

Use of health services by children and young people according to ethnicity and social class: secondary analysis of a national survey

Helen Cooper, Chris Smaje, Sara Arber

Abstract

Objective To assess whether equity is achieved in use of general practitioner, outpatient, and inpatient services by children and young people according to their ethnic group and socioeconomic background.

Design Secondary analysis of the British general household survey, 1991-94.

Subjects 20 473 children and young people aged between 0 and 19 years.

Main outcome measures Consultations with a general practitioner within a two week period, outpatient attendances within a three month period, and inpatient stays during the past year.

Results There were no significant class differences in the use of health services by children and young people, and there was little evidence of variation in use of health services according to housing tenure and parental work status. South Asian children and young people used general practitioner services more than any other ethnic group after controlling for socioeconomic background and perceived health status, but the use of hospital outpatient and inpatient services was significantly lower for children and young people from all minority ethnic groups compared with the white population.

Conclusions Our results differ from previous studies, which have reported significant class differences in use of health services for other age groups. We found no evidence that children and young people's use of health services varied according to their socioeconomic status, suggesting that equity has been achieved. A child or young person's ethnic origin, however, was clearly associated with use of general practitioner and hospital services, which could imply that children and young people from minority ethnic groups receive a poorer quality of health care than other children and young people.

Introduction

Many large scale studies have questioned whether equity is being achieved in the use of health services on the basis of social class; some have suggested that the higher social classes use disproportionately more health services than the lower classes after accounting for variations in morbidity¹⁻³ whereas others have not found any class inequality.⁴⁻⁶

However, studies of equity frequently neglect or exclude the use of health services by children and young people, despite evidence that young age groups form a significant proportion of all healthcare users,⁷ and that health service use is heavily age dependent.¹⁻⁴

Many previous studies are based on data from the 1970s. Therefore it is important to update and extend these analyses to reflect social and economic factors

that may influence health service use in the mid-1990s. In addition to social class, poor material living conditions are associated with increased illness and accidents in children and young people⁸⁻¹⁰ and a higher use of health services.¹¹

We examined the use of health services by children and young people from different ethnic groups. A consistent finding for adults is high utilisation of general practitioner services, particularly among the South Asian population,¹²⁻¹⁴ and lower hospital use among minority ethnic groups relative to the white population.¹⁵⁻¹⁷ However, despite the youthful age profile of minority ethnic groups, the use of general practitioner and hospital services has rarely been considered specifically for children and young people after adjusting for differences in their socioeconomic background and perceived health status. Our study provides a broader analysis of equity that examines not only whether class inequality exists in children and young people's use of health services, but also considers whether their ethnic group and other salient features of the patient's socioeconomic environment influence the pattern of health service use.

Subjects and methods

We used data from the British general household survey, aggregated over three years from 1991 to 1994. The survey is nationally representative and collects data on all individuals living in approximately 10 000 households each year. The response rate is estimated at 75% for minority ethnic groups and 82% for white people, but households with children tend to be overrepresented in the sample.¹⁸ Information for children under 16 years is obtained from the mother or person responsible for them within the household. Our sample included 20 473 children and young people aged between 0 and 19 years. About 10% of our sample belonged to a minority ethnic group according to the classification of the general household survey, of which 1% were black Caribbean (n = 243), 2% Indian (n = 483), and 3% Pakistani or Bangladeshi (n = 505). These proportions were equivalent to the 1991 census, in which 9.7% of children and young people aged between 0 and 19 years in Great Britain were in minority ethnic groups.¹⁹

Health service use—The health service use measures were: (a) whether the child or young person consulted a general practitioner within a two week period, (b) whether the child or young person had attended a casualty or outpatient department within the past three months, and (c) whether the child or person had been an inpatient during the past year.

