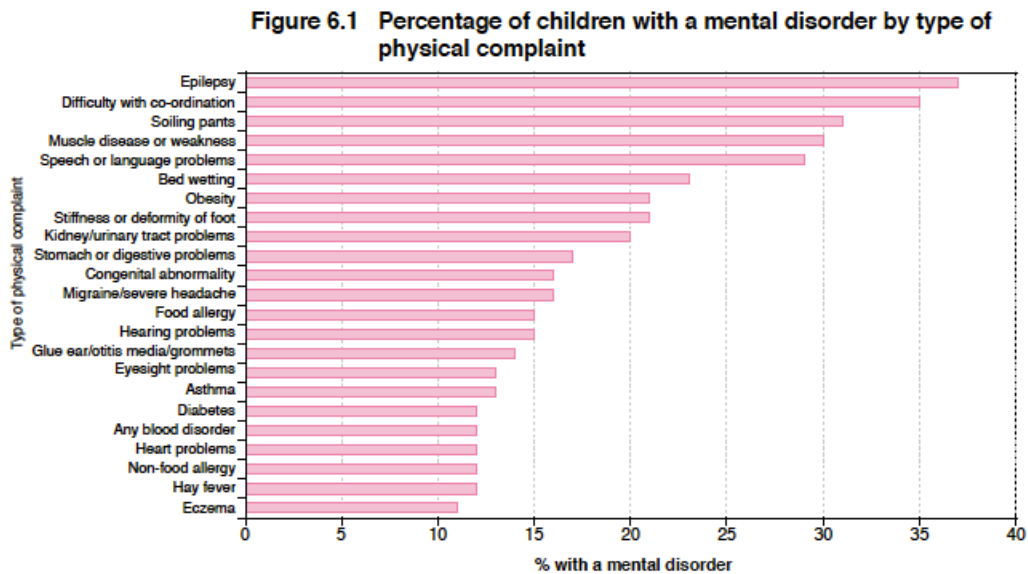


Selected papers on paediatric mental health liaison¹

Epidemiology

- Meltzer H, Gatward R, Goodman R, Ford T. (2000) **Mental health of children and young people in Great Britain**. Office for National Statistics. London: The Stationery Office [childadol_mental_health_v1_tcm77-61856](#)

In a survey for the Office of National Statistics (ONS) Meltzer et al interviewed 10,438 children between 5 and 15 years old. Data collection included information gathered from parents, teachers, and the children themselves. The researchers used ICD10 categories to define mental disorder.



Meltzer et al 2000, p.74

“Compared with no physical health condition having any physical complaint increased the odds of having a mental disorder by 82%.”

As shown above the ONS survey identified significant mental disorders associated with physical complaints, the greatest prevalence being in children with neurological conditions. There are also quite high rates of mental disorder in children who wet the bed, had speech and language problems and soiled their pants. **Apart from patients with epilepsy or other neurological problems (appendix 2), the vast majority of these mental disorders were common emotional or behavioural problems.**

Although asthma patients rated only slightly higher rates of mental problems compared to physically healthy children (13% v 10%), they were the largest single group of symptomatic children in the study. 1604 (16%) children had asthma; only 47 had diabetes. Current epidemiology shows that asthma in British children is almost 50 times more prevalent than diabetes².

¹ These citations do not deal with the evidence base for psychiatric/psychological treatments of specific health conditions (see <http://bit.ly/2kri1Xe> for selected references), nor with paediatric emergencies – including suicidal self poisoning – that require urgent psychiatric care. Summaries of national guidelines for paediatric mental health liaison are at <http://bit.ly/1Q7FzOq> See appendix 1 for the range of paediatric liaison tasks.

² Around 9% of children in UK have asthma, the majority not needing hospital care. Prevalence varies throughout the UK, and death rates are significantly higher than in comparable countries in Europe. [Wolfe, I, Cass, H, Thompson, MJ, Craft, A, Peile, E, Wieggersma, PA, Janson, S, Chambers, TL & McKee, M (2011) Improving child health services in the UK: insights from Europe and their implications for the NHS reforms' BMJ 342, d1277. 10.1136/bmj.d1277] The current prevalence of diabetes in British children is 0.187%. [HQIP & RCPCH: National Paediatric Diabetes Audit 2013/14: Report 1: Care Processes and Outcomes, RCPCH 2014.]

