Public Health Research Consortium

Will policies for the early years reduce inequalities in health? A case study on childcare

- Over the last decade, policies have given greater focus to reducing inequalities in health and increasing investment in early childhood.
- This study examined if and how policies targeting the early years could contribute to reducing health inequalities, using two case studies: unintentional injury and childcare. Information and analysis from different sources were combined to build a 'jigsaw' of evidence. This short report summarises findings from the childcare case study.
- A review of reviews highlighted that there was little research exploring childcare in relation to unintentional injury, breastfeeding, and overweight (including obesity). We therefore focused on these areas using national datasets, particularly the Millennium Cohort Study (MCS), which is following children born in the UK in 2000/02.
- Between birth and age 9 months, 35% of MCS children were cared for in informal childcare and 17% in formal childcare. For the period 9 months to 3 years, the proportions were 31% and 28% respectively. At both ages, children from less advantaged backgrounds were less likely to be cared for in formal childcare than those from more advantaged backgrounds.
- In the MCS, 8% of children had an unintentional injury between birth and 9 months, and 36% between 9 months and 3 years. Those from less advantaged backgrounds were more likely to have been injured. Compared to those looked after only by a parent, children from less advantaged backgrounds were more likely to be injured (anywhere) if they were looked after in formal childcare, whereas those from more advantaged backgrounds were less likely to be injured.
- In the MCS 33% of mothers breastfed for at least 4 months and those from more advantaged backgrounds were more likely to breastfeed than those from less advantaged backgrounds. Infants who were looked after in informal and formal childcare were less likely to be breastfed than those who were looked after only by a parent, although the reduced rates in formal childcare were only seen in more advantaged groups.
- In the MCS 23% of children were overweight or obese by 3 years, and the prevalence of overweight was socially distributed. Children looked after in informal childcare were more likely to be overweight at age 3 (compared to those looked after only by a parent), although the elevated risk was only observed in those from more advantaged backgrounds.
- Only a few aspects of health and wellbeing were explored using secondary data analysis. Evidence from the review of reviews indicates that childcare can also have a wide range of important benefits, particularly for children's development and long term outcomes.
- While this study helps to build a 'jigsaw' of evidence, further research is required to establish causality. Qualitative research is also important to better understand the associations observed.

Background

In recent decades, the proportion of mothers in paid employment, and the use of childcare, have increased dramatically. By 2007, 72% of married or cohabiting mothers and 57% of lone mothers were in paid employment. Parallel to this, child poverty grew at a faster rate than for other age groups, and although population health improved overall, social inequalities in health for both children and adults widened. These dramatic changes led to an important shift in policy direction, with greater focus on reducing inequalities in health and increased investment in the early years.

This study aimed to examine if and how government policies targeting the early years are likely to contribute to reducing health inequalities, concentrating on children growing up at a time of rapid social and policy change. Government initiatives are typically set up in ways that make it difficult to estimate effects using experimental designs. Therefore we combined information from different sources to build a 'jigsaw' of evidence.

Methods

The project comprised two case studies: the first focussing on a measure of health and the second on a policy area. The two case studies were chosen for their relevance to the early years and social inequalities, level of government priority, and, in the case of the health case study, potential for prevention.

The health case study focussed on childhood unintentional injury and explored how inequalities in unintentional injury might be influenced by a range of policies. The policy case study focussed on childcare and how it might influence inequalities in different aspects of children's health.

First, we undertook a review of reviews in order to create a map of review evidence to demonstrate the links between policies and health inequalities for each case study (unintentional injury and childcare), highlighting areas requiring further research. These maps were then discussed with a group of young people, to provide them with an opportunity to be involved in public health research and to offer insight into their perspectives.

Second, we undertook secondary data analyses to explore some of the links which were identified from the reviews of reviews as being less researched. The links were chosen based on their centrality to government policy, relevance for preschool children, and data availability. National datasets were used to summarise prevalence, trends and inequalities in the measures featuring in the links. The Millennium Cohort Study (MCS), a longitudinal survey of approximately 18,000 infants born in the UK at the turn of the century, was then used to explore the associations between the policies and inequalities in health, using data between birth and the age of 9 months, and 9 months and 3 years. Full details of the methods can be found on the PHRC website (www.york.ac.uk/phrc/).