Morbidity—Two measures of morbidity used to represent chronic and acute illness were firstly, whether the child or young person had a reported non-limiting or limiting illness and, secondly, whether the child or

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Table 1 Numbers (percentages) of children and young people using general practitioner, outpatient, and inpatient services by socioeconomic group of head of family unit. Data from British general household survey, 1991-94

Health service	Socioeconomic group of head of family unit						All	P value
	Professional, managerial	Employer, managerial, lower professional	Junior non-manual	Skilled manual	Semi-skilled	Unskilled		
General practitioner	430/3212 (13.4)	477/3363 (14.2)	330/2114 (15.6)	809/5501 (14.7)	400/2617 (15.3)	119/849 (14.0)	2560/17 656 (14.5)	NS
Outpatient	350/3210 (10.9)	367/3363 (10.9)	245/2114 (11.6)	572/5499 (10.4)	293/2619 (11.2)	101/849 (11.9)	1914/17 564 (10.9)	NS
Inpatient	177/3210 (5.5)	188/3362 (5.6)	123/2113 (5.8)	380/5501 (6.9)	170/2619 (6.5)	61/849 (7.2)	1089/17 564 (6.2)	<0.05

young person had had to reduce activity within the past two weeks because of ill health (with additional information on the number of days that activity was restricted). Measures of perceived health status have been shown to be predictive of actual health status, with no systematic bias according to class, age,^{20 21} or parental reports of chronic illness in children and young people.²²

Age—Age was used as a control variable in the multivariate analysis as infants are likely to differ from older children in their access to healthcare services.

Ethnicity—The general household survey asks for the ethnic group of respondents according to a list provided. For the purposes of our analysis, children and young people were classified into one of five ethnic groups: white, black Caribbean, Pakistani or Bangladeshi, Indian, and other. 'Other' includes children and young people of mixed origin as well as other Asian and black African groups. For part of the analysis, the Indian and Pakistani or Bangladeshi groups were combined into a single South Asian group to achieve an adequate sample size.

Socioeconomic background—We used three measures of socioeconomic status. Firstly, social class of the head of the family unit, based on the registrar general's socioeconomic groups, was used to measure the socioeconomic status of the child or young person's family unit. Secondly, information about the current work status of parents provided information on the labour force participation of both couple and lone parent families. Thirdly, housing tenure of the parents was used as a measure of structural disadvantage that applied universally to the household, divided into three categories: owner occupier, privately rented, and local authority or housing association property.

Statistical analysis

Data were analysed using the SPSS package.²³ After tabular analysis, multivariate logistic regression analysis was used to assess the influence of socioeconomic background and ethnicity on the child or young person's use of each health service, after controlling for perceived health need. These results are presented as odds ratios.

Results

Table 1 examines whether class inequality exists in the use of each health service for people under 20 years of age. The proportion of children and young people consulting a general practitioner did not vary significantly with social class and there was no evidence of a class gradient in the use of this service. The lowest use of outpatient services was for children and young people whose parents were skilled manual workers (572/5499, 10.4%) and the highest use was for children and young people whose parents were unskilled workers (101/849, 11.9%), but this variation was not consistent across the social classes and did not reach statistical significance. There was some evidence that social class is associated with use of inpatient services ($P < 0.05$). Children and young people from the non-manual classes displayed a comparable use of inpatient services (about 5.6%), which rose to 7.2% (61/849) for those whose parents were unskilled workers.

Table 2 shows the use of health services among children and young people by ethnic group. Within the two week reference period, children and young people from both South Asian groups were more likely to consult a general practitioner than those from the white population and other ethnic groups: 17.1% (78/456) of Indian children or young people and 16.4% (78/475) of Pakistani or Bangladeshi children or young people compared with 14.5% (2399/16 542) of white children and young people. The lowest likelihood of consultation (31/235, 13.2%) was among black Caribbean children and young people. In contrast, the use of outpatient services was significantly lower among Indian (28/456, 6.1%) and Pakistani or Bangladeshi children and young people (24/475, 5.1%), with around twice as many white children and young people (1869/16 540, 11.3%) using this service over a three month period. The proportion of black Caribbean children and young people using outpatient services (17/235, 7.2%) was lower than that of white children and young people and those from other ethnic groups. Overall, the ethnic variation in outpatient use was statistically significant ($P < 0.001$). All children and young people from minority ethnic groups had lower use of hospital inpatient services

