting of group workshops for primary carers of children with brain disorders.

Evaluations of team-led parent support programmes have evidenced some positive effects on parental outcomes, such as self-efficacy and perceived social supports and skills (*ibid.*). These programmes, predominantly delivered in group formats, were led by a clinician and family member team, and developed by researchers and/or clinical professionals. They often focused on providing emotional support, by facilitating shared experiences, insights and peer support, as well as instructional support and advocacy. Examples include: the Vanderbilt Caregiver Empowerment programme, co-led by a parent advocate and a clinician, which consisted of an 11-hour parent training curriculum aimed at empowering parents and increasing their involvement in their child's mental health; or the Parent Connections programme, a 15-month family support and education programme for parents of children in treatment for serious emotional or behavioural disorders, which is co-delivered by parent partners providing support through the phone and face-to-face, and mental health professionals providing three educational workshops with parent partners.

Kane *et al.* (2007) suggested that there is a lack of qualitative studies looking at parents' perceptions of parenting programmes. From the four primary studies included in their review, they concluded that parents felt that parenting programmes helped them regain control and feel more able to cope, which in turn reduced their feelings of guilt and social isolation, and increased confidence in managing their behaviour. Programmes comprised: videotaped modelling parent training programme delivered by a therapist; parenting programme delivered by health visitors; home-school-linked parenting programme; and the Webster Stratton Parents and Children Series group parenting programme.

Helping foster carers A review of behavioural and cognitive-behavioural interventions designed to help foster carers manage challenging behaviour identified only six trials (Turner *et al.* 2007). The studies were of poor quality, the results mixed, and the confidence intervals very wide. The authors concluded that in 2007, there was no evidence of the effectiveness of these interventions, though an update of this review will be published later this year (Turner *et al.* in press).

Supporting fathers The review by Magill-Evans *et al.* (2006) identified a number of interventions that research suggests can improve fathers' interactions with their young children:

- pre-natal education about infant behaviour, delivered to fathers, and modelling of this behaviour with the newborn;
- observation of infant behaviour by both parents together during a structured physical examination of the child;
- enhanced fathers' participation in a Head Start programme with support group and father-child recreational activities;
- kangaroo care to their infant in NICU by both parents; and
- a discussion group for fathers of toddlers with father-child playtime (Magill-Evans *et al.* 2006).

These interventions all involve active participation with or observation of the father's own child.

School-based initiatives

An evaluation of the effectiveness of full service extended schools (FSESs) in the UK found reported improvements in family stability and children's engagement with learning, as well as child behaviour, though no significant effects were found in terms of pupil attainment (C4EO 2010).

FSESs provide a comprehensive range of services for the child and family, and generally serve areas of disadvantage. In Northern Ireland, there is also an Extended Schools programme (see Chapter 5). Some evidence of increased parental involvement and improved family relationships was found for a knowledge-sharing scheme piloted in three local authority areas in England. This aimed to inform schools how to help parents/carers improve their child's learning (C4EO 2010). Another initiative in schools in England was the *Parent Support Adviser* (PSA), aimed at parents of children at risk of developing behavioural/emotional problems, and consisting of face-to-face support for parents, with almost half of the work being one-to-one. An evaluation of the PSA pilot found a decrease in persistent absenteeism and an increase in parents' engagement with their child learning, as reported by school line managers (C4EO).

Therapeutic approaches: Some clinician-led, family support treatments (e.g. CBT) have been found to be associated with improvements in parental mental health, reductions in parenting stress and intrusive thoughts, and improvements in parenting practices, efficacy and attitudes

towards the child (Hoagwood *et al.* 2010). *Psycho-education* and *parent-infant psychotherapy* have been found to be effective in improving mother-infant interaction, decreasing parenting stress and mothers' depression, and reducing maternal intrusiveness and mother-infant conflict (Barlow *et al.* 2010). These interventions are tailored to mothers and babies or toddlers with problems such as faltering growth, attachment difficulties and abusive parenting, and they are delivered by psychotherapists, focusing on the parent-child relationship, parental representations and practices (*ibid.*). *Parent-Child Interaction Therapy* (PCIT) (i.e. an individualised therapeutic intervention for caregivers and their children aged 4-7 with externalising behaviour) has been shown to be effective in improving parenting (as well as child's behaviour) (Thomas and Zimmer-Gembeck 2007).

Infant massage: There is evidence that infant massage can improve mother-infant interaction, promote sleep and relaxation and reduce crying and stress (Underdown *et al.* 2009). Infant massage may also enhance father-child interactions (Magill-Evans *et al.* 2006). Not all babies like massage, however, and particularly in vulnerable groups, would merit careful assessment and monitoring.

Implications for practice

A comprehensive approach is essential to promoting the mental health of parents and infants during the child's first years of life, and to prevent parent and infant mental health problems (Barlow *et al.* 2010). It has been argued that adult mental health services do not pay enough attention to the needs of its users as parents. There is a need to ensure that CAMH Tier 2 and 3 services (with specialist expertise) are available to assess and give therapeutic support to young children and their families, to promote positive parent-child relationships, and tackle attachment problems (*ibid.*). Similarly, those responsible for adult patients who are parents need to understand the impact that this can have on their children, and provide support not only in terms of their mental ill health, but in their role as carers.

There is some evidence that full service extended schools can be delivered at a low cost. This type of programme would merit further consideration and evaluation, since the most common needs of parents/carers appear to be advice and emotional support, which can be delivered through schools (C4EO 2010).

Some of the ingredients so far identified as crucial for effectively supporting families are:

- a 'joined-up' multi-agency approach;
- having a well-trained workforce;
- using media to engage hard-to-reach people, and
- using both practical and therapeutic interventions simultaneously.

C4EO 2010: 2

Within Northern Ireland, parenting programmes targeted at young mothers from deprived backgrounds, as well as intensive home visiting by health visitors and school nurses to families with complex and challenging need, have been recommended by NIAMH (Leavey *et al.* 2009).

Implications for research

Some well-established parenting programmes and other family-oriented therapeutic approaches have been found to be effective not only in improving outcomes for children, but also in helping parents/carers cope with their caring responsibilities and improve their parenting and

relationships with their children. However, rigorous evaluations of most interventions are uncommon (C4EO 2010), and more research is needed: i) to establish what programmes are best suited to support parents and carers from a diversity of backgrounds and different experiences, especially in the long-term (e.g. Coren *et al.* 2011; de Graaf *et al.* 2008; Hoagwood *et al.* 2010); and ii) to determine the differential impact of interventions with mothers and fathers (Magill-Evans *et al.* 2006). More cost-effectiveness studies are also needed, especially in the current economic climate (C4EO 2010).

Table7.3: Excluded Studies – interventions to support parents/carers

Study	Reasons for Exclusion
Blom <i>et al.</i> 2009	Not a systematic review but a description of two health care interventions developed to support parents whose infant cries excessively.
Cole <i>et al.</i> 2009	Not a systematic review. A review of the effectiveness of family interventions for paediatric acquired brain injuries.
Gentles <i>et al.</i> 2010	Not a systematic review.
Henderson <i>et al.</i> 2008	Not a systematic review.

Included studies

- Barlow, J., McMillan, A. S., Kirkpatrick, S., Ghate, D., Barnes, J. and Smith, M. (2010) Health-led interventions in the early years to enhance infant and maternal mental health: A review of reviews. *Child and Adolescent Mental Health*, 15, 4, 178-185.
- C4EO. (2010) *Improving children's and young people's outcomes through support for mothers, fathers, and carers. research review*. No. 3) London: Centre for Excellence and Outcomes in Children and Young People's Services (C4EO)
- Coren, E., Thomae, M. and Hutchfield, J. (2011) Parenting training for intellectually disabled parents: A Cochrane Systematic Review. published on-line: <http://rsw.sagepub.com/content/early/2011/03/03/1049731511399586>
- De Graaf, I., Speetjens, P., Smit, F., De Wolff, M. and Tavecchio, L. (2008) Effectiveness of the triple P positive parenting program on parenting: A meta-analysis. *Family Relations*, 57, 5, 553-566.
- Hoagwood, K., Cavaleri, M., Serene Olin, S., Burns, B., Slaton, E., Gruttadaro, D., *et al.* (2010) *Family support in Children's mental health: A review and synthesis* Springer Netherlands.
- Kane, G. A., Wood, V. A. and Barlow, J. (2007) Parenting programmes: A systematic review and synthesis of qualitative research. *Child: Care, Health and Development*, 33, 6, 784-793.
- Magill-Evans, J., Harrison, M. J., Rempel, G. and Slater, L. (2006) Interventions with fathers of young children: Systematic literature review. *Journal of Advanced Nursing*, 55, 2, 248-264.
- Thomas, R. and Zimmer-Gembeck, M. J. (2007) Behavioral outcomes of parent-child interaction therapy and triple P-positive parenting program: A review and meta-analysis. *Journal of Abnormal Child Psychology*, 35, 3, 475-495.

Turner W, Macdonald G, Dennis JA. Behavioural and cognitive behavioural training interventions for assisting foster carers in the management of difficult behaviour. *Cochrane Database of Systematic Reviews* 2007, Issue 1. Art. No.: CD003760. DOI: 10.1002/14651858.CD003760.pub3.

Underdown A, Barlow J, Chung V, Stewart-Brown S. Massage intervention for promoting mental and physical health in infants aged under six months. *Cochrane Database of Systematic Reviews* 2006, Issue 4. Art. No.: CD005038. DOI: 10.1002/14651858.CD005038.pub2.

References: excluded studies

Blom, M. A., van Sleuwen, B. E., de Vries, H., Engelberts, A. C. and l'Hoir, M. P. (2009) Health care interventions for excessive crying in infants: Regularity with and without swaddling. *Journal of Child Health Care*, 13, 2, 161-176.

Cole, W. R., Paulos, S. K., Cole, C. A. and Tankard, C. (2009) A review of family intervention guidelines for pediatric acquired brain injuries. *Developmental Disabilities Research Reviews*, 15, 2, 159-166.

Gentles, S. J., Lokker, C. and McKibbin, K. A. (2010) Health information technology to facilitate communication involving health care providers, caregivers, and pediatric patients: A scoping review. *Journal of Medical Internet Research*, 12, 2, e22.

Henderson, S., Skelton, H. and Rosenbaum, P. (2008) Assistive devices for children with functional impairments: Impact on child and caregiver function. *Developmental Medicine and Child Neurology*, 50, 2, 89-98.

SECTION D

MALTREATED AND LOOKED AFTER CHILDREN

CHAPTER 8

Models of services that provide effective help to children looked after

Introduction

This chapter considers the available evidence relating to the effectiveness or relative effectiveness of service models for looked after children, including those that offer a proactive and comprehensive approach to the assessment of their physical and mental health needs. As will be evident from the chapter, the evidence base is generally weak, both in its breadth and its quality. Partly by way of underlining the significance of the gap in this area, we take some time to review the extent and significance of need, and pinpoint issues that have been identified by those studying this issue, and which provide pointers to changes needed in practice and to the gaps in research.

Worldwide, studies point to increased rates of physical, developmental, and mental health problems amongst children in care (particularly depression and ADHD) compared with their peers (see Meltzer *et al.*, 2003; Ford *et al.* 2007; Mooney *et al.* 2009). They underachieve educationally (Jackson and McPartlin, 2006). Consequently, their longer-term outcomes are worse than those of their peers. They are also at increased risk for teenage pregnancy, substance misuse, homelessness, unemployment, and imprisonment (Mather, 2010). These key needs (i.e. physical health, education, and mental health) must be addressed whilst in care if LACYP are to be given the opportunity to achieve their full potential in life.

Many looked after children and young people have experienced abuse or neglect (DCSF 2009). Maltreatment can impact adversely on the main areas of children's development, resulting in neuro-developmental difficulties, poor cognitive development, insecure attachment, impaired social competencies and low self-efficacy (Turney and Tanner 2003). Maltreatment is often associated with disadvantage, poverty and poor parental mental health, factors that might also increase risk for a wide variety of health problems amongst looked after children.

Physical Health Rodrigues *et al.* (2004) surveyed LACYP and found that their general health care was well below statutory requirement, echoing earlier research by Hill and Watkins (2002), who found that, although assessments were being done, almost half of recommendations that followed were not acted on. They observed that failure to protect and promote the health of LACYP can cause more, rather than less, suffering. They also commented that a large body of research highlights the high level of health neglect and unhealthy lifestyles that are typical of children and young people living in public care. In order to effectively address the diverse needs of LACYP, they recommended that appropriately skilled professionals deliver health assessment, which should involve clinical diagnostic, health promotion, sexual health and mental health advice, and access to computer and paper health records (see also Stanley *et al.* 2004). Mather's (2010) study indicated that, compared with children of the same age and social status who live with birth parents, LACYP continue to be more likely to have incomplete immunisations, lower health surveillance, worse dental health, poorer nutrition, and to make unhealthier lifestyle choices.

Mental Health From their detailed review of the literature, Hannon *et al.* (2010) conclude that emotional and behavioural problems are strongly associated with placement breakdown.

Placement instability can then exacerbate any mental health difficulty being experienced by the child or young person. They argue that LACYP need high quality emotional and professional support and stable placements from the outset, to address these problems and develop their resilience. In terms of improving current provision for LACYP, they recommended:

- Making mental health assessments of LACYP entering the care system mandatory, applying a standardised multi-disciplinary measure (targeted at the DfE);
- incorporating mental health training in the training standards for foster and residential care workers (targeted at Children’s Workforce Development Council); and
- Primary Care Trusts to commission on-site CAMHS support for LACYP in residential care and residential staff.

Whilst there is increasing consensus around the concept of ‘teaming up’ of organisations to provide adequate services for children, the remit of specialist Child and Adolescent Mental Health Services (CAMHS) is not clearly defined, and this can be made worse by poor communication between health and social services (Hill and Mather 2003). Further, although the presence of behavioural problems may not require contact with specialist mental health services, a large proportion of these children will have concurrent mental health problems (Rao *et al.* 2010), pointing to the need for clearly specified and agreed care pathways.

Rao *et al.* (2010) point out that one of the markers envisaged by the National Service Framework Children, Young People and Maternity Services (DoH 2004) and New Horizons (DoH 2009) health policies in England was that the needs of children with complex, severe and persistent behavioural and mental health problems would be met through an interagency approach. This would span the tiered system, with specialist multi-disciplinary mental health teams offering a service for the more severe, complex and/or persistent mental health problems. The policies recommend that Tier 2-3 mental health services should work in tandem with other agencies to enhance child mental health and well-being, and focus on attachment difficulties, through enhanced support and training for frontline practitioners. Although most new services appeared to follow the tiered model, there was marked variation in their operational criteria, staff constitution and therapeutic roles. Rao *et al.* (2010) also noted that, although many children experience mental health problems such as anxiety and depression, the distinction between ‘mental health’, ‘well-being’, ‘problems’, and ‘disorders’ was often not clearly specified. This was a particular problem for broad, heterogeneous, and prominent presentations, such as behavioural and attachment difficulties, where a range of agencies may be involved. Consequently, there is little consensus on where to position CAMHS within a comprehensive model of intervention for LACYP.

Northern Ireland policy and service context

VOYPIC (Voice of Young People in Care), an advocacy service for LACYP in Northern Ireland, commissioned Mullan and Fitzsimons (2006) to carry out a detailed literature review of the mental health of Looked After/Care Leavers in Northern Ireland as part of the CASPAR³ project. The review identified a number of key issues for practice, namely:

³ The aim of the Caspar project is to produce an evidence base which will contribute to the development of a strategy to meet the mental health needs of Looked After Children/Care Leavers across Northern Ireland.

- LACYP need to be listened to, and to have their views placed central to the development, planning and delivery of services;
- The mental health of LACYP should be understood and assessed within the context of their lives, with a holistic approach adopted that incorporates their full range of needs, from support to treatment;
- All carers and professionals who are involved in the lives of LACYP should have a shared understanding of need and assessment;
- Mental health services for LACYP should be structured in a way that is consistent with clear, agreed, and accepted standards, and facilitates co-ordination, integration and accessibility;
- Risk reducing and resilience enhancing activities can be taken on a daily basis to enhance the life chances of LACYP. These ought to be linked to the Care Pathway Planning process;
- There is a gap in research, investment and services that disadvantage LACYP in Northern Ireland.

Results of the search

The search strategy identified 215 records. Of these, 145 were judged irrelevant, as they were not concerned with looked after children. Among these were: reviews of chapters in book; book reviews; systematic reviews of child medical conditions, such as chronic asthma and other life limiting conditions; and single studies of medical conditions. 21 publications were judged to be relevant and a further 10 reviews were identified through Google Scholar, giving a total of 31 publications considered in detail. Of the 31, just 3 met the inclusion criteria listed in Box 8. Table 8.4 provides the reasons for the exclusion of the remaining 28 publications.

Box 8: Inclusion criteria – models of service that provide effective help to children looked after

- **POPULATION:** looked after children and young people
- **INTERVENTION:** any model of service that aims to provide timely and effective help to Looked After children, and/or which offers a proactive and comprehensive approach to the assessment of their physical, educational, and mental health needs
- **COMPARISON:** any comparison
- **OUTCOME:** improved outcomes in children’s physical and mental health

The three systematic reviews examined models of service (very loosely defined), aimed at delivering positive outcomes for looked after children and young people. No systematic reviews or meta-analyses were identified that dealt with the important issue of comprehensive and timely assessments of the physical and mental health needs of looked after children. A Cochrane review on this last issue is currently in preparation (Griffiths *et al.* in preparation). This review will examine the effectiveness of comprehensive paediatric health assessments of children in out of home care due to maltreatment. It will examine the effectiveness of these paediatric assessments in identifying the physical health, developmental, mental and behavioural problems that looked after children might face (or present), and facilitating access to appropriate interventions. This highlights the need for systematic review/s of single study investigations/interventions/or evaluations in this area.

Table 8.1 sets out the characteristics of included reviews. Two systematic reviews (Macdonald and Turner 2008; and Holtan and Valentine 2009) examine specific models of foster care (Treatment Foster Care and Kinship Care); the third (Everson-Hock *et al.* 2009) is concerned with training (for foster carers/professionals/volunteers), as a means of improving outcomes for children.

Quality of reviews

All three reviews scored highly on the AMSTAR rating system for systematic reviews, which would increase confidence in the conclusions reached in relation to the findings presented (see Table 8.2).

Table 8.2: AMSTAR ratings for reviews of models of service that provide effective help to children looked after

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Everson-Hock <i>et al.</i> 2009	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N
Winocur <i>et al.</i> 2009	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Macdonald and Turner 2008	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Findings

Kinship care Kinship care has been defined as ‘the full-time nurturing and protection of children who must be separated from their parents, by relatives, members of their tribes or clans, godparents, stepparents, or other adults who have a kinship bond with a child’ (Child Welfare League of America 1994: 2). In the UK, we tend to use the term ‘family and friends care’. In Australia, the term ‘kith and kin care’ is commonplace. Arrangements can be formal or informal. When a child in care is placed with family or friends, it is a formal arrangement. Winocur *et al.*’s (2009) review focuses on formal kinship foster care placements, with comparisons made with non-kinship (or ‘stranger’) foster care. The review examined 62 quasi-experimental studies, and the authors were able to conduct meta-analyses for 16 of the 28 outcomes they examined. Most meta-analyses involved only a handful of studies, as these were heterogeneous, not always well conducted, and often reported data in ways that did not lend themselves to synthesis. Of particular importance is the fact that children placed in kinship care are different to those entering non-kinship care, and this leads to a lack of confidence between groups and ‘subsequent lack of control over contaminating events such as family preservation services’ (Barth 2008: 218, cited in Winocur *et al.* 2009). Effect sizes were generally small to medium, and the authors caution that the data may have limited practical consequences. The review provides a careful analysis of the methodological weaknesses of research in this area, and is a good starting place for anyone designing a study in this field.

Their general conclusions are that the evidence supports the use of kinship care as a means of enhancing children's behavioural development and mental health functioning, and of improving placement stability. The evidence does not support its use as a means solely to increase permanency. Given the weight of available evidence, Winocur *et al.* (2009) conclude that children in kinship care do better than those in non-kinship foster care in relation to the following:

- behaviour problems;
- adaptive behaviour;
- psychiatric disorders;
- well-being, and
- placement stability and guardianship.

However, the authors point out that there was no discernable difference between the groups with regard to reunification, length of stay, family relationships or educational attainment. What is more, they are *less likely* than those in non-kin care to achieve adoption or to use mental health services and are *more likely* to re-enter out-of-home care or have a disrupted placement. The authors caution that 'these conclusions are tempered by the pronounced methodological and design weaknesses of the included studies and particularly the absence of conclusive evidence of the comparability of groups. It is clear that researchers and practitioners must do better to mitigate the biases that cloud the study of kinship care.'

They conclude the following:

- i) Whilst a viable option, policies mandating kinship care for children removed from the home for maltreatment may not always be in the best interest of children and families. Professional judgement is required on a case by case basis.
- ii) A key consideration is whether kinship placements would be more effective with increased levels of support from social workers and therapeutic services (Green 2000). The authors note that the costs involved need to be weighed against the independence desired by some kin carers.
- iii) Policy-makers need to decide whether or not kinship carers should be approved (like foster carers) and whether they should be provided with financial resources (these issues have been 'live' for some time in the UK).
- iv) In contrast to iii), kinship care may be a cost-effective alternative to foster care, given that children appear to do comparably well on wellbeing and permanency outcomes, with lower payments and fewer services.

Treatment foster care Treatment foster care (TFC) is a foster family-based intervention that aims to provide young people (and, where appropriate, their biological or adoptive families) with an individually tailored programme designed to help bring about positive changes in their lives (Bereika 1992; Clark 1993). Because it is an individually tailored programme, TFC is sufficiently flexible to accommodate different client populations with a wide range of clinical problems and shifting community needs (Clark 1993). TFC was designed specifically to cater for the needs of children whose difficulties or circumstances place them at risk of multiple placements, and/or more restrictive placements, such as hospital or secure residential or youth justice settings (Webb 1988). These groups include children who have experienced trauma, neglect or abandonment; children and

adolescents with mental health problems; children with problems of antisocial behaviour and offending; and children with serious medical conditions (Davis 1984; Foster 1982).

Macdonald and Turner (2008) undertook a systematic review of five RCTs of Treatment Foster Care (TFC). All studies were conducted in the USA. Since the publication of this review, a pilot of Treatment Foster Care has been conducted in England (Biehal *et al.* 2010). The study would not have met the inclusion criteria for this review. The study recruited only 24 young people to the TFC group and comparison group, and was undermined by a number of other methodological (not an RCT) and practical problems (difficulties in identifying a comparison group sufficiently similar to those in the intervention group), making conclusions difficult to draw. Other studies are being conducted in Sweden but none appear to be outcome evaluations. A qualitative study of 28 foster carers in Sweden provides evidence to suggest that foster carers value the 24 hour access to the 'treatment tools' and a treatment team, that form part of the TFC package (Westermarck *et al.* 2006). This appreciation was held irrespective of how they viewed the task of foster care, i.e. as a more or less professional job.

Macdonald and Turner concluded that TFC may be a useful intervention for hard-to-place children and young people in terms of finding them a family setting. Results indicated clinically significant reductions in: anti-social behaviour; the number of days spent running away from placement; the number of clinical referrals; and the duration spent in locked settings. There were also improvements in educational and employment outcomes, particularly in terms of school attendance, homework, and finding work. The authors thought the quality of the evidence was generally fair, and improving, but that certain aspects of study quality are poorly reported, leaving many of the judgements about quality resting on unpublished information that was provided by study authors.

General Training and Support The need for improvements in training and support for foster carers has been recognised for some time (Golding 2002), as well as for residential care staff (Walton 1995). The review undertaken by Everson-Hock and her colleagues (2009) aimed to 'identify and synthesise evidence that evaluates the effectiveness of additional training and support to approved carers, professionals and volunteers involved in the care of or working directly/indirectly with LACYP on the physical and emotional health and well-being of LACYP' (p. 5). The authors identified eight studies, six of which were conducted in the US, and all but two of which examined very different interventions, although all studies compared training with and without support.

The two American studies both combined: i) training aimed at helping foster carers reinterpret children's difficult behaviour; ii) training on how to overcome the personal barriers to providing nurturing care; and iii) training to help carers provide an environment to help children develop self-regulatory processes (Dozier *et al.* 2006; and Sprang 2008). The remaining studies each focused on one kind of training.

Everson-Hock *et al.* (2009) report that in the two UK studies included in their review, foster carer training had limited impact on problem behaviour; in contrast, the US studies reported statistically significant benefits to looked after children and young people (LACYP) on this particular outcome. They commented that it was unclear whether this difference was due to differences in the type of training, or differences between UK and US fostering services. They observe that US

Table 8.3: Reviews of models of services that provide effective help for looked after children.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To identify and synthesise evidence that evaluates the effectiveness of additional training and support provided to carers, professional, and volunteers involved in the care of Looked After Children and Young People (LACYP), specifically in relation to their physical and emotional health, and well-being.	Everson-Hock <i>et al.</i> 2009	<ul style="list-style-type: none"> • 8 studies: • 5 RCTs • 1 prospective cohort study • 2 non-comparative studies 	USA (3) UK (6)	Carers, professionals, and volunteers involved in the care of LACYP. Although not specified, it is assumed that this refers to children and young people under 18 years	Training and support provided to carers, professionals, volunteers, and birth parents involved in the care of LACYP, to enhance their skills.	Training programmes in the UK may need to be of longer duration and greater intensity than currently is the case, and there is a need to re-evaluate the impact of such programmes on LACYP of all ages. Refresher training or support may be needed for short-duration courses. Foster carers (and other professionals) recognize the need for, and values of, training and support.
To evaluate the effect of kinship care placement on the safety, permanency, and well-being of children removed from home as a result of maltreatment.	Winocur et al 2009	<ul style="list-style-type: none"> • 62 quasi-experimental studies 	USA (57) Norway (1) Israel (1) Sweden (1) Holland (1) Australia (1)	Children and youth under the age of 18 who were removed from home for abuse, neglect, or other maltreatment, and placed in kinship foster care.	Formal kinship placement, irrespective of whether the caregivers were paid or unpaid.	The review supported the practice of treating kinship care as a viable placement option for children removed from home as a result of maltreatment. However, this conclusion is tempered by the methodological and design weakness that they identified in the studies that were included in the review.
To assess the impact of Treatment Foster Care (TFC) on psychosocial and behavioural outcomes, delinquency, placement stability, and discharge status for Looked After children and adolescents	Macdonald and Turner 2008	<ul style="list-style-type: none"> • 5 RCTs 	USA (5)	Children and young people up to 18 years	<ul style="list-style-type: none"> • Multi-dimensional intervention • Additional supports to foster carers • Fostering Individualised Assistance Programme (FIAP) 	TFC is a promising intervention for children and young people at risk of being placed in settings that place restrictions on their liberty, and who are at risk of a range of adverse outcomes. This is particularly the case for those with conduct disorders and delinquency.

studies tended to recruit carers of very young children, whereas the UK studies recruited a broader range, including carers of children and adolescents. Consequently, as there is a greater likelihood of placement breakdown or behavioural problems in older LACYP, the LACYP included in the UK studies would have been more likely to have serious behavioural problems at the outset. They only found one study (Macdonald and Turner, 2005) that measured the impact of training and support for foster carers on placement stability, and this found no significant differences between foster carers who completed training and those who did not, in relation to unplanned placement breakdowns. Everson-Hock *et al.* (2009) postulate that one possible explanation for this finding is that short-duration group training for foster carers is not sufficiently intense to impact on this outcome. Another possibility suggested is that the training may have led to increased confidence in the carers, and this may have encouraged them to agree to further placements of more challenging LACYP. The study by Macdonald and Turner had a number of methodological shortcomings (mainly in reporting) that they thought might have changed the conclusions.

Everson-Hock *et al.* (2009) also presented the findings from four studies that examined the impact of training and support for foster carers on the emotional well-being of LACYP, with mixed results. Two UK studies did indicate that training for carers may have some benefit on LACYP's emotional well-being, although this was more likely if training was intense.

Implications for practice

Macdonald and Turner (2008) conclude that although the number of studies in this area is relatively few, diverse and small scale, the evidence suggests that TFC can be an effective social intervention for children and young people who are at risk of a range of adverse outcomes, in addition to being placed in a setting that restricts their liberty. This is especially the case for children and young people with behavioural and emotional problems, particularly conduct disorders and delinquency. They also indicate that the research underlines the importance of ensuring that, for girls, TFC addresses the emotional and psychiatric conditions that frequently coincide with delinquency. There is indirect evidence that TFC leads to improved placement stability and other outcomes for children. This suggests that targeted selection, training, and support combines to improve the experiences of foster carers, and enhances their preparedness to foster these challenging children and young people.

Based on the limited evidence from Everson-Hock *et al.*'s review (2009), UK training programmes for foster carers and others may need to be of longer duration and greater intensity, combined with ongoing support. There is also a need to re-evaluate the impact of these programmes for all ages. Where short-duration short coursed are provided (perhaps due to cost constraints or pressures on foster carer time), then some form of refresher training or support may be useful, for example post-training group discussion, leaflets, website, or telephone support.

Kinship care is a viable option for some children, but not all (Holtan and Valentine 2009). Practitioners need to consider the levels of support provided to kinship carers, some of whom might need more financial support and other forms of advice and assistance. Foster care should continue to be an essential placement option. Children in non-kin foster care placements also experience positive outcomes, and appropriate kinship placements are not always obtainable or appropriate. Judgement is needed on a case by case basis.

Implications for research

In research terms, Holtan and Valentine (2009) highlight the need to mitigate the biases that are common place in the study of kinship care. There is a need for: longitudinal designs to investigate the outcomes for children over time; the development of psychometrically sound instruments of family and child functioning that enable more reliable comparisons between groups and studies; and greater focus on controlling and understanding selection bias, through the application of emerging statistical models.

Macdonald and Turner (2008) suggest that further research should test the generalisability of findings from the studies included in their systematic review of Treatment Foster Care, by replicating the studies using independent research teams. Studies also need to be conducted in different locations, with different groups of young people, of different ages and increased ethnic diversity, with a range of clearly identified problem profiles, and with follow-up components greater than two years.

Finally, the lack of any systematic reviews or meta-analyses of the many multiple single study investigations of the physical, educational, and mental health needs of LACYP indicates a major deficit in this area, and we would recommend that systematic reviews of studies examining these needs be resourced, either in combination, or as a series of individual reviews.

Included studies

Everson-Hock, E., Jones, R., Guillaume, L., Duenas, A., Goyder, L., Chilcott, J. and Payne, N. (2009) *Review E2: The effectiveness of training and support for carers/professionals/volunteers working with looked after children and young people on the physical and emotional health and well-being of looked after children and young people*. Sheffield: ScHARR Public Health Collaborating Centre.

Winokur M, Holtan A, Valentine D. Kinship care for the safety, permanency, and well-being of children removed from the home for maltreatment. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD006546. DOI: 10.1002/14651858.CD006546.pub2.

Macdonald G, Turner W. Treatment Foster Care for improving outcomes in children and young people. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD005649. DOI: 10.1002/14651858.CD005649.pub2

Excluded studies

Avery, R.J. (2010) An examination of theory and promising practice for achieving permanency for teens before they age out of foster care. *Children and Youth Services Review*, 32, 399-408.

CAAB (2009) *Best Practice Guidelines for the use and Implementation of Therapeutic Interventions for Children and Young People in Out-of-Home Care*. Dublin: Children Acts Advisory Board.

Davies, S. and Feeney, H. (2009) A pilot of the Parents' Evaluation of Developmental Status tool. *Community Practitioner*, 82, 7, 29-31.

Table 8.4: Excluded Studies: Models of services that provide effective help for looked after children.

Study	Reasons for Exclusion
Avery 2010	A single study of the efficacy of independent living services for preparing foster youth to live independently.
Children Act Advisory Board 2009	Not a systematic review. Best practice guidelines from the Republic of Ireland on the use and implementation of therapeutic interventions for children and young people in out-of-home care.
Davies and Feeney 2009	A single study of the Parents' Evaluation of Developmental Status (PEDS) tool. No focus on LAC.
Desbiens and Gagne 2007	Not a systematic review. Single study of the development of behaviour disorders among maltreated youth.
Forbes <i>et al.</i> 2007	A scoping exercise undertaken to provide a conceptual basis for examining the contribution of nurses to child health services.
Garg <i>et al.</i> 2007	Not a systematic review. Single study of the feasibility and impact of an intervention on the management of family psychosocial topics at well-child visits at a medical home for low-income families in the USA.
Igelman <i>et al.</i> 2007	Not a systematic review. Article focusing on a review of two trauma assessment tools. No focus on LAC.
Jee <i>et al.</i> 2010	A single study investigating the identification of mental health problems in two foster care medical homes.
Kimberlin <i>et al.</i> 2009	A traditional literature review of the research on foster care re-entry. No search strategy specified.
Kurtz 2009	Department of Health guidance on the development of tier 4 CAMHS.
Mayers Pasztor <i>et al.</i> 2006	Single study investigating the role of foster parents in meeting the mental health needs of children in care.
McMullan and Fitzpatrick 2006	Traditional literature review of research on the mental health of Looked After Children. Although this study did not meet the inclusion criteria, it did inform the Northern Ireland policy and service context.
Milburn <i>et al.</i> 2008	Review of a single programme in Victoria Australia aimed at providing a systematic comprehensive therapeutic assessment approach for child protection clients entering out-of-home care for the first time.
Mitchell <i>et al.</i> 2010	A single study investigation of the views of children on the transition into foster care.
Messing 2006	A single study investigation of the child's perspective of kinship care.
Munoz-Solomando <i>et al.</i> 2010	Traditional literature review of the transitions for young people who move from child and adolescent mental health services to mental health services for adults. No search strategy specified.
Newton <i>et al.</i> 2010	A systematic review of interventions aimed at improving child protection in the hospital emergency department. There was no focus upon Looked After children.
NICE 2010	National Institute for Health and Clinical Excellence (NICE) guidance on promoting the quality of life for Looked After children. No review of literature included.
Richardson and Lelliott 2003	Traditional literature review of the research on the mental health of Looked After children. 2003
Sayal 2006	A systematic review of the literature relating to access to mental health services for children. No focus on LAC.
Scott and Hill 2006	Traditional literature review on the health of LAC, with a particular focus on Scotland.
Shannon <i>et al.</i> 2011	Traditional literature review, with search strategy specified. However, the subject area was somatisation in school-age children and implications for school nurses, with no focus on Looked After children.
Singh 2009	Traditional literature review of the transition from child and adult mental health services. No search strategy
Sundell <i>et al.</i> 2007	Not a systematic review. Single study investigation of child protection and investigations in Stockholm.
Tarren-Sweeney 2010	Critical commentary on the need to re-think mental health services for children in care and adopted from care.
Teggart and Linden 2006	Single study of service users' and carers' views of child and adolescent mental health services in N. Ireland.
Unran and Wells 2005	Single study of direct client services provided by one foster care program in the USA.
Whyte and Campbell 2008	Single study investigating the usefulness of the Strengths and Difficulties Questionnaire (SDQ) to identify mental health strengths and needs for Looked After children in Northern Ireland.

- DCSF (2009) *Children Looked After in England (Including Adoption and Care Leavers): Year Ending 31st March 2009*. London: Department for Children, Schools and Families.
- Department of Health (2004) *National Service Framework for Children, Young People and Maternity Services: The Mental Health and Psychological Well-being of Children and Young People*. London: The Stationery Office.
- Department of Health (2009) *New Horizons: A Shared Vision for Mental Health*. London: Department of Health.
- Desbiens, N. and Gagne, M.H. (2007) Profiles in the development of behaviour disorders among youths with family maltreatment histories. *Emotional and Behavioural Difficulties*, 12, 3, 215-240.
- Forbes, A., While, A., Ullman, R. and Murgatroyd, B. (2007) The contribution of nurses to child health and child health services: Findings of a scoping exercise. *Journal of Child Health Care*, 11, 3, 231-247.
- Garg, A., Butz, A.M., Dworkin, P.H., Lewis, R.A., Thompson, R.E. and Serwint, J.R. (2007) Improving the management of family psychosocial problems at low-income children's well-being care visits: The WE CARE project. *Pediatrics*, 120, 3, 547-558.
- Goodman, R. (1997) The Strengths and Difficulties Questionnaire: A Research Note. *Journal of Child Psychology and Psychiatry*, 38, 581-586.
- Igelman, R., Taylor, N., Gilbert, A., Ryan, B., Steinberg, A., Wilson, C. and Mann, G. (2007) Creating more trauma-informed services for children using assessment-focused tools. *Child Welfare*, 86, 5, 15-33.
- Jee, S., Szilagyi, M., Blatt, S., Meguid, V., Auinger, P. and Szilagyi, P. (2010) Timely identification of mental health problems in two foster care medical homes. *Children and Youth Services Review*, 32, 685-690.
- Kimberlin, S.E., Anthony, E.K. and Austin, M.J. (2009) Re-entering foster care: Trends, evidence, and implications. *Children and Youth Services Review*, 31, 471-481.
- Kurtz, Z. (2009) *The Evidence Base to Guide Development of Tier 4 CAMHS*. London: Department of Health.
- Mayers Pasztor, E., Hollinger, D.S., Inkelas, M. and Halfon, N. (2006) Helath and mental health services for children in foster care: The central role of foster parents. *Child Welfare*, 85, 1, 33-57.
- Milburn, N.L., Lynch, M. and Jackson, J. (2008) Early identification of mental health needs for children in care: A therapeutic assessment programme for statutory clients of child protection. *Clinical Child Psychology and Psychiatry*, 13, 1, 31-47.
- Mitchell, M.B., Kuczynski, L., Tubbs, C.Y. and Ross, C. (2010) We care about care: Advice by children in care for children in care, foster parents and child welfare workers about the transition into foster care. *Child and Family Social Work*, 15, 176-185.
- Messing, J.T. (2006) From the child's perspective: A qualitative analysis of kinship care placements. *Children and Youth Services Review*, 28, 1415-14234.
- Mullan, C. and Fitzsimons, L. (2006) *CASPAR Project: The Mental Health of Looked After Children/Care Leavers in Northern Ireland: A Literature Review*. Belfast: Voice of Young People in Care (VOYPIC).

- Munzo-Solomando, A., Townley, M. and Williams, R. (2010) Improving transitions for young people who move from child and adolescent mental health services to mental health services for adults: Lessons from research and young people's and practitioners' experiences. *Current opinion in psychiatry*, 23, 311-317.
- Newton, A.S., Zou, B., Hamm, M.P., Curran, J., Gupta, S., Dumonceaux, C. and Lewis, M. (2010) Improving child protection in the emergency department: A systematic review of professional interventions for health care providers. *Academic Emergency Medicine*, 17, 2, 117-125.
- NICE (2010) *Promoting the quality of life for looked-after children and young people*. London: National Institute for Health and Clinical Excellence.
- Richardson, J. and Lelliott, P. (2003) Mental health of looked after children. *Advances in psychiatric Treatment*, 9, 249-251.
- Sayal, K. (2006) Annotations: Pathways to care for children with mental health problems. *Journal of Child Psychology and Psychiatry*, 47, 7, 649-659.
- Scott, J. and Hill, M. (2006) *The health of Looked After and accommodated children and young people in Scotland: Messages from the research*. Edinburgh: Social Work Inspection Agency.
- Shannon, R.A., Bergren, M.D. and Matthews, A. (2011) Frequent visitors: Somatization in school-age children and implications for school nurses. *The Journal of School Nursing*, 26, 3, 169-182.
- Singh, S.P. (2009) Transition of care from child to adult mental health services: The great divide. *Current opinion in psychiatry*, 22, 386-390.
- Sundell, K., Vinnerljung, B., Lofholm, C.A. and Humlesjo, E. (2007) Child protection in Stockholm: A local cohort study on childhood prevalence of investigations and service delivery. *Children and Youth Services Review*, 29, 180-192.
- Tarren-Sweeney, M. (2010) It's time to re-think mental health services for children in care, and those adopted from care. *Clinical Child Psychology and Psychiatry*, 15, 4, 613-626.
- Teggart, T. and Linden, M. (2006) Investigating service users' and carers' views of child and adolescent mental health services in Northern Ireland. *Child Care in Practice*, 21, 1, 27-41.
- Unran, Y.A. and Wells, M.A. (2005) Patterns of foster care service delivery. *Children and Youth Services Review*, 27, 511-531.
- Whyte, S. and Campbell, A. (2008) The Strengths and Difficulties Questionnaire: A useful screening tool to identify mental health strengths and needs in Looked After children and inform care plans at Looked After children reviews? *Child Care in Practice*, 14, 2, 193-206.
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CHAPTER 9

Interventions for children traumatised through maltreatment or disrupted relationships with their primary carers

In this section, we report the results of nine reviews of interventions aimed at addressing the consequences of child maltreatment. The focus is, therefore, on interventions that aim to improve outcomes for children who have experienced maltreatment, rather than intervening to prevent abuse or to prevent its recurrence. The primary author of this chapter has a conflict of interest, in that she is responsible for one of the included reviews (Macdonald *et al.* 2010).

Child maltreatment

Child maltreatment encompasses physical abuse, physical neglect and sexual abuse. Emotional abuse or neglect can be separately identified, but is also a feature common across all other forms of maltreatment. Exposure to domestic violence is now recognised as a form of maltreatment in some jurisdictions.

Prevalence A prevalence study of child maltreatment conducted in the UK by Cawson and her colleagues (Cawson *et al.* 2000) suggests that 7% of children are exposed to serious physical abuse from their parents or carers; 6% experience neglect ('serious absence of care'); 6% experience frequent and severe emotional maltreatment; and 5% experience serious lack of supervision; 11% of children experience sexual abuse by someone known to them but not related to them; 1% and 3% respectively are sexually abused by a carer or other relative, and 5% by someone unknown to them or someone they have just met.

Incidence Table 9 provides information on the number of children registered on the child protection register on 31st March 2009, or – in England – for whom a child protection plan was in place. Given the challenges of identifying child maltreatment, these numbers represent only the 'tip of an iceberg' in terms of the numbers of children maltreated (these are the only children deemed to have reached a threshold of 'significant harm' or 'risk of significant harm').

Table 9: Number of child protection registrations as at March 2009

	England	Wales	Northern Ireland	Scotland
Total registrations as at 31 March 2009	34,100	2,512	2,488	2,682
Boys (as % of total)	51%	50%	50%	51%

The numbers of children registered in each jurisdiction has increased steadily from 2002, with the largest increases occurring between 2008 and 2009, following the 'inquiry into the death of Baby P' in 2007 (Haringey LSCB 2008).