Key findings

This short report now summarises key findings from one of the case studies: childcare. Findings for the unintentional injury case study can be found on the PHRC website (www.york.ac.uk/phrc/).

Childcare: trends, prevalence and inequalities

In 1998, the Labour Government launched a childcare strategy as part of their policy of promoting paid employment as a route out of poverty. In 2004, the 1998 strategy was replaced by a new 10-year childcare strategy, which aimed to increase the availability, flexibility, quality and affordability of childcare, particularly to young children and disadvantaged children. This included increasing the free early years education places to all 3-4 year olds from 12.5 hours to 15 hours a week, extending these free places to 2 year olds living in deprived areas, and improving the training of childcare staff.

The use of informal childcare (from friends, neighbours and relatives) and formal childcare (nurseries, registered childminders) has increased in recent years, as demonstrated by data from the Infant Feeding Survey (IFS) between 2000 and 2005.

Between birth and 9 months 35% of infants were cared for in informal childcare and 17% in formal childcare (MCS data). For the period 9 months to 3 years, this had changed to 31% and 28% respectively. The majority of informal carers at both time

points were grandparents. Children from more advantaged socio-economic circumstances (SECs) were more likely to be cared for in formal childcare at both ages, whilst those from less advantaged SECs were more likely to be cared for only by a parent. There were no clear social patterns for informal childcare use.

Childcare: findings from the review of reviews

Reviews documenting the impact of childcare on children's health tended to focus on formal childcare (often preschool interventions) rather than informal childcare types. These showed that childcare can have a beneficial effect on developmental and educational outcomes, and also long-term outcomes such as employment.

Of the areas which were identified in the review of reviews as being less well researched in relation to childcare, the following were chosen to explore using secondary data analysis: 1) unintentional injury (to provide overlap with the other case study), 2) breastfeeding, and 3) overweight (including obesity).

Childcare: findings from new analyses

Childcare and unintentional injury:

Although there has been an overall decrease in childhood injury rates and death rates from injury over the past decade, data from Hospital Episode Statistics (HES) indicate that hospital admissions due to unintentional injuries in 1-3 year olds have remained constant, and may have increased for infants aged under 1 year. In the MCS 8% of infants had attended a GP or A&E due to an injury since birth, and 36% had been injured between age 9 months and 3 years. Injuries were socially patterned in both HES and the MCS, with children from less advantaged SECs being more likely to be injured. Furthermore, inequalities in hospital admissions in HES (measured by area deprivation) did not appear to have narrowed in the past decade.

Overall, there was no association between childcare use and unintentional injuries in MCS infants between birth and age 9 months. However, infants from more advantaged backgrounds were less likely to be unintentionally injured if they were cared for in formal childcare (compared to those cared for only by a parent) whereas those from less advantaged backgrounds were more likely to be injured.

Between the age of 9 months and 3 years, informal childcare was associated with an increased risk of injury overall (compared to care only by a parent). However when exploring the association in different socio-economic groups, the detrimental effect was only seen in those from less advantaged backgrounds. There was no association between formal childcare use and injury in any group. (NB: for this analysis injuries occurring at any time were explored, because in the MCS it was not possible to identify who the child was being cared for when the injury occurred).

Childcare and breastfeeding:

According to the Infant Feeding survey, the proportion of women who initiate breastfeeding increased from 62% to 76% between 1990 and 2005. However, in 2005 only 34% breastfed for at least 4 months. Similarly, in the MCS 33% of mothers breastfed for at least 4 months and data from both studies indicate that mothers from more advantaged backgrounds were more likely to breastfeed than those from less advantaged backgrounds.