Table 2 Numbers (percentages) of children and young people using general practitioner, outpatient, and inpatient services by ethnic group. Data from British general household survey, 1991-94

Health service	Ethnic group of patient					All	P value
	White	Black Caribbean	Indian	Pakistani or Bangladeshi	Other		
General practitioner	2399/16 542 (14.5)	31/235 (13.2)	78/456 (17.1)	78/475 (16.4)	113/791 (14.3)	2682/18 499 (14.5)	NS
Outpatient	1869/16 540 (11.3)	17/235 (7.2)	28/456 (6.1)	24/475 (5.1)	81/791 (10.2)	2016/18 495 (10.9)	<0.001
Inpatient	1075/16 540 (6.5)	6/235 (2.6)	16/456 (3.5)	24/475 (5.1)	43/791 (5.4)	1165/18 497 (6.3)	<0.01

Table 3 Odds ratios of health service use adjusted for age (in paired years), socioeconomic position*, perceived health status, and ethnic group in 17 485 children and young people. Data from British general household survey, 1991-94

Variable	General practitioner		Outpatient		Inpatient	
	Odds ratio (95% CI)	P value	Odds ratio (95% CI)	P value	Odds ratio (95% CI)	P value
Sex						
Male	1.00		1.00		—	
Female	1.12 (1.02 to 1.22)	<0.05	0.87 (0.79 to 0.96)	<0.01	—	NS
Housing tenure						
Owner occupier	—		—		1.00	
Private rental	—	NS	—	NS	1.14 (0.87 to 1.51)	<0.001
Local authority	—		—		1.40 (1.19 to 1.67)	
Chronic health status						
No chronic illness	1.00		1.00		1.00	
Longstanding illness	1.89 (1.66 to 2.17)	<0.001	2.58 (2.26 to 2.95)	<0.001	2.86 (2.42 to 3.39)	<0.001
Limiting longstanding illness	1.69 (1.45 to 1.99)		4.71 (4.11 to 5.41)		5.24 (4.42 to 6.22)	
Days of acute illness in past 2 weeks						
None	1.00		—		—	
1-2	4.41 (3.70 to 5.26)		—		—	
3-5	10.75 (8.99 to 12.88)	<0.001	—	NA	—	NA
≥6	12.10 (10.08 to 14.53)		—		—	
Ethnicity						
White	1.00		1.00		1.00	
Black Caribbean	0.83 (0.53 to 1.31)		0.58 (0.34 to 1.01)		0.38 (0.17 to 0.87)	
Indian	1.59 (1.21 to 2.10)	<0.05	0.62 (0.42 to 0.93)	<0.001	0.65 (0.38 to 1.12)	<0.05
Pakistani or Bangladeshi	1.09 (0.81 to 1.50)		0.46 (0.29 to 0.73)		0.80 (0.51 to 1.30)	
Other	0.90 (0.71 to 1.15)		0.98 (0.77 to 1.27)		0.80 (0.57 to 1.13)	

NA=not applicable to model.

*Socioeconomic group for head of family unit, and family work status were not statistically significant after controlling for other variables, and are therefore not shown.

than white children and young people, and these differences were statistically significant ($P < 0.01$). This lower use was most evident among black Caribbean children and young people, where only 2.6% (6/235) stayed as a hospital inpatient in the past year compared with 6.5% (1075/16 540) of white children and young people. The proportion of South Asian children and young people using this service was low for Indian children and young people (16/456, 3.5%) and Pakistani or Bangladeshi children and young people (24/475, 5.1%).

Table 3 presents the results of a logistic regression analysis, which highlights the independent effects of socioeconomic status and ethnicity on the use of health services by children and young people after controlling for age, sex, and perceived health status.

