



Northern Ireland  
Assembly

Committee for Health, Social Services and  
Public Safety

# OFFICIAL REPORT (Hansard)

Review of Health Inequalities: Scottish  
Centre for Social Research

28 November 2012



understanding of the influence of children's early circumstances and experiences on those outcomes and how different levels of exposure to key risk factors and changes to this exposure over time among children living in different circumstances affect their health outcomes. Similarly, data from the survey has also been used to identify factors that appear to protect children in disadvantaged circumstances from experiencing negative outcomes. Those are factors associated with resilience.

As members may have seen from the briefing we prepared or, indeed, from any of the existing reports produced from the study, data from GUS have already provided significant insight to that end in relation to child physical and mental health and cognitive development. For example, our findings have explored differences in a range of physical health measures over the first six years of children's lives. The findings show that children from the lowest income households and those living in more deprived areas are around twice as likely to be reported with poorer health as children in the highest income households and those living in the least deprived neighbourhoods. In addition, by age six, differences in levels of overweight and obesity are evident between children in the lower and higher income households.

In respect of mental health — social, emotional and behavioural development — and cognitive ability, significant differences between children from advantaged and disadvantaged backgrounds are already apparent by age three and tend to persist at age five. Worryingly, other research conducted over a longer period suggests that such gaps tend to grow wider as children make their way through primary school and persist through adolescence and beyond.

As well as differences in outcome measures, our research shows stark variations in risk factors, such as maternal smoking, lack of breast feeding and poorer diet. In several cases, it is the difference in exposure to those risk factors between children in different circumstances that explain the differences in their outcomes. Not all children from disadvantaged backgrounds suffer from poor health. However, our research suggests that those who do not suffer from poor health tend to have parents who are themselves healthier, who take a greater interest in their children's development, who are more open to seeking help and support, and who are more satisfied with the services and facilities in their local area. As such, it would seem that as well as improving children's material circumstances, it is important to improve those related issues at the individual, family and neighbourhood level to bring about a step change in reducing health inequalities.

Furthermore, it is clear that tackling health inequalities requires input at many levels from a wide range of actors. This is not just the responsibility of the health service or other service providers alone.

Our study is now in its eighth year. The next report will be published in February next year. That report uses data from the new birth cohort and will provide a comprehensive picture of the lives of children, born in Scotland in 2010-11, at age 10 months. Among other things, it will contain comparisons of the circumstances of those children with our earlier cohort born in 2004-05. That is a unique resource, providing a range of stakeholders with invaluable evidence about the experiences of and outcomes for children and families. Its value continues to grow, as with each round of data collection, it becomes possible to map further and more fully the varied and complex pathways taken by children as they move through the early years into later childhood and beyond.

Of course, none of that would be possible without the ongoing support and participation of the families and children involved, to whom we are extremely grateful. I hope that members have had a chance to consider my briefing paper and perhaps some of the reports from the study. I am happy to answer any questions.

**The Chairperson:** OK, Paul. Thanks very much. The Committee is looking at health inequalities. However, other Departments and Ministers are delivering policies and strategies that could impact on health inequalities. We happen to be the Health Committee, and we deal with the outcome of health inequalities. Take a look at some of our other Departments here: the Office of the First Minister and deputy First Minister has a duty to look at things such as child poverty, and other Departments have to look at the 0-6 strategy, which does not necessarily allow the Health Department to get in at that age.

What struck me was the key theme in your briefing paper that health inequalities often emerge in the very early stages of life and sometimes continue throughout a person's life. Through the Growing Up in Scotland study, are you looking at the child from an early age? If so, does that allow you to then look at the responsibilities of other Departments for a specific part of that child's life?

**Mr Bradshaw:** Yes; sure. The study itself is funded by the Scottish Government education directorate. We get contributions to the development and content of the study from a range of

Departments, covering those concerned with communities, child poverty and inequalities and health. In the early-years period, there is a lot of convergence of interests from across Departments, because we know that child poverty affects child health, and we know that early education is a key source of service delivery to young children. So, there is very much a collective effort and contribution to the content of the study, with the results of the study relevant across multiple areas.