Children who had accidents were more likely (14% v 8%) to have a mental disorder, the highest rate (25%) being found with accidental poisoning. 20% of parents of children with mental disorders reported that their children were not in good health, compared with 6% of children without mental problems (p. 76).

- Hysing M, Elgen I, Gillberg G, Lie SA, Lundervold AJ (2007) **Chronic physical illness and mental health in children. Results from a large-scale population study.** *Journal of Child Psychology and Psychiatry* 48 (8), 785–792. DOI: 10.1111/j.1469-7610.2007.01755.x

“a population-based survey of Norwegian 7- to 9-year-old children, the Bergen Child Study (BCS). The whole population was screened using the SDQ (Strengths and Difficulties Questionnaire).

Boys constituted 59.7% of the children with CI. This was significantly higher than in children without CI (Chronic Illness).

Twenty percent of the children with a Chronic Illness were defined as high-scorers according to the parent total SDQ score, compared to 11% of the children without reported CI (p < .005) This increase in emotional and behavioural problems was evident both among boys and girls.”

Aetiology

- Janssens K, Rosmalen J, Ormel J, van Oort F, Oldehinkel A. (2010) **Anxiety and depression are risk factors rather than consequences of functional somatic symptoms in a general population of adolescents: The TRAILS study** *Journal of Child Psychology and Psychiatry* 51:3; 304–312 DOI: 10.1111/j.1469-7610.2009.02174

Practice opportunities and barriers

- Garralda ME, Slaveska-Hollis K. (2016) **What is special about a Paediatric Liaison Child and Adolescent Mental Health Service.** *Child and Adolescent Mental Health* 21(2):96-101 DOI:10.1111/camh.12146

“A quick and efficient response to referrals is seen as central to the work, as is expertise in the management of joint medical and psychiatric problems within a multi-disciplinary framework.

Comparison with other CAMHS services indicates [specificity of clinical presentations and work, making the PL service both distinctive and complementary of community CAMHS](#). The survey documents improvements in many families.

Joint work with paediatricians and consultation were part of management in a substantial number.

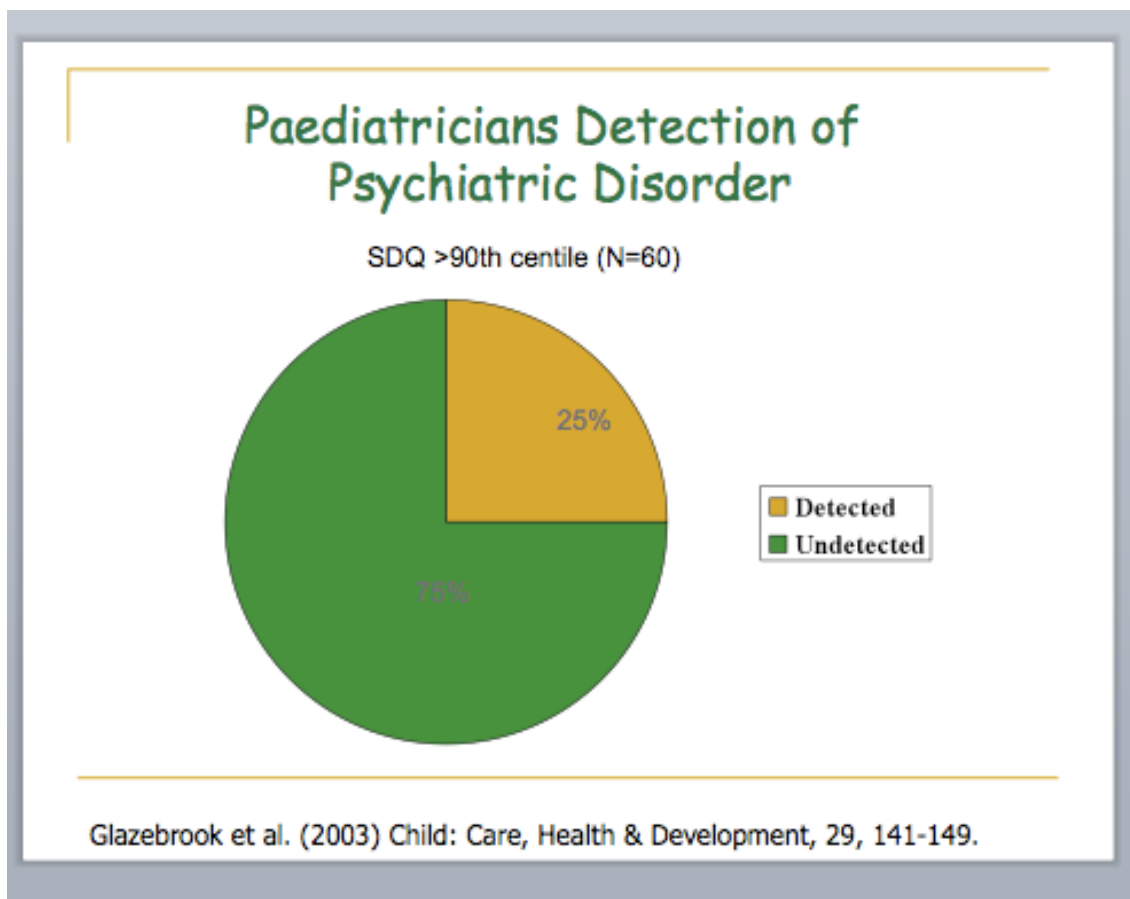
The complexity of the problems was underscored by the fact [that in addition to the paediatric and psychiatric comorbidity, school absence was noted in a third of children, and family problems in half](#).

