Scoping review of studies on service delivery and organisation of mental health interventions for children and young people

Review question

For children and young people (CYP) with mental health problems, are there specific approaches to service organisation and the delivery of evidence-based interventions in primary care that evaluate the impact on user satisfaction with services, service delivery (e.g. access) and service outcomes (e.g. identification, uptake, use of services)?

Primary care was considered to include general practitioners (GPs), community settings, and schools.

Methodology

This review was conducted over three weeks in January 2018. The search for relevant studies was limited to those conducted in the UK and Ireland, written in English language, and published in the year 2000 and after. All studies relating to specific models, pathways, commissioning, or services relating to CYP mental health interventions in primary care were included. Only a selection of studies deemed most relevant on contextual aspects relating to the review question, such as CYP's experiences with appointments relating to mental health in primary care, were included.

Sources

A formal search was conducted of MEDLINE[1] and Cochrane[2] databases using the search terms in appendix 1A and 1B. Additionally, the reference lists of key documents on CYP mental health were screened (DH & DfE 2017; Independent Mental Health Taskforce 2016; Mental Health Foundation; NHSE 2015; NHSE 2016; Taggart 2016; The British Psychological Society). Of included studies and reviews (Acri et al. 2017; Bower et al. 2001; Cooper et al. 2016; Eiraldi et al. 2015; Reardon et al. 2017; Shepperd et al. 2009; Vostanis et al. 2010) identified via the database and document search, all reference lists of included studies and studies citing included studies were screened for additional relevant studies. Finally, a Google Scholar[3] search (appendix 1C) with different search strings was used to identify further studies.

Results

Fifty-one primary studies, six reviews, and one tool were included in this review. Included studies were published between 1999 and 2017. Thirty-three of included studies were conducted in England, seven in Ireland, five in Wales, two each in Scotland and Northern Ireland, and one each across several locations within the UK, and England and Ireland. Thirty-eight of included primary studies describe service delivery or organisation models, pathways or commissioning with or without an evaluation.

1.0 CYP mental health services in primary care – perspectives from CYP and staff
1.1 CYP and families

In a qualitative study with young people, Biddle et al. (2006) found that most CYP do not recognise GPs as a source of help for mental distress and find that they lack relevant training in mental health. CYP reported that GPs may be dismissive of those with mental distress and thought antidepressants were the most likely outcome of consultation. As a result, CYP largely avoided GPs for problems with their mental health (see also Leavey et al. 2010). Similarly, Corry and Leavey (2016) found that adolescents do not trust their GPs who were perceived as impersonal and

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[1] Ovid Medline (Link) includes: Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) 1946 to Present
[2] Cochrane library (Link): http://onlinelibrary.wiley.com/cochranelibrary/search/
[3] https://scholar.google.co.uk/

uncaring. Which provider is accessed first may be different between certain groups of CYP. For example, a study using pathways analyses found that the majority of youth who require secondary mental health services first visited their GP (Hodgekins et al. 2016). The same study found mean pathways to care are typically 3.5 years with a mean of 5.5 pathways with worse outcomes for CYP with longer pathways.

Coyne et al. (2015) conducted a qualitative study involving adolescents and parents who expressed difficulty in accessing mental health services due to lack of knowledge, information and limited access. Participants wanted to be more involved in decision-making, and found there is a need for flexible scheduling, school support and parent support groups. The relationship with staff was reportedly critical and staff changes were considered disruptive. Mental health nurses were key in ensuring continuity, and assessing and advocating for adolescents needs and participation.

A case record review (Forbes et al. 2015) found that within sexual and reproductive health clinics mental health was discussed in 81%, 67%, and 37% of children less than 16 years, 16 years and older than 16 years of age of which 23%, 15%, and 7% accessed CAMHS underlining the potential of using this setting for mental health assessments. This has to be taken in the context of differential access by different population groups. For example, a study by Edbrooke-Childs et al. (2015) found that black and minority ethnic (BAME) children were more likely to be referred to CAMHS through education, social, and other (compulsory) services than primary care (voluntary services) compared to White British children.