**The Chairperson:** You talked about the 3,000 children in the study who were born in 2002-03, the 5,000 who were born in 2004-05, and the 6,000 who were born in 2010-11. Is that the complete number of births in Scotland?

**Mr Bradshaw:** Yes, so in Scotland —

**The Chairperson:** So, it is a universal approach to the births of new babies.

**Mr Bradshaw:** About 50,000 children are born in Scotland in any 12-month period. We sampled about 10% of those births in the equivalent 10-month period. For a survey of this nature, that is a larger than necessary sample to produce valid and robust statistics. We used large numbers because, within that 5,000 or 6,000, there are some key subgroups of particular interest that we wanted to isolate and look at the results for. Examples of those subgroups are teenage mothers, lone parents, families who live in the most deprived areas and families who are on lower incomes. We need large numbers at a total level to have a large enough number of people in those subgroups to separate them out and look at outcomes and pathways for children in those groups.

**The Chairperson:** We received a number of presentations from groups, and as you have probably found to an extent in Scotland, one of the issues is that people on benefits might be living next door to people who are working but who are the working poor. They live in the same area, their kids attend the same school and they have the same lack of amenities or social gatherings. On one side, one family is on benefits, and on the other, they are working but are working poor. I was interested that some of the presentations that we received, especially the ones from County Longford and Ballymun in Dublin, took a universal approach to the area rather than looking at lone parents or kids who are in a family that is on benefits. They took an approach to the area and targeted some of the kids there. Are you doing something similar to that?

**Mr Bradshaw:** Our responsibility on GUS is simply to collect the data, and it is for other people to use the findings to decide how they will target interventions or policies.

**The Chairperson:** Sorry to stop you there. Is the data that you collect specific either to lone parents or to parents who are on benefits?

**Mr Bradshaw:** No, it is a fully representative sample of all children who were born in Scotland within the 12 months across all geographical areas in Scotland, including the Highlands and the islands. In each local authority area, there is a mix of people living in deprived and non-deprived areas, so the data is representative of the general distribution of these issues across the Scottish population.

**Mr Gardiner:** What has been the Scottish experience of where good local schools have made a material difference in the life expectations of the health of the children? Do schools make a difference? If they do, how does that work and how do they make a difference? I notice that you said that children whose parents have degree-level education are 18 months ahead of children in the use of language compared with parents who have no qualifications. To what extent can this 18 months be made up, or is there a ceiling on the children's potential level of attainment because behavioural factors have become so ingrained since an early preschool age?

**Mr Bradshaw:** On your first point around the impact of schools and the question of whether schools can make a difference, we are at too early a stage in the research to look at that. Our oldest cohort, the child cohort, is around age nine, but we have not collected any data from them since they were six, at which point they had only just started primary school. Those in our birth cohort are aged around eight at the moment, and are in primary 3, their third year of primary school, but we are only collecting data from them at the moment. It will really only be after that point of data collection that we will be able to start looking at whether attending different sorts of schools or a school with particular characteristics has an impact.

What we do have some data on at the moment is the potential impact of preschool education on children's health, particularly their cognitive ability. We looked at changes in a child's cognitive ability between the ages of three and five — during the period when the vast majority of children in Scotland attend 12.5 hours of statutory preschool education per week. That research suggested that children who attended particular types of preschool — that which is provided by what we call partnership nurseries, which are privately run nurseries that offer preschool education on behalf of the local authority — appeared to make more progress in their cognitive ability during that period, compared to children who attended nursery classes attached to local authority primary schools.

That was an additional finding to some of the main research that we were looking at, but it is certainly enough of a finding to suggest that further research on the differential impact of different types of preschool on different children would be warranted. That is something that we are looking to do. Arguably, we have some evidence to suggest that preschool education can make a difference to children's outcomes by the time they enter school, but we do not have anything to talk conclusively about the impact of primary schools.

