Prevalence and characteristics of disabled children: findings from the 1974 General Household Survey

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SUMMARY In the absence of nationally representative data on the prevalence of disability among children, a special analysis of relevant data in the General Household Survey (GHS) was carried out. A long-standing illness, disability or infirmity was present in 7.6% of the children under 16 in the 1974 sample of the GHS. An assessment of the extent to which the children were disabled resulted in 10% of the children being classified as severe, 29% as moderate, and 61% as mild. About half of the children classified as severe had a congenital anomaly or suffered from a mental disorder. Prevalence rates for specific conditions were compared with those obtained in other studies. Compared with all children in the survey, significantly more of the severely and moderately disabled children were boys than girls, and significantly more came from the skilled manual socioeconomic groups. The proportion of lone parent families was not significantly different from that in the overall sample.

An estimate of the prevalence of disability in the adult population of Great Britain was provided in the national survey of the population carried out in 1969.¹ This survey did not cover children, and although studies have been carried out of the prevalence of disabilities among children in particular areas, and of particular disabilities or particular age groups,²⁻⁴ there has been no large-scale survey of the child population to establish national figures on the prevalence of disabilities and the characteristics of the affected children and their families. Disability is much less common among children than among adults and one major obstacle to a national survey is the very large number of households that would need to be screened in order to obtain a sample of severely disabled children that was large enough to permit subsample analyses.

A study of the impaired subsample of the 17 000 children in the 1970 'British births' cohort⁵ is now in progress and will provide detailed and nationally representative information on the prevalence of impairment among 10-year-old children and on the characteristics of the children and their families. In the absence of such a representative study, the data available from other sources were examined by this unit as part of its programme of research on the social policy aspects of child handicap.⁶ In this paper we present some findings on disability among children that were obtained from the first special analysis of such data in the General Household Survey (GHS). The terminology used in the paper is set out in the Figure, and there is a full description of the study in an unpublished paper obtainable from the Social Policy Research Unit.⁷

Figure Terminology of disablement.

The terminology of disablement has recently been reviewed.¹⁷ In this paper we use the terminology developed by Wood for the World Health Organisation¹⁸ as elaborated by Taylor,¹⁹ slightly amended so as to include mental impairment. This can be represented as shown in the Figure. A revised version of this terminology will shortly be published by WHO.

Method

The GHS is a multipurpose survey which is carried out continuously and provides annual information on a nationally representative sample of the population of private households in Great Britain. The effective sample size varies a little from year to year. In 1974, the year used for this analysis, the effective sample consisted of about 14 200 private households and interviews were obtained at 86% of these households.⁸ Throughout the period from 1971, when the survey started, to 1976, all respondents with children under 16 answered a child health schedule which included questions on chronic sickness. In 1974 the first of these questions was 'Do any of your children under 16 have any long-standing illness, disability or infirmity?', followed by 'Does the complaint limit the child's activities in any way?'. This analysis is based on the group of households which answered 'Yes' to the first question. There were 579 such households and they contained a total of 653 affected children. The 1974 GHS data for this subsample of households were obtained from the Department of Health and Social Security after clearance with the Office of Population Censuses and Surveys who conduct the GHS on behalf of a number of Government departments.

The data from the GHS relating to disability and handicap among children have limitations, because the questions were not designed to provide information of this kind. The respondent, normally the parent, is the sole source of information about the child. He or she gives a full description of the type of long-standing illness (this term will be used as a shorthand for the full phrase in the question) affecting the child, the cause of the illness, and the medical term for it if this is known. There is thus no medical assessment of the nature of the complaint and the information obtained from respondents may not be complete or fully accurate. The information on the illness is coded by coders with some medical knowledge and experience who are able to assess the descriptions given and code them according to the *International Classification of Diseases*.⁹ No attempt is made however, to validate the accuracy of the information provided with hospital records or those of the school health service or the general practitioner. The respondent also provides information on the activity limitation caused by the long-standing illness, and information is available on the type of school attended by the child (in particular whether it is a special school or not).