Memarzia et al. (2015) discuss the impact of the timing of transition from adolescent to adult mental health services and the outcome of current practice on mental health and its implications.

Two reviews summarize the evidence on young people's views of UK mental health services (Plaistow et al. 2013; Vallance et al. 2011), whereas Luke et al. (2014) present some common principles for intervention effectiveness, e.g. a joined-up approach, follow-up support and high levels of commitment from both carers and young people.

1.2 Primary care staff

A mixed methods study (Hinrichs et al. 2012) found that it is a challenge for GPs to detect signs and symptoms of mental illness in young people which results in higher likelihood of referrals to CAMHS being rejected. GPs feel dissatisfied with postgraduate training in adolescent mental health with key barriers including attitude of patients and families, lack of specialists, and poor service availability (Leahy et al. 2015; O'Brien et al. 2017; Roberts et al. 2013; Vallance et al. 2011). Access to services, knowing which interventions can be initiated in primary care, appropriate time and space, and a youth worker were interventions identified to help with screening and treatment (idem). A systematic review identifying a comprehensive list of barriers to managing CYP mental health in primary care was conducted by O'Brien et al. (2016).

A different study outlined a range of strategies to enhance identification, treatment and continuing engagement with young people, healthcare professionals and systems as reported by primary care professionals (Leahy et al. 2013). Portslade Health Centre co-developed a Toolkit for General Practice for use with CYP in primary care (Portslade Health Centre).

2.0 Service delivery models

2.1 GP practice based services

Abrahams and Udwin (2002) described a primary-care/practice-based child clinical psychology service for CYP with emotional and behavioural difficulties and their families. The service comprised child clinical psychologists providing 13 weekly half-day Tier 2 sessions in 12 GP practices with referrals from Tier 1 primary health care teams. The service comprised brief psychological assessment and intervention and support to the primary health care teams.

The service was compared to a similar service provided in secondary care by the same staff and the authors found a much shorter waiting time for a first appointment (7 weeks to 22 weeks) in the primary compared to the secondary care based service. The number of sessions provided in the primary care based service was also roughly half of that in the secondary care service (6 vs. 13) with similar numbers of children completing. The participating GPs were satisfied with the service with reduced stigma and reduced anxiety in using the service on the side of the children and families.

Appleton and Hammond-Rowley (2000) describe a child and adolescent mental health service (CAMHS) including a small area focus, primary-case based CAMHS specialists, comprehensive service based in schools and GP practices, and community engagement. The practical application of this model is described for a primary care service in Flintshire. While the original follow-up study evaluating this service is not accessible (Appleton et al. 2003), a study citing the evaluation study (Madge et al. 2008) reports that the intervention model has not produced the expected benefits – likely due to insufficient training and organization in the practices.

Walker et al. (2002) evaluate the effectiveness of inviting CYP to a GP practice consultation to discuss health behaviour concerns; recognition of depression (16% of participants) resulted in improved mental health outcomes at follow-up.

2.2 One-stop-shop/direct access models
In a paper published by Social Market Research (2011), a CYP one-stop-shop model in Belfast was discussed. The service was meant to provide young people with a place to access accurate and objective information about personal and lifestyle issues, service choices and access support including that related to mental health. There is limited data on outcomes beyond user satisfaction. The Well Centre (Hagell and Lamb 2016) and the Junction (Walker 2010) are similar models to that in Belfast. The model described in Walker (2010) is for CYP aged 11 to 18 years and is a CAMHS including interprofessional teams integrating with primary care and specialist CAMH staff. CYP clients reported satisfaction with the service which seemed accessible, acceptable, and appropriate (idem). The Well Centre (for CYP aged 13 to 20), based in London, is an adolescent one-stop-shop including GPs, youth workers and a CAMHS nurse (Hagell and Lamb 2016). CYP can drop-in during opening hours without appointment. No outcomes are presented (idem). Some information on both the Junction and the Well Centre are included in Hetrick et al. (2017). Hetrick et al. (2017) also includes examples of CYP one-stop models from other parts of the world which are not specifically mentioned here.