To address the gap that exists between children in more and less advantaged circumstances in their cognitive ability by age five, the figure that you quoted — the 18-month gap — exists at the point of entry to primary school. Other research suggests that it is very difficult to reduce that gap from the point of entry to primary school, but it is certainly not impossible. What we do know, however, is that the earlier you address these issues, the more cost effective that intervention is and the greater the impact. If you are aware of the gap by age three and can address it in that age three to age five gap before they enter primary school, there is a better chance that those children will do better throughout their school career. The earlier the better is what all the evidence seems to be suggesting now. That is not to say that we should give up on those kids who are behind at entry to primary school. There is plenty of excellent work being done during that period, too.

**Mr Wells:** There seems to be a pattern emerging in the evidence that we are receiving from a wide variety of sources within the UK and Ireland. I was on the Shankill yesterday, and someone told me that their analysis shows that in the most vulnerable communities, the average child aged four has 300 words in his vocabulary, while someone on the Malone Road, which is the posh end of the country as far as Northern Ireland is concerned, would have almost 3,000. Have you done any analysis on vocabulary to indicate the development of children at that age?

**Mr Bradshaw:** Yes, we have, although we used a different measure. The figure that we have just discussed — the 18-month developmental gap — is based on a vocabulary assessment at age five. We ask the children in our study to complete a cognitive, educational assessment from the British ability scales called 'Naming Vocabulary', which tests their expressive language abilities. Essentially, it is a booklet that contains a series of pictures of items, and the child is asked to name each item. The more items they can name, the higher the expressive language ability is. We have measured that at age three and age five. The gap already starts to get quite evident between children in more and less disadvantaged circumstances using that measure at age three, and it persists at age five. There is not really any change in it during that period.

**Mr Wells:** In paragraph 3.3, which deals with resilience, you state a number of factors that clearly help outcomes. I am surprised that there is no mention of a father figure or two parents. Following the riots that broke out in August 2011, 60% of those convicted of such activity had no identifiable father figure living in the house or, in fact, had no knowledge of who their father was, never mind identifying with them. Could it be argued that the breakdown of the two-parent family is a major determinant in the sense that that places a huge burden on the single parent, who may be quite young? It is often the woman is who left literally holding the baby. Is that a determinant of outcomes?

**Mr Bradshaw:** Absolutely. We did some quite interesting work, which was published, I think, two years ago, on the occurrence of significant events in children's lives and how those led to the experience of key factors that affected child outcomes. One of the significant events we looked at was parental separation. What we found was that parental separation was very closely associated with a significant reduction in income and maternal mental health, and we know that income poverty and maternal mental health are linked to child outcomes.

In an analysis, we usually include some measure of what we call "family type", whether the child lives in a couple family or a lone-parent family, and what we very often find when we include that measure alongside measures of household income and parental education is that the differences between the socioeconomic circumstances of single-parent and couple families tend to explain the differences in

child outcomes for children in those different families, rather than the fact that the child has no contact with their father per se. Certainly, the trauma and circumstances that parental separation creates in a lone-parent household tend to be associated with those factors, which then lead to poorer child outcomes.

**Mr Wells:** We have taken evidence from a wide range of bodies. I think that Sue already mentioned the fact that we had a very interesting contribution from representatives of Ballymun, which is a very difficult 20,000-person social housing area in Dublin, and a very interesting parallel was drawn with Longford, which is in the centre of the Republic of Ireland. Are you exchanging information with other groups? Are you doing this in complete isolation, or is there any cross-fertilisation?

**Mr Bradshaw:** Not at all. The study is publicly funded, and we have a responsibility to share our findings as widely as possible. We have a dedicated dissemination programme and a dissemination officer to do that. We host, for example, an annual free event every year to publicise our findings. It is attended by upwards of 150 delegates, who are predominantly in voluntary sector practice-based positions. People such as health visitors, midwives and those offering parenting and family support services take our findings and apply them to the services and support that they deliver in local areas on a day-to-day basis. They apply and use them for the benefit of those services.

