

## Research papers

# Postal survey of services for child and adolescent mental health problems in general practice in England

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## ABSTRACT

**Background** Child and adolescent mental health (CAMH) problems are prevalent in the community. Primary care has a potentially important role in terms of identification and management of such problems. However, little is known about current services provided for CAMH in primary care, or the nature of the relationship between primary care and specialist services.

**Method** A postal survey was conducted with general practitioners, using a self-report questionnaire sent to a stratified random sample of 1953 general practices. The questionnaire sought information on the provision of services for CAMH in general practice, the nature of the relationship between general

practice and specialist provision, and the determinants of GP satisfaction with specialist services. The overall response rate was 45.5%. Responses were less likely from smaller practices. A sample of non-respondents was followed up by telephone to examine possible biases.

**Results** Overall, the provision of services for CAMH in general practice was relatively low (5–10%), although there was evidence of liaison with specialist staff in a significant minority of practices. Practice size was associated with prevalence of some services. GP satisfaction with specialist services was associated with shorter waiting times, quality of information and provision of training and education.

**Conclusions** The study is limited by the poor response rate. The prevalence of services for CAMH in general practice is relatively low, although there is some evidence of liaison with specialists in a significant minority of practices. Developing the

potential for primary care involvement in CAMH remains a significant challenge.

**Keywords:** child and adolescent mental health, interservice relationships, service provision

## Introduction

### Primary care and child and adolescent mental health

Child and adolescent mental health (CAMH) problems are prevalent in the community, and the Health Advisory Service (HAS) proposed a four-tier model of services to deal with these problems in the United Kingdom: primary care (Tier 1); individual specialist CAMH staff (Tier 2); multidisciplinary specialist CAMH staff (Tier 3); and highly specialised care (Tier 4).<sup>1,2</sup>

Tier 1 was defined as ‘agencies that offer first line services to the public and with whom they make direct contact’ (p.135). Although agencies such as schools and voluntary services may meet this definition, primary healthcare is a key exemplar of Tier 1 services. A recent study found that 38% of adolescents presenting in primary care met DSM-IIIIR<sup>a</sup> criteria for psychiatric disorder during the preceding year.<sup>3</sup> The role of primary care professionals may include identification of problems, managing less severe problems, appropriate referral of more severe problems, and pursuing health promotion.<sup>1</sup>

However, development of the role of primary care professionals to fulfil this potential faces a number of barriers, including a lack of information about the extent and nature of current provision in this setting on which to base further developments.

### Models of mental healthcare in primary care

Current provision of CAMH services is not restricted to services provided entirely by primary care professionals. The four-tier HAS model highlighted the importance of effective management of the interface between primary care (Tier 1) and specialist provision (Tiers 2–4).<sup>2</sup>

Based on work on the interface in adult mental health, it is possible to identify three broad models of the primary care specialist interface.<sup>4,5</sup> The first is treatment by primary care professionals, such as general practitioners (GPs) or health visitors, appropriately trained by specialist staff.<sup>6,7</sup> The second approach involves mental health specialists (such as psychia-

trists) managing problems in primary care, i.e. the ‘shifted outpatient mode’.<sup>8</sup> Although prevalent in adult psychiatry, there is little evidence that this model is used frequently in relation to CAMH. The final model is ‘consultation–liaison’, where the specialist works in primary care, but acts to support management by primary care rather than take responsibility for patients themselves, although patients may be seen by both generalist and specialist in some cases (so-called ‘joint casework’).<sup>4</sup>

The HAS report suggested that direct provision of services by specialists (such as ‘shifted outpatient clinics’) may be a less efficient use of their skills than supportive and educational work undertaken in primary care.<sup>2</sup> However, the Audit Commission found that only 1% of specialist staff time was routinely given to supporting primary care.<sup>1</sup> Nearly half of specialist services had delivered training to GPs, but nearly one-quarter showed little evidence of any liaison or joint working. The HAS proposed the deployment of a new role to overcome this lack of liaison between primary care and specialist services – the primary mental health worker (PMHW).<sup>2</sup> The role of the PMHW was hypothesised to involve: consolidating the skills of existing primary care workers; helping primary care workers to develop new skills through training and education; aiding recognition of CAMH disorders and their referral to more specialist tiers; and treating some individuals appropriate for management in Tier 1. The PMHW is thus expected to undertake a mix of direct clinical intervention and supportive work.