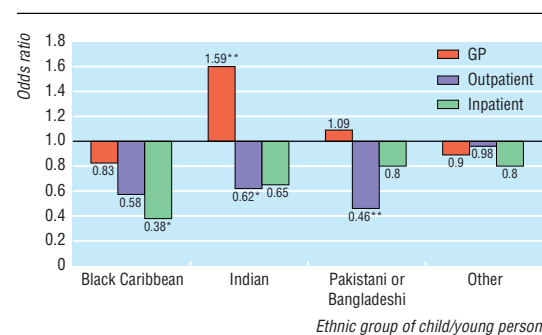
For all children and young people, perceived health status was most strongly associated with the use of each health service. The odds of consulting a general practitioner increased with the duration of acute illness, and reporting a chronic illness significantly increased the use of all three health services.

There were no statistically significant social class differences in the use of general practitioner, outpatient, or inpatient services, and so these results are not shown. The class variation in inpatient use shown in table 1 disappeared after controlling for perceived health status and housing tenure.

Housing tenure was not associated with the use of general practitioner or outpatient services, but the odds ratio of inpatient use was increased by 40% in children and young people living in local authority accommodation compared with those living in owner occupied housing.

Ethnicity was significantly associated with the use of general practitioner, outpatient, and inpatient services by children and young people. The figure presents the odds ratios of health service use by

minority ethnic children and young people relative to white children and young people. Indian children and young people were significantly more likely to consult a general practitioner than white children and young people (odds ratio 1.59, 95% confidence interval 1.21 to 2.10), whereas the use of this service by Pakistani or Bangladeshi children and young people was comparable to that by white children and young people after controlling for the other variables in the model. The use of outpatient services by both South Asian groups was significantly lower than that of white children and young people, especially for Pakistani or Bangladeshi children and young people where the odds were reduced by 54%. Black Caribbean children and young people also had reduced odds of using outpatient services, and they were also significantly less likely to become an inpatient than any other ethnic group (odds ratio 0.38, 0.17 to 0.87).



Comparison of odds ratios of health service use by children and young people from minority ethnic groups (compared with white population) controlling for age, sex, socioeconomic status, and perceived health status of patient. * $P < 0.05$, ** $P < 0.01$ (significance of difference from reference category of white). Data from general household survey, 1991-94

Discussion

The absence of class variation observed in children and young people contrasts with previous work on the adult population¹⁻³ and suggests that important differences may exist in the use of health services by children and young people compared with adults. Although our initial results suggested social class was associated with the use of inpatient services by children and young people, this variation was eliminated when controlling for the patient's perceived health status and other socioeconomic factors. Overall, there was no evidence to suggest that children and young people from the lower social classes are more disadvantaged in their use of health services than children and young people from the professional classes. Therefore the use of health services is equitable in terms of social class status.

Our results showed that other measures of socioeconomic status did not produce any consistent variation in the use of health services by children and young people, except that those living in local authority housing were significantly more likely to use inpatient services. This is consistent with previous work on children and young people,¹⁴ but in addition our study showed that this association remained after controlling for the child or young person's morbidity. These findings support previous work showing that children and young people living in materially deprived conditions are more likely to be admitted to hospital,¹⁰ or that accidents occurring in the home environment that require hospital treatment are socially patterned.^{8,9}

Ethnicity was clearly associated with the use of health services by children and young people, after controlling for socioeconomic status and perceived health status. Consistent with this finding, several previous studies of adults reported that the number of general practitioner consultations in South Asian adults^{12,14,15} was higher than that in adults from any other ethnic group, after controlling for variations in morbidity.¹³ An important finding of our analysis is that Indian children and young people were most likely to consult their general practitioner, whereas previous studies on adults reported that Pakistani or Bangladeshi patients consulted a general practitioner more than any of the other ethnic groups.¹³

Increased general practitioner consultations for South Asian groups could indicate a poor initial consultation that necessitates further visits to the doctor during a period of ill health. The much lower use of secondary care services by minority ethnic children and young people confirms previous research findings,²⁴ and would be consistent with general practitioner discrimination or bias in the referral process. However, a study that examined the referral of children and young people from minority ethnic groups by general practitioners found no evidence to support this claim.²⁵