Consequences of maltreatment

Although rare, some children are deliberately killed by their carers (homicide) or die as a result of their neglect (manslaughter). 35% of child homicides (children under 16 years) are under one year of age (Brookman *et al.* 2006). Most children do not die, but their lives are often blighted by a range of adverse consequences of their experiences. In the short-term, children may sustain physical injury, and their health, education and general wellbeing may suffer. Kolko (1986) hypothesises that

the effects of child physical abuse may impact upon a child's health in much the same way as spouse abuse has been shown to be correlated with poor health, and there is evidence that children who witness intimate partner violence are also prone to the adverse outcomes of maltreatment (Gelles and Straus 1990).

Children who experience abuse and neglect fare noticeably less well in educational terms than their peers, and are more likely to be placed in special educational provision (Jonson-Ried *et al.* 2004; Boden *et al.* 2007). It is not clear if this association is caused by their abuse, or whether the abuse is – coincidentally – linked with other factors that might explain this association (e.g. having a parent who is poor or not interested in your education).

Children who have suffered abuse and neglect are at increased risk of a range of mental health problems, including anxiety, depression (internalising problems) and behaviour problems, such as aggression or 'acting out' (Widom 1998; Fergusson *et al.* 2008). One third of children who have been maltreated meet the criteria for major depression by their late 20s (Widom *et al.* 2007).

Physical and sexual abuse, neglect, emotional abuse, and the poor or disordered attachments that so often accompany them are all traumatic for children, many of whom respond with symptoms of post-traumatic stress disorder (see Andres *et al.* 2003; Widom *et al.* 1999). Physical and sexual abuse significantly increase attempted suicide in early adulthood, even when other variables are controlled for (Fergusson *et al.* 2008). The same is not true for neglect.

Results of the search

The search strategy identified 385 records, of which one was an 'erratum' to another. Of these, 329 were judged to be immediately irrelevant on the basis of their titles. The majority of these were related to medical and surgical issues, rather than mental health issues.

Of the remaining 55 publications cited, 30 were judged irrelevant following closer inspection of their abstracts as they were not concerned with treatment. Amongst these were papers that focused on the diagnosis of abuse, the consequences of abuse, and the roles of practitioners in caring for abused children or the impact of such work on practitioners themselves. Some citations comprised overviews of trauma research or books on trauma or victimisation.

Of the remaining 25 records, 7 met the inclusion criteria listed in Box 8. Eighteen papers were excluded and Table 8.5 sets out the reasons for their exclusion. They include one review (Trask 2009) that was excluded not because it did not meet the inclusion criteria, but because it was updated in 2010. The 2010 review is included. Two additional reviews were identified from the references of reviews found through the electronic searches (Hetzl-Riggin *et al.* 2007; and Skowron and Reinemann 2005). One review, known to the author of this chapter, was included when no reviews were found that had been published since 2005, and which dealt with attachment (Bakermans-Kranenberg *et al.* 2003).

Box 9: Inclusion criteria – interventions addressing the support needs of carers

- POPULATION: children and adolescents with disrupted attachments and/or maltreated
- INTERVENTION: interventions to treat the consequences of maltreatment/disrupted attachments
- COMPARISON: any comparison
- OUTCOME: improvements in symptoms associated with maltreatment/attachment disorders

Included reviews

Table 9.1 sets out the characteristics of the ten included reviews. Six are solely concerned with child sexual abuse (Corcoran and Pillai 2006; Harvey and Taylor 2010; Hetzel-Riggin *et al.* 2007; Macdonald *et al.* 2010; Passarela *et al.* 2009 and Trask *et al.* 2011). One review dealt with psychosocial treatments for children and adolescents exposed to traumatic events (Silverman *et al.* 2008). The review by Louwers *et al.* (2010) was concerned to assess the effectiveness of screening interventions for child abuse by emergency room staff. Skowron and Reinemann (2005) conducted meta-analyses of psychological interventions for all forms of child maltreatment. The review by Bakermans-Kranenburg and her colleagues (2003) was a meta-analytic study of interventions to enhance parental sensitivity and infant attachment security.

Table 9.2 AMSTAR ratings for included studies

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Bakermans-Kranenburg <i>et al.</i> 2003	Y	CA	N	Y	N	Y	N	Y	Y	Y	N
Corcoran and Pillai 2006	Y	CA	Y	CA	N	Y	Y	N	Y	Y	N
Harvey and Taylor 2010	Y	N	Y	Y	N	Y	N	N	Y	Y	N
Hetzel-Riggin <i>et al.</i> 2007	Y	CA	Y	N	N	Y	N	N	Y	Y	N
Louwers <i>et al.</i> 2011	Y	Y	Y	Y	Y	Y	N	N ⁴	CA	N	
Macdonald <i>et al.</i> 2010	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Passarela <i>et al.</i> 2010	Y	Y	Y	Y	Y	Y	Y	Y	CA	Y	Y
Silverman <i>et al.</i> 2008	Y	CA	Y	CA	N	Y	Y	N	Y	N	N
Skowron and Reinemann 2005	N ⁵	CA	CA	N	N	Y	N ⁶	N	Y ⁷	N	N
Trask <i>et al.</i> 2010	Y	Y ⁸	Y	Y	N	Y	N	N	Y	Y	N

⁴ Authors say they consider it, but it is not really a quality assessment.

⁵ No clear protocol, inclusion / exclusion criteria, etc.

⁶ Some aspects of study quality referenced.

⁷ But there is question over the extensive heterogeneity of included studies and the appropriateness of combining these

⁸ 25% check.

Table 9.1: Systematic reviews of interventions to ameliorate the effects of child maltreatment

Objective	Author/Year	Number /type of study included	Setting	Participants
The analysis and synthesis of sensitivity and attachment interventions.	Bakermans-Kranenberg <i>et al.</i> 2003	70 studies describing 88 interventions RCTs (51) Non 'core' RCT (19) ⁹	Home and clinic settings.	Varied.
To determine the effects of parent-involvement in the treatment of 4 major symptom areas in child sexual abuse	Corcoran and Pillai 2006	• RCT (7)	USA (6) Australia (1)	Mean ages 4.68-11.5.
To meta-analyse studies of the effects of treatment for children and youth who have experienced sexual abuse, correcting for perceived limitations of previous meta – analyses.	Harvey and Taylor 2010	39 studies, • Exp or Quasi Exp (36) • Uncontrolled studies. ¹⁰ (3)	Most studies from USA. Some from UK, Canada and Australia.	Sexually abused children and adolescents aged 6 to 19 years.
To investigate the independent effects of different treatment elements on a number of secondary problems related to childhood and adolescent sexual abuse, and investigate moderators of treatment effectiveness.	Hetzel-Riggin <i>et al.</i> 2007	28 studies No information on design other than sample size and control group (8 studies)	No information provided	Children and adolescents aged 3-18 years/
To identify interventions that will increase the detection rate of confirmed cases of child abuse	Louwers <i>et al.</i> 2011	• 4 Studies • Prospective (3) • Retrospective (1)	2 x UK 1 x Canada 1 x Netherlands	Children 0-18 years
To assess the efficacy of CBT in addressing the immediate and longer-term sequelae on children who have been sexually abused.	Macdonald <i>et al.</i> 2010	• RCTs (10)	9 x USA 1 x Australia	Children 3-17 years.
To study the efficacy of CBT for sexually abused children and adolescents with PTSD	Passarela <i>et al.</i> 2010	• 3 RCTs	USA (2) Australia (1)	Children aged 5-17
To review the status of psychosocial treatments for children and adolescents who have been exposed to traumatic events.	Silverman <i>et al.</i> 2008	• RCT (21)	Not reported. 20 appear to be American.	Children 2-18 years.
To assess the effectiveness of psychological treatments for child maltreatment; examine whether effect differ by the type of maltreatment and outcomes assessed and other characteristics.	Skowron and Reinemann 2005	• RCT (12) • Non-equiv. groups (9)	Not reported	Children and adolescents
To determine the effectiveness of treatments for common outcomes in child sexual abuse; examine whether treatment characteristics moderate treatment effects and whether participant characteristics impact treatment.	Trask <i>et al.</i> 2010	• RCTs (9) • Quasi Experiments (5) • One group pre-post test (20).	England (2) Not reported (32)	Children 2-18 years.

⁹ The authors refer to a 'core set' of RCTs which they use for most of their analyses. It is not entirely clear whether the remaining 19 studies include any other RCTs

¹⁰ Impossible to reconcile reports of included studies in this paper.

Quality of reviews

Table 9.2 provides an overview of how these reviews were assessed against the AMSTAR domains. A fairly low threshold was operated here for ‘was there an a priori design provided?’ and ‘Comprehensive search’. Most authors provided evidence that they had a plan for searching the literature and a (sometimes implicit) set of inclusion criteria, though few made this explicit or provided the components of a review protocol. It was not always clear whether or not authors had searched for unpublished studies. Exceptions were two reviews that followed the Cochrane Handbook (Macdonald *et al.* 2010 and Louwers *et al.* 2011). These were also the only review teams to address potential conflict of interest, though some authors did include their sources of funding. Review teams, particularly those covering interventions for children who have been sexually abused, took very different approaches to inclusion criteria for study designs, some including only RCTs or quasi randomised studies (Macdonald *et al.* 2010; Passarella *et al.* 2009), and others making the inclusion of a variety of study designs a virtue. However, with the exception of Macdonald *et al.* (2010), the quality of included studies, irrespective of study design, was rarely taken into account when formulating conclusions, although several author teams addressed study quality to some extent.

Findings: Child sexual abuse

Two reviews of interventions for children who have experienced sexual abuse set out to examine cognitive behavioural interventions (Macdonald *et al.* 2010; Passarella *et al.* 2010).

Table 9.3: Authors conclusions – reviews of interventions to help children who have been sexually abused.

Author/Year	Interventions	Authors' Conclusions
Corcoran and Pillai 2006	CBT - focus on parental involvement	Parent involved treatment confers some advantage over comparison conditions – usually child-only treatment.
Harvey and Taylor 2010	<ul style="list-style-type: none"> • CBT • Insight oriented. 	Most treatments effective in symptom reduction. Presence of probable moderators of treatment outcome varied across symptom domains, reflecting importance of targeting therapy to individual needs.
Hetzel-Riggin et al. 2007	CBT	Treatment appears better than no treatment. Abuse-specific, supportive, and group therapy appear to me most effective for behaviour problems. CBT and individual therapy had largest effect sizes for psychological distress. Choice of therapy modality should depend on child's main presenting secondary problem. Further research needed to investigate other possible moderators and secondary problem outcomes.
Macdonald et al. 2010	CBT	Confirms CBT's potential as a means of addressing the adverse consequences of child sexual abuse, but highlights the tenuousness of the evidence base and the need for more carefully conducted and better reported trials.
Passarella <i>et al.</i> 2009	CBT	CBT reduces symptoms. No differences between therapy with only the victim or the victim plus a family member
Trask <i>et al.</i> 2011	CBT Other	Results revealed medium effect sizes for externalizing and internalizing problems. Results indicated that longer interventions were associated with greater treatment gains while group and individual treatments were equally effective.

The remaining four did not confine their inclusion criteria to CBT, but all 7 of the studies in Corcoran and Pillai’s review, around one third of the studies included in Trask *et al.* and Harvey and Taylor (13 of 35, and 11 of 38 respectively) were of CBT. It was difficult to categorise the studies from Hertzler-Riggins *et al.*’s review, but around half were assessing the impact of CBT, although these authors were most interested in moderator analyses.

The heterogeneity in inclusion criteria across these reviews, and the variation in authors’ attention to the risks of bias associated with included studies go some way to explain the differences in the reported results. Those with broader inclusion criteria are generally much more positive about the benefits of all therapy. Those focusing only on RCTs are generally more cautious. There are, however, some common themes that appear sufficiently well evidenced to use in the consideration of policy and practice. Firstly, children who are symptomatic (i.e. have one or more of the difficulties commonly associated with sexual abuse (PTSD, externalising behaviour, internalising behaviour)) appear to benefit from receiving therapy, and the weight of evidence favours cognitive-behavioural therapy, particularly that which addresses directly the sequelae of sexual abuse, so-called Trauma-Focused CBT. Secondly, both individual and group-based approaches can be useful. Thirdly, few studies have examined the impact of therapy on depression or sexualised behaviour, two common effects of sexual abuse.

Findings: Child maltreatment

Only two reviews were identified that considered intervention for child maltreatment more generally (see Table 8.4). One sought to identify effective interventions for use in emergency departments, to ensure that child maltreatment was accurately identified (Louwers *et al.* 2011). The authors found four studies that examined the impact of checklists, with or without training. Whilst cases of suspected abuse increased, there was no increase in confirmed cases in the two studies that reported these. Positive benefits associated with the interventions were improved documentation of patient files and staff awareness, but there is currently no evidence that interventions of this kind in this setting are effective at improving the detection rates of confirmed abuse.

Table 9.4: Authors conclusions – reviews of interventions to help children who have been sexually abused.

Author/Year	Interventions	Authors’ Conclusions
Skowron and Reinemann 2005	All treatments for all forms of Child Maltreatment (CM) <ul style="list-style-type: none"> • Behavioural (12) • Nonbehavioural (3) • Eclectic/combination (5) • Unspecified (1) 	Psychological treatments for CM resulted in improvements amongst intervention participants compared with wait-list control, placebo, or community case management. Treatment effects varied systematically by type, target and source of outcome construct, with parent- child- and parental ratings of child providing larger effects than behavioural observations. Treatments for child sexual abuse yielded larger effects than those more generally.
Louwers <i>et al.</i> 2011	<ul style="list-style-type: none"> • Checklist of indicators of risk for child abuse + education and training. 	Interventions improved documentation, increased staff awareness rates of suspected cases of child abuse in all studies. In two studies there was no increase in confirmed cases.

The meta-analysis conducted by Skowron and Reinemann (2005) is complex, and it is difficult to extract helpful information about the kinds of treatment that might help maltreated children. The authors conclude that children who received treatment were better off than 71% of those in any control group, though the strength of evidence was strongest ($d_+ = .53$) for self report measures (children and parents) and parental assessments of their children's progress. It was weakest for behavioural observations ($d_+ = .21$). Atypically, in this review, nonbehavioural interventions outperformed behavioural ones, but post-hoc analyses indicated that length of treatment covaried significantly with theoretical orientation, with few behavioural treatments having been provided for more than three months, compared with an average of one year plus for nonbehavioural treatments. The authors recommend that studies be designed to explore whether treatment gains are an effect of length rather than theoretical orientation.

Given that this review searched for all studies with at least a control group, published between 1974 and 2000, a significant finding is the dearth of research in this area generally. This has not changed significantly in the last ten years (Sheldon and Macdonald 2010). Overall, the meta-analysis by Skowron and Reinemann (2005) appears to have rather more to say about the gaps in research, and what is needed of quality research in this field (see below).

Findings: post-traumatic stress

The remaining two studies looked at the evidence for the effectiveness of psychotherapeutic interventions for posttraumatic stress (see Table 8.5). The review by Silverman *et al.* included four of the studies of interventions for child sexual abuse that formed part of the reviews discussed above, and seven of those reviewed by Skowron and Reinemann (2005). In addition, they included studies of treatments for children who had experienced a wide range of traumas, including – but not restricted to – maltreatment. The authors undertook a more rigorous evaluation of the methodological quality of the individual studies, and (see Nathan and Gorman 2002) classified treatments in respect of whether they were ‘well established’, ‘probably efficacious’, or ‘possibly efficacious and experimental’ (see Chambless and Hollon 1998; Chambless *et al.* 1996; 1998). They concluded that Trauma-Focused CBT met the ‘well established criteria’; that school based CBT met the criteria for ‘probably efficacious’; and that – from a clinical practice perspective – the best evidenced treatment for traumatised youth is CBT – specifically as described and implemented in the studies included in their (and earlier) reviews:

Trauma-specific core components that have emerged in the practices considered well-established, probably efficacious, and possibly efficacious include components highlighted for many years in the child trauma literature. These core components include psychoeducation, the management of anxiety, trauma and loss reminders, trauma narration and organization, cognitive and affective labeling and processing, problem solving regarding safety and relationships, parent skillbuilding and behavioral management, emotional regulation, and supporting youth to resume negatively impacted developmental competencies (Amaya-Jackson and DeRosa 2007) (Silverman *et al.* 2008: 177).

Author/Year	Interventions	Authors' Conclusions
Silverman <i>et al.</i> 2008	<ul style="list-style-type: none"> • Trauma Focused CBT • School based Group CBT • EMDR • Resilient Peer Treatment • Cognitive Processing Therapy • CBT for single incident PTSD 	TF-CBT met the well-established criteria for efficacy. School-based CBT met the criteria for 'probably efficacious'. Several others interventions were categorized as 'possibly efficacious'.

Attachment and maternal sensitivity We identified no reviews published since 2005 that dealt with interventions specifically to address attachment problems in maltreating and high risk families. A meta-analytic study by Cyr and colleagues (2010) provides unequivocal evidence of the 'destructive impact of maltreatment for attachment security as well as disorganisation', whilst at the same time, pointing out the impact posed to children in high risk families, defined as families with one or more of the following: low income, substance misuse, adolescent mothers, minority ethnic group, low educational achievement, single parenthood:

In particular, maltreated children are less likely to develop secure attachments and more likely to develop disorganized attachments compared to nonmaltreated children living in high-risk conditions. However, disorganization is also more likely to emerge in children exposed to the cumulative impact of socioeconomic risks. In fact, children exposed to five risks are almost as likely as maltreated children to become disorganized. This is not the case for attachment security: maltreated children are less likely to develop a secure attachment pattern than children exposed to five risk indicators (Cyr *et al.* 2010: 100).

Attachment insecurity is also strongly associated with externalizing behaviours, as evidenced in a meta-analytic study by Fearon *et al.* (2010):

Drawing from data on nearly 6,000 children tested in standardized observational assessments of mother-child attachment security, the average effect size for the contrast between secure and insecure children was $d = 0.31$ (95% CI: 0.23, 0.40). Over 1,700 studies of average sample size with null results would need to be added to the database to reduce this effect to nonsignificance. For clinical samples, the average effect size amounted to $d = 0.49$ (95% CI: 0.32, 0.66). On the face of it, these robust findings lend direct support to the notion that attachment plays a significant role in the evolution of children's behavior problems, for typically developing children as well as for clinical groups (Fearon *et al.* 2010: 448).

Given the importance of this area, we therefore summarise the results of a meta-analysis conducted in 2003 by Bakermans-Kranenberg and her colleagues. In their meta-analysis of interventions designed to enhance carer sensitivity and promote attachment, Bakermans-Kranenburg *et al.* (2003) identified 81 studies that met their inclusion criteria, 51 of which were randomized controlled trials. The measures used included assessments of caregiver sensitivity and ratings of attachment security. Interventions were categorized according to whether they were designed to improve sensitivity (see Black and Teti 1997), to bring about changes in carers' mental representations (see Cicchetti *et al.* 2000), or to provide social support and practical help in changing behaviour (Barnett *et al.* 1987), or a combination of these.

Maternal sensitivity The review authors concluded that interventions targeting maternal sensitivity produced a significant, albeit moderate effect when measured statistically. Based on the randomized controlled trials, they concluded that interventions focusing only on sensitive

maternal behaviour (compared with those also providing ‘support’) appear ‘rather successful’ in improving sensitive parenting, as well as infant attachment insecurity. The most effective interventions were those which:

- incorporated video feedback;
- started after the child was 6 months old;
- were short (interventions with fewer than five sessions were as effective as those with 5 to 16 sessions, and more effective than those longer than 16 sessions);
- were provided by non-professionals, and
- involved fathers (though they note that this association should be viewed with caution as there were few studies and these were not randomized controlled trials).

Infant attachment When looking at the impact of interventions on infant attachment, a similar pattern of findings emerged from the 23 randomized controlled trials that measured this outcome:

- The impact on attachment security was statistically small but significant.
- Interventions aiming only at enhancing sensitivity were the only interventions that indicated a statistically significant effect on attachment security.

By and large, these improvements were achieved irrespective of socio-economic status.

High-risk families The authors went on to examine the effectiveness of interventions with families with multiple risks. They hypothesized that these families would need more intensive and multifaceted interventions. In fact, from the 15 relevant studies, the findings echoed those reported above. The most effective interventions were those that focused on sensitivity, started at age 6 months, used video feedback, and were behaviourally based.

Relationship between sensitivity and infant attachment security The authors also concluded that the only interventions that yielded a significant effect size on attachment security were those that also brought about significant shifts in sensitivity, measured statistically.

As may be seen from a perusal of the studies included in the review by Bakermans-Kranenburg and her colleagues, attachment interventions vary considerably in design, their conceptual assumptions, and the goals of therapy. Most entail: providing a safe and supportive environment; helping the carer to ‘tune’ into her child; to be physically accessible (perhaps by sitting on the floor with him or her); and to be emotionally responsive (perhaps via play). There is often an element of information sharing or education, but this is only one small element in the most effective interventions. As indicated above, one of the most powerful mechanisms for change appears to be the chance to learn by doing, to receive feedback (via video), and to have an opportunity to reflect on that feedback with a supportive person.

Home visiting is widely recognised as a promising intervention, but the only programme that has reported a positive impact on maltreatment is that of Old’s Nurse Family Partnership. We have not included reviews of home visiting in this chapter, partly because it is aimed at preventing maltreatment. However, the UK is currently evaluating the impact of NFP across 50+ sites in the UK, and early results are promising. However, this programme targets one group of parents at risk for maltreatment, and there is a need to develop and test programmes targeted at other vulnerable groups. The New Parents Project in the South Eastern Trust is one example of a

'home grown' programme, tailored to meet the NI policy context, and which targets a wider group of parents who are vulnerable to poor attachment, inadequate parenting and maltreatment.

Implications for practice

The paucity of services available for children who have suffered maltreatment at the hands of their carers is routinely commented upon in the child maltreatment literature. The focus in the UK has been on the identification of maltreatment and the assessment of risk. Only recently have policy makers realised the opportunity costs of not addressing the infant and child mental health issues associated with maltreatment. Currently, service development for those children traumatised or otherwise adversely affected by maltreatment remains seriously underdeveloped, both in terms of availability, and the degree to which services are evidence based, as opposed to reflecting the theoretical or practice preferences of clinicians. The evidence suggests that some service may be better than none, but that interventions based on the learning theories, particularly cognitive-behavioural therapies, enjoy the strongest evidence base, particularly for children who have been sexually abused or who are experiencing symptoms of post-traumatic stress.

In relation to attachment difficulties, there are pointers to the kinds of interventions that research indicates are most likely to improve infant-mother attachment and parental sensitivity. Again, effective interventions are those that draw on social learning theory.

Gaps in research

Whilst there are now more studies in the area of maltreatment than there were, they remain few in number and are focused predominantly on dealing with the sequelae of child sexual abuse. Addressing the trauma of children who have experienced physical abuse is much less common. That associated with neglect is barely addressed at all. Given the long-term adverse consequences of maltreatment, this is a significant research gap.

Whilst co-occurrence of forms of maltreatment is the rule, rather than the norm, it is not evident that interventions focused primarily on the sequelae of child sexual abuse can be generalised to physical abuse and neglect, or to psychological maltreatment. Significantly, more research is needed in all of these areas, including sexual abuse.

Whilst there is a larger evidence base in relation to promoting parental sensitivity and infant-parent attachment, there is room for more research, particularly in relation to interventions that single studies indicate are promising, but have yet to be extensively or rigorously evaluated (e.g. Mellow parents/Mellow Babies, which did not feature in the Bakermans-Kranenberg review).

Gaps in research therefore include: the need i) for studies of interventions designed to address the sequelae of child physical abuse and severe neglect, and psychological/emotional maltreatment; and ii) studies of interventions that are designed to prevent maltreatment in high-risk populations not covered by the Nurse Family Partnership.

More generally, there is a need for studies that:

- use more robust, experimental designs;
- provide better baseline information, including assessments of presenting problems and types of maltreatment, participants, interventions, settings, contact with other agencies, etc.;

- provide information on co-occurrence of other types of abuse, which are commonplace, in order to enable conclusions to be drawn about the differential effectiveness of interventions for specific forms of maltreatment;
 - track and report client attrition rates, reasons for attrition, obtain follow-up data on all participants;
 - use a multidimensional approach to the assessment of outcomes that include behavioural observations, and
 - collect data and conduct studies of process, to assess the quality of the therapeutic alliance and other key change events.
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Table 9.5: Excluded Studies – Interventions for Child Maltreatment

Study	Reasons for Exclusion
Adler-Nevo and Manassis 2005	Systematic review focused on single incident trauma. No studies dealt with children traumatised through maltreatment or disrupted attachments.
Avinger and Jones 2007	Not a systematic review. A review of group based treatment for adolescent victims of child sexual abuse. Poorly defined question. No details of search strategy. Minimum inclusion criterion of studies with pre and post measures.
Brown 2005	Not a systematic review. Does not focus on interventions for children and young people who have been sexually abused.
Cloitre 2009	Review of psychotherapies for PTSD. Focus is on adults and not on maltreatment (except in one study of female adults sexually abused in childhood).
Cohen and Mannarino 2006	Not a systematic review. Studies reviewed covered in other publications for the most part.
Hahn 2008	Not a systematic review. A brief guideline type paper.
James <i>et al.</i> 2005	A systematic review of cognitive behavioural therapy for anxiety disorders in childhood and adolescents. No evidence that participants in included studies included maltreated children
Lalor and McElvaney 2010	Not a systematic review. A more general paper discussing child sexual abuse, its incidence and prevalence and sequelae. It discusses the findings of systematic reviews/ meta-analyses relevant to prevention and therapy. References were scrutinised to ensure that nothing of relevance to this review had been missed.
Lev-Wiesel 2008	Not a systematic review. Main focus on dissociative disorders of sexual abuse survivors. No particular focus on children.
Mendes 2008	A systematic review of the effectiveness of CBT in adults with posttraumatic stress disorder (PTSD)
NICE 2005	Guidelines. Not a systematic review and now quite old.
Pau <i>et al.</i> 2008	A systematic review of the effectiveness of atypical antipsychotics olanzipane and risperidone in the treatment of adult PTSD.
Pattison and Harris 2006	Not a systematic review. A broad narrative review of ‘counselling for children and young people, with limited reference to counselling for children who have experienced neglect, physical or sexual abuse
Paul <i>et al.</i> 2006	Not a systematic review. Focuses on how professionals can promote increase rural populations’ access to evidence based practice e.g. telehealth, web-based dissemination of treatment manuals. Did not appear of sufficient relevance to NI to ‘lower’ inclusion criteria.
Roberts and Everly 2006	A review of Crisis Intervention Studies. CI for abusive families was the reason for considering this review, but the emphasis was on intervening with families at the point of crisis, rather than addressing the consequences of abuse for children.
Silverman and Herpertz-Dahlmann 2008	Not a systematic review.
Trask 2009	A systematic review that was updated in Trask <i>et al.</i> 2010, so not included in this review.
Underwood <i>et al.</i> 2007	Not a systematic review.

Included Studies

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- Corcoran, J. and Pillai, V. (2008) A meta-Analysis of Parent-Involved Treatment for Child Sexual Abuse. *Research on Social Work Practice*, 18, 5, 453-464.
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- Velderman, M.K., Bakermans-Kranenburg, M.J., Jffer, F. and van IJzendoorn, M.H. (2006) Effects of Attachment-Based Interentions on Maternal Sensitivity and Infant Attachment: Differential Susceptibility of Highly Reacitve infants *Journal of Family Psychology*, 20, 2, 266-274.

Excluded Studies

- Adler-Nevo, G. and Manassis, K. (2005) Psychosocial treatment of pediatric posttraumatic stress disorder: the neglected field of single-incident trauma. *Depression and Anxiety*, 22, 177-189.
- Avinger, K.A. and Jones, R.A. (2007) Group Treatment of Sexually Abused Adolescent Girls: A Review of outcomes Studies. *The American Journal of Family Therapy*, 35, 315-326.

- Brown, E. (2005) correlates and treatment of stress disorder in children and adolescents. *Psychiatric Annals*, 35, 9, 759-765.
- Cloitre, M. (2009) Effective psychotherapies for posttraumatic stress disorder: a review and critique. *CNS Spectrums*, 14, 1, Supp 1, 32-43.
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- Hahn, R.A. (2008) Recommendations to reduce psychological harm from traumatic events among children and adolescents. *American Journal of Preventive Medicine*, 35, 3, 314-316.
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- Roberts, A.R. and Everly, G.S. (2006) A meta-analysis of 36 crisis intervention studies. *Brief Treatment and Crisis Intervention*, 6, 1, 10-21.
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CHAPTER 10

Effective approaches to multidisciplinary and multi-agency working

The importance of effective team working is now taken for granted, and most – if not all - mental health services are provided by multidisciplinary teams. So too is the importance of multi-agency working: different services may be involved with children and families as a result of distinct referral processes, but organisational boundaries artificially segregate problems (e.g. parental ill health may be ‘owned’ by adult mental health services, but its impact on parenting is the responsibility of children’s social services). What we know less well is how to bring about effective team-work, at least from the point of view of an evidence base that has been explicitly concerned with children’s mental health services. There is, of course, a large literature on organisational and inter-organisational behaviour, but that was outside of the scope of this review. Here, we were concerned specifically to identify reviews of studies that examined the effectiveness of interventions designed to improve multidisciplinary and multi-agency working in relation to child and adolescent mental health.

Results of the search

The search strategy identified 288 records. Of these, 242 were judged to be immediately irrelevant on the basis of their titles. The majority of these papers were disregarded, as they were related to medical and surgical issues, rather than mental health issues.

Of the remaining 46 publications cited, 39 were deemed irrelevant following closer inspection of their abstracts. These papers were either not reviews of interventions or multidisciplinary / interagency practice, were reviews of multidisciplinary working but not focused on children and young people with mental health problems, or were not reviews at all. Seven papers were obtained in full. Five were excluded for reasons given in table 10.4. Two Cochrane reviews (both updates published in 2009) were potentially relevant, but the focus of the interventions in one led us to exclude it (See Table 10.4). We include the other, but make only brief reference to it, as it deals with the more generalisable interventions of interprofessional education, and the focus of the studies was not directly relevant to this review.

Given the paucity of available evidence, and the doubtful generalisability of findings from multidisciplinary or multi-agency interventions in other areas of health, we present evidence from an earlier ‘review of reviews’, and discuss some single studies. None of these were identified systematically, and the pool of single studies or non systematic reviews will be much larger. On the positive side, the themes have remained remarkably consistent, which may be a reason both to be relatively confident that these papers represent the current state of knowledge, and relatively depressed – in equal measure.

Box 10: Inclusion criteria – evaluations of multi-agency or multi-disciplinary teams/interventions

- POPULATION: children and adolescents with mental ill health
- INTERVENTION: multi-agency or multi-disciplinary teams/models of practice
- COMPARISON: any comparison
- OUTCOME: improvements in outcomes (children, young people, families) and service delivery.

Included studies

The only systematic review published since 2005 was a Cochrane review of the effectiveness of interprofessional education (Zwarenstein *et al.* 2009). A description of this review can be found in Table 10.1, but in light of the need to rely on earlier reviews and single studies, we have chosen to discuss this review in the next section. This review was rated ‘Yes’ on all AMSTAR domains, except for those relating to the synthesis of data, where the answers were ‘Not applicable’.

Table 10.1 Characteristics of included studies – multi-agency/multidisciplinary working.

Objective	Author/Year	Number /type of studies	Setting	Participants	Interventions	Authors’ Conclusions
To assess the effectiveness of interprofessional education (IPE) interventions compared education interventions in which the same health and social care professionals than separately from one another, and to assess the effectiveness of IPE interventions compared to no education interventions	Zwarenstein <i>et al.</i> 2009	6 RCTs	UK (1) USA (5)	Multidisciplinary health teams	<ul style="list-style-type: none"> • Communication skills training • 2-day information and team planning • multicomponent education of varying lengths 	<p>Four studies indicated that IPE produced some positive (ED culture and patient satisfaction; collaborative team behaviour, reduction of clinical error rates; management of care delivered to domestic violence victims; and mental health practitioner competencies.</p> <p>2 studies reported mixed outcomes (positive and neutral) and 2 studies reported that the IPE interventions had no impact on either professional practice or patient care.</p>

A review of reviews

In 2004, Patricia Sloper published a review of reviews relevant to multi-agency working as part of the evidence gathering to inform the Children’s National Service Framework in England. We use Sloper’s review as the basis for a wider discussion of the evidence base.

Sloper is clear about her search strategy, which was conducted in 2002 and sought to identify systematic reviews and ‘good quality reviews’ (not defined), published in English since 1989. The search covered a number of databases such as those covered in this report, and was not confined to multi-agency work on children’s services ‘as it was felt that more general literature of multiagency working would be relevant’ (p572). Despite the approach to the search strategy, Sloper’s review meets none of the criteria for a systematic review. For example, little stock is taken either of the quality of the reviews included, or the quality of their included studies (though the latter is more often referenced). However, it is a ‘cool’ summary of research, which – as indicated above – is generally in tune with other reviews and the findings of single studies. Again, the primary author of this chapter has a conflict of interest, insofar as she was an author on one of the key reviews that forms part of Sloper’s paper (Cameron *et al.* 2000; 2003).

The questions Sloper sought to address were:

- i) What models of multi-agency working are utilized in practice?
- ii) What evidence is there that multi-agency working improves outcomes for service users?
- iii) What evidence is there about the factors that facilitate co-ordinated multi-agency working?
- iv) What evidence is there on the barriers to co-ordinated multi-agency working?

Most of the published literature addresses the last two questions. We begin by reviewing the evidence for the impact of different approaches to multi-agency working and interventions to promote multi-agency working – a relatively short section.

Does multi-agency working improve outcomes for children?

The systematic review conducted to Cochrane standards by Cameron *et al.* (2000), concluded that there was little quality evidence on the effectiveness of multi-agency working from the perspective changes in either the experience of services for service users, or their outcomes. A later review, focusing on keyworker systems for disabled children, points to a trend in the literature (rather than high quality data) that suggests that having one point of contact with someone mandated to coordinate services, improves families' perceived quality of life, delivers better relationships with services, and better and quicker access to them. This in turn results in reduced stress (Liabo *et al.* 2001).

The only other review cited by Sloper that reported on outcomes for services users examined team working (Borrill *et al.* 2002a). The review authors concluded that multi-disciplinary team working resulted (or could result) in reductions in hospitalisation and associated costs, improvements in service provision, detection, treatment and follow-up.

In a separate study, Borrill *et al.* (2002b) examined the work of more than 400 teams in primary care, community mental health and secondary care. They concluded that team working was associated with improved outcomes for service users (and reductions in stress amongst staff). Outcomes included in the review were: sexual health, substance misuse, access to consultations with GPs and other health professionals, use of out-of-hours services, length of GP consultations, non attendance and patient experience surveys (Sloper 2004: 575).

What factors facilitate multi-agency working?

Sloper included three studies that examined this issue, one being the systematic review by Cameron *et al.* (2000), the others a study by Atkinson and colleagues (2002), and a review by Watson and colleagues (2000, 2002). She provides a list of those factors that these authors identified as associated with successful multi-agency working:

- Clear and realistic aims and objectives, which are understood and accepted by all agencies;
- Clearly defined roles and responsibilities, so everyone knows what is expected of them and others, and clear lines of responsibility and accountability;
- Commitment of both senior and frontline staff, which is aided by involvement of frontline staff in development of policies;
- Strong leadership and a multi-agency steering or management group;
- An agreed timetable for implementation of changes and an incremental approach to change;

- Linking projects into other planning and decision-making processes, and
- Ensuring good systems of communication at all levels, with information sharing and adequate IT systems.

According to the studies examined, the implementation and ongoing management of the service requires:

- Shared and adequate resources, including administrative support and protected time for staff to undertake joint working activities;
- Recruitment of staff with the right experience knowledge and approach;
- Joint training and team building;
- Appropriate support and supervision for staff; and
- Monitoring and evaluation of the service, with policies and procedures reviewed regularly in the light of changing circumstances and new knowledge.

(Sloper 2004: 575-6)

What are the barriers to co-ordinated multi-agency working?

Clearly, an absence of ‘any of the above’ conspires to upset plans for closer working between agencies and those working within them. The review teams whose work was included in Sloper’s review also identified some additional factors that got in the way of multi-agency working, namely:

- Constant reorganization;
- Frequent staff turnover;
- Lack of qualified staff;
- Financial uncertainty and difficulties in maintaining new arrangements, once the initial funding came to an end (this was often short-term ‘pump priming’ or ‘pilot’ funding; once finished, it was also difficult to secure an equitable commitment from partner agencies); and
- Different professional ideologies and agency cultures.

Cameron *et al.* (2000) note that a few studies found that lack of coterminosity of agency boundaries hindered joint working, but Sloper observes that this was not a consistent finding across studies.

Identifying what impedes multi-agency working is easier than identifying what works in removing the obstacles. A review by Lyne *et al.* (2001) found little empirical evidence that would provide the basis for planning, other than a suggestion that shared learning may be effective in reducing interprofessional stereotypes. As Sloper points out, however, there is no evidence that interprofessional education or training brings about any changes in the experience of service users. A Cochrane review identified by Sloper (Zwarenstein *et al* 2002) found no studies that met minimum eligibility, although 89 papers were considered. The authors conducted a second review of qualitative studies of interprofessional education (IPE - Koppel *et al.* 2001) and examined the evidence from 99 studies, though most were classed as being of weak designs leading to weak evidence. The authors concluded:

IPE may be more effective at improving patient care or changing the organization of care if it is of longer duration, delivered in the workplace, and more specifically in the acute sector (Koppell *et al.*: 47).

Change was, however, only evidenced at the level of continuing professional education.

Box 10a provides a categorisation of models of multi-agency working. We do not discuss this, as we have not found any evidence that one model is intrinsically better than another at achieving the changes required in delivering effective multi-agency working. There are also other classifications (see Watson et al. 2000; 2002). As Sloper observed in 2004, there is no evidence regarding which models are in fact in use, or their effects on outcomes for children and families. Sloper points out that only case management aims to ensure that services are ‘coordinated at the point of delivery to children and families’.

BOX 10a Models of multi-agency working. Sloper citing Cameron *et al.* (2000) and Atkinson *et al.* (2002)

- *Strategic level working* – joint planning, decision-making, commissioning, purchasing.
- *Consultation and training* – where professionals from one agency provide consultation or training for those from another agency. The majority of these involved health professionals passing on knowledge to other professionals.
- *Placement schemes* – involving establishing posts which crossed the organizational divide, e.g. social workers working within primary health care. Holders of these posts usually acted as care managers, but were not necessarily part of a clear multi-agency system.
- *Centre based service delivery* – where professionals from different agencies work together in one place, but do not necessarily deliver services jointly.
- *Co-ordinated service delivery* – where there is usually a co-ordinator to pull together different services, e.g. healthy schools initiative co-ordinator. In this category, the co-ordinator operates between the strategic and operational levels, but delivery of services to children and families is still carried out by different professionals who may not have contact with each other, but do gain knowledge of other agencies’ work through the co-ordinator.
- *Multidisciplinary and multi-agency teams* and projects where professionals from different agencies work together on a day-to-day basis as a multi-agency team.
- *Case or care management* within multi-agency teams where an identified individual has responsibility for ensuring a co-ordinated service to families. Atkinson *et al.* note that this was the least common model in their findings on services for children.

More recent studies and reviews

Interprofessional education The 2002 study of interprofessional education that Sloper included (Zwarensten *et al.*) was updated in 2009 (Reeves *et al.*), and the authors identified six studies that met their inclusion criteria:

This updated review found six studies that met the inclusion criteria, in contrast to our first review that found no eligible studies. Although these studies reported some positive outcomes, due to the small number of studies, the heterogeneity of interventions, and the methodological limitations, it is not possible to draw generalisable inferences about the key elements of IPE and its effectiveness (Reeves *et al.* 2009:4).

The focus on the interventions was of limited relevance to this review, other than perhaps those seeking to improve interprofessional working in emergency departments (see below). Whilst generally conducted to a good standard, the authors point out that all the studies shared a

common, key limitation, namely that the control group received *no* education rather than uni-professional education. Few examined patient outcomes.

Joining up services with IT Gannon-Leary and colleagues (2006) describe a national project to ‘join up local services in England’ – FAME (FrAmework for Multi-agency Environments). FAME was organised around the electronic exchange of information across agencies and professional boundaries in a specific service, and Gannon-Leary and colleagues report on Phase 1 – in which six local authorities led partnerships with service providers and IT suppliers. The six projects (or ‘strands’) covered a range of services, including an ‘Integrated mental health’ strand, and one on children with disabilities.

The paper by Gannon-Leary and colleagues is organised around a review of the facilitators and barriers to partnership, and collaborative working identified in previous studies. The methodology for this review is not reported, and the paper itself introduces no new themes to those summarised by Sloper (2004), though more emphasis is placed on the role of IT, and the challenges of local authorities working with a group of providers more used to dealing with the private sector. The continuing challenges of establishing effective multi-agency working appear not to have abated in the description of these projects provided by the authors. On the particular issue of the role of IT, they conclude:

It was often reiterated by all participants in FAME - including the technology partners - that FAME was not about IT but about people, organisations and culture. Yet the technical challenges proved more intractable than anticipated. These included difficulty negotiated existing suppliers, lower than expected levels of IT skills among practitioners, and lack of clarity about technical integration as an ambition. The presence of these challenges is an important message in the context of interprofessional care because IT solutions are becoming more central in many countries to policies targeted at modernising public services (Booz, Allen Hamilton 2005). Partnerships tasked with delivering more joined up services will increasingly need to manage environments that demand harnessing technology, in addition to getting relationships right (Gannon-Leary *et al.* 2006: 672).

There was no focus on the impact of these initiatives for service users, other than from the point of view of practitioners.

Improving team working and leadership in mental health services Steve Onyett and colleagues (2009) report the outcomes of intervention designed to improve team working in mental health services. The intervention comprised a seven day program, anchored in research on effective team working, and working with 14 mental health teams covering community, inpatient and primary care across different regions of the NHS in England. The authors report before and after measures of team working, team effectiveness, staff burnout, job satisfaction and leadership style, together with data gathered from feedback questionnaires completed by participants at each session. It is not clear what the composition of each team was, but the profile of teams overall included psychiatry, clinical psychology, occupational therapy, social work, community psychiatric nursing, and a range of other professions. The authors report that the intervention affected improvements in all areas, although these did not reach statistical significance. As the measures indicate, there was no focus on patient outcomes.

Responding to early onset mental disorders The deleterious effect of delay in responding promptly to early onset psychosis is well documented (see Drake *et al.* 2000; Nordentoft *et al.* 2002).