In terms of the conceptual scheme of disablement set out in the Figure, the GHS provides reasonable data on the disease, disorder, or injury affecting the children, assuming that in the great majority of cases

the information provided by the respondent is accurate. However, in the case of disorders where the nature of the impairment may vary according to the severity of the disorder or the parts of the body affected (for example, spina bifida), it is not always certain from the disease classification whether the child has a physical impairment alone or both a physical and a mental impairment. Only a limited amount of information is available on the extent of the disabilities affecting the child and there is no information on the severity of the handicap that results from these disabilities.

The size of the subsample of affected children (653) is also a limitation but it would be possible to increase its size by including later years in an analysis. In the absence of representative data from other sources, the GHS does provide information on what is viewed by a national sample of families as chronic sickness among their children and some information on the severity of the disability caused by this sickness can be obtained. Because of the multipurpose nature of the survey, a variety of socioeconomic data are also available and can be used to describe the characteristics of the affected children.

Results

PREVALENCE OF LONG-STANDING DISEASES AND DISORDERS AMONG CHILDREN UNDER 16 AND MOST COMMON DISEASES OR DISORDERS FOUND IN THE SAMPLE

A long-standing illness, disability, or infirmity was present in 633 of the 8292 children under 16 included in the 1974 GHS, a prevalence rate of 7.6%. There were also a further 20 cases classed as having a long-standing illness in the survey but possibly suffering only from an acute illness; because of the uncertainty these have been included as mild cases in most of the Tables, giving a total of 653 children. Fifty-five of the children suffered from two complaints and a further seven from three complaints. Asthma was the most common complaint, affecting 14% of the children, followed by infantile eczema (9%), bronchitis (9%), hay fever (6%), and strabismus (6%). Nearly half of the children in the subsample (44%) were affected by one of these five complaints.

ASSESSMENT OF THE SEVERITY OF THE DISABILITY RESULTING FROM THE LONG-STANDING DISEASE OR DISORDER

Many of the complaints affecting the children would not give rise to severe disabilities. The survey provides information on whether the illness limits the child's activities in any way and on the extent to which the child is able to get out of the house. Table 1 shows

Table 1 Relationship between activity limitation and restriction in getting out of the house

	Complaint prevents child getting out of house			Complaint does not prevent child getting out of house	All cases in subsample
	Most of the time	Some of the time	Hardly ever		
Complaint does limit child's activities in some way	19	100	51	108	278
Complaint does not limit child's activities in any way	0	26	31	296	353
ALL CASES	19	126	82	404	631*

*Information not available for 22 cases.

the relationship between these two restrictions on the child's ability to live normally. The activities of 278 (44%) of the children were limited by their complaints and a further 119 of these were restricted in getting out of the house most or some of the time.

Additional information was available on the length of time for which the complaint had been limiting activities, the child's age, the type of school attended (in particular whether it was a special school or not) and the ICD coding for the long-standing illness. The advice was sought of a consultant paediatrician* with much experience of disability in children in order to assess the extent to which the children were likely to be disabled. By using his knowledge of the probable effects of the complaints affecting the children, and the available information on age and activity restriction, the children were classified as severely, moderately, or mildly disabled. The three groups were composed of 63, 184, and 406 children respectively.

TYPES OF COMPLAINT FOUND IN THE THREE SEVERITY GROUPS

Because of the limited amount of information available, all children at special schools were classed as severe although it was recognised that there is considerable variation between local education authorities in the criteria used for placing children in special schools. There were 33 children at special schools and about half of these suffered from some form of mental disorder. A further 30 children were also classed as severe, of whom 15 were at normal schools and 15 were too young for school or were at a day nursery. When all the children assessed as severely disabled were considered, 22 (35%) had complaints in ICD disease category XIV 'Congenital anomalies'; 12 (19%) in the 'Mental disorders' category (V); and 7 (11%) in the 'Diseases of the nervous system and sense organs' category (VI) (Table 2).

