The Effects of Neighbourhood, School and Family Factors upon Juveniles before the Courts. P. M. Ash, R. T. Benn, M. J. Power, E. Shoenberg (Social Medicine Research Unit, London School of Hygiene and Tropical Medicine)

Rates for juveniles before the courts have nearly doubled in a decade in England and Wales. Data from an epidemiological study of all the children in one community who make court appearances have been collected over nine years. Enumeration district delinquency rates for first court appearances by boys show wide and consistent differences over seven years. Similarly, such first appearance rates for schools show wide and consistent differences. No comparable data on the distribution of family disruption in the population of the study area are yet available, but an assessment of first offenders showed the majority of children to come from normal family circumstances, as defined.

Turning to second and later court appearances—boys repeatedly before the courts present a serious and intractable problem—showed that enumeration district delinquency rates were not specially related to reappearance; that school rates for second and later court appearances were possibly related to reappearance; and that family factors were definitely related. The interrelationship of the three influences—neighbourhood, school, and family—on first and later court appearances has theoretical and practical implications that were discussed.

FOURTH SESSION (Chairman: R. A. M. Case)

Second Primary Cancers in Patients with Tumours of the Salivary Glands. M. Patricia Prior (Department of Social Medicine, University of Birmingham)

This study forms part of a more extensive survey of multiple primary tumours currently under investigation in the Birmingham Regional Cancer Registry. A method was outlined for computing expected numbers of second primary tumours, using morbidity figures from the Registry applied to the sample population expressed in terms of patient-years at risk. The significance of the difference between observed and expected numbers of tumours was assessed by means of the Poisson distribution.

A significantly increased number of breast tumours was demonstrated in women who had had salivary gland tumours. Certain other sites, skin in particular, also showed increases sufficient to merit further examination.

Cancer of the Lung in Iron-Ore (Haematite) Miners. J. T. Boyd and R. Doll (M.R.C. Statistical Research Unit, University College Hospital Medical School, London)

The mortality of Cumberland iron-ore miners was studied by examining the death certificates of 5,811 men who died between 1948 and 1967 and had been resident in two local authority areas in which the great majority of the iron-ore miners lived. Comparisons of the iron-ore miners' experience with (1) that of other local men and (2) the relevant national experience provided an assessment of the suspected occupational risk of lung cancer associated with haematite mining. During the 20-year period there were 42 deaths attributed to lung cancer among iron mine employees resident in the study area; 36 of these occurred in miners working underground, which was significantly greater than the number expected from local non-mining experience (20·6 deaths) or from national experience (21·5 deaths). In contrast to these findings, there was no evidence of any excess mortality from lung cancer among surface workers and, for iron miners as a whole, mortality from other cancers was close to normal. A parallel analysis of mortality among coal miners showed a deficit of deaths from lung cancer in line with other studies. The patterns of other respiratory mortality in the two local mining groups confirmed the existence of a substantial silicotic hazard associated with haematite mining in Cumberland.

These findings strengthen previous necropsy evidence and indicate that West Cumberland iron-ore miners who work underground experience an occupational hazard of lung cancer. They suggest that the miners suffer a lung cancer mortality about 70% higher than 'normal'. The risk may be due to the radioactivity of the air in the mines, which is somewhat greater than the recommended maximum permitted level (average radon concentration of 100 p C/litre against 30 p C/litre) or to a carcinogenic effect of iron oxide.

Burkitt's Lymphoma and Sickle-cell Trait in Uganda. M. C. Pike (Regius Department of Medicine, Oxford)*

Epidemiological evidence suggests a causal connection between malaria and Burkitt's lymphoma (BL). Children with haemoglobin AS (sickle-cell trait) are substantially protected against malaria; preliminary results were presented from a case-control study carried out in Uganda to test whether they are also protected against BL. The results so far suggest that children with AA are twice as susceptible to the tumour as those with AS, thus providing strong evidence for the malaria—BL connection.

The difficulties of choosing controls for this study, and the correct method of statistical analysis of case-multiple control studies, were discussed.

FIFTH SESSION (Chairman: A. M. Adelstein)

Migration in an Urban Population. A. E. Bennett (Department of Clinical Epidemiology and Social Medicine, St. Thomas's Hospital Medical School)

In July 1966 a private one-in-five random sample census of dwellings in the six northern wards of Lambeth was undertaken to provide a sampling frame for subsequent population surveys. The sample list of dwellings numbered 5,546 and full information was obtained from residents of 5,499 (99·2%); 18,347 individuals were identified by name, sex, year of birth, marital status and social class.