The service moreover responded to referrals from a wide variety of in-patient and out-patient hospital teams. This highlights [the unique and important contribution of multi-disciplinary PL CAMH services, able to work with complex psychiatric problems across different paediatric units](#), and distinct from uni-disciplinary psychological, counselling or health promotion services, which when available tend not to focus on child psychopathology and are often unequally funded and distributed across specialist paediatric units.”

- Garralda, M. E. (2016), **Hospital management of paediatric functional somatic symptoms.** *Acta Paediatr*, 105: 452–453. doi:10.1111/apa.13337

“the finding that a significant number of referred children came from intact families is intriguing. A predominance of intact families has also been observed amongst children with chronic fatigue syndrome seen in specialist paediatric clinics [4]. Tøt-Strate et al. suggest that in the Danish study, this could be explained by parents living together being more reluctant to enter the family-based treatment programme offered by CAMHS. An alternative explanation could be that **a lack of obvious psychosocial stressors may lead to overemphasis on medical aspects and investigations**, thus militating against giving early attention to more subtle but relevant stressors; paradoxically, this could contribute to increased severity.”

- Glazebrook C, Hollis C, Heussler H, Goodman R, & Coates L.(2003) **Detecting emotional and behavioural problems in paediatric clinics.** *Child: Care, Health & Development* 29, 141-149. doi.org/10.1046/j.1365-2214.2003.00324.x



“Participants were 307 children aged 5–15 years attending a representative sample of paediatric out-patient clinics in one UK hospital

...paediatricians only identified a quarter of all cases with possible psychiatric disorder, thus supporting previous evidence that the psychological consequences of physical illness in children commonly go unrecognized and untreated..”

The mean age of the paediatric out-patient sample was 9.5 years (SD 3.17, range 5–15 years). There were more boys in the sample (n=192, 62%) than girls (n = 115, 38%). The majority of children (n = 164, 53%) were attending paediatric medical clinics with diabetes mellitus being the most common condition. One hundred and fourteen children (37%) were attending surgical clinics and 29 (10%) had a neurological condition (most commonly epilepsy).

The risk of psychiatric disorder was almost six times greater in children with brain disorders than community controls, compared with a doubling of risk of psychiatric disorder in children with non-brain disorders, suggesting direct and powerful brain–behaviour links. The type of psychological problem also differed in those with brain disorders, with marked increases in hyperactivity and conduct problems as well as emotional problems.”

- Hinton, D. and Kirk, S. (2016). **Families’ and healthcare professionals’ perceptions of healthcare services for children and young people with medically unexplained symptoms: a narrative review of the literature.** *Health and Social Care in the Community*, 24, 12–16 DOI: 10.1111/hsc.12184.