* Dr. Walter Henderson. Before his retirement Dr. Henderson was the consultant paediatrician for York and he is a medical adviser to the Family Fund.

The moderate classification was used where the illness caused some discomfort or difficulty and in most cases where the complaint had been present for some years and imposed some limitation on the child. Just under half of the children classed as moderate had complaints in ICD category VIII 'Diseases of the respiratory system' (Table 2).

The mild classification grouped together all the children who had a complaint which possibly caused some inconvenience or had an effect on the appearance but could not be considered to be disabling (although in some circumstances the complaint might give rise to some forms of 'social handicap'). The most common types of complaint in this group were also those in ICD category VIII 'Diseases of the respiratory system' and these affected 120 (30%) of the mild group of children (Table 2).

PREVALENCE OF SEVERE DISABILITY AND OF SOME INDIVIDUAL CONDITIONS

Sixty-three children in the sample were classed as severely disabled, a prevalence rate of 7.6 per 1000 children under 16 (95% confidence limits: 5.7 — 9.5 per 1000). Prevalence rates for some individual conditions can also be derived from the GHS, although the rates are based on small numbers and are subject to large sampling errors; data from several years of the GHS would have to be aggregated to enable more reliable rates to be calculated.

Mental impairment

There were 35 children classified as severe who had either a mental impairment alone or both a mental and a physical impairment, giving a prevalence rate of 4.2 per 1000 children under 16.

Spina bifida

Eight of the children classified as severe had spina bifida with or without hydrocephalus (ICD code 741) as did one of the children classified as moderate, so that the prevalence rate for severe and moderate was 1.1 per 1000 children under 16.

Table 2 *Types of disorder found in each severity group*

ICD disease category*	Nos. of children in each severity classification			All children in subsample
	Severe	Moderate	Mild	
I Infective and parasitic diseases	3	0	6	9
II Neoplasms	4	0	2	6
III Endocrine, nutritional and metabolic diseases	1	9	11	21
IV Diseases of blood and blood-forming organs	2	1	6	9
V Mental disorders	12	5	17	34
VI Diseases of the nervous system and sense organs	7	25	76	108
—Strabismus (eye)	(—)	(—)	(32)	(32)
—Migraine	(—)	(12)	(4)	(16)
—Refractive errors (eye)	(—)	(—)	(12)	(12)
VII Diseases of the circulatory system	1	1	8	10
VIII Diseases of the respiratory system	3	84	120	207
—Asthma	(1)	(52)	(36)	(89)
—Bronchitis, unqualified	(—)	(15)	(36)	(51)
—Hay fever	(—)	(10)	(25)	(35)
IX Diseases of the digestive system	0	3	14	17
X Diseases of the genitourinary system	2	3	6	11
XII Diseases of the skin and subcutaneous tissue	0	22	55	77
—Infantile eczema	(—)	(16)	(39)	(55)
XIII Diseases of the musculoskeletal system and connective tissue	1	5	7	13
XIV Congenital anomalies	22	15	47	84
—Other anomaly of lower limb	(1)	(2)	(10)	(13)
XV Certain causes of perinatal morbidity and mortality	2	1	6	9
XVI Symptoms and ill-defined conditions	3	3	17	23
—Convulsions	(2)	(2)	(8)	(12)
XVII(N) Accidents, poisonings and violence	0	7	8	15
ALL DISEASE CATEGORIES	63	184	406	653

*The ICD disease categories are used for the purpose of the Table but the four-digit ICD codes are also available. If several complaints are present, the child is listed under the first complaint mentioned unless a complaint mentioned later appears to be of much greater importance.

Cerebral palsy

There were six children suffering from cerebral spastic infantile paralysis (*ICD* code 343). Of these, two were classified as severe, two as moderate, and two as mild, giving a rate for all severities of 0.7 per 1000.