Arcelus et al. (1999) discussed a direct access CAMHS for children who are looked after (LAC) including mental health assessment and treatment, interprofessional information sharing, consultations to residential care staff and social workers, and work with parents and foster carers. The study was descriptive and not accompanied by an evaluation.

2.3 Co-produced models
Bates et al. (2009) reported on the principles and practical application of 'Jigsaw' (developed by Headstrong), an innovative model for systemic change which is developed based on consultations with young people, service providers and best-practice around the world. Illback et al. (2010) and Illback and Bates (2011) emphasise the community engagement activities in the development of Jigsaw. Jigsaw is also discussed in McGorry et al. (2013), Peiper et al. (2017), and O'Reilly et al. (2014). O'Keefe et al. (2015) present an outcome evaluation of Jigsaw. Following the intervention, levels of psychological distress were significantly lower for participants (majority was aged 15 to 17). There was no control group. Jigsaw is also part of an evidence review (Hetrick et al. 2017).

Another approach to CYP mental health delivery is "i-THRIVE" (Implementing I-THRIVE), which is a framework whose principles need to be translated to ensure fit with the local context and are based on joint decision making and multi agency working. I-THRIVE is being implemented in four accelerator sites and there is an on-going NIHR study underway evaluating the impact of i-THRIVE.

McGorry et al. (2013), Singh et al. (2013), and Vyas et al. (2014) discuss "Youthspace", a service provided in Birmingham, including youth access teams who provide assessment, formulation to referring GPs, evidence-based intervention and medication. An evaluation of Youthspace found higher levels of engagement, attendance, and acceptability among the participating CYP aged 16 to 25 years (Singh and Birchwood, 2012). Another evaluation of Youthspace found faster first contact following referral (mean of 2 vs. 12 days), quicker first assessment (16 vs. 45 days) and a reduced "did not attend" percentage (5% vs. 28%) compared to the Community Mental Health Teams service (Vyas et al. 2014; Ritters et al. 2013). An evidence review also reports on Youthspace (Hetrick et al. 2017).

Wilson et al. (2017) report on the effectiveness of the "Norfolk Youth Service" for CYP aged 14 to 25, an innovative youth mental health model. The service comprises a mix of clinical interventions, support work, group work, consultation and peer support work. An evaluation of the service is outstanding.

2.4 Primary Mental Health Workers

Callaghan et al. (2003a) report on a service model involving primary mental health workers (PMHW) within Youth Offending Teams (YOT) for youth aged 12 to 18 years offering a range of interventions and consultation to YOT staff. No outcomes for youth are reported. A different study (Gale and Vostanis 2003) also explores the role of the PMHW, which consists of consultation, liaison, direct work, and training. The described service comprises 13 PMHWs and is integral to CAMHS. Again, no data on youth outcomes are provided. Macdonald et al. (2004) test the key issues in implementing PMHW in some areas in England. The use of PMHW as reported by Whitworth and Ball (2004) resulted in a large increase in attendance and decrease in non-attendance rates to CAMHS with referrals being more appropriate. Similarly, Wiener and Rodwell (2006) examine the effect of PMHW on referrals and the perceived usefulness of PMHW. Data was not collected on youth outcomes.

Callaghan et al. (2003b) present a focus group study with social services staff and foster carers who reported difficulties accessing mental health services, the importance of a working partnership between CAMHS, social services and foster carers, and the need for consultations appropriate to the specific needs of LAC. The resulting service model is described (Callaghan et al 2003b). Callaghan et al. (2004) describes the service - a mental health team comprising primary mental health worker, psychology and psychiatry skills offering telephone and face-to-face consultation to local authority staff, as well as assessment, treatment, and training. At five months, children (aged 4 to 17 years, mean of 12 years) had improved HoNOSCA (Health of the Nation Outcome Scales for Children and Adolescents) and emotional SDQ (Strengths and Difficulties Questionnaire) scores. Children and carers were generally satisfied with the service.