We have spoken in circumstances such as this to over half the local authorities in Scotland; early years workers; the associations of directors of social work; head teachers' associations; educational psychologists; nutritionists; midwives; infant psychologists; and psychiatrists. The study findings are very widely disseminated, and we aim to make them as useful to policy and practice as possible.

**Mr Wells:** Finally, and this might be an unfair question, but given where you are coming from, I have to ask it. There is a view about the Scottish devolution model of the thematic ministerial positions. As you know, here in Northern Ireland, we have 12 Departments and, therefore, 12 silos, and have five parties that viciously guard their Ministers' budgets and powers. Scotland perhaps has a more mature democracy in the sense that you have cross-cutting themed ministerships to try to deliver for local people, children, etc, and we would aspire to that some day. Do you feel — and this is the ultimate leading question — that that model gives you a better opportunity to deal with early intervention than our model? If you want, you can claim the Fifth Amendment on that one.

**Mr Bradshaw:** I do not know enough about how the system works in Northern Ireland to make any useful comment on that. However, in recent years, the Scottish Government have worked very hard to push early intervention and to encourage discussion on it. In the past year, they have taken useful, practical steps to address those issues at the earliest stages.

**Mr Wells:** Who takes the lead on that in the Scottish Executive?

**Mr Bradshaw:** Our Minister for Children and Young People takes some lead on that. However, a semi-independent early years task force is now being created. It includes people such as the Chief Medical Officer, Harry Burns; the Children's Commissioner; and key figures in public health administration who are responsible for an early years fund, which is distributed through a series of working groups and subgroups. They are adopting a method known as the early years collaborative, which is based on the Scottish patient safety initiative from a few years ago. That approach requires the Scottish Government to bring together key actors from local authorities who are concerned with children in early years and early years services in order to talk about and identify good practice, as well as how funding might be spent. They rely on those local authority workers to take that work back and devise, with community planning partnerships, what policies they will deliver. That is in its very early stages.

**Mr Wells:** That is very interesting and useful.

**Mr Beggs:** Again, I declare an interest as a member of Horizon Sure Start, which does work in this area. In your paper, you present evidence that a gap in early years is opening up and say that that is already apparent, by age three, in the ability of children, depending on whether they are more or less advantaged. Later on, you indicate that an enriched home learning environment was repeatedly found to be an important factor in influencing children's early cognitive outcomes. Has your analysis pinpointed good and bad practice so that the Scottish example has been able to evolve and improve?

**Mr Bradshaw:** Yes, to some extent. The evidence that we produced regarding the impact of the home learning environment or parent-child activities on cognitive outcomes confirmed evidence that already existed in the UK, particularly from the evaluation of the effective provision of pre-school education — EPPE) — which you may have heard of. That was run in England and Wales and started in the early 1990s. It found that the home learning environment had a significant impact on early cognitive outcomes. I think that our evidence has confirmed that, using Scottish data from Scottish families, and has, therefore, influenced some policies directed at improving parent-child home learning activities, particularly among disadvantaged families. Therefore, I would like to think that our evidence has influenced and continues to influence the development of those policies.

**Mr Beggs:** One of the most disadvantaged groups is young children whose parents do not avail themselves of early years interventions, parenting skills and other services. Have you uncovered any specific ideas to improve their engagement?

**Mr Bradshaw:** Yes, to some extent. One of our reports looked particularly at the differences in the support and advice that different types of families appear to draw on or prefer. There is a wariness among disadvantaged families of very formal support and services, which, I think, we expected. Antenatal classes are a great example of a support service delivered to pregnant mothers, but we found very early on that teenage mothers do not like the idea of classes; they do not like sitting and sharing their experiences with other mothers. That suggests that approaches delivered on a peer-group basis, with mothers of their own age or in a smaller group, or one-to-one contact would be more acceptable to mothers in those circumstances. We found that some families will take it upon themselves to seek out support and will rely on online services or telephone helplines. Some will prefer one-to-one contact with mainstream health and support services; others will need something less formal but will prefer one to one, such as a service in Scotland that provides voluntary home-visiting family support. It is not attached to a formal health service, but it provides professional support and advice where necessary.

