

Psychiatric morbidity among children who are frequent attenders in general practice

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SUMMARY. *This two-part cross-sectional study set out to determine the frequency and nature of psychiatric disorder among children aged seven to 12 years who were frequent attenders at one of two general practices. The first part of the study was an interview survey with a sample of 109 children who attended frequently (four or more times in one year) and 23 children who had not attended in one year. Descriptive information from a structured parental interview was used to diagnose childhood psychiatric disorder. The second part of the study was a postal survey with a sample of 194 children selected independently of frequency of attendance. The children's score on a parental screening questionnaire was used to determine probable psychiatric disorder. The response rates were 78% and 75% for the interview and postal studies, respectively. Of the children aged seven to 12 years registered with the two practices 21% were found to be frequent attenders. Attendances by frequent attenders accounted for 51% of all attendances in this age group. Psychiatric disorder was more common among frequent attenders than non-attenders (29% versus 9%, $P < 0.05$). Most of the psychiatric disorders were of an emotional nature (63%). The postal survey revealed that 15% of the children in this age group had a probable psychiatric disorder. It can therefore be estimated that 40% of children in the population with psychiatric disorder were frequent attenders. Frequently attending children who were psychiatrically disordered received similar physical diagnoses to those who were not disordered, but were more likely to have utilized non-psychiatric hospital services during the previous year (60% versus 38%, $P < 0.01$) and to have been seen previously by a psychiatrist (31% versus 3%, $P < 0.001$).*

Psychiatric disorder is common among children who are frequently presented to their general practitioner with physical symptoms. Many of the children in the community with psychiatric disorder attend their general practitioner frequently. Targeting frequent attenders would enable general practitioners to identify many children in need of psychological treatment during the course of routine clinical work. As an appropriate psychologically-based response would be directed at a minority of children making a high demand on services, there may be resource implications for both primary and secondary care, in terms of an overall reduction in utilization.

Keywords: *psychiatric morbidity; frequent attenders; children.*

Introduction

THE government's recent statement of long term medical and health care objectives includes as an aim the reduction of

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emotional and behavioural disorders in children.¹ Epidemiological research has shown that upwards of 10% of children in the community have a psychiatric disorder² but that only one in 10 of such children are receiving specialist care.³ A way to identify and to deliver appropriate care to the majority of psychiatrically disordered children in the community is by means of primary health care services, and it is accepted that dealing with psychological problems is a part of the general practitioner's work.⁴⁻⁶

It is already known that approximately one in four consecutive children attending general practice is psychiatrically disordered^{7,8} and, as this rate is higher than that in the population in general,² it suggests a link between disorder and attendance. Unfortunately, most disturbed children are presented with physical rather than psychological symptoms⁸ which presumably contributes towards the failure to recognize underlying psychiatric disorder;⁹ children with emotional and behavioural problems have been described as 'the new hidden morbidity' in paediatric primary care.⁹ Little is known about psychological mechanisms linking disorder with presentation although, compared with general epidemiological findings, girls with emotional disorders are over-represented in the sample that presents.⁸

The rate of psychiatric disorder among paediatric clinic attenders is even higher at nearly one in three,¹⁰ which suggests a further link between disorder and referral to secondary care services. As in primary care, most children are presented with physical symptoms and emotional disorders are over-represented.

This epidemiological research, however, leaves the general practitioner with the problem of determining which children are psychologically disturbed. It is not realistic to recommend the routine gathering of detailed psychosocial information, and epidemiological screening techniques are not appropriate, not least because of the imperfect sensitivity and specificity of questionnaires (Garralda E; paper presented at a research conference on mental health services for children and adolescents in primary care settings; New Haven, USA; June 1989); the general practitioner needs to be able to identify psychiatric disorder during the course of routine clinical work by directing attention to those children who are most likely to be disturbed.

It is possible that a suitable group for such clinical attention would be children who attend their general practice frequently, many of whom may be psychiatrically disordered. This study, therefore, set out to determine the frequency and nature of psychiatric disorder among children who are frequent attenders in general practice. The study was approved by the local medical ethical committee.