The present study was designed to survey English general practices to provide information about:

- current provision of services for CAMH in the primary care setting
- the extent and nature of the interface between primary care (Tier 1) and specialist services (Tiers 2–4).

## Methods

### Sampling

A list of general practices in England was generated from the GMS-Stats<sup>b</sup> database, provided by the British

<sup>a</sup> *Diagnostic and Statistical Manual of Mental Disorders* (3e)

<sup>b</sup> General Medical Service Statistics (based on the GP census)

Medical Association (BMA). A sample of 1953 practices was selected randomly, stratified by health authority and three partnership size strata (single-handed, 2–3 partners, 4+ partners).

## Questionnaire

A structured questionnaire was used to collect the following information: perceived prevalence of disorders; practice-based CAMH provision; community and specialist services; referrals to specialists; practice demography; and responses to case vignettes. The questionnaire involved up to 123 responses over 12 pages. The questionnaire was piloted on all GPs within one health authority which was excluded from the main sample. Data concerning GP referral behaviour are the subject of another paper.

There is no agreed definition of a service for CAMH in general practice. Therefore the questionnaire enquired about the presence of a number of different services of potential relevance (see Table 2). These included skills among the primary care team, specialists working in the practice, the presence of HAS PMHWs, and particular models of working at the primary–secondary care interface. These models were:

- ‘shifted outpatient clinics’ – moving specialist clinics into primary care
- provision of ‘training and education’ to primary care
- ‘consultation–liaison’ models
- ‘joint casework’ where specialist staff see patients jointly with GPs.

## Method of administration

Questionnaires were sent to the senior partner, requesting completion by a GP on behalf of the practice. Non-respondents were sent reminders one and two months later.

In order to examine non-response bias, a random sample of 95 non-respondents (stratified by health authority response rate and practice size) was contacted by telephone to collect data from GPs or other appropriate staff (e.g. practice managers). The data collected were restricted to 23 questions that could be answered by non-GPs and were of greatest relevance, that is:

- CAMH provision in general practice
- models of interface with secondary providers.

## Analysis

The provision of services for CAMH observed in the sample were weighted to reflect the actual distribution of practices within each health authority in England,

and also weighted for non-response (using the inverse of the response rate within each health authority and practice size strata). Weighting was approximate in some cases because of lack of any respondents within some individual strata. Estimates were also adjusted based on analysis of the differences between postal and telephone respondents. Logistic regression was used to examine:

- factors associated with the provision of services for CAMH in general practice
- differences between postal and telephone respondents
- the predictors of GP satisfaction with specialist services.

Results are reported as odds ratios, e.g. the change in the likelihood of having an on-site service for CAMH

**Table 1** Characteristics of the respondents and their practices

Characteristic		%
Sex	Male	65
	Female	32
	Missing data	3
Age (years)	29–39	13
	40–49	37
	50–59	39
	60+	7
	Missing data	4
Employment	Full-time	84
	Part-time	13
	Missing data	3
Number of years as a GP	0–9	12
	10–19	37
	20–29	38
	30+	11
	Missing data	3
Practice size	Single-handed	15
	2–3 GPs	36
	4+ GPs	49
Location	Rural	13
	Semi-rural	20
	Suburban	27
	Town/city	25
	Inner-city	13
Missing data	4	
Practice population	Deprived	12
	Mixed poor	26
	Average	38
	Mixed well-off	19
	Affluent	3
Missing data	4	

related to particular practice characteristics. Analysis used SPSS and Stata.