Conclusion

Studying a broad age range of children and young people, we found no evidence to suggest that class inequalities exist in the use of general practitioner, outpatient, and inpatient services. Local authority housing was associated with higher use of inpatient services by

Key messages

- The use of general practitioner, outpatient, and inpatient services by children and young people does not vary significantly according to their socioeconomic status
- Indian children and young people are more likely to consult a general practitioner than any other ethnic group
- Black Caribbean, Indian, and Pakistani or Bangladeshi children and young people are less likely to use hospital inpatient and outpatient services than white children and young people
- These ethnic differences have important implications for the quality of health care received by children and young people

children and young people after controlling for morbidity, but other measures of socioeconomic status did not produce consistent variation in health service use. In contrast, the ethnicity of children and young people was strongly associated with their pattern of use. Indian children and young people were significantly more likely to consult a general practitioner, but children and young people from all minority ethnic groups had a much lower use of outpatient and inpatient services than white children and young people. These differences persisted after controlling for socioeconomic position and health status, and they may suggest that children and young people from minority ethnic groups receive lower rates of referral to secondary care services and a poorer healthcare service than white children and young people.

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Patients' preference for male or female breast surgeons: questionnaire study

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Patients' preferences in the provision of health care are an important consideration. Although several studies have investigated patients' preferences for male or female general practitioners,¹⁻³ few studies have considered preference for male or female surgeons, and preference of women for male or female breast surgeons has not been reported. Until recently the small numbers of female consultant surgeons in Britain meant that patients did not have a choice of male or female surgeon. This will change, however, with increasing numbers of female consultants and may have implications for the staffing of specialist breast units.

Subjects, methods, and results

In September 1997 a female consultant surgeon became available at Victoria Infirmary's specialist breast clinic, which had previously been run by a male consultant. From October 1997, 100 consecutive newly referred patients were identified by clinic receptionists on arrival and asked to fill in an anonymous questionnaire. Patients were asked their age and ethnic origin. The questionnaire then gave three options for consultant surgeon—male, female, or no preference—and the patients were asked to state the reason for their preference. Ninety eight completed questionnaires were obtained; two patients declined to complete the questionnaire.

Sixty seven patients (95% confidence interval 58 to 75) had no preference for a male or female consultant and 31 (23 to 41) preferred a female consultant. No patient preferred a male consultant. Patients who preferred a female surgeon were younger (median age 35 (range 16-56) years versus 42 (18-83) years for women with no preference; $P=0.005$, independent t test). Seven (23%) women who preferred female surgeons gave their ethnic origin as Asian compared with one (1%) woman with no specific preference ($P=0.003$, Fisher's exact test).

Women who stated a preference for a female surgeon made comments such as "women are easier to talk to" and "I feel less embarrassed with a woman." Patients who had no preference in general felt that a

surgeon's sex did not affect competence and that the most important issue was to have a good surgeon irrespective of sex.

Comment

Previous studies in surgical outpatient clinics and general practice have found that about a third of patients prefer a health professional of their own sex and two thirds have no specific preference.¹⁻³ In general surgical clinics, which have roughly equal numbers of male and female patients, this balances out reasonably evenly. At breast clinics almost all the patients are women, and it is not surprising that the results of this study are similar to those of a study of patients' preferences for male or female gynaecologists.⁴

The most striking finding is that none of the women preferred a male surgeon. The United Kingdom has a shortage of female consultant surgeons. In 1996, only 2.3% of consultants in general surgery in England and Wales were women (Women in Surgical Training, Royal College of Surgeons of England, personal communication). Most specialist breast clinics do not have female consultants, although many have women in junior grades. Twelve per cent of registrars training in general surgery in England and Wales were female in 1996 (Women in Surgical Training, personal communication), and this percentage will probably increase. This study suggests that up to one third of patients may prefer to be referred to a breast clinic with a female consultant. This will be possible only when more female consultants are available.

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