Method

Two general practices in Cheshire (practices A and B) took part in the study. Practice A was situated in a semi-rural area and had 3500 patients; practice B was an urban practice with 15 500 patients. The study population comprised all children registered with practice A on 24 August 1988 or with practice B on 15 June 1989, and who were aged seven to 12 years on 1 June 1988, the projected midpoint of the study period.

Attendance was defined as any entry in the general practice notes (excluding 'did not attend'), approximately 1% of which were not face to face contacts. Frequent attenders were defined

as those children attending four or more times during a 12-month period. Non-attenders were defined as those children who had not attended at all during a 12-month period.

Interview study

As the list sizes of practices A and B were very different the population of children aged seven to 12 years in practice B was reduced by means of a one in three computer sampling procedure before the notes were examined to identify frequent attenders and non-attenders.

As a census of attendance during the previous two years carried out at practice A at the start of the study had shown that an individual child's attendance may vary year by year, notes were examined in cohorts during the one year study period to ensure that the research interview took place shortly after inclusion and, therefore, the content of the interview related to the period during which the child had been a frequent attender or non-attender. All frequent attenders were included in the study, but as many more non-attenders were identified than were required for interview, their numbers were reduced using computer generated random numbers. Non-English speakers, relatives of surgery staff and children not traceable within the practice areas were excluded. As the research interview was fairly lengthy and demanding, siblings of those who had already taken part were also excluded.

Mothers of children identified for inclusion in the study were approached by post by their general practice; follow up of non-respondents was carried out by F B by post and then in person. Mothers who agreed to take part in the study were interviewed at home by F B using the psychiatric interview with parents.³ This extensively used instrument is a structured interview covering a wide range of emotional and behavioural signs and symptoms which has been shown to be a reliable and valid instrument for diagnosing childhood psychiatric disorder.³ Psychiatric disorder in children is defined as a handicapping abnormality of behaviour, emotions or relationships; minor or trivial behavioural problems are excluded, and learning difficulties and mental retardation do not in themselves constitute disorder. Caseness and the diagnosis according to the *International classification of diseases* (ninth revision) (ICD-9)¹¹ were agreed jointly by the authors. A random sample of 50 interview schedules, stratified by caseness, were rated by an experienced child psychiatrist unconnected with the study which showed that the percentage inter-rater agreement was 88% with a Cohen's kappa¹² of 0.74.

The general practice records of the children included in the study were examined for evidence of non-primary care contacts, and general practice attendances were coded using the *International classification of health problems in primary care* (ICHPPC-2)¹³ in which specific diagnostic or symptom codes, such as cough, are grouped into 18 sections that conform to those of ICD-9 and some of which are arranged in subsections.

Postal study

A random sample of 100 children aged seven to 12 years registered with practice A was obtained using computer generated random numbers and 94 children registered at practice B were randomly sampled using the practice computer; there were no exclusion criteria. The mothers of these children were approached by post by their general practice and asked to provide sociodemographic information and to complete the Rutter A(2) questionnaire.³ This questionnaire is a checklist of emotional and behavioural items relating to the child, on which a cut-off score of 13 has been shown to discriminate best between disturbed and non-disturbed children. A score of 13 or over indicates only probable psychiatric disorder, but sufficient is known of

its sensitivity and specificity³ (Garralda ME, Bailey D, unpublished data) for it to be used to provide a slight overestimate of the prevalence of actual psychiatric disorder. Follow up of non-respondents was by post by F B.

Statistical analysis

Data from the two practices were combined on the basis of comparability of Office of Population Censuses and Surveys small area statistics¹⁴ and of sociodemographic data obtained from the postal study.