## Results

### Response rates and characteristics of the respondents

Of the 1953 questionnaires sent out, four were sent to closed surgeries and seven to surgeries that dealt with restricted populations (e.g. students), leaving a sample size of 1942. In total, 883 (45.5%) questionnaires were returned. Responses were less likely from smaller practices (response rates of 34% from single-handers, 41% from practices with two to three GPs, and 54%

from practices with more than four GPs,  $\chi^2 = 52.5$ ,  $df = 2$ ,  $P < 0.0001$ ). Characteristics of those who did respond to the postal survey can be found in Table 1.

### Non-response bias

Of the 95 practices contacted, four were closed, and 62 (68%) supplied information. Twenty-two GPs refused to complete the interview, and in seven cases no contact was made with the GP despite multiple phone calls. Forty respondents were GPs and 22 were practice managers.

### Prevalence of services for CAMH within general practice

Table 2 shows the frequency of provision of services for CAMH in the postal sample and the telephone

**Table 2** Prevalence of services for CAMH on-site in general practice

Service	Weighted prevalence (postal respondents): % of practices	Weighted prevalence (telephone respondents): % of practices	Adjusted for non-response: % of practices
Primary care services of potential relevance to CAMHS			
Practices with a GP with training in child mental health	6.2	10.2	8.4
Practices with access to a paediatrician on-site	6.7	4.2	5.3
Practices with access to an adolescent clinic on-site	5.3	6.3	5.9
Practices with access to interventions for young mothers	37.4	25.8	31.1
Clinic for postnatal depression	13.1	12.3	12.7
Models of working at the primary–secondary care interface			
CAMHS staff consulting patients in the practice	13.2	3.5	7.9
CAMHS staff providing support with training and education	9.2	6.3	7.6
CAMHS staff providing consultation–liaison to primary care	18.6	21.7	20.3
CAMHS staff engage in joint casework with primary care team	2.0	4.9	3.6
Practices with access to a child and adolescent mental health worker	9.6	6.6	8.0
Practices with access to a child and adolescent mental health worker planned	2.8	4.9	4.0
General mental health services			
Counsellor on-site	41.7	NA	NA
Psychologist on-site	15.3	NA	NA
Psychiatrist on-site	10.3	NA	NA

NA: data not available from telephone interviews  
CAMHS: Child Adolescent Mental Health Service

interview sample. In order to illustrate the effects of non-response, it was assumed that the prevalence of services in postal non-respondents was estimated accurately by the telephone interview sample. The adjusted estimates are shown in the final column of Table 2.

Based on the data from the postal respondents only, the prevalence of on-site services of potential relevance to CAMH varied between 5.3% (adolescent clinic) and 37.4% (interventions for young mothers). Over half the practices (52.3%) had no services of

potential relevance on-site, 30.7% only reported one service, with 16.9% reporting more than one. Prevalence of models of working at the primary–secondary care interface varied between 2.5% (joint casework) and 18.6% (consultation–liaison). Sixty-nine percent of practices reported no models of interface working, 22.3% one model, 6.4% two models, 2% three models and 0.5% all four models. The prevalence of practices reporting no on-site services of potential relevance to CAMH or models of working at the interface was 37.6%.

