



FOCUS ON RESEARCH

Timing of birth and subsequent educational achievement and additional support needs: a retrospective study

Researchers

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Aim

The aim of this study was to test whether being born out of hours, when medical cover in hospitals is lower and the risk of possible complications higher, results in an increased risk of assisted special needs (ASN) or poorer educational attainment.

Project Outline/Methodology

Childbirth is a critical event that deserves high quality clinical care irrespective of the time of day. There has been considerable debate regarding the quality of perinatal care outside standard working hours in hospitals, where medical cover is not as high as it is during the day. Studies on this subject have generated conflicting findings regarding the association between timing of birth and adverse perinatal outcomes in particular, mortality. This research project aimed to inform this debate by linking routine obstetric data (SMR02) to Scottish pupil census data and investigating whether being born out of normal office hours is associated with poor educational attainment and/or ASN. The ASN subtypes we looked at were: autism spectrum disorder, sensory impairments; learning disabilities; learning difficulties; physical or motor impairments; language or speech disorders; physical health problems; and mental health problems.

Key Results

We found that being born out of hours was not associated with the risk of poorer educational attainment or ASN. Moreover, being born out of hours was not linked to an increased risk of any sub-category of ASN. These findings remained after we took into account a number of important obstetric factors or complications that could also be associated with ASN.

Conclusions

Being born outwith normal working hours does not predispose to poorer educational attainment or ASN for the child.

What does this study add to the field?

This study is the first study to use a population level data linkage of obstetric data and Scottish pupil census data to investigate the impact of out of hours birth on educational attainment and a diagnosis of ASN. Previous literature has only investigated the impact on mortality, with several studies (including a Scottish one) finding that there is an increased risk of death if a child is born outwith normal working hours. Contrary to our expectations, and using a population level linkage, we were unable to find any evidence to suggest that children are at a higher risk of ASN or poor educational attainment from being born outwith normal working hours.

Implications for Practice or Policy

The null findings of the current study do not support further study of the potential for improving understaffing and increasing senior health professional attendance in perinatal care to improve long-term outcomes following out-of-hours birth. As such, there are no strong health policy implications of the current study other than that it does not provide additional reasons to assume that staffing issues outside normal working hours have significant impact on ASN at the population-level.

Where to next?

Our finding of no association between timing of birth and ASN/educational attainment is a robust one, so follow up research in terms of a randomised clinical trial is no longer warranted. Instead we will explore opportunities to validate the findings of our study in other settings where similar associations between out-of-hours birth and perinatal mortality have previously been demonstrated.

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