Data were encoded and analysed using *SPSS/PC+* on an Opus V[®] personal computer. Two-tailed, non-parametric tests (chi square and Mann Whitney) have been used as appropriate with a 5% significance level, together with 95% confidence intervals.¹⁵

Results

Interview study

The mothers of 80% of the eligible children agreed to take part in the interview study. There were no statistically significant differences in the response rate by the child's age, sex, frequency of attendance or practice. Table 1 shows how the two practices contributed to the study groups; the frequent attenders from practice A represent the total population of such children from this surgery but all other groups are samples. Table 2 shows that, at 29%, the rate of psychiatric disorder among frequent attenders was three times that of non-attenders and that both practices had similar rates. Of the 32 psychiatrically disordered frequent attenders 17 were boys and 15 girls (sex ratio 1.1:1.0) and the majority were diagnosed as having an emotional disorder (Table 3).

Table 1. Sample of children in the interview study.

	No. of frequent attenders			No. of non-attenders		
	Practice A	Practice B	Total	Practice A	Practice B	Total
Identified	60	88	148	11	18	29
Eligible ^a	51	87	138	11	16	27
Accepted	43	66	109	10	13	23

^a The excluded children were eight siblings, two who had moved away, one who had non-English speaking parents and one child of a participating doctor.

Among frequent attenders, the ICHPPC-2 section codes most commonly recorded as the presenting symptom or diagnosis by the general practitioners were respiratory diseases (202/622, 32%), diseases of the nervous system and sense organs (mostly diseases of the ear) (108/622, 17%), signs and symptoms (83/622, 13%) and infective and parasitic diseases (66/622, 11%). Mental disorders accounted for only 1% (8/622) of presenting symptoms or diagnoses. Abdominal pain was the fifth commonest specific code (42/622, 7%) but headaches were much less common (7/622, 1%). There were no statistically significant differences in ICHPPC-2 diagnoses at the section, subsection, or specific code level by whether or not the frequent attenders were psychiatrically disordered.

There was a non-significant trend for psychiatrically disordered frequent attenders to consult most frequently. They were also more likely than frequent attenders who were not disordered to have been in contact with non-primary care services (mostly hospital medical, surgical and casualty departments) during the previous year (21/32, 66% versus 29/77, 38%, difference 28% (95% confidence interval (CI) 7% to 49%); chi

Table 2. Rates of psychiatric disorder among children who were frequent attenders and non-attenders.

	% of frequent attenders			% of non-attenders		
	Practice A (n=43)	Practice B (n=66)	Total (n=109)	Practice A (n=10)	Practice B (n=13)	Total (n=23)
Not psychiatrically disordered	67	73	71	90	92	91
Psychiatrically disordered	33	27	29	10	8	9*

* Difference between frequent attenders and non-attenders 20% (95% confidence interval 6% to 34%); two-tailed chi square: $P < 0.05$ (2×2 totals table).

Table 3. ICD-9 diagnoses of psychiatrically disordered frequent attenders by sex.

ICD-9 diagnosis	No. (%) of children		
	Boys	Girls	Total
Emotional disorder	7	5	12 (38)
Adjustment reaction ^a	3	5	8 (25)
Conduct disorder	5	3	8 (25)
Hyperkinetic syndrome	2	1	3 (9)
Infantile autism	0	1	1 (3)
Total	17	15	32

^a All of an emotional nature.

square test, $P < 0.01$). Although only one frequent attender (a case) was under the care of a child psychiatry department, disordered frequent attenders were much more likely than those who were not disordered to have been seen previously by a psychiatrist (10/32, 31% versus 2/77, 3%, difference 28% (95% CI 12% to 44%); chi square test, $P < 0.001$).

Postal study

The response rate to the postal study was 76% (148/194; 80/100 in practice A and 68/94 in practice B). There were no statistically significant differences in the response rate by the child's age, sex, frequency of attendance or practice. The responses to the request for sociodemographic information indicated that the groups from the two practices had comparable demographic profiles in terms of social class of either parent, mother's age and education, 'broken homes', number of children in family and sampled child's order in the family.

Eighteen per cent of the children (26/148) scored 13 or over on the screening instrument — 15/80 in practice A (19%) and 11/68 in practice B (16%).