“Children and young people with MUS are at risk of receiving suboptimal care and support.

Families reported strong beliefs in organic aetiology, wanted support from medical teams and were resistant to psychological intervention. ... **parents encountered difficulties communicating an invisible illness they were not experiencing themselves.** ... a retrospective review of 138 young people with chronic pain shows that parents are more likely to associate high disability and pain scores with organic pathology.

Referrals to child and adolescent mental health services are often a last resort when other approaches have failed”.

- Furness, P., Glazebrook, C., Tay, J., Abbas, K. and Slaveska-Hollis, K. (2009). **Medically Unexplained Physical Symptoms in Children: Exploring Hospital Staff Perceptions.** *Clinical Child Psychology and Psychiatry*, 14(4), 575–87. DOI: 10.1177/1359104509338437.

“Making the transition from physical to psychological care was perceived as one of the most difficult stages in the professional–carer relationship because of parental resistance to giving up the notion of an identifiable, treatable physical cause for the symptoms in favour of an approach addressing psychological and social issues.

... referrals to psychologists and psychiatrists were perceived by parents as labelling their child as ‘mad’ or as ‘obviously making it up’ [OT; Nurse], and could permanently damage the relationship between practitioner and family.”

‘Sometimes, although the news came initially from doctors, ward staff would be left with the burden of dealing with the family’s confusion or resistance: The family sits there nodding, but as the doctor goes away, then they sort of talk to the nurses and they automatically think it has been made up. **They can’t accept that the child has actually got psychological problems** (Health Care Assistant)’

- Briggs-Gowan, MJ, Horwitz, SM, Schwab-Stone, ME, Leventhal, JM, Leaf, PJ (2000) **Mental Health in Pediatric Settings: Distribution of Disorders and Factors Related to Service Use.** *Journal of the American Academy of Child & Adolescent Psychiatry*. 39(7):841-849
DOI: [10.1097/00004583-200007000-00012](https://doi.org/10.1097/00004583-200007000-00012)

“..most parents do not discuss behavioral/emotional issues with their pediatrician.

Given these findings, it is significant that neither parental affective symptoms nor behaviors of possible child abuse were associated with talking to one's pediatrician about child behavioral/emotional issues or obtaining mental health treatment. Thus, **the issues most associated with child disorder are not predominant in cases that are brought to the attention of pediatricians.**

..psychiatrists and psychologists who are already working with paediatricians in clinical and community settings can assist paediatricians by helping them to recognize key features that may indicate that a child is suffering from mental health problems that have not been brought to the paediatrician's attention and by consulting about mental health referrals once children are identified."

Poor paediatric mental health provision

- Slowik M & Noronha S. (2004) **Need for Child Mental Health Consultation and Paediatricians' Perception of these Services:** *Child and Adolescent Mental Health* 9, 121–124 DOI: 10.1111/j.1475-3588.2004.00093.x

"... general and community paediatricians perceive the need for child psychiatric consultation but **do not have frequent and prompt enough access to consultant advice from CAMHS.**

Over 80% of paediatricians perceived access as a frequently encountered difficulty.

Paediatricians were frustrated with the current provision of consultations and some tried to manage by themselves as they did not expect any additional help from their local CAMHS."

- Woodgate M, Garralda M. (2006) **Paediatric liaison work by child and adolescent mental health services.** *Child and Adolescent Mental Health* 11, 19-24 DOI: 10.1111/j.1475-3588.2005.00373.x

"... formalised liaison services were rare (provided by only one-third) and dedicated specialist CAMHS liaison services even rarer. Nearly all CAMHS were providing a generic service through outpatient and emergency referrals, but closer or more specific liaison, such as joint outpatients and ward rounds, were reported by half or less.

Whereas emergency referrals represented the hard face of disorders seen in CAMHS work, in line with previous surveys, those referred for assessment whilst on paediatric inpatient units were mainly adjustment to physical illness and somatoform disorders (Wrate & Kolvin, 1978; Black et al., 1999). These were also the main reasons for referral to CAMHS outpatients.