**Table 3** Factors associated with CAMH services on-site

Service	<i>n</i>	Characteristic	Odds ratio	95% CI
Primary care services of potential relevance to CAMH problems				
Practice with GP with CAMH training	803	Number of GP principals	NS	
		Urban/rural location	NS	
		Deprivation	NS	
Access to a paediatrician on-site	770	Number of GP principals	1.16	1.03–1.30
		Urban/rural location	NS	
		Deprivation	NS	
Access to an adolescent clinic on-site	768	Number of GP principals	1.14	1.01–1.29
		Urban/rural location	NS	
		Deprivation	NS	
Access to clinics with interventions for young mothers	769	Number of GP principals	1.12	1.04–1.21
		Urban/rural location	NS	
		Deprivation	NS	
Models of working at the primary–secondary care interface				
CAMHS staff consult patients in the practice	802	Number of GP principals	NS	
		Urban/rural location	NS	
		Deprivation	NS	
CAMHS staff provide training and education	782	Number of GP principals	NS	
		Urban/rural location	NS	
		Deprivation	NS	
CAMHS staff provide consultation–liaison	788	Number of GP principals	NS	
		Urban/rural location	NS	
		Deprivation	NS	
CAMHS staff engage in joint casework with primary care	788	Number of GP principals	NS	
		Urban/rural location	NS	
		Deprivation	NS	
Access to a CAMH worker	830	Number of GP principals	NS	
		Urban/rural location	Rural 0.85	0.36–2.06
			Semi-rural 0.35	0.15–0.82
			Suburban 0.53	0.26–1.08
			Town/city 0.33	0.16–0.68
	Deprivation	NS		

NS: not significant  
 Reference category is ‘inner-city location’ for urban/rural location and ‘deprived’ for deprivation  
 Number of GP principals was analysed as a continuous variable

## Factors associated with services for CAMH in general practice

The following factors were examined as predictors of services in general practice: health authority region; number of GP principals; urban/rural location; deprivation (the last two were measured using five ordered categories). The odds ratios for the predictor variables (controlling for all the other variables, including region) are shown in Table 3. More GPs in the practice predicted the presence of a paediatrician, adolescent clinic and interventions for young mothers on-site. Access to HAS PMHWs (present or planned) was less likely in practices in semi-rural (unweighted figures 9%) and town/city locations (8.8%) than those in inner-city areas (22.1%).

## Use of on-site services for CAMH problems

Although the services included in Table 2 are of potential relevance to the management of CAMH problems, they may not be used frequently for such purposes. GPs with particular services were asked whether they had used these for a CAMH problem in the past year. The results were as follows (unweighted): paediatrician 64%; adolescent clinic 62%; interventions for young mothers 76%; clinics for postnatal depression 63%. The vast majority of practices (86%) reported having a health visitor service on-site and the proportion of GPs referring to health visitors was 73%.

Thirty-two percent of GPs with on-site counsellors reported using them for CAMH problems, and 50% of GPs with on-site psychologists reported the same.

## GP satisfaction with specialist services

Respondents were asked to indicate their overall satisfaction with specialist services on a five-point scale, ranging from 1 ('highly satisfied') to 5 ('highly unsatisfied'). The distribution of responses was as follows: highly satisfied 4.7%; satisfied 34.5%; no opinion 9.8%; fairly unsatisfied 29.9%; highly unsatisfied 21.1%,  $n = 864$ . Satisfaction scores were used as the dependent variable in an ordered logistic regression. Independent variables were the four different models of working with specialist services (consulting patients in the practice; consultation–liaison; training; and joint casework); perceived quantity and quality of information from specialist services; and reported waiting time for a referral to be seen. Full data on all variables were available from 646 (73%) respondents.

Practices reporting higher waiting times, those reporting poor quality of information from specialist providers, and practices with no support for training and education from specialist services all reported lower satisfaction (see Table 4).

Satisfaction scores of postal and telephone respondents were compared using logistic regression, controlling for waiting times and models of working with specialist services (data on quality and quantity of information was not available for telephone respondents). Telephone respondents were more likely to report being satisfied than postal respondents (unweighted figures 73.7% telephone respondents 'very satisfied' to 'no opinion' versus 49.1% of postal respondents). There were no significant differences in the reported waiting times for specialist treatment between postal and telephone respondents ( $\chi^2 = 2.2$ ,  $df = 2$ , NS).