Craig *et al.* (2004; 2006) undertook a randomised trial of a dedicated, multi-disciplinary community team established on the principles of assertive outreach, and using evidence-based psychosocial interventions. The intervention was designed to achieve better outcomes for people with early non-affective psychotic disorders, compared with existing services delivered by community mental health teams. Although not restricted to young people, the mean age of participants was 26 and the range 16 to 40 years. Primary outcomes were rates of relapse and readmission to hospital. At 18 months, patients served by the Lambeth Early Onset Team (intervention) were less likely to relapse, were readmitted fewer times, and were less likely to drop out of the study compared with patients receiving standard care. One of the weaknesses in the study was the reliance on record systems for data on relapse but, as the authors point out, the alternative is both costly and likely to increase rates of attrition amongst the control group.

The authors report results across a number of measures of patients' symptoms, social functioning and satisfaction (Garety *et al.* 2006). Symptom improvement was not enhanced for those in the intervention group, compared with those receiving routine care, but the authors report significant improvement at 18 months in terms of satisfaction, quality of life, medication adherence, and some aspects of social and vocational function, such as regaining or establishing social relationships, time spent, vocational activity, and global functioning. For those in the intervention group, there were also fewer incidents of death prison homelessness and violence - but not self-harm, but as the authors point out, these are rare events and differences were not statistically significant.

Whilst the results are promising, they probably say more about the content of practice than model of practice, i.e. both the intervention and control teams were multidisciplinary, but the intervention team had clear treatment protocols regarding the use of medication, cognitive behaviour therapy, and family support.

The management of mental health emergencies One area that has received little attention is the response provided by hospitals and other agencies to children and young people presenting out of hours or in emergency departments. We found no systematic reviews of studies in this area. Baren and colleagues (2008) published a non-systematic review of the literature 'to identify the epidemiology, barriers to care, useful emergency department (ED) screening methods, and resources regarding paediatric mental health disorders in the ED' (p399). This is a very anecdotal paper that relates to the very different policy context of the United States, but it does highlight the need for effective interventions to recognise, screen, and manage effectively those young people presenting with problems indicative of mental disorder or mental health risk (e.g. self-harm, poisoning, suicide attempts, and depression). This may be a significant gap in the evidence base, given the high rates of self-harm and suicide in Northern Ireland, and anecdotal evidence that young people are being missed or poorly served in emergency departments (see Irish News, 3rd May 2011).

Implications for practice.

There is little in recent literature to add to the implications for practice from earlier work. The importance of multi-agency working with peers is intrinsically obvious, but we still know little

about how best to deliver it. The challenge appears not to be in assembling the component parts, but in enabling them, or making them work. Most of the available evidence has therefore, not surprisingly, focused on the process of multi-agency working, with little attention having been given to the difference this might make to those in receipt of services, and those needing them but not getting them.

Implications for research.

Assessing the effectiveness and cost effectiveness of models of practice and service delivery is undoubtedly a challenging task, both in terms of developing study designs that minimise bias, and operationally. To date, research endeavour has over-invested in mapping and investigating (new) ways of working from the perspective of the barriers to, and facilitators of, success, judged from the perspective of participant professionals. There is therefore a need for rigorous studies, which look at the impact on practice, and more particularly on outcomes for those on the receiving end of services.

Randomised trials are possible in this area, but controlled before and after studies and interrupted time series designs also provide opportunities for rigorous evaluations of professional practice and healthcare outcomes. Studies should include data collection strategies that shed light on the impacts of interventions, whether these are educational, organisational or focused on fostering good working relationships.

It is likely that there is a gap in research on models of practice aimed particularly at mentally ill young people and specifically at emergency or out-of-hours responses to them. Services in Northern Ireland are generally geared towards adult psychiatric care, and young people's experiences of finding themselves in hospital settings with older, often very disturbed or disabled people can have iatrogenic effects.

Table 10.5: Excluded Studies – Multiagency working

Study	Reasons for Exclusion
Allen <i>et al.</i> 2009	Systematic review of studies of the effectiveness of integrated care pathways for children and adults across the full range of health settings. No studies relevant to mental health settings were included.
Cross <i>et al.</i> 2005	Not a systematic review. Explores the relationship of police and child protection involvement in outcomes of child protection investigations.
Doughty 2006	Not a systematic review. A technical brief systematically to identify and appraise international evidence examining the structure and workforce configuration of effective models of mental health service provision or quality improvement in primary care. No focus on child and adolescent mental health.
Flãm 2009	Not a systematic review. Papers that consider the lessons learned from a national project to join up local services in England. Focus on older people and disabled children.
Patton <i>et al.</i> 2007	A systematic review to identify and appraise international evidence examining the structure and workforce configuration of effective models of mental health provision or quality improvement in primary care. Inclusion criteria did not exclude children, but all included reviews and studies are concerned with adults.
Zwarenstein <i>et al.</i> 2009	Not a systematic review. Concerned with reviewing evidence of need in relation to early onset mental disorders, and the effectiveness of interventions directed at these. They refer to the OPUS and LEO trials, but these are covered above.

Included reviews

Zwarenstein M, Goldman J, Reeves S. Interprofessional collaboration: effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews* 2009, Issue 3. Art. No.: CD000072. DOI: 0.1002/14651858.CD000072.pub2.

Reviews included in Sloper 2004

Atkinson, M., Wilkin, A., Stott, A., Doherty, P. and Kinder, K. (2002) *Multi-Agency Working: a Detailed Study*. National Foundation for Educational Research, Slough.

Cameron, A. and Lart, R. (2003) Factors promoting and obstacles hindering joint working: a systematic review of the research evidence. *Journal of Integrated Care*, **11**, 9–17.

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Koppel, I., Barr, H., Reeves, S., Freeth, D. and Hammick, M. (2001) Establishing a systematic approach to evaluating the effectiveness of interprofessional education. *Issues in Interdisciplinary Care*, **3**, 41–49.

Liabo, K., Newman, T., Stephens, J. and Lowe, K. (2001) *A Review of Key Worker Systems for Disabled Children and the Development of Information Guides for Parents, Children and Professionals*. Wales Office of R&D for Health and Social Care, Cardiff.

Linck, P., Ellison, P., Miles, L., Robinson, C., Parry-Jones, B. and Williams, M. (2002a) *The Inter-Agency Working Capabilities of Local Health Groups (Final Report to the Wales Office of Research and Development for Health and Social Care)*. Institute for Medical and Social Care Research, University of Wales, Bangor.

Linck, P., Ellison, P., Robinson, C., Miles, L., Parry-Jones, B. and Williams, M. (2002b) *Partnership Development Framework for Interagency Working*. Institute for Medical and Social Care Research, University of Wales, Bangor.

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Watson, D., Townsley, R. & Abbott, D. (2002) Exploring multi-agency working in services to disabled children with complex healthcare needs and their families. *Journal of Clinical Nursing*, **11**, 367–375.

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Zwarenstein, M., Reeves, S., Barr, H., Hammick, M., Koppel, I. and Atkins, J. (2002) Interprofessional education: effects on professional practice and health care outcomes (Cochrane Review). *The Cochrane Library*, Issue 4.

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Baren, J.M., Mace, S.E., Hendry, P.L., Dietrich, A.M., Grupp-Phelan, J. and Mullan, J. (2008) children's mental health emergencies-Part 1. Challenges in Care: Definition of the Problem, Barriers to Care, Screening, Advocacy, and Resources. *Pediatric emergency care*, **24**, 6, 399-408.

- Craig, T.K.J., Garety, P., Power, P., Rahaman, N., Colbert, S., Fornells-Ambrojo, M. and Dunn, G. (2004) The Lambeth Early Onset (LEO) Team: randomised controlled trial of the effectiveness of specialised care for early psychosis. *BMJ*, doi:10.1136/bmj. 38246. 594873.7C, published 14 October.
- Gannon Leary, P., Baines, S. and Wilson, R. (2006) Collaboration and partnership: A review and reflections on a national project to join a global services in England. *Journal of interprofessional Care*, 20, 6, 665-674.
- Garety, P., Craig, T.K.J., Dunn, G., Fornells-Ambrojo, M., Colbert, S., Rahaman, N., Reed, J. and Power, P. (2006) Specialised care for early psychosis: symptoms, social functioning and patient satisfaction. *British Journal of Psychiatry*, 188, 37-45.
- Lyne, P., Allen, D. & Satherley, P. (2001) *Systematic Review of Evidence of Effective Methods For Removing Barriers To Change To Improve Collaborative Working*. The National Assembly for Wales, Cardiff.
- Onyett, S., Rees, A., Borrill, C., Shapiro, D. and Bolidson, S. (2009) The evaluation of the whole systems intervention for improved team working and leadership to mental health services. *The Innovation Journal: The Public Sector Innovation Journal*, 14, 6, 1-18.
- Reeves S, Zwarenstein M, Goldman J, Barr H, Freeth D, Hammick M, Koppel I. Interprofessional education: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD002213. DOI: 10.1002/14651858.CD002213.pub2.

Excluded Studies

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- Allen, D, Gillen, E. and Rixson, L. (2009) Systematic review of the effectiveness of integrated care pathways: What works, for whom, in which circumstances? *International Journal of evidence-based health care*, 7, 2, 61-74.
- Cross, T.P., Finkelhor, D. and Ormrod, R. (2005) Police Involvement in Child Protective Services Investigations: Literature Review and Secondary Data Analysis. *Child Maltreatment*, 10, 3, 224-244.
- Doughty, C. (2006) Effective models of mental health service provision and workforce configurations in the primary care setting, New Zealand: New Zealand Health Technology Assessment.
- Flâm, A.M. (2009) 'I need your eyes to see myself': Multiagency team consultation as reflecting turn taking. *Journal of Systemic Therapies*, 28, 4. 72-88.
- Patton, G., Hetrick, S.E. and McGorry, P. (2007) Service responses for youth onset mental disorders. *Current Opinion in Psychiatry*, 20, 4, 319-324.
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SECTION E

THE DEVELOPMENT OF RESILIENCE

CHAPTER 11

Interventions to promote/nurture the development of resilience

In this section, we report the results of reviews of interventions that aim to best promote/nurture the development of resilience.

Resilience

Resilience has been defined as a ‘dynamic process encompassing positive adaptation within the context of significant adversity’ (Luthar *et al.* 2000). An individual can experience adversity in various ways, including one-off events such as acts of violence, or continuous events, such as living with a parent diagnosed with depression. What is of interest is how some individuals react to the experience of such events with the development of their own psychopathological problems, while others appear remarkably ‘resilient’, and are able to carry on with limited difficulty.

While it is difficult to identify a prevalence statistic for resilience in children, Tusaie (2004) has suggested that it could range from 15% to 50%, according to the population under investigation, and the definition of resilience used. It is noted that such a wide range in prevalence demonstrates its dynamic nature and the fact that it is strongly dependent on the context and environment.

Previously, resilience was regarded as an internal characteristic or trait, but it is now generally accepted that it is a mainly dynamic process, which is a result of various different interactions between the child and the environment. The mechanisms by which some children adapt positively when exposed to adversity are a current focus of research, but some factors appear to be associated with positive outcomes. Vanderbilt (2008) highlighted three main areas in which such protective factors could be identified. These can be categorised as: Child Protective Factors (e.g. IQ, emotion regulation, temperament, coping strategies and genetic influences), Family Protective Factors (e.g. love, nurturance, safety, security, nutrition and shelter), and Community-level Protective Factors (e.g. neighbourhood quality and cohesion, youth community organisations, and the quality of the school environment). Similarly, Riley (2008) suggested that resilience can be adequately supported in children when they have supportive, responsive, and positive parenting, experience of positive activities and interactions, and exposure to positive adult models of problems solving.

It is important to distinguish resilience from simple survival. While survivors can still be absorbed by victimization, resilience involves unexpected or markedly successful adaptation to negative life events, trauma and stress (Fraser *et al.* 1999).

The topic of resilience, particularly in childhood, has been of considerable interest to researchers. Not only it can improve our general understanding of child development processes, but it may provide the basis for the design and implementation of interventions aimed at improving child outcomes (Masten 2001).

Contextual Issues

Masten (2001) highlighted two important contextual issues to be wary of regarding the concept of resilience. Firstly, there are different approaches regarding how to judge whether adaptation following adversity is sufficiently ‘good’ or ‘positive’. While some use absence of

psychopathology or low levels of symptoms as sufficient indicators, others rely on measures of whether the child has met the major expectations of society.

A second significant contextual issue is the conflict regarding whether individuals can be considered resilient, if they have never faced a significant threat to their development, as by definition resilience supposedly requires a current or past hazard or risk with the potential to derail normal development. The difficulty here lies partly in the diverse ways in which a (potential) hazard or risk may be defined, ranging from socioeconomic status, specific trauma, low birth weight, divorce, and so forth. Consequently, there is a difficulty in comparing the concept across different studies, unless they all concern the same hazard or risk, and all use similar indicators or measures of resilience.

Interventions for the development of resilience

The Bamford report noted that early intervention strategies should be regarded as an important means of preventing the development of problems throughout Northern Ireland (Bamford 2006). Whilst interventions have been implemented and assessed in the research literature, most target specific populations who have experienced specific adverse events, such as families experiencing parental depression (Riley 2008), children of sex workers and drug users (Beard 2010), children who have experienced neglect (Allin 2005) or maltreatment (Walsh 2010), and most commonly, children experiencing depression and anxiety (Kavanagh 2009; Merry 2007). Interventions have addressed the ways in which these populations can develop or nurture their resilience following such events or experiences, most often, through family group therapy, problem solving and coping skills, cognitive behavioural techniques, and education. However, general preventative interventions, addressing general protective factors that may help to address positive adaptation should an adverse event arise, appear to be lacking.

Northern Ireland Context

Bamford (2006) highlighted that schools in Northern Ireland have made a significant effort to promote resilience and sociability in young people, as part of the positive promotion of mental health, and recommended that further activities such as Circle Time, Circle of Friends, Nurture Groups, anti-bullying programs, and the teaching of emotional skills could be used (Bamford 2006; see also discussion of NI Anti-bullying Form in Chapter 5). However, since the publication of the Bamford report, there appears to be limited evidence available regarding the implementation and assessment of such proactive, preventative strategies.

The search strategy

The search strategy identified 83 records. Of the 83 publications cited, 66 were judged irrelevant, as it was immediately obvious they were either not systematic reviews or they were not concerned with treatment or interventions. Amongst these were papers that focused on the general importance of resilience in mental health, and the consequences of failure to adequately develop or nurture resilience, yet with no reference to specific interventions. Of the remaining 17 records, 6 met the inclusion criteria listed in Box 11. Eleven papers were excluded, and Table 11.4 sets out the reasons for their exclusion.

BOX 11: Inclusion criteria - interventions to promote/nurture the development of resilience

POPULATION: children and young people, under the age of 18.

INTERVENTION: any form of intervention that addresses the promotion or nurturing of the development of resilience.

COMPARISON: management as usual, placebo intervention, no intervention.

OUTCOME: any measure of mental health (anxiety, depression, suicidal thoughts/attempts, etc.)

Included reviews

Table 11.1 sets out the characteristics of included reviews. None of the included studies focus solely on the development of resilience, but rather on interventions targeting adverse events (including depression, anxiety, and maltreatment), only some of which incorporate the development of resilience. Five of the six reviews were concerned with addressing depression, and anxiety in young people, with only one addressing treatment following child neglect or maltreatment. Within these reviews, it is only the included interventions that make specific reference to resilience that will be reported on.

Quality of reviews

Table 11.2 provides an overview of how each of the included reviews scored on the AMSTAR criteria. Overall, the quality profile of all six reviews was mixed. Three of the six failed to state whether two or more people independently conducted the search and undertook data extraction. There is, of course, a possibility that this practise was followed but not reported, though we think this unlikely. Three of the six reviews also did not attempt to search beyond peer review published literature, and none of reviews conducted any form of formal assessment for publication bias. Only one of the included reviews provided details of both included and excluded studies. All but one of the six studies made an assessment of the quality of the included studies. However, the one that did not report doing so (Merry and Spence 2007) was an update of a previously conducted Cochrane Review not included in this report as it was beyond the cut off point of 2005 (Merry and Spence, 2004). It is possible that, in this update, the authors adhered to the quality assessment guidelines outlined in the original 2004 review. Most reviews combined their findings appropriately, though only one undertook a full meta-analysis, with a further three providing effect sizes only, together with their reasons for not conducting a formal meta-analysis.

Table 11.1: Systematic reviews of interventions for promoting/nurturing resilience

Author/Year	Objective	Number and type of study included	Setting (no. of trials)	Participants
Allin <i>et al.</i> 2005	To review the effectiveness of child neglect treatment interventions.	5 studies <ul style="list-style-type: none"> • 4 RCT (1 of which relevant to resilience) • 1 prospective cohort 	USA (1)	Socially withdrawn African American children exposed to physical abuse, physical neglect, or both.
Calear and Christensen 2010	To identify and describe early intervention programs for depression and their effectiveness in reducing depression.	42 RCT studies included <ul style="list-style-type: none"> • 6 of which were relevant to development of resilience. 	Unspecified	Children aged 5-12 years
Kavanagh 2009	To review school based mental health promotion interventions, based on CBT for preventing or alleviating depression, anxiety and suicidality in young people.	17 RCT studies <ul style="list-style-type: none"> • 4 of which relevant to resilience 	USA (3) China (1)	Children and adolescents aged 11-14 years.
Merry and Spence 2007	To update a previously published Cochrane review on prevention and early intervention programs for depression in adolescents.	9 RCT studies included, 2 of which were relevant to development of resilience.	USA (1) Australia (1)	Two studies relevant to resilience included <ul style="list-style-type: none"> • 11-12 yr olds with depressive symptoms • 13-14 yr olds.
Neil and Christensen 2007	To review the efficacy of school based prevention and early intervention programs for anxiety and depression.	24 Trial Identified <ul style="list-style-type: none"> • 14 RCT • 9 Controlled Trials • 1 “No control group” It was not specified which or how many trials were relevant to resilience	All interventions developed or trialled in Australia	Information on participant characteristics can only be inferred from the type of program they were a part of: <ul style="list-style-type: none"> • 17 Trials = Universal Program (targeting all regardless of symptoms) • 6 trials = Indicated Program (displaying early/mild symptoms of disorder) • 1 Trial = Treatment Program (diagnosed with a disorder)
Neil and Christensen 2009	To review school based prevention programs for anxiety and their effectiveness in reducing symptoms of anxiety	27 Studies <ul style="list-style-type: none"> • 6 (22%) of trials focused on “building resilience” – It was unspecified which trials were part of this 22%. 	Unspecified	Children and adolescents aged 5-19 years. Further information on participant characteristics can only be inferred from the type of program they were a part of: <ul style="list-style-type: none"> • 16 Trials - Universal Program (targeting all regardless of symptoms) • 8 Trials - Indicated Program (displaying early/mild symptoms of disorder) • 3 Trials - Selective Program (at risk of disorder)

Table 11.2 AMSTAR ratings - reviews of interventions for promoting/nurturing resilience

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Allin <i>et al.</i> 2005	Y	Y	Y	N	N	Y	Y	Y	C/A	N	N
Calear and Christensen 2010	Y	N	Y	N	N	Y	Y	Y	Y	N	N
Kavanagh <i>et al.</i> 2009	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Merry and Spence 2007	Y	Y	Y	Y	N	N	C/A	C/A	C/A	N	N
Neil and Christensen 2007	Y	N	Y	Y	N	Y	Y	Y	Y	N	Y
Neil and Christensen 2009	Y	N	Y	N	N	Y	Y	Y	Y	N	N

Findings

With regards to interventions targeting depression, anxiety and resilience, one of the most commonly cited interventions was the Penn Resiliency Program. This program is based on cognitive behavioural theories of depression, and aims to assist the participant to adapt positively to the adverse event, in this case, depression. A total of six trials assessing the effectiveness of this intervention were included across the five reviews of depression and/or anxiety in young people. Often, there was overlap with the specific trials included in each reviews, but while the review authors were consistent in their reporting of the overall effects for the intervention, they often drew differing conclusions on the implications of their findings.

The review by Calear and Christensen (2010) was focused on school based interventions for children aged 5-12 year, published between 1998 and March 2009. The review included 42 eligible studies, only 5 of which were specifically related to resilience. The results of these five studies all concerned the Penn Resiliency program (PRP). The PRP is described by the programme developers as follows:

‘...a group intervention for late elementary and middle school students. The curriculum teaches cognitive-behavioral and social problem-solving skills and is based in part on cognitive-behavioral theories of depression by Aaron Beck, Albert Ellis, and Martin Seligman (Abramson, Seligman, and Teasdale, 1978; Beck, 1967, 1976; Ellis, 1962). Central to PRP is Ellis' Adversity-Consequences-Beliefs (ABC) model, the notion that our beliefs about events mediate their impact on our emotions and behavior. Through this model, students learn to detect inaccurate thoughts, to evaluate the accuracy of those thoughts, and to challenge negative beliefs by considering alternative interpretations. PRP also teaches a variety of strategies that can be used for solving problems and coping with

difficult situations and emotions. Students learn techniques for assertiveness, negotiation, decision-making, social problem-solving, and relaxation. The skills taught in the program can be applied to many contexts of life, including relationships with peers and family members as well as achievement in academics or other activities.

(<http://www.ppc.sas.upenn.edu/prpsum.htm>)

The review conducted by Merry and Spence (2007) was designed to update information on prevention and early intervention programmes for depression in children and adolescents aged 5-19. The search was restricted to studies published after the publication of their original Cochrane Review and up to the end of July 2006. This explains the more limited number of trials included in the review (n=9). Three of the nine were directly relevant to the topic of resiliency (Seligman *et al.* 1999; Yu and Seligman 2002; Puskar *et al.* 2003; and Gilham *et al.* 2006). One of these was also included in the review by Calear and Christensen (Gilham *et al.* 2006). An interesting point to note is that Calear and Christensen used the Gilham *et al.* trial to highlight the finding that trials using teacher program leaders appear to produce smaller effects than trials using mental health professionals or programme developers. In contrast, Merry and Spence drew attention to this trial, citing the results as small and inconsistent, due to the fact that the intervention did not appear to reduce depression, but did prevent depression, anxiety and adjustment disorders when these appeared combined, though only in high symptom populations (the whole sample was already designated 'high-risk').

Consequently, each of these two reviews highlights different priority areas and implications for practice. Merry and Spence conclude that, although much of the research and intervention focus is on enhancing protective skills, this would be best complemented by broader efforts to improve the child's environment, and thus reduce the initial occurrence of adverse events. Calear and Christensen (2010) highlight the Penn Resiliency Program as an example of a 'consistently effective program' that program developers should look to, in order to identify elements of a program that are 'engaging and producing the desired effects'. When considering the quality of these two reviews, it should be noted that the review by Calear and Christensen appears slightly superior in its overall methodological rigour.

The results from the two reviews by Neil and Christensen (2007; 2009) are best considered together, as while there is slight variation between the focus of the two reviews, there is considerable overlap between the topics under investigation and subsequent results, with 12 of the 51 included trials appearing in both reviews.

The earlier review by Neil and Christensen (2007) focused only on programs developed or trialled in Australia that aimed to address symptoms of anxiety or depression or increase student resilience. The later review (Neil and Christensen, 2009) focused on interventions that aimed to build resilience, or reduce symptoms of anxiety, but not depression. In addition, this second review did not restrict interventions to only those developed or trialled in Australia.

Although the inclusion criteria for the 2007 review search strategy stipulated that interventions must address symptoms of anxiety or depression, or increase student resilience, none of the included trials make any specific reference to resilience. The 2009 review was slightly clearer, in that it was stated that of the 27 studies included, 6 focused on 'building resilience'. However, it is still not specified to which 6 they are referring, with the exception of one of the 27 included trials, the trial assessing the effectiveness of the Penn Resiliency Program. This was previously included in the results of both Calear and Christensen (2010), and Merry and Spence (2007). Consequently, while the inclusion criteria for these two reviews would suggest that these interventions may relate to the

topic of resilience, we cannot identify exactly which included trials are relevant to the topic. All that can be identified is the overall effect of these interventions on anxiety and depression only. Therefore, it is difficult to apply with confidence the overall findings of these reviews to the topic of resilience.

Table 11.3: Authors conclusions - reviews of interventions for promoting/nurturing resilience

Author/Year	Interventions (no. of trials)	Authors' Conclusions
Allin <i>et al.</i> 2005	Dyadic pairing with resilient peer play buddy for play sessions (5)	Both maltreated and non maltreated children benefitted from resilient peer treatment (decreased solitary play and increased positive interactive peer play)
Calear and Christensen 2010	Penn Resiliency Program (6)	Five of the six studies indicated significant difference in depression scores following intervention (effect sizes ranged from 0.27 to 1.05) Studies differed on whether a significant effect was present at a 3, 6, 12, or 24 month follow-up. The only study to fail to indicate a significant difference following intervention was conducted on African American children.
Kavanagh <i>et al.</i> 2009	<ul style="list-style-type: none"> • Penn Resiliency Program (3) • Penn Optimism Program (1) 	Only two of the meta-analyses were based exclusively on trials relevant to resilience. These pooled results indicate: <ul style="list-style-type: none"> • Interventions provided outside of school hours were ineffective at reducing depression (SMD = -0.19 (CI= -0.42, 0.03)) • Interventions including high socioeconomic participants were effective (SMD= -0.31 (CI= -0.54, -0.07))
Merry and Spence 2007	<ul style="list-style-type: none"> • Penn Resiliency Program (CBT) (1) • The Gatehouse Project ("Whole school" approach to Health Promotion) (1) 	<ul style="list-style-type: none"> • Penn Resiliency Program prevented depression, anxiety and adjustment disorders when combined in high symptom participants. • The Gatehouse Project did not reduce depression, but reduced substance abuse.
Neil and Christensen 2007	The 24 trials were described as pertaining to 9 specific interventions, which made use of: <ul style="list-style-type: none"> • CBT • Interpersonal Therapy • Psycho-education It was not clear which interventions used which approach.	<ul style="list-style-type: none"> • Short to midterm, small to moderate significant reductions in: • Anxiety (effect sizes ranged from 0.24 to 1.36) • Depression (effect sizes ranged from 0.21 to 0.96) • Authors have suggested many of the trials were underpowered, indicating that outcomes may be more positive than findings suggest.
Neil and Christensen 2009	<ul style="list-style-type: none"> • CBT (19) • Psycho-education + CBT (2) • Relaxation (2) • Exercise (1) • Communication skills (1) • Social skills training + psychoeducation + exposure (1) • Social learning + modelling (1) 	21 of 27 trials reported significant improvement in symptoms of anxiety <ul style="list-style-type: none"> - 17 found improvement at post-test (effect sizes ranged from 0.11 to 1.37) - 4 found significant improvement at follow-up (effect sizes ranged from 0.22 to 0.81) Authors attribute the range in effect sizes to variations in the conduct of the program, including program fidelity, leader characteristics and audience characteristics.

Overall, despite some positive results, the review authors are reluctant to place any firm reliance on their findings, citing the low methodological quality of many of the included trials and lack of randomised controlled trials, as limitations to be addressed in future research. Further, as the 2007 review focused only on studies that had been developed or trialled in Australia, it is questionable how generalisable these results may be.

Kavanagh *et al.* (2009) addressed whether secondary school based mental health promotion interventions based on cognitive behavioural techniques were effective in preventing or alleviating depression, anxiety and suicidality in young people. While this review was the only one to include a series of meta-analyses, only two of meta-analyses from this review are relevant to the topic of resilience and each meta-analysis pooled results from the Penn Resiliency Program with the results from the fourth intervention relevant to resilience in this review, the Penn Optimism Program. These results therefore can only be considered apart from the other narrative syntheses. Based on these meta-analyses, the data suggest that these interventions work best for high socioeconomic participants, but these results are extremely tentative, considering only two trials were included in this meta-analysis, and would require much more detailed exploration before any firm conclusions were drawn.

The only included reviews that did not focus on depression or anxiety was Allin *et al.* (2005), exploring the effectiveness of Resilient Peer Treatment for children exposed to physical abuse or neglect. The results of this trial were very promising, leading authors of this review to highlight this intervention in their own discussion, suggesting that the use of peers may produce a more powerful effect than the use of therapists. Such a possibility would do well to be explored further, as it could identify a potentially low-cost, highly effective method of developing resilience in young populations.

Implications research

Building on the results of the included reviews, some possible research priorities for this area may include the following:

1. Due to its consistent inclusion across all of the studies concerning depression and anxiety, further examination of the effectiveness of the Penn Resiliency Programme and its applicability in a variety of settings, in more high quality, randomised controlled trials would be particularly beneficial to this area of research.
2. Because the variability in effect sizes has been attributed to variability in the conduct of the programmes, future research should explore which aspects of the programme are most supportive to the programme, and which should be controlled to ensure highest levels of efficacy.
3. The possibility that the effects of interventions may vary according to individual differences, including cultural differences and socio-economic status is also an area of interest that should be explored further.
4. As noted, none of the included reviews focused solely on the development of resilience *per se* (understandably problematic), but focused on interventions targeting depression, anxiety, and maltreatment, only some of which incorporate the development of resilience. Interventions with a clearer focus on increasing or nurturing resilience should be a research priority, for, as demonstrated, resilience can have wide ranging effects on different aspects of childhood development, and interventions that successfully address this issue could have wide potential for implementation. This may not be possible until we have a better understanding of the nature of resilience.
5. An interesting possibility was raised regarding the use of peers for resilience training, with suggestions that such strategies may be more effective than the use of professionals or

practitioners. This could have significant implications for practice and should be incorporated further into future intervention strategies. Making use of the influence of peers rather than professionals is an increasingly commonplace strategy in Northern Ireland. This is most evident through the use of Mentoring Schemes, available through organisations including Opportunity Youth. Such strategies would benefit from high quality assessment and development.

Table 11.4 Excluded Studies – Interventions for promoting/nurturing the development of resilience

Study	Reasons for Exclusion
Aisenberg and Herrenkohl 2008	Not a systematic review. Paper explores community violence and mental health, with particular reference to research on the protective factors and resilience in children exposed to this violence.
Beard <i>et al.</i> 2010	Examines the risks, stigma and discrimination faced by children of female sex workers and drug users, and provides an overview of sources of their vulnerability and resilience. Interventions of interest are not specifically related to the development of resilience, but focus on reducing harm faced by children by providing them with educational and training opportunities, safe places to play and sleep while their mothers are working.
Beaton <i>et al.</i> 2009	Not a systematic review. Examines the behavioural and mental health outcomes in children and families, following disasters, and identifies the high prevalence of anxiety and depression following such events. It provides a good overview of the ways in which public health organisations can work to improve children’s resilience following these events. No well-described search strategy or search process.
Ehnholt and Yule 2006	Focuses on refugee children who have experienced war-related trauma, with particular reference to risk and protective factors, assessment, and interventions. However, there is little direct reference to resilience. In addition, there is no description of a search strategy or search process.
Farrell and Barrett 2007	Not a systematic review. Describes the prevalence and impact of childhood depression and anxiety, along with current prevention and intervention programs, many of which are designed to build resilience. No description of the search strategy or search process.
Kanji <i>et al.</i> 2007	Not a systematic review. Focuses on the resilience processes which may be present in Afghan children, highlighting the specific adverse and protective factors they are likely to have encountered. No well described search strategy or search process.
Kushner 2009	Not a systematic review. Provides an extensive overview of the literature in the area of childhood adjustment following a parental separation, with specific reference to protective factors that allow children to remain resilient to the situation. No description of the specific search strategy or search process involved.
Riley <i>et al.</i> 2008	Not a systematic review. Provides a good overview of the theoretical basis for mechanisms of resilience in children of mothers with depression, and describes a newly designed intervention designed to promote family and child resilience following maternal depression.
Van Dyke and Elias 2007	Not a systematic review. An overview of the literature regarding forgiveness, religion and purpose, and how they relate to mental health of young people, with specific reference to the association between religion and resilience. No well-described search strategy or search process and not concerned with interventions.
Vanderbilt-Adriance and Shaw 2008	Not a systematic review. Provides a thorough overview of research in the area of resilience. Is not concerned with specific interventions aimed at developing resilience. Although details are given of the search process and search strategy of this review, only one database was searched, using two key phrases.
Walsh <i>et al.</i> 2010	Not a systematic review. Reviews studies of resilience and compares the different measures of resilience that have been used, and the reported resilience in various populations. No review of the effectiveness of interventions specific to the development of resilience.

Included Studies

- Allin, H., Wathen, C. N. and MacMillan, H. (2005) Treatment of child neglect: A systematic review. *The Canadian Journal of Psychiatry*, 50, 8, 497-504.
- Calear, A.L. and Christensen, H. (2010) Systematic review of school based prevention and early intervention programs for depression. *Journal of Adolescence*, 33, 429-438.
- Kavanagh J, Oliver S, Caird J, Tucker H, Greaves A, Harden A, Oakley A, Lorenc T, Thomas J (2009) *Inequalities and the mental health of young people: a systematic review of secondary school-based cognitive behavioural interventions*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.
- Merry, S.N. and Spence, S.H. (2007) Attempting to prevent depression in youth: a systematic review of the evidence. *Early intervention in Psychiatry*, 1, 128-137.
- Neil, A. L. and Christensen, H. (2007) Australian school-based prevention and early intervention programs for anxiety and depression: A systematic review. *Medical Journal of Australia*, 186, 6, 305-308.
- Neil, A. and Christensen, H. (2009) Efficacy and effectiveness of school-based prevention and early intervention programs for anxiety. *Clinical Psychology Review*, 29, 3, 208-215.

Excluded Studies

- Aisenberg, E. and Herrenkohl, T. (2008) Community violence in context: Risk and resilience in children and families. *Journal of Interpersonal Violence*, 23, 3, 296-315.
- Beard, J., Biemba, G., Brooks, M. I., Costello, J., Ommerborn, M., Bresnahan, M., *et al.* (2010) Children of female sex workers and drug users: A review of vulnerability, resilience and family-centred models of care. *Journal of the International AIDS Society*, 13, Suppl 2, S6.
- Beaton, R. D., Murphy, S. A., Houston, J. B., Reyes, G., Bramwell, S., McDaniel, M., *et al.* (2009) The role of public health in mental and behavioral health in children and families following disasters. *Journal of Public Health Management and Practice*, 15, 6, E1-11.
- Ehnholt, K. A. and Yule, W. (2006) Practitioner review: Assessment and treatment of refugee children and adolescents who have experienced war-related trauma. *Journal of Child Psychology and Psychiatry*, 47, 12, 1197-1210.
- Farrell, L. J. and Barrett, P. M. (2007) Prevention of childhood emotional disorders: Reducing the burden of suffering associated with anxiety and depression. *Child and Adolescent Mental Health*, 12, 2, 58-65.
- Kanji, Z., Drummond, J. and Cameron, B. (2007) Resilience in afghan children and their families: A review. *Paediatric Nursing*, 19, 2, 30-33.
- Kushner, M. A. (2009) A review of the empirical literature about child development and adjustment postseparation. *Journal of Divorce and Remarriage*, 50, 7, 496-516.
- Riley, A. W., Valdez, C. R., Barrueco, S., Mills, C., Beardslee, W., Sandler, I., *et al.* (2008) Development of a family-based program to reduce risk and promote resilience among families affected by maternal depression: Theoretical basis and program description. *Clinical Child and Family Psychology Review*, 11, 1-2, 12-29.
- Van Dyke, C. J. and Elias, M. J. (2007) How forgiveness, purpose, and religiosity are related to the mental health and well-being of youth: A review of the literature. *Mental Health, Religion and Culture*, 10, 4, 395-415.
- Vanderbilt-Adriance, E. and Shaw, D. S. (2008) Conceptualizing and re-evaluating resilience across levels of risk, time, and domains of competence. *Clinical Child and Family Psychology Review*, 11, 1-2, 30-58.
- Walsh, W. A., Dawson, J. and Mattingly, M. J. (2010) How are we measuring resilience following childhood maltreatment? Is the research adequate and consistent? What is the impact on research, practice, and policy? *Trauma Violence and Abuse*, 11, 1, 27-41.

CHAPTER 12

Interventions to address the mental health needs of gay, lesbian, bisexual and transgendered young people

In this section, we report the results of reviews of interventions or strategies aimed at addressing the mental health issues facing gay, lesbian, bisexual or transgendered young people.

Mental Health and Gay, Lesbian, Bisexual and Transgendered People

There is a noticeable gap in research regarding the mental health of gay, lesbian, bisexual and transgendered people. Some have attributed this to the historically somewhat fraught relationship between sexual minorities and psychiatrists, as a result of the previous misconception that any behaviour or attitude that differed from the majority was considered a mental disorder. This was compounded by the various attempts to use behaviour therapy to 'reorient' the sexuality of gay men and to lesser extent gay women in the 1960s and 1970s (King and Bartlett 1999). Although the American Psychiatric Association's Board of Directors voted that homosexuality should be removed from the Diagnostic and Statistical Manual of Mental Disorders in 1973 (Herek and Garnets 2007), the stigma has perhaps never fully been eradicated. The recent interest in the mental health of this population is now concerned with the effect that the prejudice, discrimination and stigma attached to lesbian, gay, bisexual and transgendered people can have on mental health.

Prevalence In studies of adult populations, research had indicated that there is a considerable difference between homosexual and heterosexual men for any mental health disorder, most notably anxiety, depression, and suicidal thoughts or attempts (Lewis 2009). Some studies suggest that gay and bisexual men are 3 times more likely to meet the criteria for major depression and 4.7 times more likely to meet the criteria for a panic disorder than their heterosexual peers (Cochran *et al.* 2003).

Research on female sexual minorities is perhaps less widely available than that of male sexual minorities, but here too there is evidence of a significant problem, with lesbian or bisexual women 3.9 times more likely to demonstrate generalized anxiety disorder (Cochran *et al.* 2003). Further research from Clements-Nolle *et al.* (2001) indicates that the increased risk of mental ill health appears equally high in transgender populations, with 62% of male to female transgender individuals, and 55% of female to male transgender individuals classified as depressed. Furthermore, 32% of male to female and 32% female to male transgender individuals had attempted suicide. A similar prevalence rate was identified by Maguen *et al.* (2005) who found 67% of their transgender participants reported problems with anxiety and depressions.

Despite a growing number of studies exploring these issues in adult populations, the attention paid to adolescent populations is less developed, with studies being few in number, and methodologically limited.

Convenience sampling is a common technique in this type of research. Van Heerington and Vincke (2000) found that homosexual and bisexual young people were significantly more likely to report suicide ideation than heterosexual young people. However, their study was notably flawed in that their population of homosexual and bisexual youths was recruited almost entirely from a holiday

camp for homosexual and bisexual youngsters, subjecting this study to high amounts of bias and poor generalisability.

Much of the current research with young people took place more than 15 years ago (Remafedi *et al.* 1991; Hershberger and D'Augelli 1995). Further, some research claiming to assess 'mental health' in this population focuses solely on the behavioural consequences of mental health, such as suicide, alcohol dependence, and truancy (Lewis 2009). This is important, and recording behaviour may be a more objective and reliable process than recording psychological processes, but the latter are also important and research should not ignore other areas of mental health, including depression and self-esteem.

Minority Stress The most commonly accepted explanation for the high prevalence of mental health problems in this population is that sexual minorities are regularly subjected to stigma, discrimination and prejudice, creating a highly stressful social environment, which leads to mental health problems. This is a common experience of members of minority groups, and consequently is often referred to as Minority Stress (Meyer 2003).

With specific relation to LGBT people, three processes of minority stress have been suggested. These range from objective processes such as external experiences and conditions, (e.g. violence and discrimination), to perceived stigma, causing anxiety, vigilance and subsequently stress, and finally, subjective processes of internalized homophobia, where the person directs societies negative attitudes towards themselves (Meyer 1995).

Interventions and Strategies

With such high rates of depression and suicide, the development and implementation of appropriate interventions to ameliorate the mental health problems of this population is clearly a priority. Some tentative suggestions have been made regarding possible strategies. For example, it has been suggested that alliances need to be made between schools and agencies that serve adolescents, in order to prevent the possible impact of discrimination and consequent isolation (Roberts 2006).

Some of the research tends to focus purely on 'recommendations' for clinicians, regarding the optimum way in which to create an appropriate environment for these young people, to reduce stigma and discrimination in a professional environment. Recommendations include encouraging good communication, ensuring all team members do not inadvertently offend the young people or crest barriers, ensuring confidentiality and promoting sensitivity (Levine 2009). Yet, there is little documented evidence regarding practical implementation and assessment of such strategies.

Another possibility suggested is that, rather than targeting the subsequent mental health problems of the population, attention should be paid to preventative strategies, addressing the initial stigma and discrimination. This could be achieved by including information on homosexuality into school sex education policies, as recommending by the British Medical Association (1997). Some research has suggested that, through a variety of intervention strategies such educational interventions aimed as dispelling myths and prejudices, it may be possible to change heterosexual attitudes to homosexuals, which could reduce the initial occurrence of minority stress (Tucker and Potocky 2006).

Northern Ireland Context

There are a number of organisations within Northern Ireland, aimed at providing support and promoting the health and well-being of gay, lesbian, bisexual and transgender people, including Gay and Lesbian Youth Northern Ireland (GLYNI), Gay and Lesbian Across Down (GLAD), and the Rainbow Project.

The Rainbow project has produced important statistics regarding the mental health of gay and bisexual men in Northern Ireland. A recent report by this organisation has indicated that 30.7% of the respondents had self-harmed at least once, and 16.3% admitted to feeling depressed when they thought of their sexual orientation (McNamee 2006).

The most notable piece of research to have taken place in Northern Ireland in recent years was the shOUT report (2003). This research examined the needs of young people in Northern Ireland who identified as lesbian, gay bisexual and/or transgender. This research was particularly important as it not only provided essential, up to date information regarding the needs of this population, but also highlighted the various methods by which professionals and organisations may be able to help. This research indicated that lesbian, gay, bisexual and/or transgender young people were at least 3 times more likely to attempt suicide, 2.5 times more likely to self-harm, and 5 times more likely to be medicated for depression.

While this report concluded with various essential recommendations for actions to be taken by different departments and organisations, there appears to be little available research regarding the implementation and evaluation of such recommendations. A review of the available research since the publication of this report in particular would be useful to identify what has effectively been done, and what areas remain to be addressed.

The search

The search strategy identified 94 records. Of these, 85 were judged irrelevant, as it was immediately obvious they were either not systematic reviews or they were not concerned with treatments or interventions. Amongst these were papers that focused on interventions reducing sexual risk behaviours and sexually transmitted infections, and HIV. These were ineligible as the focus was on physical, rather than mental health. Many studies were also ineligible due to their focus on adult populations, rather than adolescents. A further one review was identified through Google and Google Scholar keyword searches, and so a total of 10 were considered in further detail. Box 12 sets out the criteria by which studies were judged to be included or excluded.