The notes of three children from practice A and one child from practice B included in the postal survey could not be located. The patterns of attendances in the two practices were comparable, the distribution of frequency of attendance being approximately exponentially distributed with most children attending either not at all or only once or twice a year. There was, however, a trend towards generally higher attendance at practice A. Overall, 21% of the children (40/190) were frequent attenders — 25% of those in practice A (24/97) and 17% of those in practice B (16/93). Attendances by frequent attenders accounted for 58% of all 418 attendances in this age group — 59% in practice A (135/227) and 57% in practice B (108/191). Twenty seven per cent of children (52/190) had not attended at all during the 12-month period — 20% of those in practice A (19/97) and 35% of those in practice B (33/93).

Given that 21% of the children aged seven to 12 years registered with the two study practices were classified as frequent attenders, that 29% of frequent attenders were found to be psychiatrically disordered, and that 15% of the total population of children

in this age group had a probable psychiatric disorder (allowing for the tendency of the screening instrument to over-identify probable disorder), it can be estimated that 40% of children in this age group in the community with psychiatric disorder were frequent attenders — considering 100 children, 21 of these would be frequent attenders and of these 29% (six children) would be psychiatrically disordered; thus six of the 15 children who had a probable psychiatric disorder would be frequent attenders (40%).

Discussion

The results of this study can be interpreted in two ways. From the general practitioner's viewpoint, many frequent attenders are psychiatrically disordered but the epidemiologically minded child psychiatrist might stress that many of the psychiatrically disordered children in the community are frequent attenders. Combining these perspectives, it can be seen that the general practitioner spends a substantial amount of time with psychologically disturbed children and is in a position to identify many of the children registered with the practice who are psychiatrically disordered, during the course of routine clinical work.

Unfortunately, the general practitioner is not in a position to identify the psychiatrically disordered frequently attending child by the nature of the presenting physical symptoms; in few consultations in this study were the presenting symptoms headache or abdominal pain. Very frequent attendance and contact with non-primary care services, however, might help to alert the general practitioner to the possibility of an underlying psychiatric disorder, although physical morbidity in the absence of psychological disturbance can also lead to high use of services. It would be incorrect, however, to give the impression that the general practitioner faces the task of deciding which frequently attending children are psychiatrically disordered and which are physically ill. Although some disordered children in this setting will have little physical morbidity, an association between chronic physical illness and childhood psychiatric disorder is well established.¹⁶ It seems likely that in some children, psychiatric disorder leads to frequent attendance for common childhood complaints whereas in others serious physical morbidity, which requires frequent medical attention, is an aetiological factor for psychiatric disorder; these mechanisms need not be mutually exclusive. A greater understanding of these and other mechanisms underlying frequent attendance in psychiatrically disordered children is required.

An important marker for current psychiatric disorder in this study was previous involvement with child psychiatric services but, although this was highly specific (very few frequent attenders who were not psychiatrically disordered had previously seen a psychiatrist), it was not at all sensitive (most psychiatrically disordered frequent attenders had not previously seen a psychiatrist).

An index of suspicion for childhood psychiatric disorder in primary care would facilitate diagnosis by encouraging more routine enquiry into the child's emotional state and behaviour,

and school and family life; targeting frequent attenders would be a simple way of more appropriately directing such attention and this group would include many of the psychiatrically disordered children on the general practitioner's list. It would not be appropriate to refer all psychologically disturbed children to hospital child psychiatric services, which would in any case be swamped. On the other hand, the general practitioner cannot be expected to operate like a child psychiatrist, whose time and resources must necessarily be reserved for the most serious and difficult cases. Thus, brief, effective interventions suitable for implementation in primary care need to be developed.

General practice is a hard-pressed, essentially demand-led service, although recent changes have encouraged a move towards more epidemiologically motivated activities.¹⁷ The results of this study suggest that the general practitioner is well placed to detect opportunistically a substantial number of the psychiatrically disordered children in the community that epidemiological researchers have shown to exist.^{2,3} Recent research with psychologically disturbed adult frequent attenders has shown that an appropriate response (in this instance, a primary care anxiety management group) can lead to a sustained reduction in frequency of attendance.¹⁸ This suggests that the detection and treatment by general practitioners of psychiatric disorder among the minority of children who make high demands on services may have resource implications for both primary and secondary care.

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