2.5 Multi-agency teams

Golding (2010) outlines a multi-agency service for CYP in Worcestershire, the Integrated Service for Looked After and Adopted Children (ISL), jointly provided by health and children's services working in partnership with all relevant agencies and services. The service consists of education support teams who provide flexible and rapid response whereas another team provides carer support and inter-agency working. An evaluation found a positive effect on the psychological well-being of carers, child management and the children (McDonald et al. 2003). No evaluation on child outcomes has been conducted.

A Tier 4 multi-agency team, the Behaviour Resource Service (BRS) is described by Kelly et al. (2003) half of whose service users were LAC. The outcome evaluation cannot be accessed (Waldman and Storey 2002).

White et al. (2002) evaluated the "Little Hulton Project" for pre-school children including parent training groups, open clinics, and multi-agency training, liaison and consultancy. The study reported improvements in parental coping and children's behavioural difficulties.

2.6 Clinical pathways for ADHD

Coghill and Seth (2015) describe a clinical pathway for CYP with attention-deficit/hyperactivity disorder (ADHD), the Dundee ADHD Clinical Care Pathway (DACCP), which is comprised of integrated psychiatric, paediatric, nursing, occupational therapy, dietetic and psychological care alongside evidence-based assessment and a treatment pathway. It is unclear whether an evaluation of outcomes in CYP has been conducted.

2.7 Models with a dominant school focus

Day et al. (2017) report on the evaluation of the "Schools Link Pilots" which found strengthened communication and better joint working between schools and CYP mental health services. Hamilton-Roberts (2012) reports on a school-based counselling service for CYP aged 11 to 18 years in Wales involving counsellors and link-teachers which was perceived to improve mental health and emotional well-being in pupils. McKenzie et al. (2011) present a school counselling service with direct links to CAMHS in Scotland. The evaluation found significant improvements in functioning, problems, and well-being. Wolpert et al. (2012) report on the outcomes of the "Targeted Mental Health in Schools" (TaMHS) study. TaMHS provision significantly improved problems for primary but not secondary school pupils with no effect on those with emotional difficulties.

A review by Salmon and Kirby (2008) includes a number of models all involving or making use of schools in CYP mental health. The review discusses Behaviour and Education Support Teams (BESTs) (evaluation in Halsey et al. 2005). BESTs were found to have a positive impact on CYP attainment, attendance, behaviour, and wellbeing (idem). Salmon and Kirby (2008) also mention the 24 multi-agency initiatives based on Department of Health grants, one of which, based in Bury and Rochdale (Panayiotopoulos and Kerfoot 2004), made use of a multi-disciplinary team with the aim of reducing school exclusion providing early intervention for children aged 4 to 12 years. The evaluation demonstrated a reduced number of excluded days. Another project mentioned by Salmon and Kirby (2008) was Multi-Agency Prevention (MAP) using a multi-disciplinary team with the aim to improve emotional wellbeing and success in school.

Segrott et al. (2012) report on an intervention aiming to overcome key barriers in school-based emotional support services – Bounceback. The service provides one-to-one sessions to pupils aged 14 to 16 years who very experiencing stressful situations. CYP reported that the service was very acceptable and positive.

2.8 Peer mentoring

Brown (2015) reports of a programme called "More than Mentors" which is a peer mentoring programme for CYP to build emotional resilience. The programme includes training led by a youth worker and psychologist with on-going mentoring throughout. An evaluation found early signs of increased resilience in mentees (Munk, 2016).

A different programme that aims to increase emotional resilience in CYP is HeadStart[4] which involves CYP in co-designing, commissioning, the delivery and evaluation of HeadStart services (Hart and Heaver 2015). HeadStart is operating in a number of areas including Blackpool, Cornwall, Hull, Kent, Newham[5], and Wolverhampton. The evaluation is currently on-going.

2.9 GP commissioning CAMHS partnership

Humphrey et al. (2016) present a GP commissioning CAMHS partnership suggesting key factors for success. No evaluation was conducted.