BOX 12: Inclusion criteria – reviews of interventions to address the mental health needs of gay, lesbian, bisexual and transgender young people.

POPULATION: children and young people, under the age of 25 who are identified as lesbian, gay, bisexual, transgender, or with gender identity disorder.

INTERVENTION: any form of intervention addressing mental health issues.

COMPARISON: management as usual, placebo intervention, no intervention, heterosexual control group.

OUTCOME: any measure of mental health (anxiety, depression, suicidal thoughts/attempts, etc.)

Of the remaining 10 records, 2 met the inclusion criteria (see Box 12.1). Eight papers were excluded and Table 12 sets out the reasons for their exclusion.

Included reviews

Table 12.2 sets out the characteristics of the two included reviews. Neither concerns transgender individuals. One review (Bouris *et al.* 2010) explores the parental attitudes and influences that can impact a young person’s mental health, and the second (Tucker and Potocky-Tripodi 2006) examines an intervention aimed at changing the attitudes and views of heterosexual young people. While neither review is concerned with specific interventions aimed directly at young lesbian, gay or bisexual people, both examine external strategies that could alleviate the problems they face regarding stigma, discrimination and prejudice, thus impacting their subsequent mental health.

Quality of reviews

Table 12.1 provides an overview of how both included reviews scored on the AMSTAR criteria. Both seemed of a relatively low quality. Both provided sufficient information about their inclusion criteria and search strategies, and both list their included studies (but provide no information about those they excluded). Although neither explicitly stated whether there were two independent data extractors, this does not preclude the possibility that this practise was followed. Both reviews suffered a notable limitation in that no attempt was made to search beyond peer review published literature and nor was there any assessment of publication bias. Bouris *et al.* (2010) would have benefited from some form of assessment of the quality of the included studies. However, both studies urged caution in interpreting the results of their reviews due to the methodological limitations of the studies included within each review. Meta-analyses were not presented in either review.

Table 12.1 AMSTAR ratings - reviews of interventions to address the mental health needs of gay, lesbian, bisexual and transgender young people

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Bouris et al., 2010	Y	N	Y	N	N	Y	N	C/A	N/A	N	N
Tucker and Potocky-Tripodi, 2006	Y	N	Y	N	N	Y	Y	Y	N/A	N	N

Findings

The most striking finding is the lack of evidence produced in this research area in the last five years. No reviews were identified that targeted interventions specifically aimed at the mental health of young gay lesbian, bisexual or transgender people. Most research in this area targets physical health and well-being, with particular emphasis on sexually transmitted diseases, HIV and AIDS. The only exceptions were two reviews focusing on interventions that might target the stigma and minority stress experienced by this population, with potentially adverse consequences for their mental health.

In general, the findings of Tucker and Potocky-Tripodi (2006) suggest that interventions could, in principle, result in attitude change towards lesbian, gay, and bisexual young people. However, the authors of this review are reluctant to place any firm reliance on their findings, claiming that no intervention included in their review was adequately tested. Most notable among the methodological issues, was the questionable measurement tools used in the studies to assess anti-gay attitudes, the reliability and validity of which the review authors felt were not adequately reported. The authors suggest that if it is indeed possible to change attitudes in this way, it is most likely to be a cumulative effect, as a result of repeated exposure to consistent information that seems to be credible.

Table 12.2: Systematic reviews of interventions to address the mental health of gay, lesbian, bisexual and transgender young people.

Author/Year	Objective	Number /type of study included	Setting (no. of trials)	Participants	Interventions	Authors' Conclusions
Bouris, <i>et al.</i> 2010	To review parental influences on the health and well-being of lesbian, gay and bisexual young people. Health areas included substance use, violence/victimization, mental health, and suicide.	31 Studies 16 relevant to mental health • 13 cross sectional • 3 retrospective	<ul style="list-style-type: none"> • US • Canada • New Zealand (1) • US (7) • Unknown (8) 	Homosexual males and females aged 13 to 29 years.	Searched for parental influences as a correlate of one of 5 targeted health areas: <ul style="list-style-type: none"> • Sexual risk behaviour • Experience of violence/victimization • Substance use • Suicide • Mental health 	<p>A supportive and caring parent child relationship emerged as an important correlate across studies.</p> <p>Two important dimensions of parenting appeared in the overall pattern of results (i) parental knowledge and response to child's sexual orientation, and (ii) emotional qualities of parent-child relationship</p> <p>Negative parental responses are inversely associated with young people's mental well-being.</p>
Tucker and Potocky-Tripodi 2006	To review interventions that aim to improve heterosexuals' attitudes towards homosexuals.	17 studies <ul style="list-style-type: none"> • 4 RCT • 13 CCTs 	All studies conducted within USA	Undergraduate and post-graduate students from schools in USA aged 18-35 years.	Most interventions were based on one or a combination of: <ul style="list-style-type: none"> • Cognitive and/or education approach (dispelling myths and stereotypes) • Contact theory (increased exposure and shared experiences as means of changing prejudices. 	Some improvements in attitudes were evident following intervention, but were dismissed by the review authors due to the lack of statistical results and high methodological limitations of all studies.

The failure to take into account important participants' characteristics throughout the studies in this review was also a cause for concern. Specifically, all studies failed adequately to report the gender, age, and religion of participants, all of which have been indicated to affect attitudes towards minority sexual groups, and should therefore be taken account of, when designing, implementing and assessing an intervention.

While Bouris *et al.* (2010) do not address the efficacy of a specific intervention, they explore and highlight the important influence that parental attitudes can have on the mental health of lesbian, gay, and bisexual young people. These findings are important, as incorporating these parental influences could be a useful strategy for the development and implementation of future interventions. Once again, the authors are reluctant to draw firm conclusions due to the methodological limitations of their included studies. Their concerns here include the reliance on convenience samples, which make it difficult to generalise results to the wider populations. In addition, there is currently a lack of prospective longitudinal findings, which could provide better detail on the precise mechanisms of parental influences. Finally, echoing the concerns of Tucker and Potocky-Tripodi (2006), this review concludes that inadequate attention was paid towards the heterogeneity within the minority sexual groups sampled, particularly race, ethnicity, cultural and family values, all of which could impact parental attitudes and responses, as well as the dynamics of the family relationship.

Despite this, the review authors were able to identify two important dimensions of parenting that appeared in the overall pattern of results that could influence the health and well-being of lesbian, gay, and bisexual young people. These were: (i) parental knowledge and response to child's sexual orientation; and (ii) emotional qualities of parent-child relationship, including support, caring, and parent-child connectedness. In addition, across the studies, parental rejection was also identified as having a negative association with all health areas. This highlights the complexity of parental influences, in that they can "serve as a source of stress and a source of support". The review authors also highlight that these may not be the only parental dimensions of importance, as they are just those identified by the included studies. Additional parenting influences that were not examined that could be of importance include parental monitoring, and communication.

While no reviews were identified relating to the mental health of transgender young people, or gender identity disorder, a protocol is in development for a Cochrane systematic review focusing on the effects of CBT for Gender Identity Disorder in childhood. This review is expected to be completed in the next 6 to 8 months. The author of this review has concurred, based on the preliminary results of his search, that high quality trials in this area are lacking (Turner 2011).

Implications for future research

Building on the results of the included reviews, some possible research priorities for this area may include the following:

1. First and foremost, there is a demonstrable gap in research on transsexuals and young people with gender identity disorder in the last five years. This is an essential area to address, particularly considering the high rates of depression and suicide previously cited.
2. While some attempts have been made at examining important influences on the mental health of lesbian, gay, bisexual and transgender young people, attention should be directed towards the design, implementation and assessment of interventions directly aimed at these young people, focusing on the coping skills necessary to deal with minority stress, should it occur.
3. Both included reviews highlight the need for greater account for to be taken of the diversity of participants' characteristics in research. Research must take account of the

varying effects that age, gender, religion, culture and ethnicity could have on mental health, and ensure these considerations are incorporated into the interventions.

4. It is also important to prepare for the likelihood of cumulative effects. Specifically, changes in attitudes, both internal and external, are likely to occur gradually, and require repeated doses of an intervention. Again, this should be incorporated into an intervention and recipients of the intervention should be prepared for this accordingly.
5. Some general methodological points were highlighted that should be incorporated into future work, including the need to move beyond convenience samples, and incorporate more prospective longitudinal work.

Table 12.3: Excluded Studies – interventions to address the mental health issues relating to gay, lesbian, bisexual and transgendered young people

Study	Reasons for Exclusion
Hatzenbuehler 2009	A comprehensive overview of research regarding the stigma many sexual minorities face, and the subsequent stress they may experience. A frame work is postulated to aid the understanding of the process, and which could potentially lead to development of intervention strategies. However, there was no well-described search strategy and no focus on interventions <i>per se.</i>
Herek and Garnets 2006	Provides a comprehensive overview of research on factors affecting mental health among sexual minority populations, with factors such as minority stress and stigma playing a prominent role. Current mental health practises are also discussed, and attention is drawn to the APA guidelines for Affirmative Practice with sexual minority clients. However, this review could not be classified as a systematic review, as there was no description of the search process of search strategy.
Levine 2009	Reviews the challenges faced by this population, and some interventions that may allow them to reduce their risk behaviours, most notably, recommendations for providing 'culturally sensitive care' for sexual minority youth. No well-described search strategy/ search process.
Lewis, 2009	Focus on the prevalence of mental health issues in sexual minorities. No attention is paid to direct interventions or strategies addressing mental health.
Lucka <i>et al.</i> 2006	Article was only available in Polish. (English only language restriction imposed)
Maguen <i>et al.</i> 2005	Describes the development and establishment support group for male to female transgender patients within a Vancouver hospital.
Meads <i>et al.</i> 2009	Systematic review of the prevalence of mental health issues of lesbian, gay, bisexual and transgender people in the UK. Notes some associations between sexual orientation and mental health. No focus on the effectiveness of direct interventions or strategies for this population.
Roberts 2006	Provides data on the prevalence of various health problems in lesbian women, including statistical on the high rates of mental health problems, and the need for particular attention to be paid to adolescents. However, no mention is made of specific interventions or strategies that could address these problems.

Included Studies

- Bouris, A., Guilamo-Ramos, V., Pickard, A., Shui, C., Loosier, P.S., Dittus, P., Gloppen, K. and Waldmiller, J.M. (2010) A systematic review of parental influences on the health and well-being of lesbian, gay, and bisexual youth: Time for a new public health research and practice agenda. *Journal of Primary Prevention*, 31, 273-309.
- Tucker, E.W. and Potocky, M. (2006) Changing heterosexuals' attitudes toward homosexuals: A systematic review of the empirical literature. *Research on Social Work Practice*, 16, 176-190.

Excluded Studies

- Hatzenbuehler, M.L. (2009) How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin*, 135, 5, 707-730.
- Herek, G.M. and Garnets, L.D. (2006) Sexual orientation and mental health. *Annual Review of Clinical Psychology*, 3, 353-375
- Levine, D.A. (2009) Office-based care for gay, lesbian, bisexual and questioning youth. *Adolescent Medicine*, 20, 223-242.
- Lewis, N.M. (2009) Mental health in sexual minorities: Recent indicators, trends, and their relationships to place in North America and Europe. *Health and Place*, 15, 1029-1045.
- Lucka, I., Trybus-Piotrowska, M. and Rzeszotarska-Wichorowska, R. (2006) Psychopathological syndromes and the problem of youth sexual orientation. *Psychiatria Polska*, 40, 6, 1129-1136.
- Maguen, S., Shepherd, J. C. and Harris, H. N. (2005) Providing culturally sensitive care for transgender patients. *Cognitive and Behavioral Practice*, 12, 4, 479-490.
- Meads, C., Pennant, M., McManus, J. and Bayliss, S. (2009) *A systematic review of lesbian, gay, bisexual and transgender health in the west midlands region of the UK compared to published UK research*. Birmingham: West Midlands Health Technology Assessment Collaboration, Unit of Public Health, Epidemiology and Biostatistics, University of Birmingham.
- Roberts, S.J. (2006) Health care recommendations for lesbian women. *Journal of Obstetric, Gynecologic, and Neonatal Nursing*, 15, 5, 583-591.

Correspondance

- Turner, W. (personal communication, April 06, 2011)
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CHAPTER 13

Interventions to prevent self harm and suicide

Introduction

Although self harm and suicide are being considered in the same chapter, it is acknowledged that they may be distinct issues, albeit with overlaps between them. As Bursztein and Apter (2008) argue, 'Suicidal behavior is probably a set of noncontinuous and heterogeneous spectra of behaviors. Thus, suicidal ideation, suicidal threats, gestures, self-cutting, low lethal suicide attempts, interrupted suicide attempts and near fatal suicide attempts and actual suicide may or may not be related to each other, depending on the context in which they are studied...preventive methods may be different for the different subtypes of suicidal behaviors in adolescents' (p1).

In this chapter, self-harm refers to non-suicidal self-injury and suicidal behaviour refers to behaviour that is motivated by the desire to die. There is variation in how these terms are used internationally, for example deliberate self-harm in the North American literature sometimes includes attempted suicide (Bethell and Rhodes 2008). The World Health Organisation (cited in Nordentoft 2007: 311) has defined suicide as 'an act with a fatal outcome, which the deceased, knowing or expecting a fatal outcome had initiated and carried out with the purpose of provoking the change that he desired...Parasuicide...commonly used to refer to all non-fatal suicidal acts [is defined] as 'An act with a non-fatal outcome, in which an individual deliberately initiates a non-habitual behaviour that, without intervention from others will cause self-harm, or deliberately ingests a substance in excess of the prescribed or generally recognized therapeutic dosage, and which is aimed at realizing changes which the subject desired via the actual or expected physical consequences.' Hawton and James (2005) have argued that 'The term deliberate self harm is preferred to "attempted suicide" or "parasuicide" because the range of motives or reasons for this behaviour includes several non-suicidal intentions. Although adolescents who self harm may claim they want to die, the motivation in many is more to do with an expression of distress and desire for escape from troubling situations. Even when death is the outcome of self harming behaviour, this may not have been intended' (p891). Leitner *et al.* have provided a very clear set of definitions that distinguish between the main terms used:

Suicide The termination of an individual's life resulting directly or indirectly from a positive or negative act of the victim himself which he knows will produce this fatal result (Durkheim 1857).

Attempted suicide A potentially self injurious action with a non-fatal outcome for which there is evidence, either explicit or implicit, that the individual intended to kill himself or herself (Moscicki 1997).

(Deliberate) Self-Harm An acute non-fatal act of self harm carried out deliberately in the form of an acute episode of behaviour by an individual with variable motivation (Gelder *et al* 2001).

Suicidal Ideation The existence of current wishes and plans to commit suicide (Steer *et al.* 1993) (Leitner *et al.* 2008:170).

The focus of this chapter is on interventions that aim to prevent self-harm and/or suicide. The risk factors and trends in suicide and self harm are not, therefore, considered in depth, but are briefly summarised in order to provide some sense of this context. Hawton and James (2005) highlight that the common characteristics of young people who die by suicide are: broken homes (separation, divorce, or death of parents); family psychiatric disorder or suicidal behaviour; psychiatric disorder or behavioural disturbance; substance misuse (alcohol or drugs); and

previous self-harm. This reinforces the possible overlaps between self-harm and suicide. They also suggest that possible reasons for the rise in male suicides in the UK include: increased rates of family breakdown; increasing rates of substance misuse and depression; greater instability of employment; increased availability of means for suicide; media influences (thought to contribute to 5% of suicides in adolescents); and awareness of suicidal behaviour in other young people (page 891).

Interventions to prevent suicide and self-harm are extremely diverse and provided across a range of levels and settings. Nordentoft (2007) discussed three possible models for organising these interventions. The first is to distinguish between primary, secondary and tertiary interventions. Primary prevention is aimed at people who have not yet shown any indication of self harming or suicidal behaviour. Secondary prevention aims at early intervention with those who are identified as being at risk so involves interventions such as screening. Tertiary intervention targets people who are known to be self-harming or who have engaged in suicidal behaviour. An alternative model is to distinguish between universal, selective and indicated prevention. Universal interventions would be aimed at the whole population in question (all children and young people, all school age children, all children in specific areas). Selective prevention is targeted on preventing the development of self harm and suicidal behaviour in specific high-risk groups. Indicated prevention then would focus on people who have been identified as showing the early signs of self-harming or suicidal behaviour. A third possible way of classifying preventive interventions is to distinguish structural (such as restricting means, addressing social exclusion) from individual measures (such as media campaigns, counselling and treatment).

These issues of definition and classification are important to convey the complexity of the range of interventions that aim to prevent self-harm and suicide. A common theme throughout the literature is that unfortunately there is no one size fits all approach for the prevention of self-harm and suicide (Pitman 2007), and that there needs to be careful consideration of the developmental context of the children and young people (Daniel and Goldston 2009), their cultural context (Joe *et al.* 2008 and Goldston *et al.* 2008) and their social context (Burrows and Laflamme 2010).

The Northern Ireland Context

In the Northern Ireland context, the Bamford Review's report (2006) on mental health promotion reinforced the need to prevent suicide. It stated:

According to Fay *et al* (1997)...in the 25 years from 1969 to 1994, more people died here by suicide than as the result of the conflict. On average since 2000, deaths due to suicide have exceeded deaths on the road. Suicidal behaviours place a heavy human and financial burden on society in Northern Ireland. Figures from DHSSPS (2002) indicate that there are on average 150 suicide deaths every year in NI, 80,000 working days are lost to illnesses related to attempted suicide; and that there are over 4,000 hospital admissions annually as the result of suicidal behaviour. The estimated annual cost to the economy of suicidal behaviour is £170m. Although suicide accounts for 1% of all deaths annually it equates to 7% of potential years of life lost, indeed the expected years of life lost to suicide is estimated to be 4,400. (Bamford 2006:92)

The Bamford Review's (2006) report on child and adolescent mental health services emphasized the role of schools in primary prevention and recommended the "healthy schools" approach combined with more targeted approaches – it also highlighted the particularly high rates of self-harm and suicidal behaviour among LGT young people. At the secondary level, it suggested that 'there is a need to address the prevention of suicide through multi-modal programmes, probably best delivered via education services' (p46), and at the tertiary level, it highlighted the needs of

children who have experienced abuse and looked after children. The Bamford Action Plan (2009) summarised how the policy context for self-harm and suicide prevention has developed in Northern Ireland. It stated that:

the ‘*Promoting Mental Health Strategy and Action Plan (2003)* set out a cross-sectoral agenda aimed at improving mental health and wellbeing. This was followed by more detailed work on suicide prevention. *Protect Life – A Shared Vision* was published in 2006 to address the rising trend in suicide. It includes a set of actions both at population level and targeted at people and communities most at risk. In 2008 the Health, Social Services and Public Safety Assembly Committee issued its Report on the Inquiry into the Prevention of Suicide and Self Harm, making a series of recommendations for further action. A cross-departmental response to the Committee’s report and a timeframe for implementation were endorsed by the Executive in March 2009 (Bamford 2009:24).

In their review of progress on the three main relevant strategies (the Bamford Review of Mental Health and Learning Disability; the *Promoting Mental Health: Strategy and Action Plan 2003-2008*; and the *Protect Life: A Shared Vision – The Northern Ireland Suicide Prevention Strategy and Action Plan 2006-2011*), Leavey *et al.* (2009) recommended that the mental health promotion and suicide prevention strategies should be merged and that the priorities for intervention should include early-years intervention and parenting strategies, as well as supporting schools to promote resilience and well-being.

There has been some research which considers self-harm and suicide among children and young people in Northern Ireland but, as Tomlinson (2007) concluded, ‘there are major gaps in the available knowledge and research on how children and young people are positioned in relation to self-harm and suicide in NI’ (p.441). He recommended various research priorities including ‘to monitor relevant hospital attendances for Parasuicide...exploring how families and local communities cope with depression, self-harming and suicide...the processes that lead to suicide clustering...[and] the role of popular culture, new communications and the Internet in mediating ideas about suicide’ (p.441).

More recently, Arensman (2010) was commissioned by the DHSSPS to review the evidence for the *Protect Life – A Shared Vision 2006-2011*, the Northern Ireland suicide prevention strategy. This is not only addressing the needs of children and young people, but it is still immediately relevant. Her findings will be considered in more depth below, but one of the key recommendations was that “actions for which substantial and consistent research evidence is available be implemented at national level as a matter of priority in the next phase of *Protect Life*... These actions include:

Population approaches

- To restrict access to means and methods of suicide, including identification of “hotspots”, the promotion of safer prescribing, a reduction in the accessibility of certain over the counter drugs, and restriction of access to firearms).
- Develop clinical guidelines for all HSS staff to use when dealing with people who are at risk of suicide/self harm.

Targeted approaches

- To implement programmes that enhance the coping and problem solving skills of those who self harm, and which reduce the risk of repeat self harm” (p52).

Arensman (2010) also made clear recommendations for future evaluation of suicide prevention in Northern Ireland. She suggested that “Evaluating the effectiveness of suicide prevention

programmes, it would be recommended to include intermediate outcomes (e.g. improved awareness and knowledge of suicidal behaviour, increased confidence, attitude change, increased referral etc.) in addition to primary outcomes (e.g. suicide, deliberate self harm)...In addition to outcome evaluation, it would be recommended to conduct an independent process evaluation in order to identify factors that may hinder progress in achieving milestones and deliverables that are required in order to meet the targets set” (p60).

Results of the search

The search strategy identified 632 records, of which 53 were duplicates leaving 579. Of the 579 publications cited, 513 were judged irrelevant, mainly because they were not reviews of interventions, and/or their focus was not on prevention, and/or there was no specific consideration of children and/or young people. A further 4 reviews were identified through Google and Google Scholar keyword searches, and so a total of 70 were considered in further detail. The search strategy for the databases was limited to reviews from 2005, but the Google searches identified an extremely important systematic review (Crowley *et al.* 2004), which, because of its immediate and direct relevance, was included. Only systematic reviews that considered interventions aimed at preventing self-harm and/or suicide in children and young people were included. Of the 70, 46 were excluded primarily because they were not systematic reviews, or were not concerned with interventions, and these are detailed in Table 13.3). 24 were included (see Table 13.1). The inclusion criteria are listed in Box 13.

BOX 13: inclusion criteria - Interventions to prevent self harm and suicide

POPULATION: children and/or young people

INTERVENTION: prevention of self-harm and/or suicide

COMPARISON: any comparison

OUTCOME: impact on self-harm and/or suicidal behaviour

Excluded studies

Table 13.3 sets out the characteristics of excluded studies. These tend to be reviews of interventions that have not employed a systematic approach, and/or are more focused on the identification and exploration of risk factors. Nonetheless, some important issues are raised. Brown *et al.* (2007), Cwik and Walkup (2008), and Nordentoft (2007) all make the case for prioritizing large scale randomized controlled trials of suicide prevention interventions. They also discuss some of the complex methodological and ethical issues involved. The excluded studies also highlight some important considerations for developing, implementing and evaluating interventions. These include culture (Goldston *et al.* 2008; Joe *et al.* 2008), gender (Smalley *et al.* 2005) and the wider social context (Lee *et al.* 2010).

Included studies

Table 13.1 sets out the characteristics of the 28 included systematic reviews. These reviews cover an extremely wide range of interventions, which perhaps reflects the complexity of the issues involved.

Quality of reviews

The quality of the included reviews was assessed using the AMSTAR criteria, and the results are presented in Table 13.2. The AMSTAR profile suggests that most reviews have serious methodological shortcomings. Although most report sound search strategies and a clear plan for the conduct of the review, their reporting of the detailed methodology is often poor (e.g. only 3 provided details on excluded studies). Few considered unpublished material. More significantly, only nine author teams explicitly assessed the quality of studies included within their review, and only seven used this information when drawing their conclusions.

As a whole, the reviews covered a very heterogeneous set of interventions, which is probably why only six reviews included any meta-analyses. Some reviews themselves contained very diverse interventions, and this is reflected in the paucity of systematic reviews that undertook meta-analyses. Some of the reviews that covered a broad range of interventions nonetheless 'scored well' on most AMSTAR criteria (e.g. Crowley *et al.* 2004 and Robinson *et al.* 2011). Of the more focused reviews, those by Crawford *et al.* (2007) on interventions following self-harm, Guo *et al.* (2010) on means reduction, Hetrick *et al.* (2007) on SSRIs, and Tarrier *et al.* (2008) on CBT are of above average quality. For the most part, however, the conclusions drawn by these review teams is based on a combination of assessing the 'weight' of evidence (using a version of 'vote counting'), and critical judgement that could not be tested against a less subjective means of synthesising data.

Findings

There has been a lot of activity in reviewing the available evidence of 'what works' in preventing self-harm and suicide. Were the conclusions of the reviews more definitive, one would have cause for concern. As it is, most reviews do not draw strong conclusions.

Many of the reviews excluded from consideration in this chapter also contain thoughtful and potentially useful research evidence. Burrows and Laflamme (2010) draw a similar conclusion to those of earlier writers, namely that the issues are complex, embracing developmental, contextual and individual factors. Given this complexity, it is unlikely that there is a 'one size fits all' approach to prevention, of either self-harm or suicide (Daniel and Goldston). Indeed, a dominant theme throughout the literature is that the evidence for any one proposed intervention is either limited or very limited (see Robinson *et al.* 2011).

- The focus is definitely more on suicide prevention, so should maybe highlight self-harm findings – group CBT with young offenders (Townsend *et al.* 2010).
- Promising approaches include means restriction and CBT (Tarrier *et al.* 2008).
- Concerns about SSRI use (Reith and Edmonds, 2007) and screening (Peña and Caine, 2006) are false positives.

Table 13.2: AMSTAR ratings - Interventions to prevent self harm and suicide

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as in inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Arensman, 2010	Y	N	Y	Y	N	N	N	N	N/A	N	N
Burns <i>et al.</i> 2005	Y	N	Y	Y	N	Y	N	N	N/A	N	N
Crawford <i>et al.</i> 2007	Y	Y	Y	N	N	Y	N	N	Y	Y	Y
Crowley <i>et al.</i> 2004	Y	Y	Y	Y	N	Y	Y	Y	N/A	N	N
Daniel and Goldston, 2009	Y	N	Y	N	N	Y	Y	Y	N/A	N	N
Dudley <i>et al.</i> 2010	Y	N	Y	N	N	Y	N	N	N/A	N	N
Guo <i>et al.</i> 2010	Y	N	Y	Y	Y	Y	N	N	N/A	N	N
Hawton and van Heeringen, 2009	Y	N	Y	N	N	N	N	N	N/A	N	N
Hetrick <i>et al.</i> 2007	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Isaac <i>et al.</i> 2009	Y	Y	Y	N	N	Y	Y	Y	N/A	N	N
Klonsky and Moyer, 2008	Y	N	Y	N	N	Y	N	N	Y	N	N
Leitner <i>et al.</i> 2008	Y	Y	Y	Y	N	N	N	N	N/A	N	N
Lester <i>et al.</i> 2010	Y	N	Y	N	N	N	N	N	N/A	N	N
Mann <i>et al.</i> 2005	Y	Y	Y	N	N	Y	Y	N	N/A	N	N
Miller <i>et al.</i> 2009	Y	Y	Y	N	N	Y	N	N	N/A	N	N
Newton <i>et al.</i> 2010	Y	Y	Y	Y	N	Y	Y	Y	N/A	N	Y
Nrugham <i>et al.</i> 2010	Y	N	N	N	N	Y	N	N	N/A	N	N
Peña and Caine, 2006	Y	N	Y	Y	N	Y	Y	Y	N/A	N	N
Reith and Edmonds, 2007	Y	N	Y	Y	N	N	N	N	N/A	N	Y
Robinson <i>et al.</i> 2011	Y	Y	Y	Y	N	Y	Y	Y	Y	N	Y
Steele and Doey, 2007a and b	Y	N	Y	N	N	N	N	N	N/A	N	N
Szumilas and Kutcher, 2009	Y	N	N	N	N	N	N	N	N/A	N	N
Tarrier <i>et al.</i> 2008	Y	N	Y	N	N	Y	Y	Y	Y	Y	N
Townsend <i>et al.</i> 2010	Y	Y	Y	Y	N	Y	Y	Y	Y	N	N

Implications for research

Crowley *et al.*'s (2004) recommendations for future research still seem to be the priorities. These are that we need:

- larger trials;
- studies examining the socio-economic gradient and the wider structural barriers to mental health;
- process and qualitative evaluations;
- studies of the effectiveness of helplines, means reduction and the role of media in NI context, and
- a focus on high-risk groups, impact of self-harm and suicide awareness training.

Arensman's (2010) recommendations for service development also seem important to reinforce, especially building in evaluation to all prevention interventions, working on means reduction, developing guidelines for staff, and to implement programmes to develop the skills of young people who self-harm.

Table 13.1: Included Studies – Interventions to prevent self-harm and/or suicide

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To review of the evidence base for <i>Protect Life – A Shared Vision</i> . The Northern Ireland Suicide Prevention Strategy	Arensman 2010	<ul style="list-style-type: none"> • 118 published papers, • 12 books and • 17 reports were included. Details of all studies not included.	Wide range of settings.	All ages but included some research which focused on children and young people.	<ul style="list-style-type: none"> • Public information campaigns • Community based programmes • Gatekeeper training • Multi-level community based suicide prevention programmes • Means restriction • Support for parents • Support networks • School based prevention and anti-bullying • Early identification and access to services • Suicide awareness / positive mental health /well-being and substance misuse training for relevant staff • Brief problem solving intervention • School-based programmes to promote positive mental health • Guidelines for health staff • Targeted information campaign for the workforce • Media guidelines • Psychological treatments for self harm • Crisis Teams • Support for carers • Protocols for assessing people who are intoxicated • Early identification of and support for survivors of abuse • Support for marginalized and/or high risk groups 	A very wide range of recommendations are presented. The research included in the review was also assessed in terms of its level and consistency. The actions with the best evidence base are identified as: <ul style="list-style-type: none"> — Means restriction, including identification of “hotspots” — Clinical guidelines for all HSS staff to use when dealing with people who are at risk of suicide/self harm. — Programmes that enhance the coping and problem solving skills of those who self harm, and which reduce the risk of repeat self harm.
To examine the evidence for the effectiveness of clinical interventions designed to reduce the repetition of deliberate self harm	Burns <i>et al.</i> 2005	<ul style="list-style-type: none"> • 3 RCTs • 4 clinical control trials • 3 quasi-experimental studies 	Initial presentation at hospital	Adolescents and young adults	<ul style="list-style-type: none"> • Problem solving therapy • Intensive management with outreach • Readmission on demand • Family intervention • Group therapy 	The evidence base for treatments designed to reduce the repetition of self-harm in adolescents and young adults is very limited. Careful consideration should be given to process evaluation to determine which individual elements of any intervention are effective.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To examine whether additional psychosocial interventions following an episode of self-harm reduce the likelihood of subsequent suicide.	Crawford <i>et al.</i> 2007	<ul style="list-style-type: none"> • 18 RCTs 	International	People who had harmed themselves prior to the intervention	<ul style="list-style-type: none"> • Mainly individual psychotherapy such as cognitive behavioural therapy, interpersonal psychotherapy and dialectical behaviour therapy • Follow-up and access to services 	Individual randomised trials of psychosocial treatments have demonstrated statistically significant reductions in the likelihood of repetition of non-fatal self harm, but such findings do not necessarily mean that these treatments would reduce the likelihood of subsequent suicide.
To provide a review of reviews of the evidence of effectiveness for the prevention of youth suicide	Crowley <i>et al.</i> 2004	<ul style="list-style-type: none"> • 7 reviews of studies 	<ul style="list-style-type: none"> • 3 UK • 2 North America • 1 New Zealand • 1 Australia 	Young people	<ul style="list-style-type: none"> • Curriculum-based suicide prevention programmes • Recognition, management and prevention of youth suicidal behaviour by primary care practitioners • Interventions targeting family risk factors • Suicide prevention programmes for at-risk groups • Potential points of access to those contemplating suicide • Prevention of access to means • Media restrictions • Psychosocial and pharmacological treatments for deliberate self-harm 	<p>Multi-year (interventions with young people that extend over many years of their lives), multi-component strategies to address high-risk behaviour in school factors among young people should be further evaluated.</p> <p>The impact of reducing access to the means of suicide and the role of media should be further researched.</p>
To review published controlled studies of psychosocial treatment interventions for reducing adolescent suicidal behaviour	Daniel and Goldston, 2009	<ul style="list-style-type: none"> • 5 quasi experimental • 7 RCTs 	International	Young people (10-17)	<ul style="list-style-type: none"> • Emergency room intervention • Rapid response out-patient service • Admission on demand • Family intervention • Systemic therapy • Youth support team • DBT • CBT 	<p>There is limited evidence of the effectiveness of interventions in reducing suicide attempts.</p> <p>Given the heterogeneity among adolescent suicide attempters it is unlikely that a 'one size fits all' approach will work.</p>
To examine the association between adolescents who die by suicide and their use of SSRI antidepressants.	Dudley <i>et al.</i> 2010	<ul style="list-style-type: none"> • 4 RCTs • 3 with no control group 	<ul style="list-style-type: none"> • 3 US • 2 Sweden • 1 UK • 1 Denmark 	574 young people	<ul style="list-style-type: none"> • SSRIs 	9 of 574 young people (1.6%) who died by suicide had had recent exposure to SSRIs. The rarity of SSRI usage prior to adolescent suicide does not support the assertion that SSRIs are associated with increased suicide risk. Given the prevalence of depression associated with youth suicide, it favours the conclusion that most adolescents dying by suicide have not had the potential benefit of antidepressants at the time of their deaths.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To summarise the information regarding national means restriction policies/strategies and assess the effectiveness of national/provincial intentional overdose prevention policies/strategies.	Guo <i>et al.</i> 2010	Eight national suicide prevention strategy documents	<ul style="list-style-type: none"> • Australia • Canada • England • Ireland • New Zealand • Sweden • Wales • United States 	All ages but particular focus on young people	Means restriction strategies	In general, these policies/strategies do not specifically target children, youths, and young adults. Evaluation of the effects of various means restrictions including intentional overdose prevention in reducing suicidal behaviours is a complex task; hence a systematic approach that takes into account all of the important components of a comprehensive framework for a provincial policy/strategy initiative is essential.
To provide an overview of the epidemiology and prevention of suicide	Hawton and van Heeringen, 2009	Wide range of studies.	International	All ages but section on young people	<ul style="list-style-type: none"> • Strategies targeting high-risk groups • Population strategies 	<p>Clinical studies of suicide prevention are hindered by methodological and ethical problems, especially since many people at risk do not have contact with clinical care. Knowledge about who is at risk of suicide has nevertheless increased substantially, and a number of interventions show promising effects.</p> <p>Future research must focus on the development and assessment of empirically based suicide-prevention and treatment protocols.</p>
To determine the efficacy and adverse outcomes, including definitive suicidal behaviour and suicidal ideation, of SSRIs compared to placebo.	Hetrick <i>et al.</i> 2007	<ul style="list-style-type: none"> • 10 RCTs 	International, often multi-centre	Children and adolescents with depressive disorders	Range of SSRIs	<p>The evidence for effectiveness of SSRIs compared with placebo in the treatment of depressive disorder in children and adolescents is far from compelling.</p> <p>A large long term pragmatic trial that includes young people who are representative of those who present for treatment is needed.</p>
To review the evidence on gatekeeper training for suicide prevention, and propose directions for further research	Isaac <i>et al.</i> 2009	<ul style="list-style-type: none"> • 13 studies • 1 RCT • 12 Cohort 	International	All ages	Gatekeeper training	<p>Gatekeeper training holds promise as part of a multifaceted strategy to combat suicide. It appears positively to affect the skills, attitudes, and knowledge of people who undertake the training in many settings, but evidence of its impact on suicide rates and ideation is limited.</p> <p>An RCT is needed to delineate its potential for reducing the suicide base rate in a given community.</p>

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To provide a comprehensive overview of the known effectiveness of interventions aimed at preventing suicide, suicidal behaviour and suicidal ideation, both in key risk groups and in the general population.	Leitner <i>et al.</i> 2008	<ul style="list-style-type: none"> • 200 primary studies • 37 systematic reviews 	International	All ages but only 27 included children and/or young people	<ul style="list-style-type: none"> • Escitalopram for children with major depressive disorder • interpersonal psychotherapy • a psychoeducational intervention in schools involving a youth-nominated support team • a token for readmissions to hospital for suicidal young adolescents • fluoxetine alone or with CBT • youth education programme • anti-depressants • empowerment-based parent education groups • Home-based family interventions • School-based interventions • Therapeutic interventions including CBT, DBT and family therapy 	Taken together, the outcomes for studies focussed on children and young adults suggest that we currently have very little evidence of how to proceed in intervening with young people to prevent or reduce suicidal behaviour and, in particular, to reduce suicide.
To review research on the link between physical activity and involvement in sports and suicidality.	Lester <i>et al.</i> 2010	<ul style="list-style-type: none"> • 16 studies, mainly surveys 	US	Children and young people (adults considered but findings not reported here)	<ul style="list-style-type: none"> • Physical activity • Sports participation 	Physical activity and sports participation may have a beneficial impact on suicidality, at least in boys.
To examine the evidence for the effectiveness of specific suicide preventive interventions and to make recommendations for future prevention programmes and research.	Mann <i>et al.</i> 2005	<ul style="list-style-type: none"> • 10 systematic reviews • 18 RCTs • 24 Cohort • 41 population based studies 	Developed countries	All ages	<ul style="list-style-type: none"> • Awareness and education • Primary Care Physicians • Gatekeepers • Screening • Pharmacotherapy • Psychotherapy (including CBT and problem solving) • Follow-up after attempt • Means reduction • Media 	Suicide prevention interventions should be multi-modal, evidence-based, guided by specific testable hypotheses, and implemented among populations of sufficient size to yield generalisable and reliable results. Programmes must include outcome measurement.
To comprehensively review of school-based suicide prevention programs from a public health perspective.	Miller <i>et al.</i> 2009	<ul style="list-style-type: none"> • 13 studies 	Public schools	Children and young people	Universal and Selected suicide prevention programs	The current scientific foundation regarding school-based suicide prevention programs is very limited.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To evaluate the effectiveness of interventions for pediatric patients with suicide-related emergency department visits.	Newton <i>et al.</i> 2010	<ul style="list-style-type: none"> • 7 RCTs • 3 quasi experimental studies 	Emergency departments (EDs)	Children and young people	<ul style="list-style-type: none"> • ED-based delivery (1) • post discharge delivery (6) • ED transition interventions (3) 	Transition interventions appear most promising for reducing suicide-related outcomes and improving post-ED treatment adherence.
To review research on risk factors and interventions for suicidality among Norwegian youth	Rugham <i>et al.</i> 2010	<ul style="list-style-type: none"> • 29 studies on risk factors 	Norway	Upper mean age limit of 25 years.	<ul style="list-style-type: none"> • Focus on risk factors • Gun control • CAMHS • Skills training 	Impact of interventions barely studied. Non-intact parental units need to be supported and intact parental units maintained. Early detection and management of suicide attempts, depression and alcohol use should be targeted as suicide prevention interventions among adolescents.
To review the evidence of the effectiveness and safety of screening as a tool to prevent suicide among adolescents.	Peña and Caine, 2006	<ul style="list-style-type: none"> • 17 studies 	Mainly schools and clinics	Adolescents	<ul style="list-style-type: none"> • Screening instruments 	While youth suicide screening programmes offers the promise of improving identification for those who need treatment the most, further research is essential to understand how, when, where and for whom screening programmes can be used effectively and efficiently.
To assess the role of drugs in suicidal ideation and suicidality	Reith and Edmonds, 2007	No information. Seem to be mainly drug trials	Range of countries	Children and adults	<ul style="list-style-type: none"> • SSRIs • Newer antidepressants 	There is evidence of an association between SSRIs and other newer antidepressant drugs and treatment-emergent suicidal ideation and suicide-related behaviour in children and adults.
A systematic review of interventions for adolescents / young adults who presented to a clinical setting with risk of suicide attempt, suicidal ideation and/or deliberate self-harm	Robinson <i>et al.</i> 2011	<ul style="list-style-type: none"> • 15 RCTs 	International	Adolescents and young adults	<ul style="list-style-type: none"> • Medication • Emergency access card • Home-based family intervention • Compliance enhancement • Youth nominated support team • DBT • Problem solving interventions • CBT • Group therapy 	The evidence regarding the effective interventions for adolescents and young adults with suicide attempt, deliberate self-harm or suicidal ideation is extremely limited. CBT shows some promise but further investigation is needed.
To systematically review the treatment of suicidal behaviour in children and adolescents	Steele and Doey 2007a ;b	No detail of the final number of studies included.	International	Children and young people	<ul style="list-style-type: none"> • Assessment • Hospital-Based services • Alternatives to hospitalization and other outpatient services • Follow-up after discharge from ED 	The assessment of youth at risk for suicide should include attention to well-established risk factors, but prediction remains difficult. Treatment of should be evidence-based and may include psychotherapy and pharmacology. Effective methods of prevention are emerging, but more research is needed.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To synthesize the literature on youth suicide risk factors and prevention strategies; evaluate quality of information about these on selected Canadian websites; determine if website source was related to evidence-based rating (EBR); and the association of website quality indicators with EBR.	Szumilas and Kutcher, 2009	<ul style="list-style-type: none"> • Five systematic reviews. • The top 20 most commonly accessed youth suicide information websites were analyzed for quality indicators and EBR. 	Focus is on Canadian websites but the systematic reviews are international	Children and young people	<ul style="list-style-type: none"> • Information regarding youth suicide on selected websites 	<p>Fundamental to addressing youth suicide is the availability of high-quality, evidence-based information accessible to the public, health providers, and policy-makers.</p> <p>Many websites, including those sponsored by the federal government and national organizations, need to improve the evidence-based quality of the information provided.</p>
To investigate whether Cognitive-behavioral therapies (CBTs) would reduce suicide behavior	Tarrier <i>et al.</i> 2008	<ul style="list-style-type: none"> • 28 studies • All had to have a comparison group 	<ul style="list-style-type: none"> • 14 US • 5 UK • 2 Holland • 2 Denmark • 1 Australia • 1 Canada • 1 India • 1 Ireland • 1 Israel 	Adolescents (7) Adults (21)	<ul style="list-style-type: none"> • CBT or CBT as a component of intervention 	<p>Overall, there was a highly significant effect for CBT in reducing suicide behavior.</p> <p>Subgroup analysis indicates a significant treatment effect for: adult samples (but - importantly for this - review not adolescent); individual treatments (but not group), and for CBT when compared to minimal treatment or treatment as usual (but not when compared to another active treatment).</p>
To examine whether interventions relevant to young offenders with mood or anxiety disorders, or problems with self-harm are effective.	Townsend <i>et al.</i> 2010	<ul style="list-style-type: none"> • 10 RCTs 	<ul style="list-style-type: none"> • 7 US • 1 Scotland • 1 Japan • 1 New Zealand 	Young offenders with a mean age of 19 or under	<ul style="list-style-type: none"> • Medication] • Group work • Skills training • Range of psychotherapeutic approaches 	These preliminary findings suggest that group-based CBT may be useful for young offenders with such mental health problems, but larger high quality RCTs are now needed to bolster the evidence-base.