Deafness and impairment of hearing

When deaf mutism was included in the definition so that it comprised *ICD* codes 388 and 389, there were four children classified as severe or moderate who were deaf, a rate of 0.5 per 1000. When the eight children classified as mild who had impaired hearing were also included, the rate rose to 1.4 per 1000.

Blindness

One child was blind in both eyes (*ICD* code 379.1) and two had congenital anomalies of the eye (cataract, code 744.3), giving a rate of 0.4 per 1000 children under 16.

CHARACTERISTICS OF THE SEVERELY OR MODERATELY DISABLED CHILDREN

Sex

There were more boys than girls among the children with a long-standing illness and a similar sex distribution was found in all three severity groups. The excess of boys over girls was significantly greater than that found in the whole of the GHS sample (Table 3).

Age

The proportion of children in the age group 10–15 was greater in the group of severely and moderately disabled children than in the whole of the GHS sample (Table 4). For the moderately disabled group this was partly a reflection of the way in which the severity classification was carried out, as a child who had had a complaint for a long period of time was more likely to be classified as moderate. The effects of some disabling conditions also become more noticeable as a child grows older.

Table 3 Relationship between sex and severity and comparison with all children in the GHS

Sex	Severe		Moderate		Mild		All children with a long-standing illness		All children in GHS	
	No.	%	No.	%	No.	%	No.	%	No.	%
Male	37	59	109	59	238	59	384	59	4220	51
Female	26	41	75	41	168	41	269	41	4072	49
TOTAL	63	100	184	100	406	100	653	100	8292	100

All children with a long-standing illness compared with all children in GHS:

$\chi^2 = 17.9$ 1 df P < 0.001

Unless otherwise stated, all results relating to the 1974 GHS sample as a whole were taken from the report on the 1974 GHS.*

Table 4 Relationship between age and severity and comparison with all children in GHS.

Age group (years)	Severe		Moderate		Severe and moderate		All children with a long-standing illness		All children in GHS	
	No.	%	No.	%	No.	%	No.	%	No.	%
0-4	19	30	27	15	46	19	141	22	2369	29
5-9	17	27	59	32	76	30	231	35	2748	33
10-15	27	43	98	53	125	51	281	43	3175	38
ALL AGES	63	100	184	100	247	100	653	100	8292	100

All children with a long-standing illness compared with all children in GHS:

$\chi^2 = 17.6$ 2 df P < 0.001

Severe and moderate children compared with all children in the GHS:

$\chi^2 = 19.3$ 2 df P < 0.001

Family size

When two-parent families were considered, more of the severely and moderately disabled children came from families containing three or more children than in the GHS sample as a whole but the difference was just non-significant at the 5% level (Table 5).

Social class

More of the children with a long-standing illness were in the skilled manual socioeconomic groups and fewer in the professional and semiskilled manual socioeconomic groups than in the whole of the GHS sample (Table 6). When the severely and moderately disabled children were considered, the difference

was more marked: 48.5% were in the skilled manual socioeconomic groups compared with 41.3% of all children in the GHS sample.

COMPOSITION OF FAMILIES CONTAINING SEVERELY OR MODERATELY DISABLED CHILDREN

When the families which contained one or more severely or moderately disabled children were considered, the proportion of lone parents was higher than in the GHS as a whole but the difference was not found to be significant (Table 7). Although the number of lone parents in the disabled sample was very small, an analysis was carried out of the marital

Table 5 Distribution of children in two-parent families by family size and comparison with all children in GHS

Size of child's family	Severe and moderate		All children with a long standing illness		All children in GHS*	
	No.	%	No.	%	No.	%
2 parents 1 child	34	16	103	18	1369	17
2 parents 2 children	74	35	230	40	3048	39
2 parents 3 children	58	27	139	24	1842	23
2 parents 4 children	23	11	65	11	1032	13
2 parents 5+ children	25	12	44	8	580	7
All 2-parent families**	214	100	581	100	7871	100

Children coming from families consisting of two parents and three or more children: severe and moderate children compared with all children in the GHS:

$\chi^2 = 3.8$ 1 df Just non-significant at 5% level

*The figures for all children are taken from unpublished tables produced from the 1974 GHS. A breakdown by family size is not available for the families with five or more children and these families have been assumed to contain five children.