In February 1968, an age, sex, social class stratified random sample of 1,199 individuals was mailed a questionnaire for the initial stage of a survey of skin

*Based on work done in collaboration with Dr. R. H. Morrow while on secondment to Makerere Medical School, Kampa, Uganda.
disorder. If after three letters no reply had been received a personal call was made; 329 (27.4%) were found to have left their original address, giving a corrected estimate for population mobility of 25.8% over 19 months. An examination of the characteristics of migrants showed a significant excess in the age group 15–35 and in social classes I and II. All but 135 were traced, and the study finally achieved a response rate of 88.2%.

**Presenting Symptoms in General Practice. D. C. Morrell (Department of Clinical Epidemiology and Social Medicine, St. Thomas’s Hospital Medical School, London)**

A method of identifying and coding new symptoms in general practice was described. The age, sex and social class characteristics of patients initiating new consultations were reported, as the frequency with which 98 symptoms were recorded during one year in a general practice providing care for 4,500 patients. The doctor’s diagnostic actions and clinical diagnosis in response to new symptoms were compared with his response to other types of consultation.

**Disability in the Community of North Lambeth. Jessie Garrad (Department of Clinical Epidemiology and Social Medicine, St. Thomas’s Hospital Medical School)**

A study of the prevalence of disability was undertaken in the population resident in the six northern wards of Lambeth. Disability was defined in functional terms as limitation of performance in one or more defined essential activities of daily living.

The initial stage of the study was completed at the time of a random one-in-five census, and 13,903 individuals born in 1950 or before completed a self-administered questionnaire containing 10 questions enquiring for the presence of impairment or disability. Subsequently a sample of persons aged 35–74 identified as disabled, together with an age-sex matched sample of non-disabled, were interviewed at home using a validated interview schedule. Preliminary analysis gives the prevalence of disability as 7.2% for men and 9.7% for women in the age group 35–74 years.

**Indices of Height and Weight as Measures of Obesity. R. T. Benn (Social Medicine Research Unit, London School of Hygiene and Tropical Medicine)**

It may be demonstrated by theory and practice that two commonly used types of indices, namely relative weight ratios and indices of the form (Weight)/(Height)$^n$ are equivalent and a simple formula indicates which index of the latter type gives equivalent results to any given weight-for-height standard. Moreover, subject to certain conditions this method gives indices which have maximum correlation with obesity and zero correlation with height. However, it must be realized that the sampling error for the optimal value of $n$ is usually large.

**SIXTH SESSION (Chairman: Margot Jefferys)**

**Health Visitors and Family Planning. Ann Cartwright (Institute of Community Studies, London)**

A survey of both mothers and health visitors showed that at the moment health visitors play relatively little part in helping mothers to get advice about effective methods of birth control; this in spite of the fact that the majority of health visitors recognize and accept this as part of their job, and they have the advantages for this role of being women and of visiting mothers in their homes. The study suggests two ways of attempting to bridge this gap between actual and potential achievement. First, health visitors need more support, encouragement, and continuing education for this role and, in particular, they should have closer links with family planning clinics. Secondly, they need to be more aware of mothers’ needs for help and the diffidence many of them have about expressing these needs.

**Diagnostic Differences among Psychiatrists in the British Isles. J. R. Copeland and J. E. Cooper (Institute of Psychiatry, London)**

Three video-tapes of unstructured diagnostic interviews were shown to 200 psychiatrists in a number of centres in the United Kingdom and Irish Republic (London, Birmingham, Manchester, Edinburgh, Glasgow, Belfast and Dublin). After viewing the tapes the raters (1) completed Lorre’s In-Patient Multidimensional Psychiatric Rating Scale (I.M.P.S.), a series of simply worded questions in non-technical language; (2) indicated on a check list of technical psychiatric terms those which, in their opinion, covered the abnormal features seen on the video-tape; (3) made a provisional diagnosis.

Comparison between centres gave the following findings: (a) Diagnosis: Glasgow differed significantly from the other centres, favoring a diagnosis of mania rather than schizophrenia; (b) I.M.P.S. rating: overall profiles were similar between all centres. Maudsley recorded least symptoms of any centre, Dublin and Glasgow the most; (c) Ratings of psychiatrists from all British centres were consistently below the level of those of psychiatrists from the United States; (d) Differences between centres in the United Kingdom were far less than overall differences between the United Kingdom and the United States.

**Analysis of Data on Practice of Individual Consultants. M. A. Hasman, J. Donnelly and Vera Carstairs (Research and Intelligence Unit, Scottish Home and Health Department)**

The Scottish Hospital In-Patient data for 1967 were processed this year to give a return of certain indices of performance to individual consultants, together with comparative data for their specialty for all consultants in Scotland. Data on length of stay were abstracted from the individual returns to show the variation in individual consultant practice with particular reference to two medical diagnoses and six surgical operations including hernioplasty, tonsillectomy and hysterectomy.

Correlation with mean stay after operation was highest
Migration in an urban population.

A E Bennett

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