When DSM-IV was drawn up, it was decided, on the basis of research findings, to further sub-divide attention-deficit hyperactivity disorder (ADHD) into three sub-groups: predominantly inattentive (ADHD-I), predominantly hyperactive (ADHD-HI) and a combined type (ADHD-C). ADHD-I was a new departure. The sub-division is based on information from either parent or teacher. Another development in DSM-IV is the inclusion of social impairment as a symptom in defining the disorder. In a previous review, McBurnett had noted that whereas learning difficulties were associated with inattentiveness, comorbid disruptive behaviour and social impairment were associated with hyperactivity. This paper attempts to confirm these findings.

Six hundred and ninety-two children referred to a Californian clinic specialising in ADHD were studied. Four-fifths were boys. Their mean age was 8 years with a wide range from 3 to 17 years. The SNAP-R Scale completed by parents and teachers identified ADHD symptoms and also disruptiveness and social impairment. Other scales were also employed, some from the CBCL group of questionnaires. Eight SNAP-R inattention items and nine hyperactivity questions are presented in the paper. Using these measures, 65% of the children had ADHD-C, 28% ADHD-I, and 7% ADHD-HI, which are similar proportions to those found in other studies. ADHD-HI was associated with more disruptive behaviour despite higher intelligence and ADHD-I was associated with more academic impairment. Children with ADHD-C showed both more social/behavioural problems and also poor school achievement. The authors conclude that DSM-IV permits the identification of more homogeneous subgroups of cases than DSM-III-R. However, the study undoubtedly suffered from the use of symptom counts rather than a diagnostic interview, and an argument is made for longitudinal diagnoses using all available sources of data.


It is surprising how little well-designed research has been carried out to look at the psychiatric sequelae of severe traumatic brain injury (TBI). Since Michael Rutter and his colleagues undertook such a prospective study in the 1970s, the only research team to have produced a comparable inquiry is represented by the writers of this paper. However, on this occasion, they report a cross-sectional investigation of 5 to 14-year-old children who had suffered a severe TBI, defined as a score of 8 or more on the post-resuscitation Glasgow Coma Scale (GCS). Twenty-four of them were matched with mild cases of TBI, defined as a GCS of 13–15 plus a normal brain scan, irrespective of a linear fracture. Orthopaedic cases without TBI were also used as controls. The groups were matched on variables such as age, sex, social background and time since injury. Two years or so after injury various measures were employed to investigate psychiatric disorders following the injury, family circumstances, life events and behaviour at home and school. DSM IIIIR diagnoses were made, with particular attention given to exploring the symptoms of Organic Personality Disorder (OPS). Just over half the severe TBI cases had suffered from OPS but most had already recovered by the time that the assessments were made. From parent and child measures it was evident that severe TBI cases were particularly prone to anxiety and mood disorders. Proportions of the children who had new psychiatric disorders following injury were: severe TBI 63%, mild TBI 20%, and orthopaedic 4%.

Eighteen DSM-IV ADHD symptoms were included in a screening checklist administered to the adolescents. Previous work had indicated that a cut-off point of 5 symptoms of inattention and/or 5 symptoms of hyperactivity/impulsivity had a high negative predictive power, close to 100%, as well as a high sensitivity of roughly 80%. Following screening, parent and child interviews were undertaken with those selected. They were compared to a sample of those not selected. At this stage in the study, all DSM-IV criteria for ADHD had to be positive in order to make a diagnosis. In addition, conduct disorder was also assessed and the Global Assessment Scale (CGAS) was used to evaluate impairment of functioning, with a score of less than 70 required for a diagnosis of ADHD to be made. Other measures used included the teacher’s report form of the CBCL and IQ testing. About a tenth of the sample was positive for ADHD screening and one fifth of those had ADHD, a prevalence overall of about 6%. Of 23 cases found, 3 were predominantly hyperactive/impulsive, 8 were predominantly inattentive and 12, that is roughly half, were combined. Those with ADHD had a
poorer educational level than controls. No age, sex, IQ or family income differences were found. About half the young people with ADHD also had either a conduct disorder or an oppositional-defiant disorder. More of them smoked, but substance abuse did not distinguish them from controls.