Table 13.3: Excluded Studies – Interventions to prevent self-harm and/or suicide

Study	Reasons for Exclusion
Apter and King 2006	Overview of the management of depressed, suicidal children and adolescents. Concludes that research has yet to identify the treatment of choice for suicidal patients. Suggests that treatment strategies should be multi-dimensional, targeting the suicidal behaviour, mental health problems, personality factors and environmental factors. Points out that lack of continuity of care places patients at elevated risk for additional suicide attempts.
Berman 2009	This commentary on school-based suicide prevention presents some research advances but is not a systematic review. It highlights that the great majority of these prevention efforts are universal programmes, the weakest overall in their evaluated effectiveness.
Berman <i>et al.</i> 2006	This book chapter considers the treatment of suicidal adolescents. It is not a systematic review. It highlights the core role that attachment plays in both the problem and its resolution, and the need for individual care plans.
Bethell and Rhodes 2008	Focuses on the roles of suicidality and deliberate self-harm in adolescent depression and emergency department use. Highlights overlap between depression and suicidality and self-harm and so the need to identify and refer when people present at hospital. Not a systematic review.
Birbal <i>et al.</i> 2009	Considers cybersuicide and adolescents. Literature reviewed to explore the issues/cases rather than consider interventions. Recommends that guidelines for the media on reporting suicide should be adopted for the internet and that the websites should be monitored.
Brown <i>et al.</i> 2007	Not a systematic review. Argues that few suicide prevention strategies have been evaluated in rigorous trials and that there are randomised trial designs that are both feasible and ethical and can be used to test programmes and implementation strategies for population-based suicide prevention.
Borrows and Laflamme 2010	A review of studies examining the relationship between socioeconomic status and attempted suicide over a 20 year period.
Bursztein and Apter 2009	A non-systematic review of adolescent suicide. Concludes the overall empirical evidence about effective ways to prevent or treat suicidality in youth is quite low. Prevention efforts usually include interventions such as screening for depression and suicide risk in schools and clinical settings, suicide awareness and education programmes, gatekeepers' training for school staff, hotlines, means restriction and pharmacological treatment and CBT/skills training.
Chachamovich <i>et al.</i> 2009	Explores the association between depression and suicide. Not a systematic review but suggests further research should explore in depth the world of a suicidal person and consider specific, even individual strategies for prevention.
Campo 2009	Examines the relationship between youth suicide and access to care. Wide range of studies considered but not systematically. Concludes that education and training of professionals and service users, the integration of mental health services in primary care, and the use of novel technologies to track and maintain contact with at-risk youth are worthy of study.
Cohen 2007	Reviews all the controlled trials of SSRIs in child and adolescent depression although no search strategy provided. Meta-analyses revealed no data supporting the use of SSRIs except fluoxetine.
Cwik and Walkup 2008	Reviews, but not systematically, existing studies of interventions for suicidal young people, describes the challenges in selecting the population, treatment and control conditions, and outcome measures, and discusses tradition RCT and alternative methodological approaches.
de Leo and Heller, 2008	Draws on data from four large studies to consider the role of social modelling in the transmission of suicidality. Found that suicidal behaviours among respondent's social groups were important predictors of suicidal behaviour in the respondents themselves and that, in an adolescent population exposure to fatal suicidal behaviour did not predict self-harm but exposure to non-fatal suicidal behaviours was predictive of self-harm and suicide ideation. This may inform the potential impact of containing information about suicidal behaviours.
Donaldson <i>et al.</i> 2010	Not a systematic review. Chapter highlights the importance of considering engagement, including barriers created by services, when intervening with adolescent suicide attempters.
Dudley <i>et al.</i> 2008	Non-systematic review of the efficacy and safety of new-generation antidepressants with depressed children and adolescents. Practical clinical strategies for acute phase treatment suggested.
Evans <i>et al.</i> 2005	Book on treating and preventing adolescent mental health problems. Section on youth suicide provides a non-systematic overview of the prevention literature. Suggests that more rigorous methods are needed to evaluate youth suicide prevention programmes.
Glaif <i>et al.</i> 2007	A systematic review on suicidality, depression and alcohol use amongst adolescents over the previous 15 years. No focus on interventions

Table 13.3: Excluded Studies – Interventions to prevent self-harm and/or suicide (continued)

Study	Reasons for Exclusion
Goldston <i>et al.</i> 2008	Not a systematic review but does highlight the importance of cultural considerations in adolescent suicide. Reports that there are some cross-cutting issues such as protective factors, spirituality and family. Explores the need for culturally sensitive and community based interventions.
Greydanus and Shek 2009	Explores deliberate self-harm in adolescents but is not a systematic review. Recommends that priorities for research should include the role of spirituality and family processes, and that both qualitative and longitudinal designs should be used more.
Grunebaum and Soleimani 2010	Book chapter on suicide prevention. Not focused specifically on children and adolescents but briefly considers adolescent suicidality. Reports that evidence supporting schools-based suicide awareness programmes has been largely inconclusive except for the Signs of Suicide programme (Aseltine and DeMartino, 2004). Also mentions gatekeeper programmes (training school staff to identify suicidal young people) but acknowledges that research on effectiveness is limited.
Hawton <i>et al.</i> 2006	Book focusing on deliberate self-harm and suicidal ideas in adolescents. No systematic review of the evidence for prevention but concludes that research is needed on: young people who engage in self-harm in the community but who do not present at hospital; longitudinal studies; the contagious nature of self-harm; evaluations of new interventions; the needs of specific sub-groups; and the role of the media and the internet.
Headey <i>et al.</i> 2006	Reviews the evaluation of 156 local suicide prevention projects that are part of Australia's National Suicide Prevention Strategy. Reported that successful projects tended to understand contextual factors, investigate participants' needs, draw on sound evidence, develop multi-faceted strategies, develop stakeholder support, and employ capable staff.
Hoffmann 2006	Describes the development of a web-based psycho-educational programme that deals with the lived experiences of adolescent suicide survivors. Primary research but does provide a non-systematic review of psycho-education approaches.
Horowitz <i>et al.</i> 2009	Reviews suicide screening in three different settings: schools, primary care clinics and emergency departments. No search strategy provided. Concludes that valid, brief and easy-to-administer screening tools can be used to detect risk of suicide in children and adolescents, targeted screening in schools, and universal screening in primary care clinics and emergency departments may be the most effective way to recognise and prevent self-harm. The impact of suicide screening in various settings needs to be further assessed.
Joe <i>et al.</i> 2008	Reinforces the need to consider the role of culture in adolescent suicidal behaviour in order to develop prevention strategies. Not a systematic review.
Joe and Bryant 2007	Non-systematic review of suicide prevention screening, warning signs and risk factors to inform discussion of suicide screening in schools. Concludes that schools are an effective setting for suicide prevention and that screening and referral interventions are promising.
Klomek and Stanley 2007	Considers psychosocial treatment of depression and suicidality in adolescents. Not a systematic review. Asserts that there are only two evidence-based psychotherapies for adolescence depression: cognitive-behavioral therapy and interpersonal psychotherapy.
Lee <i>et al.</i> 2010	Focuses on risk factors for youth suicide in South Korea and isn't a systematic review but does apply ecological systems theory to provide a structural to consider issues within the context of micro, meso, exo, macro, and chrono systems. This reinforces the complexity of the issues that may need to be addressed by effective prevention.
Miklowitz and Taylor 2006	Describes the evidence for family focused therapy (psychoeducation, communication skills training and problem solving) for working with people with a diagnosis of bipolar who are suicidal. Not a systematic review.
Miller <i>et al.</i> 2007	Focuses on dialectical behaviour therapy but also provides a non-systematic review of the literature on the effectiveness of treatments for suicidal adolescents. Concludes that outpatient psychosocial treatments targeting suicidal behaviours directly, particularly CBT, are effective in reducing the risk of future such behaviours in high risk individuals.
Miller and Eckert 2009	Non-systematic review with focus on demographic data; risk factors and warning signs; and where, when, and how youth suicidal behavior typically occurs rather than prevention.
Nixon and Heath 2009	Section on intervention and prevention issues for non-suicidal self-injury in young people. It is not a systematic review but does provide an overview of possible universal, selective and indicated interventions.
Nordentoft 2007	Focuses on the prevention of suicide and attempted suicide in Denmark. Excellent overview of the issues and research but not a systematic review. Concludes that large randomised clinical trials examining the effectiveness of interventions to reduce rates of suicide attempt and suicide should be a high priority.

Table 13.3: Excluded Studies – Interventions to prevent self-harm and/or suicide (continued)

Study	Reasons for Exclusion
Pfeffer 2006	This chapter on suicide and suicidality among children and adolescents doesn't provide a systematic review but does suggest some areas for future research: the developmental course of young people who are bereaved by suicide, the effectiveness of methods for screening, education strategies, enhancing help-seeking and psychosocial and pharmacological treatments.
Pitman 2007	Discussion, rather than a systematic review, of the literature informing suicide prevention policies. It is argued that interventions may have differential effects in specific risk groups, which may include paradoxical increases in risk. For these reasons, policy makers may need to abandon the goal of one treatment for all and focus on the distinct subgroups of patients at risk when selecting, evaluating and implementing preventive interventions.
Portzky and van Heeringen 2007	Literature review on deliberate self-harm in adolescents. Brief details of the methodology but no search strategy. Concludes that the association between the use of antidepressants in depressed children and adolescents and the emergence of suicidal behaviour continues to subject to conflicting evidence. Suggests that the results regarding CBT in depressed and suicidal young people are clearly positive.
Posner <i>et al.</i> 2007	Focuses on the identification and monitoring of suicide risk in primary care settings. It isn't a systematic review but raises the issue that concerns about suicidal ideation and behavior associated with young people's antidepressant treatment have led to declines in prescribing. They suggest there is now concern about under-treatment of depression and the subsequent impact on suicide rates. Reinforces that primary care settings offer opportunities to identify those at risk of suicidal behaviour.
Sher and Zalsman 2005	Not a systematic review. Reports that alcohol abuse and suicidal behaviour in adolescents and in adults has been found to have biochemical, genetic, and psychological correlates. Suggests that treatment of adolescents who alcohol problems and suicidality should follow an integrated protocol that addresses both issues.
Smalley <i>et al.</i> 2005	Reviews, but not systematically, recent research on the social context of suicide in young people, with particular reference to evidence about the gendered character of suicidal behaviour. Concludes that of all the aspects of the social context of youth suicide, one of the most important and also one of the most gendered is the effect of unemployment. Argues that the impact of macro-level social policy should be included in any suicide strategy and that gender issues should be further explored in research.
Spirito and Esposito-Smythers 2006	Provides a comprehensive overview of risk factors and considers prevention relatively briefly. Reports the prevention program with the best evidence to date combines an education awareness component on depression and suicide with a screening programme: the Signs of Suicide program (Aseltine and DeMartino, 2004).
Wagner 2009	Book on suicidal behaviour in children and adolescents and includes a chapter on prevention. It is not a systematic review and concludes that there is a great need for systematically testing innovative, theory-based, and well-designed prevention programmes for young people.
Wasserman and Wasserman 2009	Good overview, especially of international perspectives but not systematic. Chapters on young people and effective treatments. Concludes that it has not been conclusively demonstrated that either antidepressants or psychotherapy reduce suicidal ideation or risk of suicidal behaviour. It also mentions this may be in part due to the exclusion of most suicidal individuals from clinical trials.
Westefeld <i>et al.</i> 2010	Focuses on children under 13 and argues that issues related to preadolescent suicide should be considered separately from adolescent suicide. Not a systematic review.
Wintersteen <i>et al.</i> 2007	Review, but not systematic, of screening for suicide risk in the pediatric emergency and acute care setting. Conclude that practitioners in these settings are well positioned to identify, assess and appropriately refer.

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CHAPTER 14

Interventions to help parents with mental health problems to parent their children

Introduction

In this section we report the results of reviews of interventions aimed at helping parents with mental health problems provide good enough parenting to their children. The focus is, therefore, on interventions that aim to improve parental mental health and parenting, rather than interventions to support children whose parents have mental health problems, which are addressed in Chapter 15. There is some overlap between these two areas, and some interventions are aimed at both parents and children, but the focus in this chapter is on the aspects of these interventions that are aimed at the parents. There have also been some difficulties identified at the interface between adult mental health services and child care services, and interventions to address these difficulties are also briefly discussed but are not the focus of the review. To provide the context of the review estimates of the prevalence of parental mental problems, the need for intervention and the Northern Ireland context are explored first.

Parental mental health problems

Based on findings from national surveys of mental health problems, Parker *et al.* (2008) have estimated that, at any one time in Great Britain, nine to ten per cent of women aged 16-65, and five to six per cent men aged 16-65, are parents with mental health problems. Most of these will have common mental health problems, such as depression or anxiety, and only a very small proportion (0.5% or fewer) will have some form of psychosis. The Social Exclusion Unit (2004) has highlighted that some groups of parents may be at higher risk of developing mental health problems. It reported that 'Levels of depression are highest among the mothers of young children, lone parents and those who are economically inactive. 28 per cent of lone parents have common mental health problems. Post-natal depression is estimated to affect one in ten new mothers and usually starts within six weeks of the birth. Research suggests that a mother's prolonged post-natal depression may have a negative effect on the child's cognitive development and social relationships' (p75). The Social Exclusion Unit (2004) also suggested that parents with mental health problems and their families are one of the four groups most likely to be excluded from health and social care provision. There may also be a range of barriers for parents with mental health problems seeking help from services, including possible concerns about the involvement of social services, and how their parenting may be assessed.

The 2003-2005 National Confidential Enquiry into Maternal and Child Health reported that 'Psychiatric disorder and depression are common during pregnancy and following birth. Ten per cent of new mothers are likely to develop depression in the year following childbirth, of whom between a third and a half will be suffering from a severe depressive illness. A particularly severe form of mental illness, puerperal psychosis will occur in 2 per thousand births. Women with a history of serious mental illness have an increased risk of recurrence in the post natal period' (CEMACH 2007:173). Drawing on these data, the Department of Health, Social Services and Public Safety (DHSSPS) placed an emphasis on the perinatal period (pregnancy and first six months after birth) in its consultation document *Service Framework for Mental Health and Wellbeing* (DHSSPS 2011).

Parrott *et al.* (2008) have estimated that over one third of all UK adults with mental health problems are parents, and that two million children live in households where at least one parent has a mental health problem (p1). Of these parents, less than one quarter is in work. The authors go on to point out that the ‘potential stressors leading to parental mental health problems include a lack of money; breakdowns in valued relationships, bereavement, loss of control at work and long working hours’ (p1). These findings may provide some indication of the prevalence of parental mental health problems in Northern Ireland but, as identified in Chapter 3, there is a need for a high quality, large-scale prevalence study in Northern Ireland that would include identification of people who are parenting.

The need for intervention with parents who have mental health problems.

It is important to acknowledge that most parents with mental health problems do parent their children effectively (Parrott *et al.* 2008; Evans and Fowler 2008). Parental mental health problems do not always impact negatively on children’s health, development and wellbeing and a range of factors (e.g. access to treatment and support, the type of mental health problems and the social and economic circumstance of the family) may influence the nature and extent of any impact (Social Exclusion Unit 2004). In their evaluation of a service initiative to improve the interface between adult mental health and child care services in Northern Ireland, Davidson and colleagues (2010) summarised the rationale for addressing mental health as follows:

...mental health problems may impact on the development and safety of children in a wide range of ways that may combine and interact. There may also be a negative cycle of impact where the affected child may then have emotional and behavioural needs that may increase the stress of parenting and so have a detrimental effect on the parent/s’s mental health. The mechanisms ... can be both direct and indirect (Manning and Gregoire 2006; Social Exclusion Unit 2004).The direct effects may include genetic factors, prenatal development and exposure to their parent/s’ mental health problems after birth, which may impact on attachment and development. The indirect effects may include socio-economic deprivation, exposure to related issues such as substance misuse, relationship conflict and domestic violence, and additional caring responsibilities. It has been estimated that 29 per cent of young carers are looking after a family member with mental health problems (Dearden and Becker 2004) and it is important to acknowledge the possible complexities and dynamics involved (Aldridge and Becker 2003) The stigma associated with mental health problems may also be an important factor for parents, children and professionals as it may affect many aspects of how people think of and behave towards themselves, others and services (Sartorius 2007). (p3).

Obviously, affected children are also more likely to have mental health problems in adulthood. As long ago as 1995, a major finding from the overview report *Child Protection: Messages from Research* (Department of Health 1995) was the high levels of parental mental health problems, alcohol and drug misuse, and domestic violence in families of children who become involved in the child protection system. Cleaver *et al.* (1999) reported that parental mental health problems may combine and interact with a range of other factors, especially substance misuse and domestic violence, to create multiple and cumulative adversities that are associated with a range of negative outcomes for children.

Concerns about the impact of parental mental health problems on children have been reinforced by the repeated finding that parental mental health problems have been a feature of cases in which

children have sustained serious injury or been killed. Falkov's (1996) study of serious case reviews found that in a third of cases, the parent/s had mental health problems. Sinclair and Bullock (2002) found that in 18/40 serious case reviews (45%) at least one parent had mental health problems. Kearney *et al.* (2003) interviewed child care social workers who estimated that between that between 50 and 90 per cent of parents they were working with had mental health problems, or alcohol or substance misuse problems (Davidson *et al.* 2010). Recent overviews of Serious Case Reviews in England report similar findings (Brandon *et al.* 2008; 2009).

Northern Ireland policy and service context

In Northern Ireland, the need to provide effective interventions for parents with mental health problems has been reinforced by recent inspection and inquiry reports (Independent Inquiry Panel to the Western and Eastern Health and Social Services Boards (O'Neill Inquiry), 2008; Social Services Inspectorate (SSI) 2006). There have been two major developments in recent years to attempt to improve the services provided to this group. The first is that Northern Ireland is one of the pilot sites for the implementation of Social Care Institute of Excellence (SCIE)'s (2009) *Think Child, Think Parent, Think Family* guidance, which is aimed at improving outcomes for parents with mental health problems and their families. This work is being carried out by the Mental Health and Children's Services Project, was set up in April 2009, and is overseen by the Health and Social Care Board. The Project is working with all of the Trusts to implement SCIE's priority recommendations across nine areas: signposting and improving access to services; screening; assessment; planning care; providing care; reviewing care plans; strategic approach; workforce development; and notably in the context of this rapid review – generating more evidence about what works. The focus, so far, has been on the first three priority recommendations, but it may be important to consider how evidence could be generated as part of the implementation process to help inform consideration of the impact of the service developments. The Project has also developed some performance measures that could facilitate evaluation, but the data that is routinely collected at present is insufficient to enable this.

The second development is that the *Service Framework for Mental Health and Wellbeing* (DHSSPS 2011) currently proposes that 'All women presenting to maternity service should be asked about past or present mental illness and treatment including at their first contact visit with primary care, the booking visit, the 3rd trimester visit, during the post-natal contact period between 6-10 weeks and up to 1 year postnatal. Where appropriate, they should be referred to specialist mental health services that include access to psychological interventions, additional health visitor support and inpatient care as appropriate and in accordance with NICE guidelines' (Standard 45, p173). This possible service development may present further opportunities to develop the evidence base in Northern Ireland.

Results of the search

The search strategy identified 838 records, of which 80 were duplicates, leaving 758. Of the 758 remaining citations, 739 were judged irrelevant, as they were not directly concerned with reviewing interventions to help parents provide good enough parenting. Amongst these were papers that focused on: the impact on children of parental mental health problems; interventions aimed at supporting children of parents with mental health problems; primary research on specific initiatives and interventions; and research on interventions to address mental health

problems or parenting. A further six reviews were identified through Google and Google Scholar keyword searches, and so a total of 25 were considered in further detail.

Of the 25, 11 met the inclusion criteria and these are listed in Box 14. 14 papers were excluded and Table 14.3 sets out the reasons for their exclusion.

Box 14: Inclusion Criteria – Interventions to help parents with mental illness parent their children.

Population: PARENTS WITH MENTAL HEALTH PROBLEMS

Intervention: ANY INTERVENTION THAT AIMS TO SUPPORT PARENTING

Comparison: ANY COMPARISON

Outcome: ABILITY TO PROVIDE GOOD ENOUGH PARENTING

Included reviews

Table 14.1 sets out the characteristics of included reviews. The coverage of the included reviews seems comprehensive, in terms of settings and interventions. There are a number of important gaps in the research, as discussed below.

Quality of reviews

The included reviews appeared to be generally very clear and rigorous (see Table 14.2). Only two reviews undertook meta-analyses. There seemed to be some differences in what was meant by excluded studies – in some of the reviews this referred to all studies that were identified in the search and not included. In these cases, the excluded studies tended not to be listed.

Findings

The main recurring finding is summarised by Barlow and colleagues (Barlow *et al.* 2008; 2010):

There is a lack of high-quality, particularly UK-based, research about the effectiveness of interventions delivered during the postnatal period in supporting parenting to promote optimal outcomes for children. (Barlow *et al.* 2008:26).

The review by Barlow and her colleagues covered a very wide range of interventions, and the authors draw some tentative conclusions about possible directions based on the available evidence. They conclude that the evidence suggests that the *focus* of support shortly before and after birth (perinatal support) should be the parent-infant relationship, including both mothers and fathers. They suggest a range of ‘stepped services’ are needed and conclude:

There is indicative evidence to support the use of a range of innovative and dyadic methods of supporting the parent-infant relationship such as video-feedback; infant massage; methods of increasing the parents awareness of the infants perceptual and sensory capabilities; parent infant psychotherapy. Many of these techniques (e.g. skin-to-skin care; infant carriers; anticipatory guidance etc) should be part of the *routine guidance* that is offered to parents... Targeting of services should as far as is possible be undertaken within the context of universal provision. Promotional interviews

provide an exemplar of the type of strategy that staff could use to identify families in need of further support...Primary care practitioners (particularly midwives and health visitors) should be routinely and universally assessing for 'deep-seated' problems such drug-abuse and domestic abuse. (Barlow *et al.* 2008.:26)

The review by Parker *et al.* (2009; see also 2008) confirmed the dearth of relevant evidence and concluded that there were 'no secure messages ... about which interventions or ways of providing services would best support parents with mental health problems and their children' (p20). They recommend investment in high quality interventions and service development, with similarly good quality evaluations of their effects (p20). They also highlight the potential of a simple screening tool, which had been used to identify mental health problems amongst parents in healthcare settings in the USA (Olsen *et al.* 2006). The screening tool appeared to be acceptable to parents, and it served as a prompt to professionals to discuss issues with those parents identified as having a problem, and refer them for specialist support. They conclude that such this tool could usefully be evaluated in the context of a range of UK healthcare settings to see if the apparent benefits were generalisable (pp19-20).

Table 14.2: AMSTAR ratings – reviews of interventions to help parents with mental illness parent their children

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Barlow <i>et al.</i> 2008	Y	Y	Y	CA	Y	Y	Y	Y	N/A	N	N
Bates and Coren, 2006	Y	Y	Y	CA	Y	Y	Y	Y	N/A	N	N
Boyd and Gillham, 2009	Y	Y	Y	N	Y	Y	Y	Y	N/A	N	N
Dennis and Allen, 2008	Y	Y	Y	Y	Y	Y	Y	Y	Y	CA	Y
Dennis <i>et al.</i> 2007	Y	Y	Y	Y	Y	Y	Y	Y	Y	CA	Y
Irving and Saylan, 2007	Y	Y	Y	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A
Maybery and Reupert, 2009	Y	Y	Y	Y	N	N	Y	Y	N/A	N	N
Parker <i>et al.</i> 2009	Y	Y	Y	Y	Y	Y	Y	Y	N/A	CA	N
Shaw <i>et al.</i> 2006	Y	Y	Y	Y	Y	Y	Y	Y	N/A	CA	N
Wan <i>et al.</i> 2008	Y	CA	Y	N	Y	Y	Y	Y	N/A	N	N
Yuen and Toumbourou, 2008	Y	CA	Y	N	Y	Y	N	N	N/A	N	N

Two possible interventions were also suggested for further exploration. The first was a Finnish intervention provided to all parents being treated for mental health problems – the *Effective Family Programme*. The authors suggest this as a possible way of implementing system wide intervention (Boyd and Gillham 2009). The other was an evaluation by the Family Welfare

Association (Morris 2007), which was highlighted by Parker *et al.* (2009) because ‘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 parents with mental health problems and their families would help to transform the evidence base in this under-researched area’ (Parker *et al.* 2009, pp20-21). It would certainly be a leap forward if evaluation was routinely included in all new service developments and interventions.

Implications for practice and gaps in research

As well as the general need for high quality research on interventions to support parents with mental health problems, the reviews identified a number of gaps in the research which provide direction for future studies in Northern Ireland. Parker *et al.* (2009), building on Bates and Coren (2006), identified five major questions:

- Are the experiences and needs of fathers with mental health problems different? The literature is dominated by research on mothers or undefined ‘parents’, who are usually mothers.
- Are the experiences and needs of parents with mental health problems from BME communities different from those of parents with mental health problems 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 parents with mental health problems and their families?
- How can service providers ensure that their services are what parents with mental health problems and their families want and, when they are what they want, that they are able to use the support that is on offer?

In light of the current developments in Northern Ireland and informed by the findings of this rapid review, some possible research priorities for the Northern Ireland context could be:

- There is a clear need, as identified in Chapter 3, for the prevalence of parental mental health problems in Northern Ireland to be identified.
- If the Service Framework for Mental Health and Wellbeing is to introduce a screening tool, there is an immediate need for possible tools to be piloted and their effectiveness evaluated (Parker *et al.* 2009; see also Yelland *et al.* 2009 in the excluded studies).
- As highlighted by Parker *et al.* (2009) an important contribution to developing the evidence in this area would be to build in evaluation studies from the beginning. This, therefore, could be considered as part of the ongoing work of the Mental Health and Children’s Services Project, as it works through the implementation of SCIE’s (2009) guidance.
- The current focus on this area may also provide opportunities for high quality research on specific interventions, and the review offers a wide range of promising possibilities.
- As is highlighted above there is a major gap in the international literature on the experiences and needs of fathers with mental health problems, as the focus is usually on mothers, and particularly mothers with depression. This might be an area Northern Ireland could lead on.

Table 14.1: Systematic reviews of interventions for parents with mental health problems

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To identify effective health-led interventions to support parents, parenting and the parent-infant relationship during the perinatal period and beyond	Barlow <i>et al.</i> 2008	<ul style="list-style-type: none"> • 39 systematic reviews • 2 reviews of reviews • 24 individual studies were included on expert advice <p>Wide range of types of study included from RCTs to qualitative</p>	Studies from many different countries included and interventions across a range of settings	Expectant mothers and fathers, and parents	<p>Reviews the evidence for a wide range of interventions used:</p> <ul style="list-style-type: none"> i) at various stages of parenthood from Preparation for Pregnancy through to support in early parenthood; ii) for parents in high risk groups, such as those experiencing domestic violence or with substance misuse problems; teenage parents iii) to assist parents with learning difficulties; iv) to support parents with particular challenges, such as child behaviour problems <p>Interventions reviewed include</p> <ul style="list-style-type: none"> i) information based interventions; ii) psychosocial interventions including home visiting; ii) a range of parenting classes, interventions to promote attachment and bonding, and iv) interventions designed to address a wide range of issues associated with promoting infant mental health and wellbeing, e.g. smoking cessation programmes, treating obesity. 	<p>There is a lack of high-quality research about the effectiveness of interventions delivered during the postnatal period in supporting parenting to promote optimal outcomes for children. Particularly so in the UK</p> <p>The evidence suggests that the <i>focus</i> of support that is provided to both mothers and fathers during the perinatal period should be the <i>parent-infant relationship</i>.</p> <p>A range of stepped services are required.</p> <p>There is indicative evidence to support the use of a range of innovative and dyadic methods of supporting the parent-infant relationship such as video-feedback; infant massage; methods of increasing the parents awareness of the infants perceptual and sensory capabilities; parent infant psychotherapy. Many of these techniques (e.g. skin-to-skin care; infant carriers; anticipatory guidance etc) should be part of the <i>routine guidance</i> that is offered to parents.</p> <p>Targeting of services should as far as is possible be undertaken within the context of universal provision. Promotional interviews provide an exemplar of the type of strategy that staff could use to identify families in need of further support.</p> <p>Primary care practitioners (particularly midwives and health visitors) should be routinely and universally assessing for 'deep-seated' problems such drug-abuse and domestic abuse.</p> <p>There is an urgent need for further research in a number of areas:</p> <ul style="list-style-type: none"> • The best methods of providing antenatal preparation for childbirth and the transition to parenting; • Best methods of supporting fathers; • Methods of supporting alcohol and drug abusing parents, and parents with serious mental health problems during pregnancy.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
<p>To provide an overview of research on:</p> <ul style="list-style-type: none"> • The extent and detection of parental mental health problems (PMHP) in the UK • The impact of PMHP on the wider family • The accessibility, acceptability and effectiveness of available /potential interventions for parents with mental health problems. 	Bates and Coren 2006	<ul style="list-style-type: none"> • 754 studies included • Wide range of methods including survey methods (192), case control design (130), non-systematic reviews (100), cohort studies (74) and systematic reviews (15). 	Wide range of countries and settings but largest numbers from USA and UK.	Wide range of participants included	The largest category of intervention types in the map are parent training and programmes, followed by interventions focused on education, social support and counseling.	<p>A number of gaps have been identified in this mapping exercise.</p> <p>Firstly, there were few studies in the map that focused on male participants only – a gap in the primary research that should be considered in future primary research commissioning.</p> <p>Another example is the lack of systematic reviews that specifically consider the accessibility of interventions.</p> <p>There also appeared to be more available literature on depressive illness than on other disorders, indicating further potential gaps in the evidence base.</p> <p>Furthermore, there are few studies in the map coded as employment advice, housing or financial advice. This may also reflect a gap in the research literature in relation to the effectiveness, accessibility or acceptability of these interventions.</p>
To review interventions for parental depression from toddlerhood to adolescence	Boyd and Gillham 2009	<ul style="list-style-type: none"> • 19 studies included • Had to have a control or comparison group 	15 x USA 1 x UK 1 x Canada 1 x Australia 1 x Korea	Children aged 18 months to 18 years and parents with a depressive disorder or elevated depressive symptoms	<ul style="list-style-type: none"> • Toddler-Parent Psychotherapy • Group CBT • Cognitive-behavioural family intervention • Parenting Psychoeducation group • Preventive Intervention Project • Cognitive-Behavioural Group Therapy • Interpersonal Psychotherapy for Depressed Mothers • Coping with Depression 	<p>Therapy for adult depression can be expanded to focus on parenting experiences. The importance of educating families with parental depression about depression and its impact on children is highlighted.</p> <p>Interventions that teach behavioural parenting techniques may also be helpful. Although the findings from existing studies are promising, it is too early to draw conclusions about the effectiveness of interventions that are designed to promote well-being in children of depressed parents.</p> <p>A Finnish intervention called Effective Family Programme which is provided to all parents being treated for mental health problems is mentioned as a possible way of implementing intervention.</p>

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To assess the effects, on mothers and their families, of non-pharmacological / psychosocial / psychological interventions compared with usual ante partum care in the treatment of antenatal depression.	Dennis and Allen, 2008	• 1 RCT	1 x USA	54 pregnant women with depression	<ul style="list-style-type: none"> • Maternal massage • Acupuncture specifically treating symptoms of depression 	The evidence is inconclusive to allow us to make any recommendations for massage therapy or depression-specific acupuncture for the treatment of antenatal depression. The included trial was too small with a non-generalisable sample, to make any recommendations.
To assess the effects, on mothers and their families, of psychosocial and psychological interventions, compared with usual ante partum care in the treatment of antenatal depression	Dennis <i>et al.</i> 2007	• 1 RCT	1 x USA	38 pregnant women with depression	<ul style="list-style-type: none"> • Interpersonal psychotherapy 	<p>The evidence is inconclusive to allow us to make any recommendations for interpersonal psychotherapy for the treatment of antenatal depression. The one trial included was too small, with a non-generalisable sample, to make any recommendations.</p> <p>It is remarkable that only one psychological or psychosocial trial of antenatal depression was of adequate quality to be included in this review.</p> <p>The treatment of antenatal depression using psychosocial and psychological interventions is an area that has been neglected, despite the research clearly indicating that antenatal depression is a strong risk factor for postpartum depression.</p>

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To review the effects of mother and baby units for mothers with schizophrenia or psychoses needing admission during the first year after giving birth, and their children, in comparison to standard care on a ward without a mother and baby unit.	Irving and Saylan, 2007	<ul style="list-style-type: none"> • None 	N/A	N/A	<ul style="list-style-type: none"> • N/A 	Mother and bay units are reportedly common in the UK but less common in other countries and rare or non-existent in the developing world. However, there does not appear to be any trial-based evidence for the effectiveness of these units. This lack of data is of concern as descriptive studies have found poor outcomes such as anxious attachment and poor development for children of mothers with schizophrenia and a greater risk of the children being placed under supervised or foster care. Effective care of both mothers and babies during this critical time may be crucial to prevent poor clinical and parenting outcomes. Good, relevant research is urgently needed.
To summarize the constraining barriers and issues for the psychiatric workforce according to: i) policy and management; ii) interagency collaboration; iii) worker attitude, skill and knowledge; iv) parent-consumer; v) the consumer's family, including children.	Maybery and Reupert, 2009	<ul style="list-style-type: none"> • 28 studies • Broad inclusion criteria, qualitative and quantitative included 	Australia, Denmark, Finland, Germany, Greece, Sweden, the UK and the USA	Children, parents and professionals	<ul style="list-style-type: none"> • Focus on barriers to intervention 	<p>For the psychiatric workforce to become family focused (particularly in relation to children) there is a clear need for family sensitive policies and procedures, managerial and organizational support and well-targeted and sustained workforce training.</p> <p>However, there are multiple barriers to the adult mental health workforce becoming family focused including:</p> <ul style="list-style-type: none"> • Some adult mental health services do not identify consumers who are parents and subsequently do not respond to children, parenting and family needs. • Organizations often do not have adequate family and child friendly policies and procedures. • The adult mental health workforce lacks skills and knowledge about families, children and parenting. • The workforce needs to increase encouragement of consumers to include family members and dependent children in treatment of the ill parent including the provision of psycho-education.

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
<p>Four questions:</p> <p>1. What do we know about the numbers and types of parental mental health problems (PMHP) in the UK?</p> <p>2. What systems, tools and opportunities are there for detecting PMH problems?</p> <p>3. How accessible and acceptable are services or interventions for parents with MHPs and their children?</p> <p>4. What are the outcomes of services or interventions intended to support parents with MHP and their families?</p>	Parker <i>et al.</i> 2009	<ul style="list-style-type: none"> • Question 1 (n=39) • Question 2 (n=24) • Question 3 (n=68) • Question 4 (n=40) <p>Range of types of study</p>	Q: 1 – UK Q: 2-4 - International	Range of participants	<ul style="list-style-type: none"> • Q:1 – national surveys and surveys of sub-populations • Q: 2 – identification of parental mental health problems • Q: 3 – factors associated with access and engagement • Q: 4 – CBT, depressive symptom intervention, parenting programme, interpersonal psychotherapy 	<p>A very simple screening tool for identifying mental health problems among parents in healthcare 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 healthcare settings in the UK that parents and children use to see if it has similar effects.</p> <p>Those who work with parents and families in poor socio-economic conditions should be aware that they are likely to be dealing with a higher than average proportion of parents with mental health problems. However, 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 mental health problems clinically.</p> <p>Both parents with mental health problems and their children can be anxious about the likely consequences of identifying themselves to professionals.</p> <p>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, no research evidence was found about such models of service delivery and their outcomes.</p> <p>Overall, there were no secure messages from the review about which interventions or ways of providing services would best support parents with mental health problems 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.</p>

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To examine the published evidence of the effectiveness of postpartum support programs to improve maternal knowledge, attitudes, and parenting skills and maternal mental and physical health, and quality of life.	Shaw <i>et al.</i> 2006	<ul style="list-style-type: none"> • 22 studies • RCTs 	7 x USA 5 x Canada 5 x Australia 4 x UK 1 x Ireland	Post natal women from immediately after birth to one year	<ul style="list-style-type: none"> • Home visits • Pediatrician visits • Phone follow-up • Debriefing after birth • Education 	<p>No randomized controlled trial evidence was found to endorse universal provision of postpartum support to improve parenting, maternal mental health, maternal quality of life, or maternal physical health.</p> <p>There is some evidence that high-risk populations may benefit from postpartum support.</p>
To evaluate empirical studies that attempted to improve observed mother-infant relationships in order to inform a potential approach for mothers with schizophrenia.	Wan <i>et al.</i> 2008	<ul style="list-style-type: none"> • 9 studies • Only empirical evaluations included 	5 x USA 3 x UK 1 x Canada	Mothers with depression (8 studies) Mothers with eating disorders (1 study)	<ul style="list-style-type: none"> • Toddler-parent psychotherapy • Mother-infant therapy • Vocational/social rehabilitation and 'mood induction' • Social support group • Nurse home visits • Range of therapies • Massage • Video feedback 	<p>Overall, approaches that emphasise the mother-child dyad, such as sensitivity-focused behavioural techniques and toddler-parent psychotherapy, were most efficacious for improving maternal sensitivity/child attachment.</p> <p>Although individual psychological therapies are the more conventional treatment, little current evidence suggests that mother-infant relations improve with symptom reduction.</p>
To identify whether individual and group family interventions for adolescent substance abuse enhance the mental health of other family members. .	Yuen and Toumbourou, 2008	<ul style="list-style-type: none"> • 9 studies • 6 quantitative • 3 mixed methods/qualitative 	CA	Parents and other family members	<ul style="list-style-type: none"> • Family interventions 	<p>The available literature suggests that a number of determinants of family mental health may potentially be impacted through family intervention for adolescent substance abuse. However, definite conclusions cannot be made at this point as the literature is mostly descriptive and there have been few longitudinal studies or randomized controlled trials.</p>

Table 14.3: Excluded Studies – Interventions for Parents with Mental Health Problems

Study	Reasons for Exclusion
Balaji <i>et al.</i> 2007	Not a systematic review. No search strategy reported. Presents a review of research on social support networks and maternal mental health which concluded that interventions that combine multiple treatment approaches may be more effective in addressing mental health and mothers with more supportive networks have better mental health outcomes.
Carter <i>et al.</i> 2010	Not a systematic review. No search strategy reported. Provides a review of literature on post-natal depression, relationship problems and relevant interventions. Then outlines a treatment manual for interpersonal psychotherapy to address post-natal depression.
Feinberg <i>et al.</i> 2006	Not a systematic review. No search strategy reported. Reviews interventions for screening and treating maternal depression in paediatric and other primary care settings.
Gentile and Bellantuono, 2009	A systematic review of the safety of specific anti-depressant medication during pregnancy in terms of foetal structural abnormalities rather than direct interventions to address parenting.
Parrott <i>et al.</i> 2008	Not a systematic review but a SCIE research briefing on stress and resilience factors in parents with mental health problems and their children. The focus is on the underlying factors relevant to stress and resilience and so interventions are not considered in depth but it is concluded that a multi-faceted and multi-level approach to building resilience through the provision of effective support for individuals, families and communities is needed.
Ranson and Urichuk, 2008	Not a systematic review. No search strategy reported. Provides a broad overview of studies that explore parent-child attachment and its influence on bio-psychosocial outcomes. It is therefore also not directly addressing interventions but does suggest that the literature on the impact of attachment issues suggests that further research should explore the potential of prevention and promotion interventions to provide education and support for parents.
Rothman, 2008	Not a systematic review. No search strategy reported. A practice focused article providing an overview of the management of depression in the postnatal period. It encourages professionals to identify antenatal and postnatal depression and to consider a wide range of treatment options including guided self-help, computerised cognitive behaviour therapy, exercise, non-directive counselling, brief behaviour or interpersonal therapy, group work, infant massage, diet and exercise.
Singleton, 2007	Not a systematic review, though it does provide a brief overview of the issues and some examples from Scotland and Australia of interventions to address parental mental health problems. It encourages support to be provided to the whole family.
Solari <i>et al.</i> 2009	Not a systematic review, no search strategy. Sets out a range of recommendations for non-pharmacological interventions for mothers with a diagnosis of schizophrenia. The interventions include: addressing pregnancy-specific symptoms, providing psycho-education and psychotherapy, assessing and supporting parenting capability, and assisting women with proactive family planning. The interventions to directly support parenting included parenting classes, parent support groups, co-parenting and parenting coaching.
Suppaseemanont, W.	Not a systematic review, no search strategy. Overview of interventions to treat depression during pregnancy. Concerns about the safety of anti-depressant medication for the foetus are considered.
Winklbaaur <i>et al.</i> 2008	Systematic review but the focus is on interventions for pregnant women dependent on opioids. There is some discussion of pharmacological treatment during pregnancy of the mental health problems that these women may have.
Yelland <i>et al.</i> 2009	Not a systematic review, no search strategy. Discussion of the National Perinatal Depression Plan in Australia which will introduce: routine screening for depression during pregnancy and 2 months after birth; follow-up support and care for women who are assessed to be at risk of or experiencing depression; and training for professionals to help them screen and assess. The article considers some of the debates and evidence about screening which may be relevant to the proposal in the Service Framework for Mental Health and Wellbeing (DHSSPS, 2011) to introduce routine screening in Northern Ireland.

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CHAPTER 15

Interventions for children of parents with mental health problems

The previous chapter examined interventions for parents with mental health problems. In this section, we report the results of four reviews of interventions aimed at supporting the children of parents with mental health problems. The focus is, therefore, on interventions that aim to improve outcomes for children in these circumstances. Given the close relationship between interventions for parents with mental health problems, and those developed directly or indirectly to support their children, some degree of overlap is inevitable.

Consequences for children of parents with mental health problems

Numerous studies have found that parents with mental health problems may experience significant challenges and barriers in providing stable and safe environments for their children, as a result both of their own illness and society's response to people with mental health problems (Mowbray *et al.* 2000). Four decades of research has established that children of parents with mental health problems are at increased risk of developing mental health problems themselves (Rutter 1966). It is of concern that this association has remained relatively unchanged over this period. More recently, Nicholson *et al.* (2008) showed that poor developmental outcomes are four to six times more likely for children of parents with mental health problems. Furthermore, Gunlicks *et al.* (2008) indicated that children of depressed parents, compared with those of non-depressed parents, are more likely to develop psychiatric illness, including depression, anxiety, and externalising disorders. They are also at increased risk for social, cognitive, and medical difficulties. These risks may be genetic, or related to the consequences of the illness with respect to parenting, or to marital and social difficulties (Beardslee *et al.* 1998).