A range of such programmes is being delivered in Scotland just now. For example, there is an ongoing pilot of the Family Nurse Partnership, which you may have heard about. It is a dedicated, intensive home-visiting support service, specifically for first-time teenage mums. It is being delivered in Lothian and Fife as a pilot at the moment. Contrast that with the Triple-P – Positive Parenting Program — being delivered in Glasgow. It is a universal, seminar-based support and advice programme for the parents of children entering primary 1 all over Glasgow. All the parents are invited to three seminars, but Triple-P will offer more dedicated and intensive support to different types of parents at different levels. Therefore —

**The Chairperson:** We got a presentation on the Triple-P programme from County Longford.

**Mr Bradshaw:** It is delivered internationally. However, other parenting advice and support services that offer a wide range of services are being delivered more widely across Scotland. That is necessary because universal services are definitely not used universally, and not all families regard them as acceptable.

**The Chairperson:** Kieran, are you looking to come in?

**Mr McCarthy:** Not really. The only thing that comes to mind is obesity. I suppose that it can apply to anywhere, but you say that it is one of the outcomes in the most deprived areas. Why would that necessarily be? You would have thought that in a deprived area, with not so much cash for good meals, etc, those people would be out rather than in front of a screen playing with their modern technology and, therefore, not be obese.

**Mr Bradshaw:** I do not think that we have fully worked that out yet. The report tends to suggest that obese children in such circumstances have poorer diets; they consume high-energy foods, such as snacks, chocolates and crisps, from an early age. There also seems to be some suggestion that the parents of such children exhibit poor health behaviours: lower physical activity, more sedentary behaviours and more sitting round watching television, for example, and that has an impact on the behaviour of the children and, therefore, their weight. We have not quite got to the bottom of that yet. We are still looking at it, but those are the sorts of things coming through.

**Mr McCarthy:** Right. OK; thanks.

**The Chairperson:** Manufacturers need to take those issues on board. There is less money for fresh fruit and veg, yet manufacturers can sell 100 pizzas for £1.

**Mr Bradshaw:** Yes.

**The Chairperson:** There is a multitude of factors.

**Mr Bradshaw:** There is also the question of access to leisure services as well as simply having the resources to pay for them, which differs for families.

**Ms Brown:** Thanks for your interesting presentation. I find it interesting that in one of your points about resilience, you mention a mother aged 35 or older. I am 40 years old, and my youngest child is 16. Is there evidence that young mothers cope less well mentally?

At the age of 20, 21 and 24, I was physically very strong and had three children. I would be much stronger mentally now — although physically unable to have a child — to deal with raising children. Is there any evidence around the mental health issue?

**Mr Bradshaw:** Off the top of my head, I cannot quite remember. A couple of years ago, we produced a report that looked specifically at maternal mental health. We will have considered maternal age, but I cannot remember what the precise finding associated with that was. However, the finding that I have included is unusual for us, because although we tend to find considerable differences between younger mothers and older mothers, normally, when we account for the differences in the socioeconomic circumstances of those mothers, age is not a factor. It has to do with the fact that younger mothers tend to have poorer education, lower incomes, be out of employment and, generally, have more chaotic lives. That is what explains the difference in outcomes rather than age per se. We are looking specifically at that because we are doing additional analysis that is very focused on the differences between younger mothers and older mothers, and mental health will be one of the issues that we will specifically look at in that analysis. Therefore, we will have concrete findings on that early next year.