2.10 E consultation

Grealish et al. (2005) report on the use of videoconferencing for the provision of CAMHS. The authors report great satisfaction by adolescents and their carers despite resistance amongst the clinical team being unwilling to reallocate

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[4] https://www.biglotteryfund.org.uk/headstart
[5] http://www.newhamconnect.uk/Services/3471

funding away from staffing. Gringras et al. (2006) describe an internet-based real-time system for monitoring symptoms in children with neurodevelopmental and neuropsychiatric disorders to enable better pathways and more effective treatment.

3.0 Engagement and attendance with mental health services

Doc Ready is a tool designed to make it easier for primary care professionals to assess CYP mental health (Doc Ready). Hawker (2017) conducted a review comparing opt-in systems with other interventions for appointment scheduling and found that systems that used opt-in systems greatly reduced patient-non-attendance. Kim et al. (2012) present a review on any interventions aiming to improve engagement of CYP in mental health treatment. Michelson and Day (2014) describe an engagement intervention and its effect on attendance rates. Families who received the intervention were significantly more likely to attend their first appointment compared to two control groups.

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Nadine Pfeifer

05.02.2018

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Appendix

1 – Search strategies

1A – MEDLINE search strategy (search conducted 11/01/18)

Search #	Search Syntax	Fields	Results
Mental Health			
1	("mental health" OR CAMHS OR (well*being NEAR/3 (mental OR psychological)) OR "mental illness" OR "mental disorder" OR "mental disease*" OR "mental condition*" OR "emotional health" OR "psych* health")	ab OR kw OR ti	160,010
2	mental health/ OR Mentally Ill Persons/ or Mental Disorders/ or Mental Health Services/ or Community Mental Health Services/	MeSH	225,177
3	**1 OR 2**		**310,435**
CYP			
4	("adolescent*" or teenage* or juvenile* or minor* or youth or "young adult" or "young women" or "young men" or girl* or boy* or CYP OR children* OR "young people*")	ti OR ab OR kw	1756725
5	Adolescent/ or minors/ or child/ or young adult/	MeSH	3123229
6	**4 OR 5**		**3,884,408**
Area of interest			
7	(("pathway*" NEAR/3 (care OR treatment)) OR (provision NEAR/3 (care OR treatment)) OR "model* of care" OR ((service* OR system) NEAR/3 (deliver* OR design OR redesign OR organisation OR configuration OR transformation or provision)))	ti OR ab OR kw	**103,948**
8	**3 AND 6 AND 7**		**2,451**

1B – Cochrane search strategy (search conducted 11/01/18)

Search #	Search Syntax	Fields	Results
Mental Health			
1	(("mental health" OR CAMHS OR (well*being NEAR/3 (mental OR psychological)) OR "mental illness" OR "mental disorder" OR "mental disease*" OR "mental condition*" OR "emotional health" OR "psych* health") OR ("mental health" OR "Mentally Ill Persons" or "Mental Disorders" or "Mental Health Services" or "Community Mental Health Services"))	ab OR kw OR ti or MeSH	
CYP			
2	("adolescent*" or teenage* or juvenile* or minor* or youth or "young adult" or "young women" or "young men" or girl* or boy* or CYP OR children* OR "young people*") OR ("Adolescent" or "minors" or "child" or "young adult")	ti OR ab OR kw or MeSH	
Area of interest			
3	(("pathway*" NEAR/3 (care OR treatment)) OR (provision NEAR/3 (care OR treatment)) OR "model* of care" OR ((service* OR system) NEAR/3 (deliver* OR design OR redesign OR organisation OR configuration OR transformation or provision)))	ti OR ab OR kw	
4	**1 AND 2 AND 3**		**198**

1C – Google Scholar search strings

- ("mental health") AND (adolescents or young or child) AND (service OR pathway OR model OR design)) AND "primary care"
  - Conducted: 25/01/2018 – first 500 results sorted by relevance, results published after year 2000
- ("mental health") AND (adolescents or young or child OR children) AND (services OR service OR pathway OR model OR design))
  - Conducted: 25/01/2018 – first 200 results sorted by relevance, results published after year 2000