The need for interventions with children of parents with mental health problems

These negative patterns of intergenerational transmission of mental health difficulties are of concern. Epidemiological studies have shown that almost one in four families have, or have had, at least one parent with a mental health problem (Kessler *et al.* 2005; Maybery *et al.* 2009), with over two million children in England and Wales living with parents or carers with mental health problems (Gould 2006). Furthermore, 50% of adults who access mental health services are parents with dependent children (Seeman and Gopfert 2004). The World Health Organisation data indicate that, by 2020, depression will be the most prominent disorder after heart disease (Pretis and Dimova 2008) Thus, as Maybery and Reupert (2009, p785) argue, 'Given the prevalence and associated risk for children whose parents have a mental illness, it is essential to develop appropriate preventative interventions for such families'.

Northern Ireland policy and service context

The Northern Ireland policy and service context for children of parents with mental health problems is addressed sufficiently in the previous chapter.

Results of the search

The search strategy identified 149 records, of which four were duplicates. Of the 145 publications cited, 129 were judged irrelevant as they were not concerned with the children of parents with mental health problems, or the parents themselves. 17 publications were judged to be relevant. A further six reviews were identified through Google Scholar keyword searches, giving a total of 21 publications considered in detail. Of the 21, 4 met the inclusion criteria listed in Box 15. 17 publications were excluded, and Table 15.3 specifies the reasons for their exclusion.

Box 15: Inclusion criteria – interventions for children of parents with mental health problems

POPULATION: children of parents with mental health problems

INTERVENTION: any intervention that aims to support children

COMPARISON: any comparison

OUTCOME: ability to withstand negative impact of parental mental health problems

Included reviews

Table 15.1 sets out the characteristics of included reviews. All four are concerned with the relationship between parental mental health problems and children well-being. However, only one of the reviews was focused upon intervention programmes for children of parents with mental health problems, the remaining three examined this issue indirectly, by looking at interventions at the parental level that would help their children.

Quality of reviews

Although a comprehensive search strategy was employed, only one systematic review was identified (Gunlicks and Weisman 2008), highlighting the need for further systematic review in this area. In order to ensure adequate coverage of relevant literature, the inclusion criteria were further relaxed to capture any reviews of research in which a search strategy had been specified. On this basis, a further three reviews were identified (Blewett *et al.* 2011; Fraser *et al.* 2006, and Maybery and Reupert 2009). We use the AMSTAR rating system to reflect the limitations of these additional reviews. Only one of the included sources was a systematic review. Consequently, AMSTAR ratings were only moderate. However, in all instances a search strategy had been specified, and several other AMSTAR dimensions were present.

Table 15.1: Reviews of interventions to support the children of parents with mental health problems

Objective	Author/Year	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
To review what works in improving the safety, health and wellbeing of children and young people through improving the physical and mental health of mothers, fathers and carers.	Blewett <i>et al.</i> 2011	54 articles, including: <ul style="list-style-type: none"> • literature reviews/evidence syntheses • empirical research • practice guides No details provided	Authors comment that over half the articles were from England or Australia. No indication is given of the setting for the remaining articles.	Not specified. Assumed to be parents with mental health problems and their children under their age of 18.	<ul style="list-style-type: none"> • Home-Start • FNP¹¹ • Intensive Family Interventions • Think Family Pathfinders • First Parent • Mellow Parenting • Incredible Years • Positive Parenting • Parenting Matters • Building Bridges • AMASS 	As causal relationships are difficult to establish, it cannot be stated that negative outcomes for children of parents with mental health problems are inevitable, and care needs to be taken in assessing the impact on children. Both the characteristics and the parents and the children can play a role in determining outcomes.
To evaluate the quality of existing evidence from intervention programmes aimed at reducing risk of poor outcomes for children of parents with mental health problems.	Fraser <i>et al.</i> 2006	<ul style="list-style-type: none"> • 26 studies: • 12 RCTs • 8 pre-post test no comparison or control • 1 case control • 1 CCT • 1 interrupted time series • 3 not specified 	USA (18) Australia (4) UK (3) Israel (1)	All children and/or families affected by parental mental health problems.	<ul style="list-style-type: none"> • Psycho-education • Therapeutic intervention • Parenting skills • Child/adolescent peer and education support group • Residential program 	Practitioners should use a recognized theory in developing intervention programs, link program components to identified risk factors and select intervention components from across the public health spectrum, and incorporate greater inter-sectoral collaboration.
To systematically review evidence of associations between improvements in parents' depression and their children's psychopathology.	Gunlicks and Weismann 2008	<ul style="list-style-type: none"> • 10 studies: • 8 experimental studies • 2 open trials 	Not reported. Appears that 7 were from USA and 3 from UK	Children under 18	<ul style="list-style-type: none"> • IPT¹² • M-ITG (Mother-Infant therapy Group) • Supportive therapy • Psychodynamic therapy • CBT • Psychotherapy • Nondirective counselling 	More research is needed to examine the precise relationship between parental and child symptoms, the differential effect of treatment with psychotherapy versus medication, the effects of fathers' as well as mothers' symptomatic improvement and mediators of the relationship between parental improvement and psychopathology.
To summarise the constraining barriers and issues for the psychiatric workforce when attempting to assist children of parents with mental health problems.	Maybery and Reupert 2009	<ul style="list-style-type: none"> • 28 articles: • No description provided in relation to specific study type. 	Australia, Greece, Denmark, UK, USA, Germany Finland, Sweden. No indication of which studies conducted where.	All children and/or families responded to by the psychiatric workforce.	<ul style="list-style-type: none"> • Not specified. 	Need for organisational audits to identify the most pressing barriers that impede family sensitive practice.

¹¹ Family Nurse Partnership

¹² (Interpersonal Psychotherapy) Medication

Table 15.2 AMSTAR ratings for included studies

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Blewett <i>et al.</i> 2011	Y	N	Y	N	N	N	Y	Y	N	N	N
Fraser <i>et al.</i> 2006	Y	N	Y	N	N	Y	Y	Y	N	N	N
Gunlicks and Weissman 2008	Y	N	Y	Y	N	Y	Y	Y	N	N	N
Maybery and Reupert 2009	Y	Y	Y	N	N	N	N	N	N	N	N

Findings

As discussed above, only one of the included reviews was a systematic review of interventions (Gunlicks and Weissman 2008). AMSTAR ratings for this review were only moderate, so caution is needed when assessing the reliability of conclusions drawn. Similarly, the remaining reviews were not systematic in nature, and again, all findings and conclusions need to be balanced against the relatively low quality AMSTAR ratings obtained.

Fraser *et al.* (2006) indicated that there was very limited evidence of program effectiveness when assessing well-being or illness outcomes for a child, where a parent or parents has mental health problems. However, there was some evidence that for infants of depressed mothers, baby massage and toddler-parent psychotherapy can be effective. For non-depressed adolescents of depressed parents, group Cognitive Behavioural Therapy (CBT) was effective (but not effective for depressed adolescents of depressed parents). No evidence was found for the effectiveness of education sessions, home visits from nurses, interaction coaching sessions for mothers, counselling, CBT, or brief psychodynamic psychotherapy for children of parents with a serious mental illness, when the outcome measured was simply the absence of psychopathology in the child. However, there was some evidence of effective interventions when using surrogate markers of child psychological wellbeing. Infants gained weight and reduced stress, while maternal-child interaction improved, with baby massage and interaction coaching. Child understanding of parental mental illness increased following education sessions led by a clinician. Following home visits from Registered Nurses, mothers' depressive mood scores increased, daily stress levels reduced, and use of punitive parenting decreased. Counselling resulted in improved infant emotional and behavioural ratings, and more sensitive early mother-infant interactions. Critically though, there was no evidence that these surrogate markers resulted in improved mental health in children.

According to Gunlicks *et al.* (2008), there was some consistent evidence that reduction or remission of parental depressive symptoms was related to reduction in child symptoms, and that these child effects were maintained. They found that in five of the nine studies that they examined, where there had been an assessment of the psychopathology of children whose parents received treatment for depression, treatment was associated with improvements in child psychopathology, specifically the reduction in children's symptoms of emotional and behavioural problems, and psychiatric diagnoses. Six studies had focused upon children's psychosocial

outcomes, and five found that mothers' treatment was associated with child improvements. Treatment of maternal depression predicted better child academic functioning, global functioning, and enhanced mother-child relationships and interactions. However, no significant associations were found between treatment of maternal depression and cognitive development, attachment, temperament, and emotionality.

In their knowledge review of improving children's outcomes by supporting parental mental health, Blewett *et al.* (2011) found that services which combine direct support for children, but also work with their parents within a framework of flexible and tailored support, have been positively evaluated, both within the research-base literature, and also local practice. They found that the quality of the relationship between professionals and the families they supported was a crucial lever for change in a range of services, such as Home-Start and Family Nurse Partnerships. They also found that interventions aimed at reducing parental stress levels, in addition to working with the child, were positively associated with improvements in child behaviour.

Maybery and Reupert (2009) highlighted a number of barriers faced by the psychiatric workforce when working with families and children, where one or more parents have mental health problems. These are:

- the lack of policy and consistent guidelines to identify the parenting status of service users when they access psychiatric services;
- inadequate resource allocation for family-focused practice, including the provision of time, and having to deal with high client workloads;
- mental health workers feeling that they were unclear whether or not their role allowed them to support the children of their clients;
- outdated views of management that are resistant to family-focused interventions due to a belief that the family itself is a major cause of the problem; it may be deemed too costly to work with families;
- lack of liaison between service agencies;
- mental health workers may be concerned about the possible adverse impact on their relationship with their client if the issue of parenting is raised, with this threatening the therapeutic alliance, and
- the reluctance of parents sometimes to involve their children and other family members in treatment.

Implications for practice

A number of features of a family sensitive service were recommended by Maybery and Reupert (2009). These are: a process for identifying service users' children and for establishing relationships with family members (including children); an assessment of the parent, child, and family's basic needs; the provision of education about mental illness to each family member; a clear procedure for referral, and the provision of some form of specialised family approach, such as family therapy or a comprehensive psycho-educational approach. They also argued that greater account should be taken of the views of service users and their families, in identifying future directions for mental health workforce practice. Blewett *et al.* (2011) similarly argued that much health-related data fails to identify the fact that patients also have a role as parents. Consequently,

the needs of children in these families often remains invisible, and better data would facilitate better understanding of their needs.

Fraser *et al.* (2006) argued that while currently there is not a robust body of evidence to guide interventions for children of parents with mental health problems, improvements in current service delivery can be made. First, practitioners should use a recognised theory when developing interventions, and should link program components to identified risk factors for this target group. Second, intervention components should be selected from across the public health spectrum, and not remain focused on individual high-risk strategies. Third, this would require a broader range of agencies to be involved in addressing these needs, and the provision of additional training for mental health clinicians. Fourth, future programmes should be evaluated using rigorous methodological design, previously validated tools, and appropriate outcome measures, with the findings of such evaluations widely disseminated. Finally, a longer-term follow-up of participants would greatly enhance assessment of the benefits of interventions over time.

Although there is a positive association between early intervention and better outcomes, Blewett *et al.* (2011) argued that late intervention is better than no intervention at all. They also noted that although there is an association between parental mental health problems and children's safety, health and well-being, the exact mechanisms involved are only partially understood. Consequently, it cannot be stated that negative outcomes are inevitable, and care needs to be taken in assessing the impact on children of parental health difficulties. Both the characteristics of the parents and children themselves can play a role in determining outcomes.

Implications for research

In terms of future research, Gunlicks *et al.* (2008) noted that there are numerous efficacious treatments for adult depression, and that different parental treatments could have different effects on children. Consequently, they argue that a study of the direct comparison of treatment of parental depression with medication versus psychotherapy, which was of sufficient power to determine whether there are differential effects on children, would be of considerable interest and value. They also argue that there is a need for research on the effect on children of treating depressed fathers (with the vast majority of current research on parental depression focused upon the mother).

Excluded Studies – Interventions for children of parents with mental health problems

Study	Reasons for Exclusion
Barlow <i>et al.</i> 2010	A systematic review of health-led interventions to support parents, parenting and the parent-infant relationship during the perinatal period. No focus on interventions to support children of parents with mental health problems.
Bates and Coren 2006	A systematic map report of interventions dealing with the extent and impact of parental mental health problems on families. It includes extensive information on the methodological components of a systematic review, but does not present any of the findings from the studies included in the review, or discuss any possible conclusions or recommendations.
Diareme <i>et al.</i> 2007	Not a systematic review. A review of mental health supports for children of parents with somatic illness.
Duggan <i>et al.</i> 2007	Single study examination of the impact of a home visiting program to prevent child abuse.
Grant <i>et al.</i> 2008	Single study examination of assessment and support for young people supporting parents with mental health problems.
Knutsson <i>et al.</i> 2007	Single study investigation of the subjective experience of the children of parents with mental health problems, and their opinions concerning their previous contact with psychiatric services.
Korhonen <i>et al.</i> 2009	Not a systematic review. Main focus on the developmental process and psychometric testing of the preventive child-focused family work (PCF-FW) questionnaire in adult psychiatric settings.
Lewin and Abdrbo 2009	Single study examination of the characteristics of mothers with serious mental health problems and their children, who were involved with child protection services in a large metropolitan Midwestern city in the USA.
Mattejat and Renschmidt 2008	Selective literature review focused on issues facing the children of parents with mental health problems. No search strategy specified.
Mellin 2009	Not a systematic review. Book chapter focused upon self-esteem issues among children of parents with mental health problems.
Pretis and Dimova 2008	Traditional literature review of the improving resilience for children of parents with mental health problems. No search strategy specified.
Ranson and Urichuk 2008	Not a systematic review. A traditional literature review of the effect of parent-child attachment relationships on child biopsychosocial outcomes. No examination of interventions to support children of parents with mental health problems.
Riley <i>et al.</i> 2008	Evaluation of the Keeping Families Strong (KFS) program. No search strategy provided in relation to reviewed literature.
Shaw <i>et al.</i> 2006	A systematic review of the effectiveness of postpartum support to improve parenting, maternal mental health, maternal quality of life, and maternal physical health. Did not focus on issues for children.
Singleton	Not a systematic review. A summary review of parental mental health problems and the effects on children and their needs. Although briefly specified, with little detail, some useful commentary on interventions to support children in these circumstances.
Walsh 2008	Not a systematic review. A review focused on children's understanding of mental ill health. No focus on interventions to support children of parents with mental health problems.
Wanless <i>et al.</i> 2008	Traditional literature review of the relationship between parental depression and cognitive development. No search strategy specified.
Whitham <i>et al.</i> 2009	Not a systematic review. A web-based Delphi study focused on the development of a training resource for workers supporting families where parents experience mental health problems. No focus on interventions to support children in these circumstances.

Included studies

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SECTION F

**THE MENTAL HEALTH AND WELLBEING
OF THOSE
WITH COMPLEX NEEDS/
AUTISTIC SPECTRUM DISORDERS**

CHAPTER 16

Effective approaches for assertive outreach/intensive treatment/ day unit treatment for young people with complex needs

Background

Child and adolescent mental health inpatient units provide highly specialist intensive care and treatment to children and adolescents with the most severe and complex mental health problems, such as eating disorders, psychosis, and mood disorders (O’Herlihy *et al.* 2005). While inpatient treatment is generally effective, alternative treatment is sought for a number of reasons: inpatient care is expensive; there is a shortage of beds; and lack of local provision means children and young people are often placed in adult psychiatric wards (Department of Health 2004), or in specialized units, long distances from their families (Hewson 2002). Inpatient care may disrupt children and young people’s informal social support networks and their education, training or employment. There may be risks associated with inpatient care, such as increased dependency, stigma, discrimination and institutionalisation. For some young people, the trauma of admission may have adverse effects. Further, the difficulties in engaging young people in mental health services are well documented (Minty and Anderson 2004). Over recent decades, in line with WHO, European and UK policy, there has been a shift away from hospital-based treatment for mental health problems, to treatment in community settings. Various models of outreach and intensive community treatment have been implemented across the UK and internationally.

Models developed for adult mental health services include day provision, assertive community treatment, crisis resolution teams, and home treatment. Systematic reviews of such services suggest that they can be successful in reducing attrition (Irving *et al.* 2006; Marshall *et al.* 2008) and hospitalisation (Irving *et al.* 2006), and improving patient satisfaction (Marshall *et al.* 2008). While replicating such models of treatment in child and adolescent services is not adequate, they can be adapted to be developmentally appropriate for use in CAMHS. These alternative services may prevent young people developing a dependency on the hospital environment or being stigmatised. In addition, these services may facilitate the transfer of any therapeutic gains to the young person’s every day environment, thus maximising the potential for improved health outcomes to be sustained (Katz *et al.* 2004), and for educational attainments to be less severely affected (Milin *et al.* 2000).

Assertive outreach

Assertive outreach is the term used to describe mobile, multi-disciplinary teams that provide intensive care coordination to a relatively small cohort of consumers with complex needs, who require ongoing proactive and sustained support and treatment to remain living in the community. Over the past decade, assertive outreach approaches in adult mental health have made considerable inroads into services in the UK, including some developments in Northern Ireland. Teams are specifically aimed at people with a severe mental health problem and a variety of complex needs (e.g. alcohol abuse), who are described as ‘difficult to engage’. Key features of these teams include a mix of disciplines, low staff to client ratio, community-based services, 24-hour coverage, and time-unlimited service. Numerous research studies suggest that assertive outreach delivers better engagement with community services, higher client satisfaction, improvement in quality of life and social functioning, greater housing stability, some symptom

improvement, reduction in the number of hospital admissions, reduction in the time spent in hospital, reduced costs, and no increase in family burden (see Wood and Carr 1998).

In Northern Ireland, 'early intervention' teams or services for children and young people may be based on an assertive outreach model or approach.

The National Service Framework addressed the problem of non-engagement with mental health services with a review of the effectiveness of specialist services. It recommended assertive outreach or assertive community treatment as an appropriate method of providing services to people who do not engage with treatment plans on discharge from hospital. Assertive outreach workers hold smaller caseloads than other mental health professionals in community mental health teams, and visit their clients at home more frequently. They help their clients to maintain their tenancies, secure an adequate income, sustain daily living skills, and adhere to treatment plans to help them to maintain their mental health and develop their independence. Social workers are key members of assertive outreach teams, as they have expertise in working flexibly to assess and meet needs to people within their own homes.

The Bamford Review

The Bamford review makes recommendations for assertive outreach, which could be delivered by collaboration between Tier 4 and Tier 3 services in conjunction with other agencies. It can take place in an inpatient setting or exclusively as an outpatient assertive outreach model, or in conjunction with day unit provision, but day units are more readily applicable to urban populations than to scattered rural populations, because of distances of travel involved in the latter case (section 6.14). Intensive treatment can be developed as a result of collaboration between CAMHS and social services or education or both. This can be achieved through joint work between Tier 2/3 and Tier 4 CAMHS, or by collaboration between CAMHS and paediatrics, or CAMHS and adult mental health. In order to function effectively, there needs to be close links with, and support from, adequately resourced Tier 2/3 specialist CAMHS teams, as well as age appropriate Tier 4 inpatient beds for children and adolescents (section 6.15).

Compared to the rest of the UK, Northern Ireland has higher levels of socio-economic deprivation and higher levels of psychiatric morbidity in the adult population, which would suggest that the prevalence of mental health problems is higher among young people here. The Bamford Review reported that there was insufficient capacity in existing CAMH teams to provide the type of Tier 4 assertive outreach and crisis intervention services that were currently operational in England and Wales (section 3.19). Models of assertive outreach/intensive treatment/day unit treatment for young people with complex needs should be developed and implemented by commissioners and providers as a priority (section 6.15).

Search strategy

Comprehensive searches were conducted in Medline and PsycInfo, as well as the Cochrane Library and the EPPI database. Only English language articles were included, as time restrictions precluded use of translation services.

Inclusion criteria

For a review to be considered systematic, the authors must have searched at least two electronic databases and included either their search strategy or terms used in the searches. Inclusion criteria are set out in Box 16. The results from the searches were initially screened for relevance on the basis of their titles and abstracts, using broad criteria that were intended to be overly inclusive. Full texts of potentially relevant reviews were then retrieved, and the aims and methods sections were reviewed to determine if they did in fact meet the inclusion criteria.

Box 16: Inclusion criteria – assertive outreach, intensive treatment and day units for young people with complex needs.

POPULATION: young people with complex needs

INTERVENTION: any intervention described as assertive outreach/intensive treatment or day unit treatment interventions

COMPARISON: any comparison

OUTCOME: improvements in mental health

Results of the search

The search strategy identified 109 records, however only one suitable systematic review was identified (Shepperd *et al.* 2008). Two further systematic reviews were identified (Bender *et al.* 2006; Bird *et al.* 2010), but on reading the full text, they were deemed unsuitable. Bender *et al.* (2006) did not include assertive outreach/intensive treatment or day unit treatment in their systematic review, while in the review by Bird *et al.* (2010), the focus was not exclusively on young people, and not enough detail on participant characteristics were provide in order to separate out relevant results. Due to the lack of systematic reviews in this area, other publications that described, evaluated or reviewed relevant models of intervention were screened for relevance, and are detailed below.

Quality of reviews

Table 16.1 profiles Shepperd *et al.* (2008) against the AMSTAR criteria. The review was undertaken within the Cochrane framework and was of high quality.

Table 16.1 AMSTAR ratings – study of alternatives to inpatient mental health services

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Shepperd <i>et al.</i> 2008	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y ¹³

¹³ One of the authors of the systematic review is the principal investigator on one of the included trials.

Findings

The systematic review and mapping study conducted by Shepperd *et al.* (2008) had two aims: firstly, to identify and assess the effectiveness of the alternatives to inpatient mental health services for children and young people; and secondly, to identify the range and prevalence of different models of service that seeks to avoid inpatient care for children and young people in the UK. The review included a total of 58 studies, made up of seven RCTs, six non-randomised controlled studies, four pre-post test studies with a comparison group, and 41 descriptive studies. These studies described eight distinct models of care, five of which are the most pertinent to the present review area; multi-systemic therapy (MST) at home, day hospital, case management, intensive outpatient services, and home-based psychiatric treatment. Other interventions included were family preservation services, therapeutic foster care, and services provided in residential care.

Multi-systemic Therapy (MST) at Home is described by Shepperd *et al.* as ‘an intensive, short-term ecological-orientated therapeutic approach that targets individual, family and community factors contributing to youth psychopathology. MST practitioners work with each young person, their family and community associates in identify the determinants of the youth’s problems and develop behavioural management techniques. They are also involved in mobilising the problem solving skills of the youth and their families to prevent relapse.’

Two RCTs, both from the US, evaluated MST at home (one study reported in two papers - Henggeler *et al.* 1999 and Schoenwald *et al.* 2000; Rowland *et al.* 2005). The therapeutic approach is family-centred, ecological orientated therapy targeting individual, family, peer and environmental aspects of psychopathology in the community. While treatment follows a standard protocol, the intensity is based on the needs of the young person and their family. Therapies include family therapy, behavioural therapy, and cognitive behavioural therapy, and include developing aftercare plans and comprehensive crisis care plans, focusing on mobilising the problem-solving skills within the family and community. The service is available 24-hours a day, seven days a week. Therapists work with the young people in their homes, and maintain service provision if hospitalisation is required. The review found that young people receiving home based MST experienced some improved functioning in terms of externalising symptoms, they spent less days out of school and in out of home placement. At short-term follow up, the control group had a greater improvement in terms of adaptability and cohesion, but this was not sustained at four months follow-up.

Intensive Home Treatment was evaluated in two RCTs (Mattejat *et al.* 2001; Winsberg *et al.* 1980) and two non-randomised comparison studies (Sherman *et al.* 1988; Schmidt *et al.* 2006). Using a child- and family-centred approach, home treatment is used when family dynamics are a significant factor, and is based on ecological theories from family systems using systemic developmental models of symptomatic behaviour, together with family-centred problem-solving approaches. Treatment goals are agreed with the family and can include reducing aggressive behaviour and other maladaptive behaviour and increasing pro-social behaviours, control of school truancy and supervision of school tasks. Specific interventions are arranged on the basis of individual and family need, and intensity and duration of intervention can vary. The review found that no differences at follow-up were reported between inpatient and home treated children from the two RCTs. One non-randomised study reported a greater improvement in symptoms.

Intensive outpatient services are multi-disciplinary in nature, usually including psychiatrists, social workers, psychiatric nurses, and psychologists. They cover a wide range of psychotherapeutic approaches, and typically offer services for a greater duration and intensity than generic services. These can include crisis intervention services that offer a rapid response for the purpose of assessment, stabilisation and follow-up planning of care needs (Sheppard *et al.* 2008). A variety of these specialist, intensive outpatient services, are provided for high-risk children considered too vulnerable for management in generic outpatient clinics. While home-based treatment assigns one therapist to a young person, families usually have input from multiple professionals.

The effectiveness of such services have been evaluated in two randomised controlled trials, one in the US (Silberstein *et al.* 1968) and one in the UK (Byford *et al.* 2007), and by three non-randomised studies which used a comparison group. Of the last three one was conducted in the US (Blumberg *et al.* 2002) and two in Canada (Greenfield *et al.* 1995 and Greenfield 2002). Silberstein *et al.* (1968) described an intensive parental counselling programme involving weekly therapy sessions in behavioural management, combined with medication for children with emotional and behavioural disorders. The UK study examined specialist outpatient clinics for the treatment of anorexia nervosa in the UK, which included cognitive behavioural therapy, parental counselling, dietary therapy and multi-modal feedback on weight management (Byford *et al.* 2007). Sheppard *et al.* (2008) include in their review a UK based outreach service that provides continuity of care for young people with anorexia nervosa, and is described by Jaffa *et al.* (2004). The service engages with patients and their families in their homes and at CAMHS outpatient clinics. A rapid-response, intensive crisis management service for suicidal youth is offered by outpatient clinics, and aims to identify the nature of the psychiatric crisis, explore precipitating events, look at individual strengths and weaknesses and work with the young person's support system (Greenfield *et al.* 2002; Blumberg *et al.* 2002; Greenfield *et al.* 1995; Gillig *et al.* 2004; Ruffin *et al.* 1993). Treatment aims to reframe misconceptions, maladaptive behaviours and poor communication patterns that affect the youth or their family. No differences were reported at follow-up for those receiving intensive outpatient services compared with inpatient care for behavioural or psychological outcomes.

Table 16.2: Systematic reviews of assertive outreach/intensive treatment/day unit treatment interventions

Author/Year	Objective	Number /type of study included	Setting	Participants	Interventions	Authors' Conclusions
Shepperd <i>et al.</i> 2008	To identify, by systematic review, the different organizational structures and therapeutic approaches described in the literature as alternatives to inpatient mental health services for children and young people, and assess the evidence of effectiveness, acceptability and cost of these alternatives.	58 studies: <ul style="list-style-type: none"> • 7 RCTs • 6 non-randomised controlled studies • 4 pre-post test studies with a comparison group • 41 descriptive studies 	US (41), Canada (9), Germany (4), UK (3) Finland (1).	Children and adolescents with primary diagnosis of emotional and behavioural disorders (46 studies); anorexia nervosa (3 studies) suicide ideation(5 studies) psychosis (1 study), autism (1 study), substance abuse(1 study externalising/ internalising disorders (1 study). 25 studies described interventions aimed at children 12 years and over, while 20 studies described interventions aimed at younger children.	The studies described eight distinct models of care: <ul style="list-style-type: none"> • multisystemic (MST) therapy at home • day hospital, case management • specialist outpatient service • home treatment • family preservation services • therapeutic foster care • services provided in residential care 	Given the current concerns about the scale and management of mental health problems in children and adolescents, a high priority should be attached to improvements in the quality of the evidence base which currently provides very little guidance for the development of services. Prospective comparative systems of audit, conducted across several centres, which include baseline measurement at admission along with demographic data, and outcomes measured using a few standardised robust instruments have the potential to improve the current level of evidence.

Intensive Day Treatment programmes provide an intensive service, aiming to prevent inpatient hospitalisation or out of home placement, as well as reduce the use of specialist community services. Using a variety of psychotherapeutic approaches, treatment goals may include improved psychosocial adjustment in relationships with self, peers and family, as well as changing behaviour within home, community and school settings, and strengthening community resources for young people. Day hospitals usually include a special education programme, as well as art therapy, psychodrama, psycho-educational programming, medication management, and family therapy. Leisure trips are also sometimes incorporated into day treatment programmes as a reward measure, and also as an opportunity to teach social skills. Intensity of treatment can vary across service providers, patients, and stage of treatment, from full-time attendance, to less intensive evening, morning or afternoon sessions. Duration of treatment may vary according to the programme and the mental health problem being treated. Staffing is usually made up of a multi-disciplinary team including clinicians, teachers and occupational therapists, and this may be supplemented by an on-call 24-hour child psychiatry service, which can be used for support and consultation. The review found no RCTs of intensive day treatment, however a non-randomised comparison study found no significant differences between groups in terms of being in school or at work, having problems with the law or with people they lived with (Cornwall and Blood 1998).

Intensive Case Management aims to arrange a package of community-based services to prevent psychiatric hospitalisation or out-of-home placements. It is offered to children with severe emotional disorders within their home, community and school settings, and may involve stays in residential care prior to rehabilitation in the community. Case managers determine the needs of individual children through assessment and consultation with families and professionals. ‘Wraparound’ is one form of case management, involving collaboration between special education and mental health services, which may include family support specialists to help parents cope with their child’s behaviour. Crisis plans are developed to ensure that services are delivered in a timely manner. Case managers can operate on an expanded broker model, where they advocate on behalf of their clients and arrange services for them. Improvements in child functioning are expected through parental training and specific therapeutic interventions for children such as cognitive behavioural therapy, play therapy and social skills training. Crisis case management operates on a 24-hour, seven day week basis. The duration of case management depends on the individual needs of the child and their family, although some home services end after one year (Clarke, 1992). The New York model, described by Evans *et al.* (1996), reports a mean of 421 days (SD 320) of service enrolment. Case managers have a low caseload and a fixed financial budget for providing services for children in their care (Evans *et al.* 1996). A non-randomised comparison study compared hospitalisation rates before and after enrolment into a case management service (Evans *et al.* 1996). Use of inpatient services fell significantly after enrolment, but lack of psychosocial outcome data for the treatment and comparison groups limits the usefulness of this study.

Models of assertive outreach / early intervention teams

While the systematic reviews described above highlight areas for service development and future research, they were undertaken a number of years ago. As our aim was to determine research priorities in relation to models of assertive outreach/intensive treatment/day unit treatment for young people with complex needs, it seemed imperative to have a more recent overview of such

service provision and gaps in the evidence base. Further searches were conducted from 2008 onwards, using Google Scholar, with broader key word search terms. These identified several empirical articles which were not identified during the systematic searches for review articles. Collectively, they describe national and international developments in community-based service provision for mental health problems, each of which is outlined below.

Adolescent Intensive Management Assan *et al.* (2008) described a model of assertive outreach, the Adolescent Intensive Management (AIM) team, used in Australia to address a gap in young mental health provisions. The AIM team was established as part of the Intensive Mobile Youth Outreach Services (IMYOS) teams, which aimed to target difficult-to-engage adolescents, aged 12-18 years, with extreme risk behaviours, difficult-to-manage behaviours, and multiple residential placements. The multi-disciplinary AIM team offers after-hours and weekend on-call telephone consultation services to clients, their families and other service providers, to facilitate the management of crisis and reduce presentations to emergency departments, and assists emergency clinicians with prompt information and advice. Typical referrals are made for young people with little community connectedness, past history of difficulty engaging with the service, and severe co-morbid clinical presentation. The clinical service data presented by the authors indicates that the AIM outreach team engaged successfully with high-risk, difficult-to-engage young people. These young people had a range of complex needs and co-morbidities, including drug and alcohol misuse, disengagement from education, self-harm and suicidality. All young people treated during the 12 month audit period (n=70) were retained by the service, and the high rate of return to education provides some evidence of improvement in functioning. This study is limited in that it is a retrospective review of client data, undertaken by clinical personnel involved in delivering the service.

ICEBREAK Another model of community-based early intervention service, implemented in the UK, is described by Farrand *et al.* (2009). This service, termed ICEBREAK, is aimed at young people aged 16-25 years old with personality disorder. It emphasises building a trusting and open relationship with service users, and includes features associated with assertive community treatment, rather than the provision of a specific therapeutic approach. It is based in the voluntary sector, and is located within a city-centre, high street community organisation that provides a range of services, in order to minimise stigma and increase engagement with the service. In terms of staffing, the service consists of a team leader, six case-managers, a part-time GP specialising in mental health, and a part-time clinical psychologist. Case managers are drawn from a variety of backgrounds, included social work, youth work, education, community psychiatric nursing, fostering, and carer support. In addition to a month-long period of training prior to undertaking the role, case managers receive weekly supervision from psychotherapists employed by the local Primary Care Trust. Upon referral to the service, young people undergo a three-month period of engagement, during which a full assessment of their difficulties is undertaken. Services offered after this period are tailored to the young person's specific needs, and can involve referrals to specialist mental health professionals, interventions, or community and social welfare services, while continuing to receive support from ICEBREAK, through team-based assertive community treatment, if appropriate.

In assessing ICEBREAK's drop-out rate, Farrand *et al.* (2009) found that young adolescent and adult males with high levels of deprivation, who are more likely to disengage from mental health

services, were not more likely to drop out from ICEBREAK, suggesting the service is effective in engaging this group of young people. However, drop-out was more likely among young people with multiple emotional and behaviour difficulties, or among those reporting additional mental health problems or substance abuse problems. Future research should investigate how to successfully engage young people with multiple and complex needs, in order to inform service development. Research should also seek to identify and understand young people's reasons for withdrawal from services. Similar to the AIM model of assertive outreach discussed above, the ICEBREAK service was only evaluated here in using client chart reviews, which precludes any statements about the effectiveness of the service. As with the AIM model of assertive outreach discussed above, the ICEBREAK service was only evaluated here in using client chart.

Intensive Mobile Youth Outreach Service (IMYOS) The effectiveness of IMYOS (Melbourne, Australia) was evaluated through audit of 47 clinical files (Schley *et al.* 2008). The service offers assistance to young people aged 15-24 years, who display signs of mental illness, are considered 'high-risk' (e.g. of suicide), and have a history of poor engagement with clinic-based services. IMYOS, a sub-programme of ORYGEN Youth Health, a specialist mental health service for young people, utilizes a flexible outreach approach to engagement and treatment, and provides services in the most natural setting possible, typically clients' homes. A Youth Access Team offers an out-of-hours mobile assessment and acute community treatment for clients. IMYOS staff are multidisciplinary, including three psychologists, two social workers, one occupational therapist and one psychiatric nurse, with consultant psychiatry input for two days per week. Each full time staff member carries a caseload of eight to nine young people, and provides an average of two home visits per client per week. IMYOS works within a case management framework. Interventions are multi-systemic and typically involve the young person, their family, and support systems, such as schools. Audit results suggest that IMYOS significantly reduces the number of clients requiring hospitalisation and the number of inpatient days, when compared to psychiatric hospital admission rates prior to IMYOS. Additionally, risks measured at referral, such as suicidal ideation, self-harm, violence, and crime, were significantly lower at discharge. Again, the evaluation is very weak. The small sample size and lack of control group for comparison have to be borne in mind when interpreting these results. In addition, clients were not included in the audit if follow-up information was missing, and so there is a risk of bias towards young people who were more engaged with the service. Future research using experimental design, for example, including a waiting-list control group or other comparison, with adequate sample size, and validated outcome measures, would allow for firmer conclusions to be drawn about the effectiveness of assertive outreach approaches with young people.

Early Intervention Services across the West Midlands, UK The Department of Health set a target to establish 50 early intervention services for young people aged 14-35 years with first-episode psychosis across England (DoH 2001). Fourteen early intervention services are evaluated using a multiple case-study approach (Lester *et al.* 2009), eliciting service user, carer and clinician views. At the time of the study, each service was at a different stage of development, ranging from newly established and not yet recruiting patients, to having been in place for 10 years. The majority of services had been running for 6-18 months. Key workers were employed and generally had an active case-load of about 15 service users each. All early intervention services focused on biological issues such as the need to treat presenting psychotic symptoms with low-dose antipsychotic medication; psychological perspectives, including providing individuals with the skills they needed to help them understand their psychosis; and social aspects

such as help accessing vocational and social activities. All services also offered family psycho-education.

In order to maximise engagement with the service, clinicians reported a number of strategies. For example, priority issues for the young person often centred around education and employment, which were therefore often addressed first, before discussing medication and other issues. Other strategies included meeting in venues with no stigma attached to them, for example, a café, and using text messages to communicate. The service users who were interviewed compared their experiences of inpatient mental health treatment with the early intervention service, and described the former as places where they were treated like children, not listened to, were unable to influence decisions, and where staff constantly changed. By contrast, early intervention staff were described as ‘consistent’, who ‘knew what they were doing’, ‘cared’, ‘weren’t pushy but listened’, and were ‘very helpful and gave lots of information’. Illustrating this sense of satisfaction, the majority (90.6%) remained engaged at 12 months after inception into the service.

The lack of experimental design used in this study, and lack of outcome data reported, limits the conclusions which can be made about the effectiveness of the service. However, almost 500 service users were reported to have been incepted across the 12 early intervention services, and therefore a multi-site RCT evaluation of the service may be appropriate.

Evaluation of Service Provision in Northern Ireland

The Regulation and Quality Improvement Authority recently published a review of child and adolescent mental health service provision in Northern Ireland. Different models of intensive treatment have been applied in three of the five Trusts (see Table 16.3).

Implications for research

Shepperd *et al.* (2008) discuss the methodological quality of the studies included in their review. The quality of the studies included in this review was variable and most studies were under powered. Overall, the standard of reporting on the elements of an intervention is poor with many individual studies failing to report the duration and intensity of an intervention, the training and qualifications of staff, and the use of treatment manual-guidelines or team meetings. This has important implications for replicating these interventions in future research, assessing treatment fidelity across studies, and for the development and implementation of evidence-based research programmes. Furthermore, the majority of the studies included in this review were from the US, making it more difficult to extrapolate results to a Northern Ireland context.

Given the current concerns about the scale and management of mental health problems in children and adolescents, a high priority should be attached to improvements in the quality of the evidence base, which currently provides very little guidance for the development of services. Well designed, adequately powered RCTs are needed in this area to determine which services result in the best outcomes for children and young people with complex needs, although the inherent ethical issues involved in such a study design is possibly why the evidence-base is currently so weak. Shepperd *et al.* (2008) make two further recommendations for future research: firstly, the implementation of prospective comparative systems of audit, to include baseline measurement and demographic data at admission, along with outcomes measured using standardised robust instruments. Secondly, they note that few of the studies included in the review mentioned whether they consulted with service users and their parents, or the

professionals treating them. As a result, it is difficult to determine the acceptability of interventions included in this systematic review, and future research could improve the evidence base using qualitative methods.

Table 16.3: Models of intensive treatment in the Trusts.

BHSCT and SEHSCT	NHSCT	SHSCT	WHSCT
<p>The Belfast Trust provides a range of specialist community CAMH services. The range and provision of specialist CAMHS in SEHSCT was not always evident.</p> <p>The review team found there was good integration with other CAMH services.</p> <p>The review team found this was a model of good practice.</p> <p>Plans are in place to develop a home treatment team as an appropriate and alternative to hospital. Plans are also in place to develop an intensive day service, which is not currently operational.</p>	<p>The Northern Trust provides a limited range of specialist CAMHS.</p> <p>The trust does not currently provide crisis intervention or out-of-hours provision.</p> <p>A crisis service was initially developed but had to be withdrawn as the staff member needed to be redeployed to other duties.</p>	<p>The Southern Trust has attempted to provide a range of specialist CAMHS.</p> <p>The Southern Trust reported not having developed a specific crisis service but having used funding to develop a community intensive intervention service and out-of-hours hospital liaison service for same or next day hospital liaisons.</p> <p>The Southern Trust reported having a community intensive intervention service, which has been developed and utilised as a step down process for discharge from in-patient care.</p> <p>This is provided by one staff member in each CAMHS team.</p> <p>An out-of-hour's liaison service is provided to acute hospitals at weekends and bank holidays. The liaison officer contacts wards and departments in all the acute hospitals and actively seeks new referrals. The review team found that this may not be the most cost effective option but was assured that the time is used effectively.</p>	<p>The Western Trust has a proactive approach to specialist CAMHS but needs to make sure that services are accessible throughout all areas.</p> <p>Service descriptions known as intensive care management system and home treatment appear to be used interchangeably.</p>
<p>RQIA assessment outcome: Substantially achieved</p>	<p>RQIA assessment outcome: Partially achieved</p>	<p>RQIA assessment outcome: Substantially achieved</p>	<p>RQIA assessment outcome: Substantially achieved</p>

Included reviews

Shepperd, S., Harris, L., Bull, L., Doll, H., Fitzpatrick, R., Gowers, S., James, T., Fazel, M. and Pollack, J. (2008) *Systematic review and mapping study of alternatives to inpatient care for children and adolescents with complex mental health needs*. National Institute for Health Research Service Delivery and Organisation Programme.

Excluded reviews

Bender, K., Springer, D.W., Kim, J.S. (2006) Treatment effectiveness with dually diagnosed adolescents: A systematic review. *Brief Treatment and Crisis Intervention*, 6(3), 177-205.

Bird, V., Premkumar, P., Kendall, T., Whittington, C., Kuipers, E. (2010) Early intervention services, cognitive-behavioural therapy and family intervention in early psychosis: systematic review. *The British Journal of Psychiatry*, 197, 350-356.

CHAPTER 17

Improving the social inclusion of children with Autism Spectrum Disorders

In this section, we report the results of 23 systematic reviews, published since 2005, of interventions aimed at addressing the social and communication skills, and therefore enhancing the social inclusion of children with Autism Spectrum Disorders (ASD).

Autism Spectrum Disorders

Autism Spectrum Disorders are a range of life-long, neurodevelopmental disorders, characterized by deficits in social interaction and communication. These impairments become evident in early childhood and, depending on severity, can have implications for learning and social inclusion.