**Ms Brown:** I was at home for eight years with my children; I was with them 24/7 when I was married. My husband was working all the time, and I might as well have been on my own apart from the fact that I had good financial support. An enriching home learning environment was mentioned, but a mother who is on her own most of the time can find that it is difficult to provide even that. Even when a mother has financial backing, it is difficult to divide yourself so many ways. Is there anything around that? Sometimes, it might be easier for an older woman who works and who earns a good salary to send her children to childcare where they will get the stimulation and education that might be easier to get outside the home. Naturally, you would think that a mother being at home with the children is, ultimately, the best scenario, but I am not sure that that is the case. There could be a happy medium.

**Mr Bradshaw:** Interestingly, an enriching home environment is not based on specific parent-and-child activities but is simply a measure of how many times the child has been read to over a week or has done activities involving painting and drawing. It does not account for who they have done that with. Therefore, there is a suggestion that it is the child's experience of those activities, either in the home or with a grandparent, a childcare provider or somewhere else, that makes the difference. We also know that the strength and warmth of the parent-child relationship is very important. That suggests that parents do not need to have a great deal of time to spend with their children but that they do need to make the effort to spend some time with their children. Parents who engage in such activities and building that relationship tend to have children who have better outcomes, irrespective of their socioeconomic circumstances.

**The Chairperson:** Throughout your presentation and in answer to the questions, you mentioned some of the key factors. Every time that Jim mentions that 60% of the people who were involved in the riots in England came from a single-parent household, I think that it is my duty to mention that 40% did not come from that background. It is important to say that there are a number of factors. It is like yin and yang; every time that he says something, I have to respond to it. A multitude of factors determines the outcome of a child's life. Can you give us more details on the key factors that can protect children and make them more resilient throughout their life?

**Mr Bradshaw:** When we tried to identify the factors associated with resilience, we found that very few persist after you account for material circumstances such as income, parents' education, area

deprivation and social class. All the things that affect children's material circumstances are very important. What remains after those factors have been taken into account is that parents who have better physical and mental health and well-being tend to have healthier kids.

Parents who are more comfortable seeking advice and support is a factor that seems to be associated with children in disadvantaged circumstances avoiding negative outcomes. The home learning environment and, in fact, parenting as a whole, appears to have an influence. We have evidence to suggest that, irrespective of background, children who have a better parent-child relationship and who experience higher levels of parent-child activities tend to have better outcomes, particularly for their cognitive development.

We also have some interesting evidence around satisfaction with local services. We are not quite sure about the direction of that relationship. It could simply be that parents who are more open to seeking support go out and find those services and, therefore, are more satisfied. It could also be that parents whose children have poorer outcomes simply do not have access to services and, therefore, are less satisfied. I do not think that we have quite got to the bottom of that yet. However, satisfaction with your local area and having access to resources and services that you need locally appears to make a difference.

**The Chairperson:** Is it better to take a universal approach to communities rather than a targeted approach for a specific part of a community? I am thinking about where I live, where you have teenage parents, single parents, two-parent families, people on benefits and people who work. The kids in that community go to the same schools and take part in the same activities. A universal approach might help the outcomes for the area.

**Mr Bradshaw:** If by universal you mean a service that is available in the community for anybody to use, that is important. However, we need to acknowledge that not all parents will use a universal service. It is important to have a range of services available that are suited to the different needs, circumstances and attitudes of parents. There have been programmes that have sought to provide services that are universal but which are targeted by area, such as Sure Start. One of the key difficulties that Sure Start found was that when it opened a universal service in a disadvantaged area, it tended to be used more by the advantaged families from those areas. It is important to acknowledge that, make sure that you are aware of who is using it and who is not using it, and deliver something suitable.

**The Chairperson:** Are you aware of similar studies here?

**Mr Bradshaw:** In Northern Ireland?

**The Chairperson:** Across the island.

**Mr Bradshaw:** The Economic and Social Research Institute in Dublin is running an almost identical study called Growing Up In Ireland; it draws a sample from the Republic of Ireland, but it is, in many respects, identical to us. It has two cohorts. The parents of a birth cohort are first questioned at nine months, and there is then a much older cohort aged nine at the start. It has two waves of data and a whole range of evidence.