**Table 4** Predictors of GP satisfaction with specialist CAMH services

Variable	Coding	Odds ratio	95% CI
Quantity of information	(1 = excellent, 5 = very poor)	NS	
Quality of information	(1 = excellent, 5 = very poor)	0.37	0.29–0.46
Waiting times	(1 = 6 months or less, 2 = 7 months or more)	0.18	0.13–0.25
CAMHS staff on-site	1 = yes, 2 = no	NS	
Training and education	1 = yes, 2 = no	0.53	0.32–0.89
Consultation–liaison	1 = yes, 2 = no	NS	
Joint casework	1 = yes, 2 = no	NS	

NS: not significant

Odds ratio refers to the change in satisfaction (<1.0 means decreasing satisfaction), given a one-point change (or change in binary response variables, e.g. from 'yes' to 'no') in the relevant independent variable  
 $n = 646$ ; missing responses included 'don't know' responses to questions on information and waiting times

## Discussion

### Limitations of the study

A key limitation is the response rate. The overall response rate of 45.5% was low and raises the possibility of significant bias. Questionnaire length or lack of interest in the subject matter may have contributed to non-response.<sup>9,10</sup> Few primary care surveys have examined non-response systematically, as done in the present study. Empirical studies are inconsistent as some have suggested that telephone respondents have greater interest and enthusiasm in the subject matter while others have suggested they have less interest.<sup>11,12</sup>

The time required to conduct each telephone interview precluded raising the response rate significantly through this method. Therefore, the telephone follow-up was used to ascertain the direction of bias, and estimate an adjusted prevalence. However, visual examination of the prevalence estimates (see Table 2) indicates that there did not seem to be any clear pattern in whether postal or telephone respondents were more likely to have relevant services. Although telephone respondents were more satisfied with services overall, it is not clear whether this reflects genuine differences in satisfaction or the effects of presentational biases associated with interacting with an interviewer.<sup>11,12</sup> In summary, the analysis of non-response may not suggest consistent or significant bias.

The second key limitation is the reliance on self-report. It is not possible to be certain of the accuracy of self-report data, especially where respondents' direct experience of CAMH services may have been limited.

Finally, mental health problems in children and adolescents may involve services outside of health, such as education and social services. Obviously, these services were outside the remit of the current survey, but the current study only provides a partial view of service delivery for this client group.

### Overall level of services for CAMH

The overall provision of services for CAMH in general practice is relatively low (see Table 2), at least compared to the corresponding figures for adult mental health services such as counsellors.<sup>13</sup> This is especially true given that some of the services itemised in Table 2 are only of potential relevance to the management of CAMH problems, rather than being specifically designed to manage such disorders (e.g. paediatricians and adolescent clinics on-site in the practice). Health visitors are an important referral option for GPs, although the data do not show whether the referrals are appropriate in relation to the skills of the health visitors involved.

Larger practices were more likely to provide some services for CAMH, which supports the findings of previous work on mental health services.<sup>13</sup> Larger practices are better able to find the financial resources and generate the case load needed to support specialist provision. However, the association between practice size and service provision was very modest in size.

Since the factors measured in the survey (i.e. practice size, deprivation, and location) were relatively poor predictors of the presence or absence of services, it is still unclear why particular practices report CAMH services. Some services (such as shifted outpatient clinics) may be generally targeted at practices where staff have a known interest in CAMH, or may reflect more practical pressures such as available space for the provision of such clinics. Primary care trusts (PCTs) are increasingly prioritising sharing of resources across practices in order to increase equitable access.<sup>14</sup>

GPs reported using counselling and other on-site mental health services for CAMH problems. Unfortunately, these data are ambiguous, as these referrals may involve 17 year-olds rather than younger patients, or may involve the inclusion of children in family group meetings, and this issue requires further research.

### GP satisfaction with secondary services

Although the measurement of GP satisfaction was relatively crude, the factors associated with satisfaction were unsurprising. The issue of long waiting times has been previously identified as a major problem.<sup>15,16</sup> In addition, the present study found that information provision was important in determining satisfaction, which again supports previous smaller-scale studies.<sup>17,18</sup> This also suggests the possibility of improving satisfaction without necessarily having to increase patient throughput.