Prevalence estimates have shown steady increases over the past four decades. Most recently, a school-based population study carried out in the UK estimated that one in 101 primary school children are diagnosed with ASD (Baron-Cohen *et al.* 2009). In Northern Ireland, the population prevalence of ASD in 2007 was estimated to be about one in 76 (BELB 2007), and more recently, the Department of Education Training and Inspectorate revealed that the number of school-aged children with ASD in NI had increased from 3000 in 2007, to 4000 in 2010 (DETI 2006; DETI 2009). This increase will undoubtedly have implications for service utilization and development. This review looks at two particular areas for intervention, namely social skills and communication skills, as these can be particularly detrimental to social inclusion.

Social skills Social difficulties are an area of vulnerability, even for the most cognitively able children and young people on the autistic spectrum (Howlin 2005; Shea and Mesibov 2005). Social interaction is hampered by a fundamental lack of social understanding and understanding of other people's thoughts and feelings. This can make integration in schools, peer groups or communities difficult. A common misconception is that children and young people with autism do not want to form friendships, but it is the desire for friendship, without the necessary social competence, which may lead to many difficulties, including the onset of mental health problem for this group.

Communication skills Impairments in verbal and non-verbal communication are fundamental to ASD. Verbal difficulties may include a delay in the development of language, literalness, poorly modulated intonation and delivery of speech, comprehension difficulties, repetitive use of language and unusual vocabulary. Difficulties in social communication include failure to empathise with others, and to appropriately use and interpret social cues, body language and facial expressions.

The Northern Ireland context

The Bamford report highlighted the social problems faced by children with ASD. Their lack of social skills can lead to peer victimisation, which has longer-term health outcomes, including depression, low self-esteem, anxiety, loneliness and lower academic achievement. Interventions that focus on reducing isolation and integrating individuals into society are key to addressing the needs of these young people. The need to promote social competence and integration for young

people with ASD is not sufficiently addressed by current services in Northern Ireland (section 3.32). Bamford specified the need for interventions to help children and young people with ASD to develop their social and communication skills, in order to minimise social exclusion and prevent mental health difficulties that can result from exclusion (section 5.23). The Autism Bill, passed in March 2011, will also have implications for service provision.

Interventions for ASD

Interventions designed to support the development of children with ASD are diverse, with a large literature devoted to the evaluation of their effectiveness. There is no specific treatment for ASD, however, within the UK, interventions used include speech and language therapy, music therapy, occupational therapy, physiotherapy, art, drama, and play therapies. The format of interventions can vary from highly structured dyadic approaches to more naturalistic programmes in which teaching is guided by the child's interest. Interventions may use broad educational approaches, or target specific areas of development such as communication, or learning and behaviour. Interventions also vary according to their theoretical orientation, mode of delivery, intensity and degree of parental involvement (Krebs Seida *et al.* 2009). Examples of the interventions currently in use are:

- Applied Behavioural Analysis (ABA)
- Cognitive Behavioural Therapy (CBT)
- Discrete Trial Training
- Early Intensive Behavioural Interventions
- Pivotal Response Training
- Theory of Mind training
- Milieu training
- Social Stories
- Social Skills Groups
- Video Modelling

Despite the widespread evaluation of interventions in ASD, variation in how studies have assessed outcome, as well as concerns regarding the rate of variation of individual change (Howlin *et al.* 2009) have made it difficult to evaluate the validity of research claims. Indeed, studies examining the effectiveness of a variety of interventions have also been criticised for lack of longitudinal follow-up and the absence of comparable control groups (Myer and Johnson 2007). The large literature evaluating the effectiveness of interventions for ASD makes it challenging for health and social care, and educational professionals, as well as policy-makers, to decide which interventions should be recommended for ASD. There is still a need to evaluate the quality of published systematic reviews.

Following a diagnosis of ASD, children and young people, parents and carers, and professionals want effective interventions to be available and need information to help make decisions about what form these could take. There are many different interventions and treatments for ASD in everyday use, some of which are not evidence-based.

Search strategy

Comprehensive searches were conducted in Medline and PsycInfo, as well as the Cochrane Library and the EPPI database. Only English language articles were included, as time restrictions precluded use of translation services. The search strategy (see Medline example given below) consisted of keywords and subject headings for autism and children and young people. Terms which may denote an intervention were included, as well as the terms social and communication skills.

Results of the search

The search strategy identified 369 records, after duplicates were removed. Of these, 320 were judged irrelevant. Of the remaining 49 records, 23 met the inclusion criteria (set out in Box 17). Twenty-six papers were excluded, and Table 17.4 sets out the reasons for their exclusion.

Box 17: Inclusion criteria – interventions to improve the social inclusion of children with ASD

POPULATION: children under 19 years with Autistic Spectrum Disorders

INTERVENTION: intervention to develop social and communication skills in children with ASD

COMPARISON: any comparison

OUTCOME: improved social and communication skills; social inclusion.

Included reviews

Table 17.1 sets out the characteristics of the 23 reviews judged to meet the inclusion criteria. Eleven reviews focused on interventions for improving social skills (Ayres and Langone 2005; Bellini *et al.* 2007; Delano 2007; Kokina and Kern 2010; Lee *et al.* 2007; McConachie and Diggle 2007; Reichow and Volkmar 2010; Sinha *et al.* 2006; Wang and Spillane 2010; Wang *et al.* 2011; Williams-White *et al.* 2007). Five reviews focused on interventions for communication skills, including social communication skills, speech, and language development (Flippin *et al.* 2010; Gold *et al.* 2010; Howlin *et al.* 2009; Preston and Carter 2009; van Der Meer and Rispoli 2010). A further seven reviews included both social skills and communication skills as outcomes (Machalicek *et al.* 2008; Meadan *et al.* 2009; Ospina *et al.* 2008; Reynhout and Carter 2006; Shukla-Mehta *et al.* 2010; Spreckley and Boyd 2009; Virues-Ortega 2010). Over half (n=12) were published since 2009.

Table 17.1: Systematic reviews of interventions for social skills/communication skills in children with ASD

Objective	Author/Year	Number /type of study included	Setting	Participants
Examines critical features of video-based modeling of social and functional skills for children with autism	Ayres and Langone 2005	5 studies <ul style="list-style-type: none"> • Multiple baseline design • Multiple probe design 	Not specified.	Children of preschool; primary and secondary school aged
To provide a quantitative synthesis of existing single-subject research on school-based interventions for children with ASD; to examine the aggregate outcomes of these studies and features that lead to the most effective outcomes	Bellini <i>et al.</i> 2007	<ul style="list-style-type: none"> • 55 single-case designs • multiple baseline /probe (42) • reversal design (6) • A-B design (3) • changing conditions design (2) • alternating treatment /reversal (1) 	Geographic location not specified. Had to be implemented in school settings	157 participants <ul style="list-style-type: none"> • Preschool (<5 yrs) (21) • 5-11 years, approx. (28) • 11 years+ (9)
To examine the effectiveness of video-modeling interventions for improving the skills individuals with autism	Delano 2007	19 single-subject research designs <ul style="list-style-type: none"> • multiple baseline design (17) • multiple baseline + alternating treatment design (1) • multiple treatment design (1) 	Geographic location not given. <ul style="list-style-type: none"> • Special education program (8) • Integrated preschool class (2) • Private inclusive school (1) • Home (5) • Community (1) 	N=55 (48 male) Age 3-20 years.50% under 8. Six participants were over 12 years.
To determine the effects of the Picture Exchange Communication System on speech and communication outcomes for children and young people with ASD.	Flippin <i>et al.</i> 2010	11 studies <ul style="list-style-type: none"> • single-case experiments (8) • RCTs (2) • non-matched/non-random group (1) 	Not specified	SCEDs: 18 children aged 3-11 years. Group designs: 160 children aged 3-10 years.
To review the effects of music therapy or music therapy plus standard care for individuals with ASD	Gold <i>et al.</i> 2010	3 studies <ul style="list-style-type: none"> • Crossover design (2) • Parallel group (1) 	USA	Children 2- 9 years old. 80-100% in each study were male.
To evaluate the effectiveness of early intensive behavioural interventions (EIBI) for young children with autism	Howlin <i>et al.</i> 2009	11 studies <ul style="list-style-type: none"> • RCTs (2) • case-control trials (6) • retrospective case-control trials (3) 	Majority USA	Number of participants unclear.
To examine the effectiveness of Social Story interventions; describe the ways in which Social Stories™ were used in research studies; examine the role of a comprehensive set of moderator variables on the effectiveness of Social Stories	Kokina and Kern 2010	18 single subject designs (including 3 dissertations) <ul style="list-style-type: none"> • 9 ABAB reversal • 9 multiple baseline 	Geographic location unspecified. <ul style="list-style-type: none"> • 9 in special education • 8 in general education • 5 at home 	47 participants <ul style="list-style-type: none"> • 0-5 yrs (10) • 6-11 years (28) • 12 years +(9) Primary diagnosis <ul style="list-style-type: none"> • ASD (33) • PDD-NOS (10) • Aspergers syndrome (4)
To examine the efficacy of self-management for increasing appropriate behaviour of children and youth with autism	Lee <i>et al.</i> 2007	11 single-subject design <ul style="list-style-type: none"> • multiple baseline design (9) • reversal design (2) 	Geographic location not given. Mixture of school, community and clinic setting	34 participants <ul style="list-style-type: none"> • 3-5 years (10) • 6-17 years (24)

Objective	Author/Year	Number /type of study included	Setting	Participants
To evaluate school-based instructional interventions for students with ASD.	Machalicek <i>et al.</i> 2008	45 single case design studies	Geographic location not given Interventions were in school settings.	118 participants
To review the evidence for parent-implemented intervention for pre-school children with ASD.	McConachie and Diggle 2007	10 studies (reported in 12 papers) <ul style="list-style-type: none"> • RCT (7) • non-randomised controlled studies (3) 	Geographic location not specified.	Preschool children RCTs (171) Non-RCTs (96)
To critically review the literature on parent-implemented interventions aimed at promoting and enhancing the social and communicative behaviour of young children with ASD.	Meadan <i>et al.</i> 2009	12 studies <ul style="list-style-type: none"> • Single-subject design (8) • Pre- and post-test (1) • RCT (1) • Single-subject v group analysis method (1) 	Geographic location not specified. Interventions were home based.	105 participants, aged between 20 months and 9 years.
To assess the effectiveness of behavioural and developmental interventions for improving symptoms associated with ASD.	Ospina et al 2008	101 studies <ul style="list-style-type: none"> • RCT (55) • controlled clinical trials (32) • prospective cohort studies (4) • retrospective cohort studies (10) 	Majority USA	Total N: 2,566.
To examine the extant empirical research on Picture Exchange Communication Systems (PECS), with specific consideration of the research designs employed and, consequently, the strength of conclusions that can be drawn.	Preston and Carter 2009	27 studies (3 focused on adults). <ul style="list-style-type: none"> • Pre-experimental designs (8) • Single-case, multiple baseline (7) • Single-case alternating treatment (3) • RCT (3) • Quasi-experimental (2) • ABAB design (1) • Within-subjects changing criterion (1) 	Geographic location not specified. 14 studies conducted special school, special preschool or special classroom settings. Other settings included integrated preschool, regular classroom, homes and clinics.	444 participants aged 20 months-19 years old.
To examine the empirical evidence of recently studied social skills interventions	Reichow and Volkmar 2010	66 studies <ul style="list-style-type: none"> • RCT (3) • Quasi-experimental (7) • Single-subject experimental (56) 		513 participants (81% male).
To review the literature on Social Stories™, focusing on the nature and quality of studies, the participants, and characteristics of the Social Story™ interventions, behaviours that have been targeted, short-term efficacy, generalization and maintenance.	Reynhout and Carter 2006	16 studies <ul style="list-style-type: none"> • ABAB (3); • ABA (1) • AB (3) • ABAC (1) • Pre-test-post-test (4). • Multiple baseline (4) 	Geographic location not specified. Majority of interventions (n=12) took place in school settings. Other settings were home (n=1), mixture of school and home setting (n=2), and a games room (n=1).	77 children aged 3-15 years old (60 males).

Objective	Author/Year	Number /type of study included	Setting	Participants
To determine the effects of video instruction (video-modeling, video self-modeling, and point-of-view video) on the acquisition and generalization of social and communication skills.	Shukla-Mehta <i>et al.</i> 2010	26 studies <ul style="list-style-type: none"> • 25 single-subject design • Matched random group comparison 	Regular school settings (n=11) Home (4); Clinic (5) Residential setting (1) University (1); Mixture (4)	104 children with ADD Mainly preschool/ primary school-age.
To determine the effectiveness of Auditory Integration Training (AIT) or other methods of sound therapy in people with ASD.	Sinha <i>et al.</i> 2006	6 studies, all RCTs, one of which was a cross-over trial.	Not specified	171 participants with ASD, majority under 19 years.
To review the effectiveness of applied behaviour intervention programs for preschool children with ASD in their cognitive, adaptive behaviour and language development.	Spreckley and Boyd 2009	4 RCTs	Nursery school, school and home settings	101 participants
To synthesize communication intervention studies that involve the use of speech-generating devices (SGD) for children with autism.	van Der Meer and Rispoli 2010	23 studies <ul style="list-style-type: none"> • Single-subject designs (20) 	Preschool setting (18 studies) Other settings included home, community and hospital.	51 children aged 3 and 16 years. (90% male)
To ascertain the collective effectiveness of ABA intervention for autism.	Virues-Ortega 2010	22 studies	USA (14); UK (5); Israel (2) Norway (2); Australia (1) Argentina (1)	No information
To provide a synthesis of research studies on interventions to increase social skills for children and adolescents with ASD.	Wang and Spillane 2010	38 studies <ul style="list-style-type: none"> • Single-subject designs (36) • Group experimental designs (2) 	Geographic location not specified. Interventions were primarily school-based.	147 participants, aged between 2 and 17 years.
To examine the effectiveness of peer-mediated and video-modeling approaches for social skills training for children with ASD.	Wang <i>et al.</i> 2011	14 single-case research designs <ul style="list-style-type: none"> • AB design (2) • Reversal (6) • Multiple baseline (6) 	Not specified.	46 participants
To examine the effectiveness of peer-mediated and video-modeling approaches for social skills training for children with ASD.	Wang <i>et al.</i> 2011	14 single-case research designs <ul style="list-style-type: none"> • AB design (2) • Reversal (6) • Multiple baseline (6) 	Not specified.	46 participants
To summarise the state of empirical research on group-based Social Skills Training for ASD.	Williams-White <i>et al.</i> 2007	14 studies <ul style="list-style-type: none"> • Pre-post design (8) • Controlled (4) • Single-subject (2) 	Not specified.	
To summarise the state of empirical research on group-based Social Skills Training for ASD.	Williams-White <i>et al.</i> 2007	14 studies <ul style="list-style-type: none"> • Pre-post design (8) • Controlled (4) • Single-subject (2) 	Not specified.	141 participants; most aged 6 and 17 years old

Quality of reviews

Table 17.2 provides an overview of how each of the included reviews was scored against the AMSTAR criteria. Many of the reviews had methodological flaws; the most common being that there was not duplicate selection of included studies, which may introduce bias. Most reviews failed to include unpublished sources of literature in searches, and failed to consider publication bias. Only three reviews provided a list of excluded studies.

Table 17.2: AMSTAR ratings - interventions to promote the social inclusion of children with autism

	'A priori' design?	Duplicate study selection and data extraction?	Comprehensive Literature Search	Status of publication used as inclusion criteria?	List of included and excluded studies provided?	Were the characteristics of the included studies provided?	Scientific quality of the included studies assessed and documented?	Scientific quality of the included studies used appropriately in formulating conclusions?	Were the methods used to combine the findings of the studies appropriate?	Was the likelihood of publication bias assessed?	Was the conflict of interest stated?
Ayres and Langone 2005	Y	CA	Y	Y ²	N ⁴	Y	Y	N	NA	N	CA
Bellini <i>et al.</i> 2007	Y	Y	Y	Y ²	N ⁴	N	Y	Y	NA	Y	CA
Delano 2007	Y	CA	Y	Y ²	N ⁴	Y	Y	Y	NA	N	CA
Flippin <i>et al.</i> 2010	Y	Y	Y	Y ²	N ⁴	Y	Y	Y	Y	N	CA
Gold <i>et al.</i> 2006	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y ⁵
Howlin <i>et al.</i> 2009	Y	CA	Y	Y ²	N ⁴	Y	Y	Y	N	N	CA
Kokina and Kern 2010	Y	CA	Y	Y	N ⁴	Y	Y	Y	Y	N	CA
Lee <i>et al.</i> 2007	Y	CA	Y	Y ²	N ⁴	Y	N	NA	Y	N	CA
Machalicek <i>et al.</i> 2008	Y	CA	Y	CA	N ⁴	Y	N	NA	NA	N	CA
McConachie and Diggle 2007	Y	CA	Y	N	N ⁴	Y	Y	Y	NA	N	CA
Meadan <i>et al.</i> 2009	Y	CA	Y	Y	N ⁴	Y	N	NA	NA	N	CA
Ospina <i>et al.</i> 2008	Y	Y	Y	Y ³	Y	Y	Y	N	Y	N	N
Reichow and Volkmar 2010	Y	CA	Y	Y	Y	Y	Y	Y	Y	Y	CA
Reynhout and Carter 2006	Y	Y	Y	Y ³	N ⁴	Y	N	NA	NA	N	CA
Shukla-Mehta <i>et al.</i> 2010	Y	CA	Y	Y ²	N ⁴	Y	N	NA	NA	N	CA
Sinha <i>et al.</i> 2006	Y	Y	Y	Y	N ⁴	Y	Y	Y	NA	N	N
Spreckley and Boyd, 2009	Y	N ¹	Y	CA	N ⁴	Y	Y	Y	Y	N	N
van Der Meer and Rispoli 2010	Y	N ¹	Y	Y ²	N ⁴	Y	N	NA	NA	N	N
Virues-Ortega <i>et al.</i> 2010	Y	Y	Y	Y ²	N ⁴	Y	Y	Y	Y	Y	CA
Wang and Spillane 2010	Y	N ¹	Y	Y ²	N ⁴	Y	N	NA	Y	N	CA
Wang <i>et al.</i> 2011	Y	N	Y	CA	N ⁴	Y	N	NA	Y	N	CA
Williams-White <i>et al.</i> 2007	Y	CA	Y	N ³	N ⁴	Y	Y	Y	NA	N	CA

Findings

Table 17.3 summarises the interventions covered in the included reviews alongside the review authors' conclusions. There is considerable heterogeneity in the types of interventions for ASD that have been examined using systematic review methodology. Five broad types of interventions were evaluated in the reviews: i) interventions based on behavioural theory, such as applied behaviour analysis or cognitive behaviour therapy; ii) music- or sound-based interventions; iii) communication-focused interventions, using tools such as the Picture Exchange Communication System, iv) parent- or peer-training interventions; and v) social skills development interventions, using video-modelling, social stories or social skills training groups.

The differences in theoretical construct and program content of interventions based on behavioural theory makes it difficult to interpret the evidence base for this group of interventions. ABA resulted in improvements in adaptive behaviour, communication and interaction, comprehensive language, expressive language, daily living skills, intellectual functioning, and socialisation (Ospina *et al.* 2008; Virues-Ortega 2010), but, as noted by the review authors, most of the studies in the reviews were of low quality. Spreckley and Boyd (2009) found no evidence of effectiveness of interventions based on ABA. Other interventions based on behavioural theory, e.g. Early Intensive Behavioural intervention (EIBI; Howlin *et al.* 2009), were effective for some, but not all children with autism.

The two systematic reviews of music therapy yielded conflicting results: the 2006 review by Sinha and colleagues found insufficient evidence to support the use of music therapy, but a later review by Gold *et al.* (2006) found beneficial effects of music therapy on communication skills in ASD.

The evidence base for communication-focused interventions is not well established. The Picture Exchange Communication System showed promise in promoting communication in children with little or no speech (Preston and Carter (e.g. with low joint attention, low motor imitation and high object exploration) (Flippin *et al.* 2010).

The evidence base for parent- or peer-training interventions supports the use of parent-training in terms of improving child target behaviours (McConachie and Diggle 2007; Meadan *et al.* 2009). Peer-training was generally implemented in preschool or primary school setting, and typically targeted social communication and social interaction skills. This form of intervention was well supported (Reichow *et al.* 2010; Wang and Spillane 2009; Wang *et al.* 2011), but would benefit from further research on peer selection procedures.

Social skills development was the main focus of interventions which used social skills groups, social stories, and video-modelling to teach appropriate behaviours. Social skills groups were generally positive, some studies did not show strong effects, had inconsistent results, and/or reported poor maintenance of skills (Reichow and Volkmar 2010). The systematic reviews identified methodological flaws in the evidence base, as trials often failed to adequately measure social skills and deficits associated with ASD, had small and poorly characterized samples, and had minimal examination of the degree to which learned skills generalize (White *et al.* 2009). Social skills groups generally focused on individuals with medium to higher cognitive abilities; therefore, little is known about how applicable such interventions are for individuals with lower functioning levels (Reichow and Volkmar 2010). Social stories showed promise as an intervention which is easy to implement, however they received limited empirical support (Ospina *et al.* 2008). Video-modelling appears to be successful in teaching target social skills, as

well as maintaining and generalising skills to other settings (Shukla-Mehta *et al.* 2010; Wang and Spillane 2009; Wang *et al.* 2011).

Overall, review authors report positively on the effectiveness of psychosocial interventions for those outcomes that were measured, with only a small number reporting negative or unclear findings. Interventions that were generally well supported include ABA, peer-training, and parent-training. Social skills training groups had mixed results and require further research. Recent reviews of video-based and computer-based instructional interventions show promise, but further research is needed in this area to determine the best format for such interventions, and under what conditions and with which participants, do these interventions work best.

Studies used different outcome measures, which made comparisons difficult. There is clearly a great deal of primary research, but few of these reviews identified high-quality RCTs or Controlled Clinical Trials. The majority of included studies were single-subject designs, a common design used in this area, but which provides relatively weak evidence in terms of efficacy.

The range of interventions covered in the reviews testify to the diverse range of treatment options, however there is little evidence of their effectiveness, either alone or compared one with another.

Implications for research

A great deal of information about treatments for ASD exists, but this represents only the beginning of understanding why and how to best design interventions for children and young people with ASD. Many intervention areas have yet to be rigorously evaluated, including ecological or environmental modifications, collateral skill development, visual supports, social skills development programmes, educational programmes, and many well known manualized and comprehensive programmes. Little is known about the accessibility, feasibility, or affordability of programmes or the cost-effectiveness of interventions, and very little is known about the effects of intervention on parents and family well-being or the effect of treatment over the lifetime. Future research should not merely determine whether a treatment is effective, but it must specify clearly for whom and in what context the intervention is effective.

Many of the studies included in the reviews employed a single-subject research design, which, while useful, have limitations. There needs to be more research using group designs, and experimental group designs in particular, which will allow for further understanding of an intervention's effects.

The results of this review would indicate that there is evidence of the effectiveness of interventions designed to enhance the social and communication skills of children and young people with ASD, but it is not possible to draw conclusions about the superiority of one intervention over another. Future research should include direct comparisons of various types of interventions, in addition to using placebo or no treatment as comparators, in order to provide evidence that will assist patients and practitioners in choosing among many treatment options.

The evidence-base is greatest for preschool children (typically aged <5 years), which is not surprising given the importance of early intervention. Future research should explore more the application of intervention to school-aged children and adolescents.

Table 17.3. Description of interventions and authors' conclusions for included reviews.

Author/Year	Interventions	Authors' Conclusions
Ayres and Langone 2005	Video-based interventions to improve: <ul style="list-style-type: none"> • Social skills (e.g. communication and conversations skills, play, sharing, greetings) • Functional skills (e.g. purchasing skills, self-care, household tasks) 	Studies reviewed here provide initial evidence that video based instruction can be an effective component of intervention for both social and functional skills.
Bellini <i>et al.</i> 2007	<ul style="list-style-type: none"> • Collateral skills (e.g. play skills, conversation skills, prosocial skills). • Peer mediated – non-disabled peers are trained to direct and respond to the social behaviours of children with ASD. • Child specific – involve the direct instruction of social behaviours, such as initiating and responding • Comprehensive – combine 2 or more of the above intervention categories. Experimental control was demonstrated in 49 studies through the introduction or removal of the independent variable across 3 or more time points. Interventions ranged in length from 8 to 73 sessions (2.5 – 28 hours).	The results support the recommendations offered by Gresham <i>et al.</i> (2001), which include increasing the dosage of social skills interventions, providing instruction in the child's natural setting, matching the intervention strategy with the type of skill deficit, and ensuring intervention fidelity. Future research is needed to examine both the efficacy and the social validity of social skills interventions and to examine factors that lead to the most beneficial outcomes for children with ASD.
Delano 2007	Video-based interventions targeting one or more of the following skill areas: <ul style="list-style-type: none"> • social communicative behaviours • functional living skills • answering perspective-taking questions • challenging behaviours 	The positive outcomes of the studies reviewed suggest that video modeling interventions are important tools for practitioners, but additional research is warranted. Review is limited by the small number of studies included. Treatment effects were not measured, so it is unclear if video modeling is more or less effective than other models of instruction.
Flippin <i>et al.</i> 2010	PECS – a behaviourally based pictorial communication system which targets expressive communication skills using reinforcement, delay and generalization across trainers and settings.	The overall effectiveness of PECS for communication outcomes with children with ASD is promising, but not yet established. Evidence for effectiveness of the approach on speech outcomes is not as strong. PECS may be more beneficial for promoting speech in children with low joint attention, low motor imitation and high object exploration.
Gold <i>et al.</i> 2010	Music therapy delivered either at home, school or at an outpatient therapy centre, on a daily basis for one week.	The included studies were of limited applicability to clinical practice, but findings indicate that music therapy may help children with ASD to improve their communication skills. More research is needed to examine whether these effects are enduring, and to investigate the effects of music therapy in typical clinical practice.
Howlin <i>et al.</i> 2009	Community-based, school-based or home-based EIBI	There is strong evidence that EIBI was effective for some but not all children with ASD. There is wide variability in response to treatment.
Kokina and Kern 2010	Goals of interventions: <ul style="list-style-type: none"> • Reduce inappropriate behaviours • Improve appropriate social behaviours • Assist in transition, novel situations, reduce anxiety • Teach academic/functional skills 	The average intervention PND score (60%) fell below the cut-off suggested for effective interventions (70%). Social Stories had low to questionable overall effectiveness; however they were more effective when addressing inappropriate behaviours than teaching social skills. They also seemed to be more effective when used in general education settings and with target children as their own intervention agents.

Author/Year	Interventions	Authors' Conclusions
Lee <i>et al.</i> 2007	<ul style="list-style-type: none"> • 7 studies used self management packages (prompts, self-monitoring and self-reinforcement) • 3 studies used self-monitoring • 1 study used self-reinforcement Behavioural targets: <ul style="list-style-type: none"> • Social communication • Schedule following • Daily living skills • Practical and social play skills 	<p>Overall mean PND was 81.9%, supporting the efficacy of self-management interventions in increasing appropriate behaviours in students with ASD. Self-management methods should be given careful consideration when planning students' programs. This review made no attempt to assess the quality of studies.</p>
Machalicek <i>et al.</i> 2008	<ul style="list-style-type: none"> • 6 studies were instructional interventions to teach academic skills • 11 studies taught communication skills • 6 studies taught functional living skills • 11 studies taught play skills • 12 studies taught play skills 	<p>The majority of studies reported positive findings. It is impossible to draw strong conclusions regarding the comparative effectiveness of these interventions, because of the variability between studies, in terms of targeted skills, participant characteristics, instructional procedures, and magnitude of behavioural change.</p>
McConachie and Diggle 2007	<ul style="list-style-type: none"> • Social communication parent training. • Joint attention focused parent training • Pivotal response training vs. individual target behaviour training • Maternal psycho-educational treatment 	<p>All the studies in this review have important methodological limitations, in particular, small sample sizes.</p> <p>However there is sufficient evidence from this review that parent training <i>can</i> work in terms of observed improvements in children's communication skills, parental performance, parent-child interactions, and reduction in parental depression.</p>
Meadan <i>et al.</i> 2009	<ul style="list-style-type: none"> • Modified Incidental Teaching Sessions (MITS) • Joint attention and joint engagement • Imitating/ animating (I/A) and expectant waiting (EW) • Reciprocal Imitation Training (RIT) • Pivotal Response Training (PRT) • Enhanced-Milieu Teaching (EMT) • Functional Communication Training • PROMPT 	<p>All studies reported that parents were able to learn and implement new strategies with their children in natural environments. This in turn resulted in positive changes in children's target behaviours. However there was considerable variation between interventions and methods of measuring outcomes.</p> <p>Further large-scale research into parent-implemented interventions is needed – these should pay attention to measures of fidelity of implementation, include populations from diverse social and cultural backgrounds, and investigate strategies that enable the generalisation of skills.</p>
Ospina <i>et al.</i> 2008	<ul style="list-style-type: none"> • Applied Behaviour Analysis (n=31) • Communication-focused interventions (n=10), e.g. PECS, CAI, Sign Language training • Integrative programs (n=14) • Sensory motor interventions (n=15) • Social skills development interventions (n=6) • Environmental modification (n=1) 	<p>ABA: Lovaas training produced better outcomes on adaptive behaviour, communication and interaction, comprehensive language, expressive language, daily living skills, intellectual functioning, and socialisation, compared to special education. However this is based on weak evidence, as most of the studies were of low quality.</p> <p>Well conducted RCTs need to be replicated to clarify the use of Lovaas intervention. Further consideration should be given to the longer term effects on family functioning and QoL.</p>

Author/Year	Interventions	Authors' Conclusions
Preston and Carter 2009	<ul style="list-style-type: none"> • PECS – a picture based system to help young children with ASD to acquire functional communication skills. 	The studies reviewed provide preliminary evidence that PECS may be efficacious for children with ASD, who have little or no speech. Primary benefits appear to be evident in communication by picture exchange. Research needs to determine the core aspects of the program that are important to its success, the individuals to whom it is best suit, and its relationship to other interventions. Further RCTs should be a research priority.
Reichow and Volkmar 2010	<ul style="list-style-type: none"> • Technological delivery, e.g. computer/videotape (n=10) • Parental delivery (n=4) • Non-parental adult delivery, e.g. teacher, clinician, therapist (n=26) • Peer delivery-same-aged individuals trained to deliver intervention (n=10) • Combined or multiple delivery (n=16) 	The methods and results of this synthesis do not permit conclusions about the superiority of one treatment over another to be made. No interventions for preschool-aged children or adolescents and/or adults had enough support to be considered and evidence-based practice based on the results of this review. Social skills groups for school-aged children with ASD demonstrated the evidence necessary to be considered an established evidence-based practice.
Reynhout and Carter 2006	<p>Social Stories™ targeting:</p> <ul style="list-style-type: none"> • Disruptive or challenging behaviours (n=6) • Social skills (n=9) • Communicative behaviours (n=4) • On-task behaviours (n=4) 	The effects of Social Stories™ is highly variable. It is unclear whether particular components of Social Stories™ are central to their efficacy. Data on maintenance and generalisation are limited. Social Stories™ are promising interventions, being relatively straightforward and efficient to implement, with application to a wide range of behaviours. Further research is needed to determine the exact nature of their contribution and components critical to their efficacy.
Shukla-Mehta <i>et al.</i> 2010	<ul style="list-style-type: none"> • Video-modeling alone without any additional components (n=4) • Video-modeling with additional intervention components, e.g. prompts and reinforcers (n=5) • Video-modeling as part of a multi-component package (n=8) • Video-modeling compared to another intervention (n=3) • Video self-modeling (n=4) • Point-of-view modeling (n=2) 	<p>Results from 3 of the 4 video-modeling alone studies suggest that participants not only acquired target skills, but also maintained and/or generalised the target responses to untrained people, objects and settings.</p> <p>Video self-modeling and point-of-view modeling resulted in increases in target behaviours and decrease in problem behaviours.</p> <p>Some evidence exists to support video instruction in teaching social and communication skills to students with ASD.</p> <p>Future research should document the fidelity of intervention procedures, analyse the specific effects of video-modeling compared to instructor behaviours, develop a profile of participants best suited to particular interventions, and implement video-modeling with older children, and other cultural and language groups.</p>
Sinha <i>et al.</i> 2006	Auditory Integration Treatment (AIT), consisting of uniform treatment period for all trials, consisting of two 30 minute sessions of music therapy per day, for 10 days.	Three studies showed no benefit of AIT over control conditions. Three studies showed improvements in behaviour at 3 months, although the outcome measure used is of questionable validity. At present, there is not sufficient evidence to support the use of AIT.
Spreckley and Boyd 2009	Applied Behavioural Intervention (ABI, 3 of the 4 studies used Lovaas). Duration of intervention ranged from 12 month to 48 months.	Current evidence does not support the use of ABI as a superior intervention for children with ASD. Instruments used to measure change were primarily discriminative and secondarily evaluative; these may not be able to detect low-level changes. Future research should be sufficiently powered to evaluate critical periods for intervention, the optimum intensity, and mode of delivery for achieving successful outcomes. A multi-centre RCT is essential.

Author/Year	Interventions	Authors' Conclusions
van Der Meer and Rispoli 2010	<ul style="list-style-type: none"> • Operant/ behavioural instructional procedures to teach the use of SGD • Staff training in SGD use 	The majority of studies reported improvements in the child's ability to use SGDs to communicate following intervention. An SGD has many advantages over other ACC modes of communication; in particular, it is easily used by the student and understood by others.
Virues-Ortega 2010	<ul style="list-style-type: none"> • Clinic-based intervention programs • Parent-managed interventions 	Results suggest that long-term, comprehensive ABA intervention leads to positive medium to large effects on intellectual functioning, , language development, acquisition of daily living skills and social functioning in children with autism.
Wang and Spillane 2010	<ul style="list-style-type: none"> • Social stories • Peer mediated • Video-modeling • CBT 	Results varied widely across interventions. Only video-modeling appeared to meet criteria for being evidence-based and effective. Social stories and peer mediated interventions also appeared to be evidence-based. Future research should target older children to determine if particular interventions are more effective with this age group. Future research should examine the generalisation of skills across multiple settings and with multiple persons.
Wang <i>et al.</i> 2011	<ul style="list-style-type: none"> • Peer mediated • Video-modeling 	Both interventions were found to significantly and equally improve the social performance of children with ASD. Age functioned as a significant moderator in the effectiveness of the intervention; effectiveness decreased with increasing child age.
Williams-White <i>et al.</i> 2007	<p>Social skills training, including:</p> <ul style="list-style-type: none"> • Increasing social motivation • Increasing social initiations • Improve appropriate social responding • Reduce interfering behaviours • Promote skills generalisation 	Group-based social skills training approaches may be useful, but this is based on evidence from several small studies. Several recommendations can be made; there is a need to develop and test structured, manual-based curricula, for replication and amenability to evaluation of treatment fidelity. Future research should use control groups with random assignment. Reliable and valid outcome measures need to be developed, or else existing tools adapted for use in the ASD population. Multi-site interventions may be needed in order to accrue adequate sample sizes.

Table 17.4. Excluded Studies – social/communication skills/social inclusion interventions for young people with ASD

Study	Reasons for Exclusion
Alpern and Zager 2007	Not a review of interventions.
Bellini and Peters, 2008	Not a systematic review. No methods section. Draws on results of previous papers by the first author, which are included (Bellini <i>et al.</i> 2007a and 2007b).
Brunner and Seung 2009	Not a systematic review, hard to be certain that design was ‘a priori’, only 1 database was searched, and no details were provided on the search strategy.
Cappadocia and Weiss 2011	Not a systematic review. A review of social skills training groups (SSTG). No methods section - no details of search strategy.
Case-Smith and Arbesman 2008	Systematic review but scope limited to interventions relevant in the field of occupational therapy.
Countryman 2008	Not a systematic review.
Duncan and Klinger 2010	Not a systematic review. Literature and practice review of interventions to build social skills in young people with ASD. No methods section.
Frankel and Whitham 2011	Not a systematic review.
Konstantareas 2006	Not a systematic review – narrative review of social skills training techniques for ASD. No methods section.
Luckett <i>et al.</i> 2007	Described as a systematic review, however only 1 database is searched.
Makrygianna and Reed 2010	Unable to determine if this is a systematic review due to limited description of search strategy.
Matson <i>et al.</i> 2007	Searched 1 database, no description of search terms. Formatted as a traditional literature review.
Matson and Smith 2008	Review of 6 existing reviews of early intensive behavioural interventions for ASD. No methods section – no details of search strategy or inclusion criteria.
Matson 2007	‘Selective’ review. No methods section, limited information given on search strategy, searches only carried out using one database.
Matson and Boisjoli 2009	No methods section and no details on search strategy.
McCoy and Hermansen 2007	Descriptive summaries of a research method (video-modeling). Methods section is basic, and only 1 database is searched.
Millar <i>et al.</i> 2006	Systematic review of AAC interventions for communication in individuals with developmental disabilities – excluded because only 30% of the participants were autistic, and more recent systematic reviews of communication interventions specifically for ASD are included.
Prendeville <i>et al.</i> 2006	Not a systematic review.
Rao <i>et al.</i> 2008	Insufficient details provided about the search strategy and methods for screening and selection of studies, or extraction of data.
Rogers and Vismara 2008	No methods section and limited details provided on search and selection strategy to determine if review was systematic. Reported more as a traditional literature review.
Scattone 2007	Not a systematic review.
Schreiber 2011	Lack of information given on methods (described as a ‘narrative review of representative research’), appears to lack systemacity.
Stichter <i>et al.</i> 2007	Search appears systematic, but no methods section and lack of detail on how studies were selected for inclusion.
Vismara and Rogers 2010	Not a systematic review. A selective review of ABA intervention approaches.
Wigram and Gold 2006	Not a systematic review – discussion paper, mentions SR in progress by the authors (which is included in this review).
Yoder and McDuffie 2006	Not a systematic review – selective literature review with no methods section, and therefore no information on how studies were selected.

Included studies

- Ayres and Langone (2005) Intervention and instruction with video for students with autism: A review of the literature. *Education and Training in Developmental Disabilities*, 40, 2, 183-196.
- Bellini, S., Peters, J.K., Benner, L. and Hopf, A. (2007) A meta-analysis of school-based social skills interventions for children with autism spectrum disorders. *Remedial and Special Education*, 28, 3, 153-162.
- Delano, M.E. (2007) Video modeling interventions for individuals with autism. *Remedial and Special Education*, 28, 33-42.
- Flippin, M., Reszka, S. and Watson, L.R. (2010) Effectiveness of the Picture Exchange Communication System (PECS) on communication and speech for children with autism spectrum disorders: A meta-analysis. *American Journal of Speech-Language Pathology*, 19, 178-195.
- Gold, C., Wigram, T. and Cochavit, E. (2006) Music therapy for autistic spectrum disorder. Cochrane Database of Systematic Reviews, Issue 2. Art. No.: CD004381. DOI: 10.1002/14651858.pub2.
- Howlin, P., Magiati, I. and Charman, T. (2009) Systematic review of early intensive behavioral interventions for children with autism. *American Journal on Intellectual and Developmental Disabilities*, 114, 1, 23-41.
- Kokina, A. and Kern, L. (2010) Social Story™ interventions for students with autism spectrum disorders: A meta-analysis. *Journal of Autism and Developmental Disorders*, 40, 812-826.
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- Ospina, M.B., Seida, J.K., Clark, B., Karkhaneh, M., Hartling, L., Tjosvold, L., Vandermeer, B. and Smith, V. (2008) Behavioural and developmental interventions for autism spectrum disorder: A clinical systematic review. *PLoS ONE*, 3, 11, e3755.
- Preston, D. and Carter, M. (2009) A review of the efficacy of the Picture Exchange Communication System intervention. *Journal of Autism and Developmental Disorders*, 39, 1471-1486.
- Reichow, B. and Volkmar, F.R. (2010) Social skills interventions for individuals with autism: Evaluation for evidence-based practices within a best evidence synthesis framework. *Journal of Autism and Developmental Disorders*, 40, 149-166.
- Reynhout, G. and Carter, M. (2006) Social Stories™ for children with disabilities. *Journal of Autism and Developmental Disorders*, 36, 4, 445-469.
- Shukla-Mehta, S., Miller, T. and Callahan, K.J. (2010) Evaluating the effectiveness of video instruction on social and communication skills training for children with autism spectrum disorders: A review of the literature. *Focus on Autism and Other Developmental Disabilities*, 25, 1, 23-36.

- Sinha, Y., Silove, N., Wheeler, D. and Williams, K. (2006) Auditory integration training and other sound therapies for autism spectrum disorders: A systematic review. *Archives of Disease in Childhood*, 91, 1018-1022.
- Spreckley, M. and Boyd, R. (2009) Efficacy of applied behavioral intervention in preschool children with autism for improving cognitive, language, and adaptive behavior: A systematic review and meta-analysis. *Journal of Pediatrics*, 154, 338-344.
- van Der Meer, L.A.J. and Rispoli, M. (2010) Communication interventions involving speech-generating devices for children with autism: A review of the literature. *Developmental Neurorehabilitation*, 13, 4, 294-306.
- Virues-Ortega, J. (2010) Applied behavior analytic intervention for autism in early childhood: Meta-analysis, meta-regression and dose-response meta-analysis of multiple outcomes. *Clinical Psychology Review*, 30, 387-399.
- Wang, P. and Spillane, A. (2010) Evidence-based social skills interventions for children with autism: A meta-analysis. *Education and Training in Developmental Disabilities*, 44, 3, 318-342.
- Wang, S.-Y., Cui, Y. and Parrila, R. (2011) Examining the effectiveness of peer-mediated and video-modeling social skills interventions for children with autism spectrum disorders: A meta-analysis in single-case research using HLM. *Research in Autism Spectrum Disorders*, 5, 562-569.
- Williams-White, S., Keonig, K. and Scahill, L. (2007) Social skills development in children with autism spectrum disorders: A review of the intervention research. *Journal of Autism and Developmental Disorders*, 37, 1858-1868.