Over 1600 boys and girls aged 9 to 14 years, sampled from the general population, were surveyed. A dietary intake questionnaire, an activity scale, height, weight, a puberty scale, periods (in the case of girls) and a questionnaire concerned with methods used to control weight gain, were the measures employed. More boys than girls were actually overweight, but more girls than boys considered themselves to be overweight. As they grew older, a greater proportion of girls admitted to trying to lose weight. Unfortunately, methods employed to keep weight down, such as vomiting or purging, were not looked at separately, presumably because they were rarely mentioned. Older girls were more likely to try to control weight in these ways, especially if puberty was further advanced and there was overweight. Older girls were also more likely to suffer from binge eating, which affected 3.6% of 14-year-olds. Overweight young people are all too common in the USA compared to 20 years ago. The erroneous self-perception of being overweight is also common, together with anorexic and bulimic behaviour, although most young people with these difficulties do not fulfil the criteria for DSM diagnosis.


In this paper, Plomin discusses the relationship between genetics and intelligence. ‘g’, standing for general intelligence, is described as the common element in a whole range of valid and reliable cognitive tests. After intercorrelating scores on these tests, and carrying out a factor analysis, a main unrotated principal component is a good measure of g. Genetic studies of intelligence have mostly used intelligence tests. Other possible approaches, such as looking at brain functioning more directly, have not so far been an important source of genetic investigations. It is clear that close relatives are often of a similar level of ability. Thus, in identical twins, g correlates 0.85, and in similar sex non-identical twins g correlates 0.60. About half the variance of g is explained by heritability, or what is known as genetic effect size. Adoption studies such as those of identical twins reared apart strongly support these findings. These substantial correlations can be compared to other behavioural genetic studies, not involving cognitive ability, where only about 5% of variance is explained. A remarkable fact to emerge is that heritability of g, which is about 20% in infancy, becomes 40% in childhood and 60% in adults even in old age. The Colorado Adoption Project (CAP) involves the study over 25 years of 245 children adopted soon after birth. In control families parent/child g correlations increased from 0.2 in infancy to 0.3 in adolescence. Biological mothers, whose children were adopted and reared apart from them, had similar g correlations with their natural offspring. Adoptive parents and their adopted children had g correlations of about zero. Family environment does not therefore appear to be important in parent-child resemblances. Considering specific cognitive abilities, which are generally thought to be components in a hierarchical model of intelligence, they too show important genetic influence although not as substantial as g. A surprising finding is that the same genetic factors appear to influence different intellectual abilities, not just specific ones. School achievement measures also seem to follow a similar genetic effect to g, but discrepancies between ability and achievement do not appear to be genetic. It is believed that g is determined genetically by multiple genes, so called quantitative trait loci (QTLs), although some single gene effects such as phenylketonuria are found.


Genetic factors in the aetiology of childhood disorders are increasingly being investigated. This paper reports some findings from the Virginia Twin Study of Adolescent Behavioral Development. Two hundred and sixty-eight monozygotic (MZ) and 166 dizygotic (DZ) twin pairs were studied, representing boys from about 400 families. The CAPA scale was employed to collect relevant information and to make psychiatric diagnoses. Various other scales were also used, including the Obeus Conduct Disorder Scale. Dimensional measures of disorder and risk factors were also studied. The boys rated their own behaviour and mothers rated both boys in a twin pair. Using a cross-classification of overt/covert and destructive/non-destructive types, four sub-groups of conduct disturbance and oppositional behaviour were considered: aggression, opposition, inappropriate conduct, and theft/vandalism. Not unexpectedly, mother and child rating were so different that they had to be investigated separately.

An ACE statistical genetic model, in which A represents additive genetic factors, C represents common environmental influences and E represents unique environmental influences, was used as a basis for both univariate and multivariate analysis. Additive genetic factors were assessed on the basis that MZ twins share all their genes and DZ twins share half (MZ correlation = 1, DZ = 0.5). The correlation between twins’ common environmental influences (r = 1) and unique environmental influences (r = 0) was assessed as the same for both MZ and DZ pairs. Some rather patchy conclusions were reached. The children’s self-ratings suggested that there was a general genetic factor that accounted for substantial amounts of the variance with respect to property violations and aggression. Destructiveness and non-destructiveness seemed to have separate genetic bases. Somewhat surprisingly, knowing how little significance is normally given to common environmental factors in genetic studies, the mothers’ assessments of their sons indicated the importance of their shared environment.

Despite the methodological difficulties for those of us not familiar with the significance of the rather esoteric terminology used, studies of this kind can be useful in so far as they show the importance of environmental as well as genetic influences in the causation of disorders.