**The figures for two-parent families do not include any of the 'married' lone parents discussed in the footnote to Table 7.

Table 6 *Distribution by social class and comparison with all children in GHS*

Socioeconomic grouping*	SEGs	Severe and moderate children aged 0-14 %	All children with a long-standing illness aged 0-14 %	All children in GHS aged 0-14** %
Professional	3, 4	4.4	3.8	5.9
Employers and managers	1, 2, 13	14.8	16.3	16.7
Intermediate and junior non-manual	5, 6	13.1	14.3	14.4
Skilled manual (including foremen and supervisors) and own account non-professional	8, 9, 12, 14	48.5	46.6	41.3
Semiskilled manual and personal service	7, 10, 15	14.4	14.3	17.3
Unskilled manual	11	4.8	4.7	4.3
Base (= 100%)		229	601	7568

Children in the skilled manual group: severe and moderate children compared with all children in the GHS:

$\chi^2 = 4.7$

1 df

P < 0.05

*This grouping is the collapsed version of the SEG classification used by the GHS, with children classified where possible by their fathers' occupations.

**The information for all children in the GHS is available only for the age group 0-14.

Table 7 *Sex and marital status of lone parents and comparison with all lone parent families in GHS*

Sex and marital status of lone parents	Lone parent families containing one or more severely or moderately disabled children		Lone parent families containing one or more children with a long-standing illness		All lone parent families in GHS*
	No.	%	No.	%	
Mother—single	1	4	8	15	14
—widowed	3	12	9	16	71
—separated	11	42	16	29	
—divorced	10	38	19	35	
Father	1	4	3	5	15
All lone parents	26	100	55	100	402
Lone parent families as % of all families		11%		9%	9%

Proportion of lone parent families: all families with severely and moderately disabled children compared with all families in the GHS:

$\chi^2 = 1.4$

1 df

*Figures for lone parents obtained from the GHS have to be amended because the GHS classes as lone parents lone mothers who describe themselves as married whereas special analyses of the GHS schedules have shown that two-thirds of these mothers are not in fact lone parents because they are only temporarily separated from their husbands. Following the method used by Leete, two-thirds of the 'married' lone parents have been omitted from the figures for lone parents and the remaining third included in the separated category.¹⁴ A similar procedure has been followed for the families containing disabled children.

status of the lone mothers. Among the lone parent families with severely or moderately disabled children, there were fewer single mothers and lone fathers and more mothers who were widowed, separated, or divorced than among lone parent families in the GHS as a whole (Table 7).

Discussion

Data on children with a long-standing illness, disability, or infirmity were obtained from the 1974 General Household Survey and were used to produce an estimate of the prevalence rate for these chronic disorders among children of 76 per 1000 children under 16. This rate can be compared with prevalence rates for chronic physical disorders found in other studies, although all estimates of prevalence depend on the variety of types of diseases included in the study and on the criteria of severity used to determine the inclusion of cases. The prevalence of chronic physical disorders found in the present study was 70 per 1000 children under 16, compared with a rate of 111 per 1000 children under 16 derived by Pless and Douglas from the National Survey of Child

Health and Development, a longitudinal study of a sample of about 4700 children born in 1946.¹⁰ The characteristics of the two studies differed considerably, however, in that the results of the present study were based on the chronic illnesses reported by parents at the time of interview whereas past episodes of illness would have been recorded in the longitudinal study, and some clinical data were also available. The definitions of chronic illness also differed in the two studies. Prevalence rates for chronic physical illnesses in childhood derived from cross-sectional studies and quoted by Pless and Douglas¹⁰ ranged from 57 to 180 per 1000. The rate of 57 per 1000 was that found in a study of 10- to 12-year-old Isle of Wight children which used well-defined criteria for the inclusion of cases and criteria which were more selective than those used in the GHS study.²

The most common long-standing illness reported in the GHS was asthma, followed by eczema and bronchitis. Asthma and eczema were also among the most common disorders found in the surveys mentioned above,^{2 10} but bronchitis was not included in their definitions of chronic physical disorders.

