6 Health and development issues

Children born prematurely

It is often thought that infants born prematurely, especially those whose birth weight is very low (below 1000 grams) are at some risk for problems in development, such as slower-than-normal physical development, language delay or difficulties, intellectual handicap, and slowness-in-maturation in social and emotional areas. Sometimes their early months are spent in hospital and it can be hard for parents to be close to them in this critical early period.

Almost six per cent of the infants in our sample were considered premature; that is, they were born at 36 weeks or less gestation. We made a special study of the temperament and behavioural adjustment of these infants and then followed-up when they were toddlers to see whether they were showing systematic differences from the rest of the sample who were not born prematurely. That is, our question was, are these children at risk for social and emotional difficulties? At the infancy stage we found that there were no differences between premature and full-term infants on any of our measures. They were not more likely to have a more difficult temperament, nor to be more difficult to manage, and they did not show a greater number of developmental problems such as colic, sleep problems and excessive crying.

This finding is a much more positive one than has been reported in North America, where premature infants have been extensively studied, with findings of developmental disadvantage being common (for example, Minde 1984). One possible explanation is that, in Australia, we do not have the extremes of poverty and disadvantage in such large numbers as are found in some North American groups. The Australian families also tend to be well functioning, with relatively few of the social disadvantages which are commonly associated with prematurity and low birth weight. Premature infants in Australia also receive intensive high-quality postnatal care, including attention to the need for early contact and bonding between the infant and the family. Thus these findings suggest that prematurity itself may not be a risk factor, but rather that it is the social and economic context of 'at risk' families which have the most powerful influence on their future development and adjustment. In our study, the factor of prematurity increased risk for behavioural maladjustment in the children only when it was associated with the mother's perception of her child as difficult to manage.

Analyses of the data in toddlerhood showed that the premature group were continuing to develop well and to show no differences from the remainder of the sample on any of our measures. Of the 53 children born prematurely for whom we had reading ability scores at 7–8 years, 11 were experiencing problems (21 per cent). This is a just a slightly higher proportion than for the rest of the sample. In general this sub-group in the sample did not show any overall specific short or long-term disadvantage although, of course, there may be some individuals within the group who did so.

Children with a chronic health problem

There is limited information in Australia regarding the prevalence of chronic health problems (asthma, epilepsy) in childhood and its effects on development. This study gave us the opportunity to examine whether children with chronic conditions were at risk for psycho-social and learning problems.

In 1990–1991 when the children were 7–9 years old, we sent the families the Child Health Questionnaire (16 per cent of the sample). Parental responses to this questionnaire allowed us to identify children with medical conditions that were recurring or persistent, or which required hospitalisation. For asthma and for hearing problems we provided more detailed questionnaires to give further information. The survey identified 263 children with a chronic health condition. By far the most common condition among these children was asthma – 66 per cent of those who reported health problems. Other conditions were relatively rare, although 8.6 per cent had ecxema/dermatitis, 9 per cent had digestive or bowel problems, 7.6 per cent had hearing difficulties, and 7.6 per cent had heart problems.

We then compared this group with a group of children without health problems, on reading ability, behavioural adjustment, and self-esteem measures. We also had measures of socio-economic status and intelligence for each child. Very few differences between chronically-ill and well children emerged. However children without health problems had a somewhat lower level of emotional and behavioural difficulties than was reported for the children with chronic health problems. Those children who had both asthma and an additional condition (35 children) were more likely to have problems. The level of severity of the reported illness did not appear to affect psychological adjustment.

In general, the children with a chronic condition appeared to be doing well in all the domains we measured, despite their health status. It is possible the families with the very ill and problematic children, and those who were particularly stressed, did not participate in this study, or dropped out of the project early. Hence our report may under-estimate both the number of children with chronic illness and the disadvantages they suffer. It is also known that it is children with disorders involving the central nervous system and brain (affecting mental functioning) who are most at risk for a poor outcome, and there were very few children in that category in our sample. The overwhelming majority were children with asthma, and there is no expectation that this group is at particular risk for academic problems or emotional and behavioural difficulties.