As regards similar data specific to children living in Northern Ireland, there is a millennium cohort study, which has a sample of Northern Irish children. I cannot remember the numbers, but it has perhaps 1,500 children, all of whom were born in 2000 or 2001 and who will now be aged about 11. In fact, they will just have had some data collection at age 11. As a UK-wide study, it covers Scotland, England, Wales and Northern Ireland and has a range of comparative data looking at outcomes across the four countries. It also has data specifically on the subsample of children living in Northern Ireland, and that can be analysed. There are other relevant studies.

**The Chairperson:** OK. That is quite useful. I remember hearing about that millennium study.

**Mr Bradshaw:** It is a bit further ahead and is already looking at outcomes at the later stage.

**Mr Dunne:** I apologise that I missed your presentation. Funding is a big issue. How do you continue to justify your expenditure? There is always the argument that there should be more funding at the

sharp end for acute services, for example. Is it a constant battle to justify your work and increased funding for the budget involved?

**Mr Bradshaw:** I would not say that it is a constant battle to justify the budget for undertaking this research. However, we have to ensure that the findings and data from our research are widely disseminated; we are required to demonstrate impact; and we have to show how our findings have been used to make a difference to policy and practice. We spend a great deal of time ensuring that people are aware of our study and that they are using the findings to influence policy and practice.

The findings from the study are used to influence discussions and debates on policy at central government level. They are also used by voluntary-sector organisations in seeking support for their delivery from local authorities and to influence their discussions with government on how their funding is placed. We continue to demonstrate how the findings are being used, which justifies the money being spent. We respond to a tender. Our funders at the education directorate need to make a case for that continued funding being available, and we contribute to that.

**Mr Dunne:** Northern Ireland and Scotland have a history of high rates of heart disease. From your study or your experience, what similar initiatives have been taken to try to address that issue?

**Mr Bradshaw:** There is nothing on that from our study as yet, but it is definitely something that we will be interested in looking at as our children get older. My organisation is also responsible for undertaking the Scottish health survey, which collects a lot of information about the incidence of heart disease and related issues. It is capable of teasing out some of the issues affecting Scotland and, in fact, specific areas of Scotland. We talk about the Glasgow effect. There is specific ongoing research comparing health outcomes for adults in Glasgow with those in Liverpool and Manchester. Those three cities have very similar socioeconomic histories and circumstances, yet Glasgow seems to do much worse in those specific outcomes. The Scottish survey has not quite got to the bottom of that yet, but some dedicated research is ongoing. I imagine that that will be relevant to the comparison between Scotland and Northern Ireland.

**Mr Dunne:** Is there evidence that exercise and fitness early in life reduces the risk of poor health later?

**Mr Bradshaw:** There is no doubt that physical activity is important in ensuring good health. We do not have a lot of evidence to suggest that at the moment, but other studies do.

**Mr Dunne:** We are made aware, more and more, of the need for everyone to exercise, and society needs to get a grasp of that.

**Mr Bradshaw:** What our findings suggest is that exercise in isolation is not enough to improve health outcomes; a combination of diet and physical activity is ideal in ensuring better health. Simply raising physical activity levels will not necessarily have the desired impact. If you can do that alongside improving diet, it will definitely make a difference.

**The Chairperson:** I think that it is universally accepted that early intervention has a positive impact not only on individuals but on communities and society.

Paul, this has been very useful and so, as I said, was your paper. It has allowed us to factor in some of the work being done in different areas. We are looking at health inequalities, notwithstanding some of the difficulties that we have with Ministers looking after their own Departments. Issues that concern children cut across all Departments.

On behalf of the Committee, I want to thank you for providing us with this information and for coming over to speak to us. If you think that there is any other information that might be useful to us in our work, feel free to point us in the right direction. Thank you.

**Mr Bradshaw:** You are welcome. Thank you.