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- Alpern, C. and Zager, D. (2007) Addressing communication needs of young adults with autism in a college-based inclusion program. *Education and Training in Developmental Disabilities*, 42, 4, 428-436.
- Bellini, S. and Peters, J. (2008) Social skills training for youth with autism spectrum disorders. *Child and Adolescent Psychiatric Clinics of North America*, 17, 857-873.
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- Cappadocia M.C., Weiss J.A. (2011). Review of social skills training groups for youth with Asperger syndrome and high functioning autism. *Research in Autism Spectrum Disorders*, 5, 1, 70-78.
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- Countryman, J. (2008) Social skills groups for Asperger's disorder and pervasive developmental disorder not otherwise specified. *Psychiatry*, 5, 1, 42-47.
- Duncan, A.W. and Klinger, L.G. (2010) Autism Spectrum Disorders: Building social skills in group, school and community settings. *Social Work with Groups*, 33, 2-3, 175-193.
- Frankel, F. and Whitham, C. (2011) Parent-assisted group treatment for friendship problems of children with autism spectrum disorders. *Brain Research*, 22, 240-245.
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- Matson, J.L. and Boisjoli, J.A. (2009) The token economy for children with intellectual disability and/or autism: a review. *Research in Developmental Disabilities*, 30, 240-248.
- McCoy, K. and Hermansen, E. (2007) Video modelling for individuals with autism: A review of model types and effects. *Education and Treatment of Children*, 30, 4, 183-213.
- Millar, D.C., Light, J.C. and Schlosser, R.W. (2006) The impact of Augmentative and Alternative Communication Intervention on the speech production of individuals with developmental disabilities: A research review. *Journal of Speech, Language and Hearing Research*, 49, 248-264.
- Prendeville, J.A., Prelock, P.A. and Unwin, G. (2006) Peer play interventions to support the social competence of children with autism spectrum disorders. *Seminars in Speech and Language*, 27, 1, 32-46.
- Rao, P.A., Beidel, D.C. and Murray, M.J. (2008) Social skills interventions for children with Asperger's syndrome or high-functioning autism: A review and recommendations. *Journal of Autism and Developmental Disorders*, 38, 353-361.
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- Scattone, D. (2007) Social skills interventions for children with autism. *Psychology in the Schools*, 44, 7, 717-726.
- Schreiber, C. (2011) Social skills interventions for children with high-functioning autism spectrum disorders. *Journal of Positive Behavior Interventions*, 13, 1, 49-62.
- Stichter, J.P., Randolph, J., Gage, N. and Schmidt, C. (2007) A review of recommended social competency programs for students with autism spectrum disorders. *Exceptionality*, 15, 4, 219-232.
- Vismara, L.A. and Rogers, S.J. (2010) Behavioral treatments in autism spectrum disorder: what do we know? *Annual Review of Clinical Psychology*, 6, 447-468.
- Wigram, T. and Gold, C. (2006) Music therapy in the assessment and treatment of autism spectrum disorder: clinical application and research evidence. *Child: Care, Health and Development*, 32, 5, 535-542.
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¹ Duplicate data extraction only

² Peer reviewed only

³ Peer reviewed only, but including unpublished dissertations

⁴ Included studies only

⁵ The authors of this study are clinically trained music therapists

SECTION G

SUMMARY AND RECOMMENDATIONS

CHAPTER 18

Summary of Recommendations for Research

Throughout the report, we have identified implications for both practice and research as these arose, and have drawn on the examples of good and innovative practice that our advisors brought to our attention. In this chapter, we bring together in one place the recommendations for research that have emerged from the evidence reviewed relating to the issues covered in this report. We begin though, by highlighting some of the issues identified by our advisory group.

Issues identified by practitioners

- i) Our lack of knowledge as to how many children attend services, whether these are appropriate, effective and accessible, and whether or not children engage with them.
- ii) The significance of substance misuse and its links to mental health difficulties, though for families and young people. Both issues were thought to decrease engagement with services.
- iii) The high rates of mental health issues amongst looked after children., which those present thought was about two thirds, and a lack of knowledge as to how many get help, what level of help they get, and where they get it.
- iv) How best to identify help-seeking behaviour.
- v) The importance of wraparound services and supporting carers
- vi) Lack of knowledge about the impact of adoption, which is significantly increased over the last 10 years, with the children being adopted older and possibly more emotionally and psychologically ‘damaged’.
- vii) The importance of knowing the features of services that work.
- viii) The need to give more attention to child sexual abuse. The emphasis on ‘protection’ needs to be matched by attention to the therapeutic needs of children who have been sexually abused.
- ix) The importance of retaining young people in education as a means of improving outcomes.

Research gaps

Chapter 3 - Northern Ireland prevalence study of mental health Clearly, all of the above have implications for a research agenda. However, those with whom we talked were unanimous in the view that the NI prevalence study of child and adolescent mental health, recommended by Bamford, needed urgently to be conducted. It was felt that there was reason to believe that Northern Ireland was sufficiently different in its history from the rest of the UK to merit such a study, and that the Meltzer study conducted in England and Wales was now over 10 years old. Some emphasised the importance of knowing how many young people in Northern Ireland are moderately and severely disturbed. Most saw it as an important prerequisite to informed planning and service development.

Chapter 4 - *Effective interventions for helping parents, professionals and communities to identify help-seeking behaviour* Given our long-standing awareness of the under-recognition of mental health problems by young people, their parents, and professionals – particularly teachers and general practitioners –, the dearth of research in this area is striking, particularly in relation to what might bring about change. The same is true of interventions designed to prevent or overcome the barriers to help-seeking behaviour. The singular problem of youth suicide in Northern Ireland makes this a high priority area for research.

Chapter 5 - *Targeting factors that contribute to poor mental health* A key finding here was the need for better reporting of studies. Researchers need to detail how programmes/interventions are implemented and what their different components are, so that we can determine the extent to which effects are related to key features of the intervention or key features of the evaluation. Similarly, researchers should detail participant characteristics and/or associations between such characteristics and intervention outcomes. To date, studies have lacked long-term follow-up assessments, which are key to determining how effective an intervention is in the long-term. Cost-benefit analyses have yet to be conducted, and these are particularly pressing for school anti-bullying programmes, given their widespread adoption. Finally, the views of participants have been noticeably absent for most of these studies, although they could be crucial in order to identify the effective components of interventions.

Chapter 6 – *Preventing attachment and other behavioural disorders* The gaps in research vary somewhat in relation to the intervention type under consideration. In the area of parenting research, we need research that answers questions about the maintenance of gains, as most studies have only reported on short-term outcomes. To date, the evidence has little or nothing to say about whether or not parenting programmes are cost-effective as a primary prevention programme, or are best suited to secondary prevention. In both areas, studies need to be larger and address a wider range of outcomes over a longer period of time. Given the evidence regarding the importance of the parent-infant relationship to future mental health and social adjustment, this should be a research priority.

The evidence base underpinning home visiting is mixed. The programme reporting the best results to date are those of the Nurse Family Partnership (Olds 2006) and this is currently being trialled in the UK, and introduced to Northern Ireland. The evidence base is persuasive, but the evidence rests on three studies, conducted in a policy context quite different to that of the UK, and about which some researchers have expressed some concerns, not least of all in the lack of access to the primary data. There is a scope for the rigorous evaluation of other forms of parenting support programmes, such as that being rolled out in the South Eastern Health and Social Care Trust.

Despite the number of reviews and studies exploring the effectiveness of school-based programmes and interventions, further research needs to be conducted, especially longitudinal designs and good quality CCTs in the UK to assess the impact of whole-school and targeted approaches (Adi *et al.* 2007; Barry *et al.* 2009). This kind of approach is especially vulnerable to ‘policy fads’, and there are already indications that such interventions may no longer be a political imperative. Not to evaluate the potential of these interventions would represent a missed opportunity within the UK.

Chapter 7 – *Supporting carers* There are few rigorous evaluations of parenting interventions. Research is needed to establish what programmes are best suited to support parents and carers

from a diversity of backgrounds and different experiences, especially in the long-term, and also to determine the differential impact of interventions with mothers and fathers. Again, studies that seriously examine the cost-effectiveness of programmes are needed.

Chapter 8 – *Looked after children* There is still a need for studies of kinship care that succeed in better controlling the biases present in most existing studies. In particular, longitudinal designs that can investigate the outcomes for children over time, together with the development of psychometrically sound instruments of family and child functioning, would enable more reliable comparisons between groups and studies, and greater focus on controlling and understanding selection bias, through the application of emerging statistical models.

Given the limited evidence base and the fact that most studies have been conducted by programme developers, there is a need for independent evaluation of the effectiveness of Treatment Foster Care. The English study was not well designed, and recruited few participants. Studies need to be conducted in different locations, with different groups of young people, of different ages and increased ethnic diversity, with a range of clearly identified problem profiles, and with follow-up components greater than two years.

There is a gap in the synthesis of data from studies that have investigated interventions designed to improve the physical, educational, and mental health of LACYP.

Chapter 9 – *Maltreated children* Gaps in research include the need i) for studies of interventions designed to address the sequelae of child physical abuse and severe neglect, and psychological/emotional maltreatment, and ii) studies of interventions that are designed to prevent maltreatment in high-risk populations not covered by the Nurse Family Partnership.

Whilst there is a larger evidence base in relation to promoting parental sensitivity and infant-parent attachment, there is room for more research, particularly in relation to interventions that single studies indicate are promising, but have yet to be extensively or rigorously evaluated, such as Mellow parents/Mellow Babies.

More generally, there is a need for studies which:

- use more robust, experimental designs;
- provide better baseline information, including assessments of presenting problems and types of maltreatment, participants, interventions, settings, contact with other agencies, etc.
- provide information on co-occurrence of other types of abuse, which are commonplace, in order to enable conclusions to be drawn about the differential effectiveness of interventions for specific forms of maltreatment;
- track and report client attrition rates, reasons for attrition, obtain follow-up data on all participants;
- use a multidimensional approach to the assessment of outcomes that include behavioural observations, and
- collect data/conduct studies of process, to assess the quality of the therapeutic alliance and other key change events.

Chapter 10 – *Multi-agency and multi-disciplinary working* We do not need any more studies of the factors hindering or facilitating multi-agency or multi-disciplinary working. We do need more studies that explore the relative effectiveness of different ways of working and different interventions designed to promote effective multi-agency and multi-disciplinary practice.

Effectiveness might be defined in relation to service improvements, but there is a need for studies that focus on the end point of deliver and the difference made in the lives of children and families. Studies should include data collection strategies that shed light on the impacts of all interventions, whether these are educational, organisational or focused on fostering good working relationships.

Assuming that we know something about effectiveness, or can establish it, there is a significant gap in our knowledge of the cost-effectiveness of single agency versus multi-agency work, and different forms of these.

Randomised trials, controlled before and after studies and interrupted time series designs provide opportunities for rigorous evaluations of professional practice and healthcare outcomes.

It is likely that there is a gap in research on models of practice aimed particularly at mentally ill young people and specifically at emergency or out-of-hours responses to them. Services in Northern Ireland are generally geared towards adult psychiatric care, and young people's experiences of finding themselves in hospital settings with older, often very disturbed or disabled people can have iatrogenic effects.

Chapter 11 – *Nurturing resilience* The Penn Resiliency Programme is widely referenced as an evidenced-based programme that can make significant impacts on depression and anxiety in young people. This might be interpreted as meaning there is no need for further research, but there is a need for independent evaluations of this programme, implemented in different policy contexts and with different populations. Its 'promise' suggests that it would be worthwhile commissioning an effectiveness trial of this programme within the UK, including Northern Ireland. This study (or studies) should be designed to answer questions about which aspects of the programme are essential to ensure optimum impact.

Resilience remains a poorly understood phenomenon, and more research is needed to explore how resilience is nurtured, what threatens it, and how best to support individuals who are faced with extraordinary levels of assault or threat, or levels of trauma or adversity that they are unable to manage without support. Whilst the Penn Resiliency Programme stands out for its results, it does so largely because there is a dearth of other interventions that have been developed, which enjoy a sound logic model and which have been subject to rigorous evaluation. It is unlikely that this one programme will meet all our needs, and there is a significant gap in the evidence base relating to 'what works' in promoting, sustaining, or rebuilding resilience. Making use of the influence of peers rather than professionals is an increasingly commonplace strategy in Northern Ireland. This is most evident though the use of Mentoring Schemes available through organisations including Opportunity Youth. Such strategies would benefit from high quality assessment and development.

Chapter 12 – *Addressing the needs of gay, lesbian, bisexual and transgendered young people*

The evidence available suggests that, first and foremost, there is a significant gap in our understanding of the challenges facing children and young people who are gay, lesbian, bisexual and transgendered. There has been little rigorous research into the nature of gender identity disorder, or what interventions are appropriate or effective. This is a significant gap in research, given the high rates of depression and suicide previously cited.

While some attempts have been made at examining important influences on the mental health of lesbian, gay, bisexual and transgender young people, attention should be directed towards the

design, implementation and assessment of interventions directly aimed at these young people, focusing on the coping skills necessary to deal with minority stress, should it occur. Such research needs more carefully to document and address the diversity of participants, taking into account the varying effects that age, gender, religion, culture and ethnicity could have on mental health, and ensure these considerations are incorporated into the interventions.

Research in this area, as others, needs to be more rigorous than hitherto. In particular, it should seek to move beyond convenience samples, and incorporate more prospective longitudinal work.

Chapter 13 – Preventing suicide and self-harm Following Crowley *et al.* (2004), our recommendations for future research are that we need to develop interventions that are conceptually and empirically sound and investigate them by means of larger trials, and studies that examine the socio-economic gradient and the wider structural barriers to mental health; process and qualitative evaluations. More particularly, we need studies of the effectiveness of helplines; means reduction, the role of media in NI context, and the responsiveness of out-of-hours and/or emergency teams. Research needs to particularly to focus on high-risk groups, the impact of self-harm, and suicide awareness training. Finally, evaluation needs to be built in to all prevention interventions.

Chapter 14 – Helping parents with mental health problems In light of the current developments in Northern Ireland, and the evidence from the included reviews, priorities for research appear to be as follows. We need information on the prevalence of parental mental health problems in Northern Ireland. In light of the proposed introduction of a screening tool, there is an urgent need to evaluate possible tools on a pilot basis, before evaluating them more definitively. Encouraging (or insisting?) that new initiatives be subject to some form of independent evaluation from the outset, would go some considerable way to building an evidence base. This should be considered as part of the ongoing work of the Mental Health and Children's Services Project, as it works through the implementation of SCIE's (2009) guidance. There is a very significant gap in the international literature on the experiences and needs of fathers with mental health problems.

Chapter 15 – Interventions for parents with mental health problems There is a predominance of interest and endeavour on early interventions. Whilst this is appropriate, it is also the case that other opportunities exist to help, and older children with parents who have mental health problems also have developmental needs that should not be ignored. Further, whilst we know that there is an association between parental mental health problems and children's safety, health and well-being, the exact mechanisms involved are only partially understood – important if we are to provide effective support. More importantly, perhaps, we should not assume that negative consequences are inevitable, and research is therefore needed to improve decision-making. There is a need for research that directly compares various forms of treatment for parental depression, which is sufficiently well designed and powered to determine differential effects on children. Gunlicks *et al.* (2008) highlight the need for research on the effects on children of treating fathers with depression.

Chapter 16 – Assertive outreach, intensive or day unit treatment The quality of studies addressing alternatives to inpatient care are highly variable and generally under powered, and the standard of reporting is poor. This has important implications for our ability to replicate those interventions that appear promising, whether in practice or in research. Further, the majority of the current evidence comes from studies conducted in the US, making it more difficult to extrapolate results to a Northern Ireland context.

Given current concerns about the scale and management of mental health problems in children and adolescents, a high priority should be attached to improvements in the quality of the evidence base which currently provides very little guidance for the development of services. Well designed, adequately powered RCTs are needed in this area to determine which services result in the best outcomes for children and young people with complex needs, although the inherent ethical issues involved in such a study design is possibly why the evidence-base is currently so weak. Shepperd *et al.* (2008) make two recommendations for future research: firstly, the implementation of prospective comparative systems of audit, to include baseline measurement and demographic data at admission, along with outcomes measured using standardised robust instruments. Secondly, future studies should gather evidence from service users, their parents, and/or the professionals treating them, regarding their experiences of interventions and the difference it makes in their lives. This indicates a need for qualitative research, and/or the embedding of process and implementation data collection within effectiveness studies.

Chapter 17 – *Children with autistic spectrum disorders* Few interventions have yet to be rigorously evaluated, including ecological or environmental modifications, collateral skill development, visual supports, social skills development programmes, educational programmes, and many well known manualized and comprehensive programmes. Little is known about the accessibility, feasibility, or affordability of programmes or the cost-effectiveness of interventions, and very little is known about the effects of interventions on parents and family well-being or the effect of treatment over the lifetime. Future research should not merely determine whether a treatment is effective, but it must specify clearly for whom and in what context the intervention is effective.

There needs to be more research using group designs, and experimental group designs in particular, which will allow for further understanding of an intervention's effects.

The results of this review would indicate that there is much evidence to support the treatment of social and communication skills in children and young people with ASD, however it is not possible to draw conclusions about the superiority of one intervention over another. Future research should include direct comparisons of various types of interventions, in addition to using placebo or no treatment as comparators, in order to provide evidence that will assist patients and practitioners in choosing among many treatment options.

The evidence-base is greatest for preschool children (typically aged <5 years), which is not surprising given the importance of early intervention. Future research should explore more the application of intervention to school-aged children and adolescents.

APPENDIX 1: INDICATIVE SEARCH STRATEGIES¹⁴

GENERAL

1. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
2. [MeSH descriptor **Adolescent**, this term only](#)
3. [MeSH descriptor **Child** explode all trees](#)
4. [MeSH descriptor **Minors** explode all trees](#)
5. [MeSH descriptor **Infant** explode all trees](#)
6. #1 OR #2 OR #3 OR #4 OR #5
7. Ireland or NI
8. [MeSH descriptor **Northern Ireland**, this term only](#)
9. [MeSH descriptor **Ireland**, this term only](#)
10. #7 OR #8 OR #9
11. (Mental\$ OR Psychiatri\$) ADJ2 (Health\$ OR Ill\$ OR Disorder\$)
12. MeSH descriptor **Mental Health**, explode all trees
13. MeSH descriptor **Mental Disorders**, explode all trees
14. #11 OR #12 OR #13
15. #6 AND #10 AND #14

(Medline Results = 205, Restricted to post 2000 = 122, Restricted to “Reviews” = 3)

CHAPTER 3 - Prevalence

What is now known about the mental health issues of children in NI and do we need a NI prevalence survey of the mental health needs of children and young people?

PSYCHINFO

Search ID# **Search Terms**

S9 S7 and S8

S8 review* or meta* or synthes*

S7 S4 and S5

S6 4 and S5

S5 Prevalence*

S4 S1 or S2 or S3

S3 KW (baby OR babies OR infan* or juvenile* or minor* or child* or adolescen* or youth* or young* or teen* or boy* or girl*) and KW ((Mental* w3 health*) or (mental* w3 ill*) or (mental* w3 disorder*) or (Psychiatri* w3 health*) or (Psychiatri* w3 ill*) or (Psychiatri* w3 disorder*))

S2 AB (baby OR babies OR infan* or juvenile* or minor* or child* or adolescen* or youth* or young* or teen* or boy* or girl*) and AB ((Mental* w3 health*) or (mental* w3 ill*) or (mental* w3 disorder*) or (Psychiatri* w3 health*) or (Psychiatri* w3 ill*) or (Psychiatri* w3 disorder*))

¹⁴ Full search strategies for any chapter, available on request.

S1 TI (baby OR babies OR infan* or juvenile* or minor* or child* or adolescen* or youth* or young* or teen* or boy* or girl*) and TI ((Mental* w3 health*) or (mental* w3 ill*) or (mental* w3 disorder*) or (Psychiatri* w3 health*) or (Psychiatri* w3 ill*) or (Psychiatri* w3 disorder*))

Centre for Reviews and Dissemination (DARE, NHS EED and HTA) Search: prevalence AND mental AND health AND children All Years: 18 2005-2011: 6

CHAPTER 4 - Identifying help seeking behaviour

What helps professionals and lay workers to identify help seeking behaviours (from parents, children and others)?

1. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
2. MeSH descriptor **Adolescent**, this term only
3. MeSH descriptor **Child** explode all trees
4. MeSH descriptor **Minors** explode all trees
5. MeSH descriptor **Infant** explode all trees
6. MeSH descriptor **Parents** explode all trees
7. (parent\$ OR mother\$ OR father\$ OR carer\$ OR care-giv\$ OR caregiv\$ OR care giv\$ OR guardian\$)
8. #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7
9. (Help\$ OR Health\$ Advise\$ OR advice\$) ADJ2 seek\$
10. (identif\$ OR screen\$ OR test\$ OR evaluat\$ OR monitor\$ OR examin\$ OR detect\$ OR assess\$)
11. #8 AND #9 AND #10

(Medline Results = 1521, Restricted to post 2000 = 1067, Restricted to “Reviews” = 81)

CHAPTER 5 - Preventing the factors that contribute to poor mental health

What interventions best address factors known to contribute to poor mental health and self harm, such as bullying?)

1. (Mental\$ OR Psychiatri\$) ADJ2 (Health\$ OR Ill\$ OR Disorder\$)
2. MeSH descriptor **Mental Health**, explode all trees
3. MeSH descriptor **Mental Disorders**, explode all trees
4. self harm\$ OR self destructive behave\$ OR self injur\$ OR DSH OR self-harm\$ OR suicid\$ OR parasuicid\$ OR suicidal behav\$
5. (attempt* OR complete*) ADJ2 suicid\$
6. #1 OR #2 OR #3 OR #4 OR #5
7. (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$)

8. violen\$ or aggress\$ or angry or hostil\$ or bully\$ or bullie\$ or fight\$ or fought
9. (antisocial or agonis\$) near behav\$
10. #8 OR #9
11. #6 AND #7 AND #10

(Medline Results = 5973, Restricted to post 2000 = 3828, Restricted to “Reviews” = 625)

CHAPTER 6 - Preventing attachment and other behavioural disorders

What primary and secondary prevention strategies/interventions are most likely to help prevent attachment and other behavioural difficulties amongst children and young people (Bamford 2007, para 5.13).

1. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
2. [MeSH descriptor **Adolescent**, this term only](#)
3. [MeSH descriptor **Child** explode all trees](#)
4. [MeSH descriptor **Minors** explode all trees](#)
5. [MeSH descriptor **Infant** explode all trees](#)
6. #2 OR #2 OR #3 OR #4 OR #5
7. (attachment OR difficult\$ OR problem\$) ADJ2 Behav\$
8. (Primar\$ OR second\$) ADJ3 (prevent\$) ADJ3 (interven\$ OR strateg\$ OR train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR therap\$)
9. #6 AND #7 AND #8

(Medline Results = 26, Restricted to post 2000 = 15, Restricted to “Reviews” = 6)

CHAPTER 7: Addressing the support needs of carers

How best to address the support needs of carers (para 5.22).

1. Carer\$ or Care-giv\$ or Caregiv\$ or Care giv\$ or Caretaker\$ or Guardian\$
2. Support\$ or Help\$ or Assist\$
3. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
4. [MeSH descriptor **Adolescent**, this term only](#)
5. [MeSH descriptor **Child** explode all trees](#)
6. [MeSH descriptor **Minors** explode all trees](#)
7. [MeSH descriptor **Infant** explode all trees](#)
8. #3 OR #4 OR #5 OR #6 OR #7

9. #1 AND #2 AND #8

(Medline Results = 4546, Restricted to post 2000 = 3184, Restricted to “Reviews” = 409)

CHAPTER 8: Models of service that provide effective help

How best to develop a coherent service response that does not rely on the presence of symptoms as a basis of referral e.g. proactive and comprehensive approaches to the assessment of the physical, educational and mental health needs of Looked After Children (para 5.21).

Medline search

1. [MeSH descriptor Foster Home Care explode all trees](#)
2. foster-care\$
3. (foster) ADJ3 (care\$ OR parent\$ OR mother\$ OR father\$)
4. (substitute OR kinship OR relative OR grandparent\$ OR grandmother\$ OR grandfather\$) ADJ3 (care OR carer\$)
5. (Child\$ OR Foster*) ADJ3 home\$
6. (Residential OR famil\$) ADJ2 placement\$
7. “in care”
8. Look\$ ADJ2 after
9. LAC or LAAC
10. (vulnerable OR maltreat\$ or public\$ care\$) ADJ2 child\$
11. #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10
12. Physical\$ ADJ2 (assess\$ OR identif\$ OR screen\$ OR test\$ OR evaluat\$ OR monitor\$ OR examin\$ OR detect\$)
13. Educat\$ ADJ2 (assess\$ OR identif\$ OR screen\$ OR test\$ OR evaluat\$ OR monitor\$ OR examin\$ OR detect\$)
14. (Mental\$ health\$ OR Mental\$ ill\$ OR Mental\$ disorder\$) ADJ2 (assess\$ OR identif\$ OR screen\$ OR test\$ OR evaluat\$ OR monitor\$ OR examin\$ OR detect\$)
15. #12 OR #13 OR #14
16. #11 AND #15

(Medline Results = 876, Restricted to post 2000 = 611, Restricted to “Reviews” = 73)

What models of services are most likely to ensure that children looked after receive timely and effective help?

1. [MeSH descriptor Foster Home Care explode all trees](#)
2. foster-care\$
3. (foster ADJ3 care\$)
4. (foster ADJ3 parent\$)
5. (foster ADJ3 mother\$)
6. (foster ADJ3 father\$)
7. (substitute) ADJ3 (care OR carer\$)

8. Child\$ home\$
9. Foster\$ home\$
10. Residential placement\$
11. “in care”
12. Look\$ after
13. “Look\$ after” ADJ3 “social service\$”
14. #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13
15. (model\$ OR service\$ OR outreach\$ OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
16. #14 AND #15

(Medline Results = 11841, Restricted to post 2000 = 7049, Restricted to “Reviews” = 849)

CHAPTER 9 - Mental health of maltreated and looked after children

What interventions are most likely to provide effective support to children traumatised through maltreatment or disrupted relationships with their primary carers (para 5.17-20, see also Sheldon and Macdonald 2008).

1. [MeSH descriptor Child Abuse](#) [explode all trees](#)
2. (infan\$ or child\$ or teen\$ or adolescen\$ or minor\$ or toddler\$ or baby or babies) ADJ3 (maltreat\$ or neglect\$ or abuse\$)
3. (physical\$ or sexual\$ or emotion\$) ADJ3 abuse\$ ADJ3 (infan\$ or child\$ or teen\$ or adolesc\$ or minor\$ or toddler\$ or baby or babies)
4. (intent\$ or unintention\$) ADJ3 injur\$ ADJ3 (infan\$ or child\$ or teen\$ or adolesc\$ or minor\$ or toddler\$ or baby or babies)
5. #1 OR #2 OR #3 OR #4
6. (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$)
7. trauma\$ OR traumatic stress OR PTSD OR post-traumatic OR stress-prevention
8. MeSH descriptor **Stress Disorders, Traumatic** [explode all trees](#)
9. #7 OR #8
10. #5 AND #6 AND #9

(Medline Results = 1569, Restricted to post 2000 = 1064, Restricted to “Reviews” = 167)

CHAPTER 10 - Multidisciplinary working

What approaches to multidisciplinary and multi-agency work are most effective?

1. Multidisciplinary\$ OR Interdisciplinary\$ OR Multiprofessional\$ OR Multimodal\$ OR Integrat\$ OR Multi-agenc\$ OR Multiagenc\$ OR Multicentre\$
2. [MeSH descriptor Foster Home Care explode all trees](#)
3. foster-care\$
4. (foster ADJ3 care\$)
5. (foster ADJ3 parent\$)
6. (foster ADJ3 mother\$)
7. (foster ADJ3 father\$)
8. (substitute) ADJ3 (care oOR carer\$)
9. Child\$ home\$
10. Foster\$ home\$
11. Residential placement\$
12. "in care"
13. Look\$ after
14. "Look\$ after" ADJ3 "social service\$"
15. #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14
16. #1 AND #15

Medline Search - Multi-disciplinary/agency

- #1 (Multidisciplinary* or Interdisciplinary* or Multiprofessional* or Multimodal* or Multi-agenc* or Multiagenc* or Multicentre*).ab,kw,ti.
- #2 ((foster* adj3 (care* or parent* or mother* or father* or home)) or (substitute adj3 care*) or (Child* adj3 home*) or (Residential adj3 placement*) or in care).mp. or (Look* after)).ab,kw,ti.
- #3 Foster Home Care.sh.
- #4 (((physical* or sexual* or emotion*) adj3 abuse*) or ((intent* or unintention*) adj3 injur*)) or (disrupt* adj3 relationship*).ab,kw,ti.
- #5 #2 or #3 or #4
- #6 (infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies).ab,kw,ti.
- #7 #1 and #5 and #6
- #8 #7 and 2006:2011.(sa_year)
- #9 (review* or meta* or synthes*)ab,kw,ti.
- #10 #8 and #9

(Medline Results = 1170, Restricted to post 2000 = 706, Restricted to "Reviews" = 135)

PsycInfo Search - Multi-disciplinary/agency

- #1 TI (Multidisciplinary* OR Interdisciplinary* OR Multiprofessional* OR Multimodal* OR Multi-agenc* OR Multiagenc* OR Multicentre*) or AB (Multidisciplinary* OR Interdisciplinary* OR Multiprofessional* OR Multimodal* OR Multi-agenc* OR

- Multiagenc* OR Multicentre*) or KW (Multidisciplinary* OR Interdisciplinary* OR Multiprofessional* OR Multimodal* OR Multi-agenc* OR Multiagenc* OR Multicentre*)
- #2 TI ((foster-care*) OR (foster w3 care*) OR (foster w3 parent*) OR (foster w3 mother*) OR (foster w3 father*) OR (substitute w3 care) OR (substitute w3 carer*) OR (Child* w3 home*) OR (Foster* w3 home*) OR (Residential w3 placement*) OR (in care) OR (Look* after)) or AB ((foster-care*) OR (foster w3 care*) OR (foster w3 parent*) OR (foster w3 mother*) OR (foster w3 father*) OR (substitute w3 care) OR (substitute w3 carer*) OR (Child* w3 home*) OR (Foster* w3 home*) OR (Residential w3 placement*) OR (in care) OR (Look* after)) or KW ((foster-care*) OR (foster w3 care*) OR (foster w3 parent*) OR (foster w3 mother*) OR (foster w3 father*) OR (substitute w3 care) OR (substitute w3 carer*) OR (Child* w3 home*) OR (Foster* w3 home*) OR (Residential w3 placement*) OR (in care) OR (Look* after)) or TI ((maltreat* or neglect* or abuse*)) or AB ((maltreat* or neglect* or abuse*)) or KW ((maltreat* or neglect* or abuse*))
- #3 TI ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies)) or AB ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies)) or KW ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies))
- #4 #1 AND #2 AND #3
- #5 **Limiters** - Published Date from: 20050101-20111231
- #6 TI (review* or meta* or synthes*) or AB (review* or meta* or synthes*) or KW (review* or meta* or synthes*)
- #7 #4AND #6

DARE/HTA Database Search

(multidisciplinary* or interdisciplinary* or multiprofessional* or multimodal* or multi-agenc* or multiagenc* or multicentre*) and (infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies) and (foster* or care* or residential or abuse* or neglect* or maltreat* or home*) RESTRICT YR 2005 2011.

Chapter 11 Interventions to promote/nurture the development of resilience

What interventions best promote/nurture the development of resilience? Bamford notes the importance of pursuing infant mental health and early interventions services as a preventative strategy (para 5.12).

1. [\(infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
2. [MeSH descriptor Adolescent, this term only](#)
3. [MeSH descriptor Child explode all trees](#)
4. [MeSH descriptor Minors explode all trees](#)
5. [MeSH descriptor Infant explode all trees](#)
6. #1 OR #2 OR #3 OR #4 OR #5
7. (Mental\$ OR Psychiatri\$) ADJ2 (Health\$ OR Ill\$ OR Disorder\$)

8. MeSH descriptor **Mental Health**, explode all trees
9. MeSH descriptor **Mental Disorders**, explode all trees
10. #7 OR #8 OR #9
11. MeSH descriptor **Resilience, Psychological** explode all trees
12. Resilien\$
13. #11 OR #12
14. (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$)
15. #6 AND #10 AND #13 AND #1

(Medline Results = 256, Restricted to post 2000 = 219, Restricted to “Reviews” = 43)

Medline Search - Resilience

- #1 (baby or babies or infan* or juvenile* or minor* or child* or adolescen* or youth* or young* or teen* or boy* or girl*)ab,kw,ti.
- #2 (adolescent or child or minors or infant)sh.
- #3 #1 OR #2
- #4 ((Mental* or Psychiatri*) adj2 (Health* or Ill* or Disorder*))ab,kw,ti.
- #5 (mental health or mental disorders)sh.
- #6 #4 OR #5
- #7 “Resilien*”. ab,kw,ti.
- #8 Resilience, Psychological/
- #9 #7 or #8
- #10 (train* or educat* or promot* or program* or skill* or group* or support* or teach* or learn* or interven* or therap*)ab,kw,ti.
- #11 #3 AND #6 AND #9 AND #10
- #12 #11 and 2006:2011.(sa_year)
- #13 (review* or meta* or synthes*)ab,kw,ti.
- #14 #12 AND #13

PsycInfo Search - Resilience

- #1 TI ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies)) or AB ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies)) or KW ((infan* or child* or teen* or adolescen* or minor* or toddler* or baby or babies))
- #2 TI ((Mental* W2 health*) OR (Mental* W2 ill*) OR (Mental* W2 disorder*) OR (psychiatri* W2 health*) OR (psychiatri * W2 ill*) OR (psychiatri * W2 disorder*)) or AB ((Mental* W2 health*) OR (Mental* W2 ill*) OR (Mental* W2 disorder*) OR (psychiatri* W2 health*) OR (psychiatri * W2 ill*) OR (psychiatri * W2 disorder*)) or KW ((Mental* W2 health*) OR (Mental* W2 ill*) OR (Mental* W2 disorder*) OR (psychiatri* W2 health*) OR (psychiatri * W2 ill*) OR (psychiatri * W2 disorder*))
- #3 TI resilien* or AB resilien* or KW resilien*
- #4 TI (train* OR educat* OR promot* OR program* OR skill* OR group* OR support* OR teach* OR learn* OR interven* OR therap*) or AB (train* OR educat* OR promot* OR program* OR skill* OR group* OR support* OR teach* OR learn* OR interven* OR

therap*) or KW (train* OR educat* OR promot* OR program* OR skill* OR group* OR support* OR teach* OR learn* OR interven* OR therap*)

#5 #1 AND #2 AND #3 AND #4

#6 **Limiters** - Published Date from: 20050101-20111231

#7 TI (review* or meta* or synthes*) or AB (review* or meta* or synthes*) or KW (review* or meta* or synthes*)

#8 #6 AND #7

DARE/HTA Database Search

(infan* or juvenile* or minor* or child* or adolescen* or youth* or young* or teen* or boy* or girl*) AND (mental* OR psychiatr*) AND (resilien*) RESTRICT YR 2005 2011

CHAPTER 12 – Interventions to address the needs of Gay, Lesbian, Bisexual and Transgender young people

What interventions/strategies are most likely to help address the mental health issues relating to gay, lesbian, bisexual and transgendered young people (Bamford 2007, paras 5.6 and 5.7)?

1. Homosexual\$ OR Gay\$ OR Lesbian\$ OR Bisexual\$ OR Transgender\$ OR Trans-gender\$ OR (Sexual identi\$) OR (Gender Identi\$) OR GID or GIDS OR (Same sex) OR “men who have sex with men” OR MSM OR “women who have sex with women” OR WSW
2. ([infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$](#))
3. [MeSH descriptor Adolescent, this term only](#)
4. [MeSH descriptor Child explode all trees](#)
5. [MeSH descriptor Minors explode all trees](#)
6. [MeSH descriptor Infant explode all trees](#)
7. #2 OR #3 OR #4 OR #5 OR #6
8. (Mental\$ OR Psychiatri\$) ADJ2 (Health\$ OR Ill\$ OR Disorder\$)
9. MeSH descriptor **Mental Health**, explode all trees
10. #8 OR #9
11. #1 AND #7 AND #10

(Medline Results = 446, Restricted to post 2000 = 301, Restricted to “Reviews” = 30)

CHAPTER 13 – Interventions to prevent self harm and suicide

What interventions show most promise / evidence of effectiveness in preventing self harm and suicide?

1. ([infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$](#))

2. [MeSH descriptor Adolescent, this term only](#)
3. [MeSH descriptor Child explode all trees](#)
4. [MeSH descriptor Minors explode all trees](#)
5. [MeSH descriptor Infant explode all trees](#)
6. #1 or #2 or #3 or #4 or #5
7. deliberate self harm\$
8. self harm\$
9. self destructive behave\$
10. self injur\$
11. DSH
12. self-harm\$
13. suicid\$
14. parasuicid\$
15. suicidal behav\$
16. attempted suicid\$
17. completed suicid\$
18. #7 or #8 or #9 or #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17
19. (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$)
20. #6 AND #18 AND #19

(Medline Results = 8139, Restricted to post 2000 = 4803, Restricted to “Reviews” = 541)

CHAPTER 14 – Interventions to help parents with mental health problems

How can services support their parenting whilst remaining mindful of the needs of children and young people themselves?

1. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
2. [MeSH descriptor Adolescent, this term only](#)
3. [MeSH descriptor Child explode all trees](#)
4. [MeSH descriptor Minors explode all trees](#)
5. [MeSH descriptor Infant explode all trees](#)
6. #1 OR #2 OR #3 OR #4 OR #5
7. [MeSH descriptor Parents explode all trees](#)
8. (parent\$ OR mother\$ OR father\$ OR carer\$ OR care-giv\$ OR caregiv\$ OR care giv\$ OR guardian\$)
9. #7 OR #8
10. (model* OR service\$ OR outreach\$ OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
11. #6 AND #9 AND 10

(Medline Results = 95315, Restricted to post 2000 = 53747, Restricted to “Reviews” = 6628)

[MeSH descriptor Parents explode all trees](#)

1. (parent\$ OR mother\$ OR father\$ OR carer\$ OR care-giv\$ OR caregiv\$ OR care giv\$ OR guardian\$)
2. #1 OR #2
3. (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$)
4. (Mental\$ OR Psychiatri\$) ADJ2 (Health\$ OR Ill\$ OR Disorder\$)
5. MeSH descriptor **Mental Health**, explode all trees
6. MeSH descriptor **Mental Disorders**, explode all trees
7. #5 OR #6 OR #7
8. #3 AND #4 AND #8

(Medline Results = 8139, Restricted to post 2000 = 5335, Restricted to “Reviews” = 660)

CHAPTER 15 –Keeping children in mind

How can services support their parenting whilst remaining mindful of the needs of children and young people themselves?

12. [\(baby OR babies OR infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
13. [MeSH descriptor Adolescent, this term only](#)
14. [MeSH descriptor Child explode all trees](#)
15. [MeSH descriptor Minors explode all trees](#)
16. [MeSH descriptor Infant explode all trees](#)
17. #1 OR #2 OR #3 OR #4 OR #5
18. [MeSH descriptor Parents explode all trees](#)
19. (parent\$ OR mother\$ OR father\$ OR carer\$ OR care-giv\$ OR caregiv\$ OR care giv\$ OR guardian\$)
20. #7 OR #8
21. (model* OR service\$ OR outreach\$ OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
22. #6 AND #9 AND 10

(Medline Results = 95315, Restricted to post 2000 = 53747, Restricted to “Reviews” = 6628)

CHAPTER 16 - Effective approaches for assertive outreach/intensive treatment/ day unit treatment for young people with complex needs?

What are the most effective approaches for assertive outreach/intensive treatment/ day unit treatment for young people with complex needs?

1. [\(infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)

2. [MeSH descriptor Adolescent, this term only](#)
3. [MeSH descriptor Child explode all trees](#)
4. [MeSH descriptor Minors explode all trees](#)
5. [MeSH descriptor Infant explode all trees](#)
6. #1 or #2 or #3 or #4 or #5
7. Complex\$ ADJ2 need\$
8. (Assertive* OR Intensive* OR DayUnit) ADJ2 (outreach\$OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
9. #6 AND #7 AND #8

(Medline Results = 15, Restricted to post 2000 = 12, Restricted to “Reviews” = 1)

Medline example

- #1 (juvenile\$ or minor\$ or child\$ or adolescen\$ or youth\$ or young\$ or teen\$ or boy\$ or girl\$).tw.
- #2 MeSH descriptor **Adolescent**
- #3 MeSH descriptor **Child**
- #4 MeSH descriptor **Minors**
- #5 #1 or #2 or #3 or #4
- #6 Complex\$ ADJ2 need\$.tw
- #7 (Assertive\$ OR Intensive\$ OR Day Unit\$) ADJ2 (outreach\$ OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
- #8 early intervention team\$
- #9 early intervention service\$
- #10 #7 or #8 or #9
- #11 #5 and #6 and #10

CHAPTER 17 - Interventions to improve the social and communication skills of children with autism spectrum disorder

What are the most effective approaches for assertive outreach/intensive treatment/ day unit treatment for young people with complex needs?

10. [\(infan\\$ or juvenile\\$ or minor\\$ or child\\$ or adolescen\\$ or youth\\$ or young\\$ or teen\\$ or boy\\$ or girl\\$\)](#)
11. [MeSH descriptor Adolescent, this term only](#)
12. [MeSH descriptor Child explode all trees](#)
13. [MeSH descriptor Minors explode all trees](#)
14. [MeSH descriptor Infant explode all trees](#)
15. #1 or #2 or #3 or #4 or #5
16. Complex\$ ADJ2 need\$
17. (Assertive* OR Intensive* OR DayUnit) ADJ2 (outreach\$OR care\$ OR program\$ OR approach\$ OR treatment\$ OR support\$ OR interven\$ OR therap\$)
18. #6 AND #7 AND #8

(Medline Results = 15, Restricted to post 2000 = 12, Restricted to “Reviews” = 1)

Medline example

- #1 (infan\$ or juvenile\$ or minor\$ or child\$ or adolescen\$ or youth\$ or young\$ or teen\$ or boy\$ or girl\$).tw.
- #2 MeSH descriptor **Adolescent**
- #3 MeSH descriptor **Child**
- #4 MeSH descriptor **Minors**
- #5 MeSH descriptor **Infant**
- #6 #1 or #2 or #3 or #4 or #5
- #7 Social\$ ADJ5 skill\$.tw.
- #8 Communication\$ ADJ5 skill\$.tw.
- #9 Social\$ ADJ5 inclusion.tw.
- #10 #7 or #8 or #9
- #11 (train\$ OR educat\$ OR promot\$ OR program\$ OR skill\$ OR group\$ OR support\$ OR teach\$ OR learn\$ OR interven\$ OR therap\$).tw.
- #12 (autis\$ or Asperg\$ or pervasive development\$ disorder\$ or PDD or PDDs or ASD or ASDs or childhood schizophrenia or Kanner\$).tw.
- #13 MeSH descriptor **Developmental Disorder, Childhood**
- #14 MeSH descriptor **Autistic Disorder**
- #15 #12 or #13 or #14
- #16 #6 and #10 and #11 and #15

(Medline Results = 687, Restricted to post 2000 = 487, Restricted to "Reviews" = 76)

APPENDIX 2: GENERAL REFERENCES

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