Growing pains

Many children report pains in various limbs, for which there seems to be no explanation. Traditionally these have been described as 'growing pains' although they have little do to with growing. Parents of 183 children in the project (11 per cent) reported such pains in their children through the Child Health Questionnaire completed when the children were 7–9 years of age. The pains were most commonly felt in the lower limbs, were usually described in vague terms, and had lasted for between one month and seven years. There was a family history of such pains reported in 66 per cent of cases. More than half had seen their doctors about the pain and had been told that they had growing pains.

This group of children was compared with a group without such pains on a variety of our measures. The children with reported pains appeared to be more negative in mood and to be more intense in temperament. They were also more likely to be rated as having behaviour problems, although only for aggression were their scores above the average

for the whole sample. The only teacher-reported difference was in anxious-fearful behaviour, but again the differences were relatively small. These comparisons suggested that children with 'growing pains' might be more likely to have temperamental and behavioural characteristics which made them more vulnerable to experiencing and reporting pain. However there were no differences in teacher ratings of social skills, temperament, or academic achievement, indicating that any problems were more likely to be seen at home. The study suggested that there could be psychological influences on this particular complaint of childhood but, of course, it does not answer any questions regarding the origin of such pain experience.

Children with early language problems

Language and speech normally develop naturally and gradually over the first years of life, with comprehension usually being ahead of speech in the early stages. Girls are often (but not always) ahead of boys in the early stages of language development. Language skills have powerful and long lasting effects on the individual's ability to cope with life, not only in school-based learning, but also in the ability to reason, to learn, to solve problems, and to communicate successfully in interpersonal relationships. Therefore it is a very significant aspect of development. Because of the large sample spread across Victoria, we were not able to actually observe and test the language development of each child. However, when the children were 3–4 years, we asked the mothers to report to us whether their child had signs of delay in developing language, or whether they had other problems like stuttering or poor articulation, such that they were hard to understand. We also asked mothers to tell us if the child had ever had any speech therapy. The results using this method of reporting may not be completely accurate because mothers may not always recognise when a language problem exists. Thus, we might have had an underestimate of language problems.

Boys and girls differed significantly at 3–4 years in the proportions having difficulties. Thirteen per cent of boys were reported to have definite or suspected problems in language development compared to four per cent of girls. More boys were reported by their mothers as having been slow to talk (ten per cent of boys, three per cent of girls).

Because children with early language difficulties are at risk for later learning problems (especially with reading), we have tried to follow-up the children with early language problems to assess their progress. Forty-three children from the metropolitan area, whose mothers had reported that they had language problems when they were 3–4 years of age, were visited at home when they were in Grade 3 (around 8–9 years of age). At this time they were given tests of language development, intellectual ability, reading, and spelling. Almost 90 per cent of these children still had some difficulties with language in Grade 3. This was particularly the case for what is called 'phonological' ability. This ability includes knowing how words are made up of a number of sounds (such as c-u-p = cup); how to analyse printed words into their component parts, such as letters and syllables; and how to put together parts of words so that they make sense. Such skills are very important in learning to read.

We found that 20 per cent of the group had reading problems, and 42 per cent had spelling problems at this stage, especially if their language was still behind age-appropriate levels. However the positive side of this story is that 80 per cent of these children were reading well and did not differ from the average child in the classroom. The best predictor of reading progress was our measure of phonological ability, that is, children with better-developed phonological skills were more likely to be reading well, although other language abilities were also important in affecting whether a child made

good progress. This study confirmed the importance of specific language abilities in success in reading and spelling among a group of children with early signs of language problems.

A substantial proportion of these children were reported to have hearing problems between pre-school and Grade 3 and this would, of course, be a factor in their language problems. Hearing problems were reported in half of the 20 per cent who were having reading problems. Our results emphasise how important it is to be alert for delay and difficulty in early language development, and to provide assistance such as speech therapy. Some children will need special help at school when their language problems have not resolved, in order to help them to achieve as well as they can.

Further reading

See items 17, 27, 28, 36, 52, 66 and 77 in the list of Australian Temperament Project publications and Gore, 1992 in the References at the end of this book.