The importance of information provision and training and education in determining satisfaction provides some support for the use of models of working between primary and secondary care that provide opportunities for improvements in interaction. However, locating specialist staff in primary care does not always lead to improvements in communication or significant education.<sup>19,20</sup>

### The effectiveness of current models of CAMH services

The development of specific CAMH services in primary care is only really worthwhile if there is evidence that such services are associated with improved patient outcomes. Previous reviews of CAMH services have tended to underplay the role of the evidence base in planning, instead highlighting principles such as easy access and a multidisciplinary approach.<sup>21</sup>

A recent review found that information on the effectiveness of interventions delivered in primary care is limited in scope, with very few interventions having evidence from randomised controlled trials that they were effective when used specifically with primary care patients, as opposed to those in specialist settings.<sup>22</sup> The next section considers different models of provision identified in the survey and the available evidence of effectiveness.

The most frequent service provided in general practice was interventions for young mothers, and these might provide a platform for the delivery of parenting initiatives.<sup>23</sup> An evaluation of such initiatives in CAMH in primary care has recently been completed, which demonstrated some impact on the knowledge and skills of primary care staff, but little effect on outcomes at the level of mother and child.<sup>24</sup>

Clinics for postnatal depression were also fairly common. Although interventions for postnatal depression in primary care seem to be effective in improving outcomes for mothers, one trial found few related effects on child development.<sup>25–27</sup>

Given the relatively low levels of relevant non-specialist services in general practice, services involving increased collaboration between primary care and specialist services may be a more useful platform for service development. The most prevalent interface was the provision of consultation–liaison services. The potential of such services has been highlighted, although evidence suggests that some models of consultation–liaison may not be particularly effective at improving the way that GPs manage adult mental health problems.<sup>2,4,28</sup> However, the literature is limited and these services may have a different impact in CAMH.

The survey found that the presence of specialist staff who consulted with patients in the practice was also relatively common. Although direct client work undertaken in such ‘shifted outpatient’ clinics may be convenient for patients and increase access to care, evidence of the effectiveness of brief therapy undertaken in primary care is lacking (although there are some suggestive non-randomised studies), and the effectiveness of such clinics in disorders other than CAMH is ambiguous.<sup>22,29</sup> Increased accessibility to specialist interventions may also result in changes in the characteristics of patients seen by specialists. This may have important implications, as current evidence concerning the effectiveness of particular interventions in secondary care populations may not generalise to this new population.<sup>30</sup>

It is likely that a proportion of the ‘consultation–liaison’ and ‘shifted outpatient’ services reported in the present survey referred to the work of HAS PMHWs. Nearly one in ten practices reported access to a PMHW. A recent study found that such workers (predominantly nurses, psychologists and social

workers) reported spending 20% of their time in direct work and 30% in consultation.<sup>31</sup> However, a recent evaluation of the PMHW role in one site found that only one-third of GPs reported that liaison clinics run by these workers increased their knowledge and skills.<sup>32</sup> This may reflect the fact that some GPs lack enthusiasm for the further development of their skills in this area.<sup>33</sup>

A qualitative project conducted subsequent to the present survey examined CAMH services in particular sites in England and suggested that development of CAMH services in primary care may be highly dependent on these new PMHW posts. There is an urgent need to evaluate the cost-effectiveness of the different roles (e.g. direct provision of brief therapies, consultation–liaison) that these workers can undertake, so as to determine what would be an effective mix of service delivery in these new posts. However, it should be noted that the evaluation of complex interventions such as consultation–liaison is difficult, and the relevance of particular models of service delivery may be dependent to a degree on the local context.