Specialist CAMH services in this survey were providing a considerable amount of teaching to paediatricians, nurses and medical students, but this was an infrequent activity and might therefore only have token influence on the mental health aspects of paediatric practice. The importance of teaching doctors and other disciplines has been highlighted (Kurtz et al., 1994, Bass, Peveler, & House, 2001; Cockburn & Bernard, 2003; Slowik & Noronha, 2004).

Less training is associated with less joint working with child mental health professionals (Fritz & Bergman, 1984). Our results suggest that careful thought needs to be given to where and how to prioritise paediatric training needs in this area.

... With the increasing pressure for specialist CAMHS to liaise with educational and social services, there is a danger that paediatric liaison work may be 'squeezed out', unless adequately planned and commissioned for. This would leave a population of high need un-served"

- Kraemer, S (2009) **"the menace of psychiatry": does it still ring a bell?** *Archives of Disease in Childhood* 94;570-572 DOI:10.1136/adc.2008.142851

"Although ambivalence is expressed in more subtle ways the marginalisation of mental health in hospital paediatrics continues into the present century."

Cost savings

- Casey PH, Lyle RE, Bird TM, Robbins JM, Kuo DZ, Brown C, Lal A, Tanios A, Burns K.(2011) **Effect of hospital-based comprehensive care clinic on health costs for Medicaid-insured medically complex children.** *Arch Pediatr Adolesc Med.*165(5):392-8. DOI: 10.1001/archpediatrics.2011.5.

“The clinical intervention of the ACH medical home program resulted in significantly fewer inpatient stays PPPM with significantly shorter lengths of hospital stay. This resulted in an annual savings of \$1,766 PPPM. [The number of outpatient claims per child per month increased, but emergency department contacts decreased for the year after the first clinic visit compared with the year before the first clinic visit.](#) The aggregate cost savings for Arkansas Medicaid, including the costs mentioned earlier as well as medications and other related expenses, was \$1,179 PPPM for the year after the first clinic visit.”

- Garralda E. (2015) **Cost effectiveness of Paediatric Liaison CAMH Services** (letter) *Br J Psychiatry* 8.6.2015) <http://bjp.rcpsych.org/content/cost-effectiveness-paediatric-liaison-camh-services>

“An audit of a sample of 15 children and young people with functional symptoms seen 2002-2010 by a PL CAMHS in an UK tertiary hospital found an average 252 days between first hospital contact and the PL CAMHS referral [The average health costs per patient incurred prior to PL referral through hospital admissions, physical investigations and invasive procedures was £4,881 \(£12,598 in the gastrointestinal symptoms group\),](#) again with a wide range (£15-£38,407); the total cost for all children was £73,252.

Somatoform disorder presentations with functional physical symptoms are common reasons for referral to PL CAMHS teams and can be successfully and cost effectively treated with evidence informed interventions.”

- Houts CB, Turbett JA, Arnold LE, et al. (1985) **Cost of medical/surgical pediatric hospital days preventable by psychiatric treatment.** *J Am Acad Child Adolesc Psychiatry* 24:227-30

“A random sample of 572 inpatient charts from 14 selected diagnostic categories in a large children's hospital was reviewed for admissions and length of stay potentially preventable by psychiatric treatment (assuming efficacy of psychiatric treatment). Conservative guidelines classified 12.4% of the charts as suggesting some preventable days. [Calculation showed that 9.9% of the total days for the entire sample were considered preventable.](#) This represented a potentially preventable 2-year cost of \$580,000 for the 14 diagnostic categories.”

Social and family contexts

- Agha M, Glazier RH, Guttman A. (2007) **Relationship Between Social Inequalities and Ambulatory Care-Sensitive Hospitalizations Persists for up to 9 Years among Children Born in a Major Canadian Urban Center.** *Ambul Pediatr*; 7 (3), 258-262.

“We examined ACS and all hospitalizations of children born from 1993 to 2000 in Toronto, Canada, by birth year, calendar year, and socioeconomic status (SES)

[The relationship between socioeconomic disadvantage and both ACS and all-cause hospitalization in children was large,](#) consistent across many conditions, remained stable over time, and persisted up to 9 years of age. These effects occurred in a universal health insurance setting without direct financial barriers to physician or hospital care.”

This study shows that poorer children are more likely to be admitted to hospital beds, implying that ambulatory services will disproportionately favour the better off.