When the children classed as severely disabled were considered, a prevalence rate of 7.6 per 1000 children under 16 was obtained (95% confidence limits: 5.7–9.5 per 1000). This rate can be compared with the estimated prevalence rate of 7.6 per 1000 for severely handicapped children obtained for the 11-year-olds in the 1958 cohort of the National Child Development Study and with the rate of 6.2 per 1000 obtained for the child population of York in 1974 (estimates derived using Family Fund criteria for the definition of severe handicap¹¹).

Some information on the prevalence of individual conditions is also provided by the GHS study, although the rates are based on small numbers and are subject to large sampling errors. The prevalence rate for severe mental handicap of 4.2 per 1000 children under 16 is comparable to the rate of 4 per 1000 accepted by the Department of Health and Social Security after reviewing a number of studies.¹² The rate for spina bifida of 1.1 per 1000 children is the same as that found for 7-year-old children in the 1958 cohort of the National Child Development Study, although only half of the children who survived to the age of 7 were found to be severely disabled.⁴ A very low rate for the prevalence of all severities of cerebral palsy was found in the GHS study. The rate was only 0.7 per 1000 children compared with 2.3 per 1000 for the 7-year-olds in the 1958 cohort and 2.9 per 1000 for children aged 5 to 14 in the Isle of Wight neurological survey.²⁴ In the discussion on the selection of children with physical disorders for the Isle of Wight study, cerebral palsy and related conditions were mentioned as the only major group of disorders in the study that were picked out largely on the basis of a physical examination. The absence of any medical assessment in the GHS may thus contribute to the low prevalence rate for cerebral palsy.

The comparison of the results of the GHS study with those obtained from studies of applicants to the Family Fund is of interest because although the numbers of affected children in the GHS are small, the sample is nationally representative. The extent to which the applicants to the Family Fund are representative of all families with very severely disabled children is not known, although the fund provided a source of data on about 50 000 such families in 1979.

The higher proportion of boys than of girls found in the GHS among the children with a long-standing illness at all levels of severity is also found in the studies on Family Fund applicants and in other studies of chronic illness in childhood.^{10 13} As in the GHS, a higher proportion of the applicants to

the Family Fund are in Social Class III M which approximates to the skilled manual socioeconomic groups (52.7% of all applicants¹³).

If the influence of other factors is not taken into account, disabled children are more likely to come from large families, because such families have exposed themselves more frequently to the risk of having a disabled child. The greater prevalence of large families among the lone parent families with severely or moderately disabled children may partly explain the differences in marital status between lone mothers in these families and in the GHS as a whole. Studies on lone mothers in the GHS show that single mothers have on average the smallest number of children and divorced and separated mothers the largest.¹⁴

Children born to lone mothers appear to have a greater risk of impairment than those born in two-parent families,¹⁵ but such evidence as there is on the effect of disabled children on marriage tends to suggest that they can strengthen as well as weaken a marriage.¹⁶ In this study the prevalence of one-parent families was not very different among families with disabled and non-disabled children. The data are, however, cross-sectional and provide no evidence on episodes of lone parenthood.

One of the aims of this study was to explore information on child disability obtainable from the General Household Survey which had not previously been analysed. Despite the limitations of the data, the analysis has produced findings on the prevalence of chronic sickness and disability among a nationally representative sample of the child population and on the characteristics of these disabled children.

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