*The NHS Plan* has also proposed the deployment of another professional which may be of relevance to CAMH. Primary care mental health workers (PCMHWs) are likely to differ significantly from the PMHWs proposed in the HAS report, in terms of skills and experience, as many are expected to be graduate psychologists. Although *The NHS Plan* proposes that such workers will be involved in the management of children, the appropriateness of their involvement remains unclear, given their likely skills and the lack of evidence of effective models of service provision for this age group.<sup>34</sup>

## Conclusions

In many ways, difficulties in the provision of effective CAMH services in primary care reflect those in adult services: variation in the enthusiasm of primary care staff for mental health work; low levels of recognition of disorder; low levels of service provision; and a lack of evidence concerning cost-effective and acceptable ways of delivering services. Improvements in adult service delivery have occurred, but problems have arisen concerning issues such as the cost-effectiveness of mental health provision by specialists working in primary care and the identification of feasible ways of improving the mental health skills of GPs, problems which may occur in relation to CAMH as well.<sup>35,36</sup>

However, further developments in adult mental health have been prioritised by the focus on these services in *The NHS Plan* and the *National Service Framework for Mental Health*, which has made these issues a priority for PCTs.<sup>37,38</sup> The importance of CAMH in the



*Children's National Service Framework* may be significant in determining the priority afforded to primary care CAMH services by PCTs in the future.

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#### REFERENCES

- Audit Commission (1999) *Children in Mind: child and adolescent mental health services*. Audit Commission: Portsmouth.
- Health Advisory Service (1995) *Child and Adolescent Mental Health Services: together we stand*. HMSO: London.
- Kramer T and Garralda E (1998) Psychiatric disorders in adolescents in primary care. *British Journal of Psychiatry* **173**: 508–13.
- Gask L, Sibbald B and Creed F (1997) Evaluating models of working at the interface between mental health services and primary care. *British Journal of Psychiatry* **170**: 6–11.
- Pincus H (1987) Patient-oriented models for linking primary care and mental health care. *General Hospital Psychiatry* **9**: 95–101.
- Bernard P, Garralda E, Hughes T and Tylee A (1999) Evaluation of a teaching package in adolescent psychiatry for general practitioner registrars. *Education for General Practice* **10**: 21–8.
- Davis H and Spurr P (1998) Parent counselling: an evaluation of a community child mental health service. *Journal of Child Psychology and Psychiatry* **39**: 365–76.
- Subotsky F and Brown R (1997) Working alongside the general practitioner: a child psychiatric clinic in the general practice setting. *Child: Care, Health and Development* **16**: 189–96.
- Cartwright A (1978) Professionals as responders: variations in and effects of response rates to questionnaires, 1961–1977. *British Medical Journal* **2**: 1419–21.
- Lydeard S (1996) Commentary: avoid surveys masquerading as research. *British Medical Journal* **313**: 733–4.
- Templeton L, Deehan A, Taylor C, Drummond C and Strang C (1997) Surveying general practitioners: does a low response rate matter? *British Journal of General Practice* **47**: 91–4.
- Sibbald B, Addington-Hall J, Brenneman D and Freeling P (1994) Telephone versus postal surveys of general practitioners: methodological considerations. *British Journal of General Practice* **44**: 297–300.
- Sibbald B, Addington-Hall J, Brenneman D and Freeling P (1993) Counsellors in English and Welsh general practices: their nature and distribution. *British Medical Journal* **306**: 29–33.
- Wilkin D, Gillam S and Coleman A (2001) *The National Tracker Survey of Primary Care Groups and Trusts 2000/2001: modernising the NHS?* NPCRDC: University of Manchester.
- Rawnsley K and Loudon J (1962) Factors influencing the referral of patients to psychiatrists by general practitioners. *British Journal of Preventive and Social Medicine* **16**: 174–82.
- Mutale T (1995) Fundholders and child mental health services. *Psychiatric Bulletin* **19**: 417–20.
- Thompson A and Place M (1995) What influences general practitioners' use of child psychiatry services? *Psychiatric Bulletin* **19**: 10–12.
- Jones S and Bhadrinath B (1998) GPs' views on prioritisation of child and adolescent mental health problems. *Psychiatric Bulletin* **22**: 484–6.
- Reeves D, Alborz A, Hickson F, Bamford J and Gosden T (2000) Community provision of hearing aids and related audiology services. *Health Technology Assessment* **4**: 1–198.
- Mead N, Gosden T and Roland M (1998) Conclusions and key issues for the future. In: Roland M and Shapiro J (eds) *Specialist Outreach Clinics in General Practice*. Radcliffe Medical Press: Oxford, pp. 69–82.
- Harrington R, Kerfoot M and Verduyn C (1999) Developing needs led child and adolescent mental health services: issues and prospects. *European Child and Adolescent Psychiatry* **8**: 1–10.
- Bower P, Garralda E, Kramer T, Harrington R and Sibbald B (2001) The treatment of child and adolescent mental health problems in primary care: a systematic review. *Family Practice* **18**: 373–82.
- Tsiantis J, Dragonas T, Cox A, Smith M, Ispanovic V and Sampaio-Faria J (1996) Promotion of children's early psychosocial development through primary health care services. *Paediatric and Perinatal Epidemiology* **10**: 339–54.
- Tsiantis J, Smith M, Dragonas T and Cox A (2000) Early mental health promotion in children through primary health care services: a multi-centre implementation. *International Journal of Mental Health Promotion* **2**: 5–17.
- Holden J, Sagovsky R and Cox J (1989) Counselling in the general practice setting: controlled study of health visitor intervention in the treatment of postnatal depression. *British Medical Journal* **298**: 223–6.
- Wickberg B and Hwang C (1996) Counselling of postnatal depression: a controlled study on a population based Swedish sample. *Journal of Affective Disorders* **39**: 209–16.
- Cooper P and Murray L (1997) The impact of psychological treatments of postpartum depression on maternal mood and infant development. In:

- Murray L and Cooper P (eds) *Postpartum Depression and Child Development*. The Guildford Press: New York, pp. 201–20.
- 28 Bower P and Sibbald B (2000) Do consultation–liaison services change the behaviour of primary care providers? A review. *General Hospital Psychiatry* **22**: 84–96.
- 29 Roland M and Shapiro J (1998) *Specialist Outreach Clinics in General Practice*. Radcliffe Medical Press: Oxford.
- 30 Harrington R, Whittaker J, Shoebridge P and Campbell F (1998) Systematic review of efficacy of cognitive-behaviour therapies in childhood and adolescent depressive disorder. *British Medical Journal* **316**: 1559–63.
- 31 Lacey I (1999) The role of the child primary mental health worker. *Journal of Advanced Nursing* **30**: 220–8.
- 32 Neira-Munoz E and Ward D (1998) Side by side. *Health Service Journal* **108**: 26–7.
- 33 Weeramanthri T and Keaney F (2000) What do inner city general practitioners want from a child and adolescent mental health service? *Psychiatric Bulletin* **24**: 258–60.
- 34 Bower P (2002) Primary care mental health workers: models of working and evidence of effectiveness. *British Journal of General Practice* **52**: 926–33.
- 35 Bower P, Rowland N, Mellor-Clark J *et al.* (2002) Effectiveness and cost effectiveness of counselling in primary care (Cochrane Review). *The Cochrane Library, Issue 4, 2002*. Update Software: Oxford.
- 36 Thompson C, Kinmonth A, Stevens L, Peveler R, Stevens A, Ostler K *et al.* (2000) Effects of a clinical practice guideline and practice-based education on detection and outcome of depression in primary care: Hampshire Depression Project randomised controlled trial. *Lancet* **355**: 185–91.
- 37 Secretary of State for Health (2000) *The NHS Plan*. HMSO: London.
- 38 NHS (1999) *National Service Framework for Mental Health: Modern Standards and Service Models*. HMSO: London.

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