

International Journal of Population Data Science

Journal Website: www.ijpds.org



Social and Demographic Determinants of Interpregnancy Weight Change: A Linkage of the Northern Ireland Longitudinal Study and Maternity Services System

Estelle Lowry¹ and Neil Rowland¹

¹Queens University Belfast, Belfast, United Kingdom

Objectives

This study primarily aims to explore the change in risk profile of women giving birth in Northern Ireland, with a particular interest in socio-demographic determinants of interpregnancy weight change. Furthermore, the novel linkage of two data resources in Northern Ireland (NI) highlights the potential for transformative research in maternal health.

potential to provide important insights. Results can also highlight socio-economic groups most vulnerable to weight gain between pregnancies and help develop targeted interventions.

Methods

The NI Maternity Services System (NIMATS) provides access to biological variables collected during the gestational period. The NI Longitudinal Study (NILS) is a rich source of Census information providing a demographic, social and economic background we would not otherwise obtain from NIMATS alone. We used descriptive statistics to explore demographic, social and economic determinants of maternal obesity. We then identified a sub-population of women with more than one pregnancy and categorised according to whether they have lost weight, gained weight or remained the same between pregnancies. Logistic regression was used to explore socio-economic and demographic correlates of interpregnancy weight changes.

Results

The data enabled analysis of over 44,000 pregnancies spanning an eight-year period. A shift in risk factors such as older age, higher BMI, and proportion with a metabolic disorder can be observed during this short time. These were found to have associations with birth outcomes such as delivery method and birth weight. Furthermore, the linkage of these two datasets has also allowed us to link pregnancies to the same mother, enabling exploration of weight changes during the interpregnancy period(s).

Conclusion

Given the increased demand in maternity services during recent years, research in maternal socio-demographic profiles facilitated by the unique linkage of NILS and NIMATS has the



Temporary page!

$\LaTeX$ was unable to guess the total number of pages correctly. As there was some unprocessed data that should have been added to the final page this extra page has been added to receive it.

If you rerun the document (without altering it) this surplus page will go away, because $\LaTeX$ now knows how many pages to expect for this document.