- Landolt MA, Ystrom E, Sennhauser FH, Gnehm HE, Vollrath ME (2012) **The mutual prospective influence of child and parental post-traumatic stress symptoms in pediatric patients.** *Journal of Child Psychology and Psychiatry* 53: 767–774. DOI: 10.1111/j.1469-7610.2011.02520.x

“A total of 287 children (aged 6.5-16 years) and their mothers (n = 239) and fathers (n = 221) were assessed at 5-6 weeks and 1 year after an accident or a new diagnosis of cancer or diabetes mellitus type 1 in the child.

“mothers and fathers in our sample had considerable rates of PTSD across all diagnostic groups and at both times. At 5–6 weeks, overall rates among parents were higher than in children. Specifically, [parents of children with cancer and diabetes were affected significantly more than their children](#). Although parental symptoms decreased over time, PTSD rates in the cancer group were still remarkably high at 1 year (mothers 25.4%; fathers 18.4%). In contrast, only 4.7% of the children with cancer had clinically relevant PTSS.

This study highlights the long-term influence of parental PTSS on the child’s recovery after trauma and calls for a family systems approach and for early interventions in the treatment of traumatized pediatric patients.”

Dr Sebastian Kraemer
www.sebastiankraemer.com
 March 2017

Appendix 1

Tasks of paediatric mental health liaison

1. emergencies (suicidal self poisoning and psychiatric crisis, combining medical and psychiatric investigations and care).
2. medically unexplained symptoms (MUS) at all ages from infancy to adolescence (failure to thrive and regulatory/attachment disorders of infancy, somatisation/conversion, chronic fatigue, pervasive withdrawal, fabricated and induced illness, any other unidentified mental disorder in a paediatric patient)
3. long term and life-limiting illness (treatment adherence, associated mental disorder, school problems, parental and sibling stress, reduction in hospital admissions, terminal care)
4. staff development and support (attendance at routine multidisciplinary meetings, joint clinical work in selected cases, ethics of palliative care, teaching specific courses, staff review after death of patients etc)
5. psychiatric symptoms of physical disease/neuropsychiatry (metabolic, immunological/infectious and brain disorders, drug-induced behaviours etc)
6. eating disorders
7. elimination disorders (resistant encopresis and enuresis)
8. post traumatic states (after serious burns, accidents and injuries, post major surgery eg transplants)
9. anxiety about procedures (needle phobia, imaging etc)
10. therapeutic work with anxious, depressed or bereaved parents of paediatric patients
11. clinical support for parents and staff in paediatric and neonatal intensive care units
12. therapeutic help for children of parents who have died or are seriously ill in co-located hospital departments
13. paediatric mental health has a significant part to play in perinatal mental health services

Appendix 2

Table 6.4 Prevalence of mental disorders

by type of physical complaint

All children

	Emotional disorders	Conduct disorders	Hyperkinetic disorders	Less common disorders	Any disorder	Base
<i>Percentage of children with mental disorders for each complaint</i>						
Epilepsy	17	18	1	10	37	67
Difficulty with co-ordination	13	17	10	8	35	235
Solling pants	13	17	9	7	31	116
Muscle disease or weakness	18	10	8	2	30	99
Speech or language problems	12	15	7	6	29	393
Bed wetting	10	13	5	2	23	484
Stiffness or deformity of foot	10	12	3	1	21	183
Obesity	11	11	4	2	21	84
Kidney/urinary tract problems	12	10	4	-	20	96
Stomach or digestive problems	11	7	2	1	17	629
Migraine/severe headache	10	8	1	1	16	513
Congenital abnormality	6	4	8	3	16	74
Hearing problems	5	9	2	1	15	429
Food allergy	6	9	2	2	15	370
Glue ear/otitis media/grommets	5	8	2	1	14	480
Asthma	6	7	2	1	13	1604
Eyesight problems	6	7	2	1	13	1097
Hay fever	6	7	1	0	12	976
Non-food allergy	6	6	2	1	12	581
Heart problems	7	2	2	-	12	128
Any blood disorder	8	7	2	2	12	47
Diabetes	6	10	2	-	12	47
Eczema	5	6	1	0	11	1289

Meltzer et al 2000, p. 79