In the MCS, mothers were less likely to breastfeed (either partially or exclusively) for at least 4 months if they used informal or formal childcare (lasting at least 10 hours a week) which commenced before their infant turned 4 months, compared to those whose infant was cared for only by a parent or in childcare for less than 10 hours a week. When considering time spent in childcare, mothers were less likely to breastfeed if they used part-time or full-time informal childcare (compared to care only by a parent), whereas for formal childcare the reduced likelihood of breastfeeding was seen only if it was full-time. The reduced likelihood of breastfeeding in informal childcare was consistent across all socio-economic groups, whereas for formal childcare the detrimental impact was seen only in the more advantaged groups. Lone parents who used formal childcare were more likely to breastfeed than lone parents who did not use childcare.

Childcare and overweight and obesity:

Data from the Health Survey for England (HSE) show that childhood overweight (including obesity) has levelled off in recent years, but still remains high, with around

one quarter of children being overweight or obese by the time they reach school age. In the MCS, 23% of children were overweight or obese at age 3 years. Children from less advantaged backgrounds were more likely to be overweight or obese than those from more advantaged backgrounds in both the HSE and MCS, although data from the HSE between 2000 and 2007 show that these inequalities had not widened.

In the MCS, three year olds who were cared for in informal childcare for at least 10 hours a week were more likely to be overweight or obese than children who were cared for only by a parent (or in childcare for less than 10 hours a week), particularly if they were cared for full-time. When stratifying by socio-economic background, the increased risk of overweight in informal childcare (compared to parental care) was limited to children from more advantaged groups. There was no association between formal childcare and overweight. Breastfeeding did not mediate the association between childcare use in infancy and overweight at age 3 years.

Conclusions

Childcare use has increased over the past few decades and is likely to continue to rise. However, childcare has the potential to widen inequalities in injury in infants and young children, and may also be having a detrimental impact on breastfeeding rates and levels of overweight and obesity (although sometimes more so in more advantaged families). However findings from the review of reviews indicated that childcare can also be beneficial, for example for development and educational outcomes. Strategies focussed on ensuring that good quality childcare is available to children from all backgrounds may reduce health inequalities. Such strategies might include, for example, improved training, and activities to support informal carers and raise their awareness of children's health needs.

Recommendations for further research

Further research is required to understand why childcare might be having a differential impact on unintentional injury, and how the beneficial influences seen in more advantaged groups can be extended to all children. Childcare offers a potential setting for the promotion of breastfeeding and obesity prevention; further research is required to establish how this potential can be realised.

Our project explored some of the links which our review of reviews highlighted as requiring further research. Research on other links, for example the association between informal and formal childcare use and maternal wellbeing would be valuable. This project has also identified broader areas for further research, for example on the impact of informal childcare on a range of child health outcomes. Since the analyses conducted in this project were based on observational data, further research is required to establish causality and qualitative research will help to better understand the associations observed.

This study has demonstrated the use of secondary data analysis, alongside reviews of existing research, for contributing to the 'jigsaw of evidence'. The approach could be replicated for other areas of policy making and health, and incorporating a more complete range of qualitative and quantitative information sources.

Details of the research team

Catherine Law[1], Jake Abbas[2], Helen Duncan[2], Brian Ferguson [2], Hilary Graham[3], Richard Jenkins[1], Leah Li[1], Anna Pearce[1].

[1]Centre for Paediatric Epidemiology and Biostatistics, UCL Institute of Child Health, London, WC1N 1EH.

[2]Yorkshire and Humber Public Health Observatory, York Science Park, York, YO10 5DG.

[3]Department of Health Sciences, University of York, York, YO10 5DD.

Address for Correspondence

Professor Catherine Law, Centre for Paediatric Epidemiology and Biostatistics, UCL Institute of Child Health, London, WC1N 1EH. Email: c.law@ich.ucl.ac.uk

About PHRC: The Public Health Research Consortium (PHRC) is funded by the Department of Health Policy Research Programme. The PHRC brings together researchers from 11 UK institutions and aims to strengthen the evidence base for public health, with a strong emphasis on tackling socioeconomic inequalities in health. For more information, visit: www.york.ac.uk/phrc/index.htm