Commentary: Development of the Aberdeen children of the 1950s study

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This study was set up in the early 1960s, not as a prospective longitudinal study but as a retrospective reconstruction of the life events of children born 6–12 years earlier. It built upon the existence of a continuous databank of obstetric and social information established by Professor Sir Dugald Baird in 1951 covering all births occurring in the city of Aberdeen. The databank had been used primarily for monitoring year-by-year changes in obstetric performance and for identifying priorities for clinical research and practice. Some attempts to follow-up the later lives of children born in Aberdeen hospitals had been made but these were small and exceptional. One such study, by an obstetrical colleague and myself, came to the attention of Stephen Richardson and Herbert Birch, scientific staff members of the American Association for the Aid of Crippled Children (AACC) in New York and alerted them to the research possibilities of the Aberdeen situation. They were interested in setting up an epidemiological study of intellectual disability and its possible antecedents in obstetrical experience but had been unable to find a site that met their requirements in the USA. After visits to Aberdeen and discussions with Baird, other members of the existing Aberdeen team and myself, they agreed to plan and carry out a collaborative study designed to achieve their joint and individual objectives.

Birch had for some years been researching brain damage in children (see Birch 19641), its aetiology, its manifestations, its behavioural consequences, and the methods by which it could be identified and defined. Dissatisfied with the biases of cases derived from hospital practice, he felt the need for evidence from a more diverse population, and preferably one that was representative of all cases arising in a normal community. What he found during visits to Aberdeen in 1961/62 was:

(i) A databank of almost all births to Aberdeen mothers stretching back to 1951 with details of the course of pregnancy, delivery, and the early neonatal period recorded at the time of the event, specifically for the purpose of clinical and epidemiological research.

(ii) A school system that over those years had conducted group IQ tests on almost all the city’s children at ages 7, 9, and 11 using standard test instruments. Results were recorded in a readily accessible form.

(iii) Records of health examinations conducted by Public Health doctors on all Aberdeen children at the ages of 5, 9, and 11. Data included height and weight, the results of vision and audiometry testing, laterality, and comments on health history.

(iv) A practice whereby all children scoring less than 75 on the 7, 9, and 11 IQ tests were referred for individual psychometric evaluation by a psychologist and considered for placement at special schools for mentally subnormal children.

This met Birch’s requirements (see Birch et al., 19702). A full prospective longitudinal study could have produced data more precisely tailored to his requirement, but it would have delayed results for 12 years and have been subject to all the uncertainties involved in the long-term maintenance of a project.

Richardson had equally specific requirements. He had worked previously with handicapped children and was interested in how they saw themselves, how others saw them, and how their social environment affected their functioning. He and colleagues at the AACC had identified a curious anomaly in the recorded prevalence of mental sub-normality. A number of epidemiological studies showed that prevalence after the age of 14 was only half as high as at the age of 14. Why? Were they still handicapped but now unknown to the services? Had their functioning improved to such an extent that they were no longer seen as retarded? Were they now, outside educational institutions, more able to cope with the demands made on them, and therefore no longer seen as retarded? Using the sources listed above Richardson could identify as his research population all city children administratively defined as mentally subnormal. He had access to the obstetric, child health, and educational data sources listed above and would additionally have access to the highly detailed and specialized material on his population deriving from Birch’s medical, psychological, and neurological examination of the same children. He was now able (Richardson and Koller 19963) to follow this documented population, as well as borderline cases and a sample of the total child population, through the critical years of supposed changes in prevalence through their teens and into their 20s. If he had picked up a fresh population and followed them from birth, his results would have been delayed for 12 years and he would not have had the advantage of the data created in the other studies.

The third component of the design covered the whole child population born in the years 1950–55. It entailed the retrospective compilation and linking of their obstetric, educational, and child health records, and the conducting of a range of reading tests and behavioural questionnaires in all relevant city schools. The parents of a 20% sample of these children were also interviewed in their own homes. The motivations for these studies were less clear-cut and not attached to particular individuals. They gave a background to the specialized studies described above. The AACC had tentative plans to conduct a survey of reading skills in a child population in Connecticut; a similar study in Aberdeen would give useful comparative material. There was also a sense that such a battery of information on a whole city population could well be a

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valuable resource for the future, that it could be done now, and that the opportunity should not be missed. My previous research on social class, social mobility, and health had raised many questions about the interweaving of educational and physical development with social class, questions that could be clarified using a larger and better-documented population than had previously been available to me.

Management of the resulting mass of information, using the pre-computer technology of the day, became a heavy strain on the resources and the technical know-how of the research team and caused long delays in the exploitation of the data. Given today’s technology that problem would have been simplified. In practice it meant that, by the time the data were fully available for use, the interests and responsibilities of the Aberdeen team had moved on and the data were under-used.

We are asked whether we would do anything different now if we were again setting up a study involving children. That question is unanswerable. However, hindsight permits certain comments. Any longitudinal study would need the existence of a research team dedicated to its long-term conduct, equally stable funding, and leaders with the vision, leadership qualities, and prestige to deal with the political and financial problems that would arise. Today’s ethical concerns about confidentiality would rule out many of our sources of data and the low response rates of today’s mail questionnaires would introduce uncertainties in the findings, which we would have thought unacceptable. Above all the planning and pilot phases would have to be long and ruthlessly self-critical. Our successes came from those sub-studies designed to answer precise questions. The failures came from ambitious designs in which there was no clear focus but a hope that massive data coverage would yield answers to a wide range of questions. Part of that failure came from the complexities of handling massive datasets in pre-computer days, part from staff depletion in the period of waiting. Mainly, however, it came from failure to anticipate what quality of findings could or could not be achieved by alternative approaches. For example, Illsley (2002)\(^4\) was able to answer many of my questions about the interaction of class, school, and neighbourhood in intellectual and physical development, but the design was such that data were weakest in the pre-school period, which, it became clear from supplementary small-scale work, was when the development differentials were created.

We are also asked to consider how the study has developed in recent years compared with our original aims. The founders of the study never intended to follow the whole child population into late adulthood. They wanted to understand how a community, its institutions, and its social structure shaped the development of its children. They did so in the knowledge that such influences would affect status and health in adulthood. But their focus was on the community, its neighbourhoods, schools, occupations, and health and social services and their different implications for the children in childhood itself. Those children are now adults spread across many communities in Britain, which will in turn have influenced health. The emphasis has inevitably shifted from childhood and community to become the analysis of social and/or health variables in a body of epidemiologically useful data, sometimes perhaps carried out by distant research workers quite unfamiliar with Aberdeen. With the recently collected data on adult life there is scope for a very informative study of the long-term outcome of community experience. The bringing together of the Aberdeen, Copenhagen, and Stockholm material also opens up the possibility of cross-community studies.

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References