



Does a healthy immigrant effect exist among Irish born children?

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&

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Research Question

Does a healthy immigrant effect exist among Irish born children?



About Me





Research Background

- **Paediatric Nursing background**
- **Trinity College, Department of Public Health and Primary Care**
 - Master of Science (Research) – Breastfeeding & respiratory illness in Irish infants (GUI Infant Cohort)
 - Childhood overweight in General Practice
- **Temple Street Children's Hospital**
 - Paediatric Early Warning System



Immigration, Emigration & the Irish Diaspora

- **Immigration:** movement of people into a country to which they are not native in order to settle there
- **Emigration:** the act of permanently leaving one's country in order to settle in another
- **The Irish Diaspora:** more than 80 million Irish emigrants and their descendants

(NESC, 2006)

Immigration in Ireland



- **2004 citizenship referendum: “considered the terms of the amendment to be too restrictive and unfair to many children born in Ireland and out of keeping with the spirit of the 1916 declaration which called on us to ‘cherish all the children of the nation equally’.”**
- **“creating an environment where racism and discrimination is rejected and where the potential of each person is fully realised and celebrated.” (Reilly, 2011)**



The Healthy Immigrant Effect





What is the healthy immigrant effect?

- The health status of immigrants on arrival into a new country is better than comparable native born individuals
- The existence of a healthy immigrant effect has been documented in large immigrant receiving countries – America, Canada, United Kingdom, Australia
- Suggested that difference does not persist over time – health reverts over time

(Nolan, 2011)



The healthy immigrant effect in Ireland

- Limited evidence in support of the healthy immigrant effect in Ireland: SLAN 2007 data (Nolan, 2011)





The healthy immigrant effect & children

- Little research exists examining the health of children of immigrants
- Existing evidence does suggest that the healthy immigrant effect does extend to the children of migrants (Maximova et al., 2011)



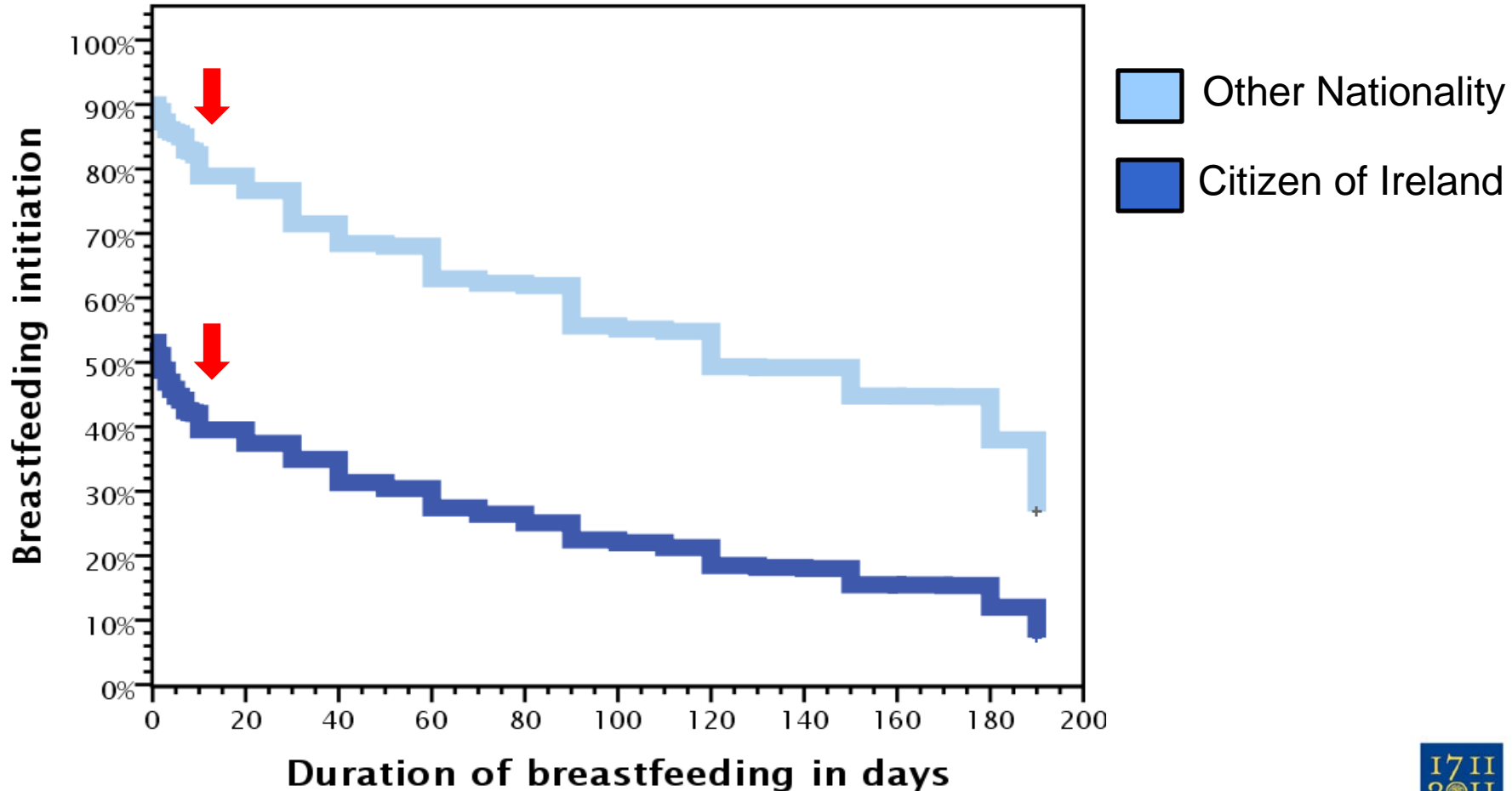


Breastfeeding & Immigration

- **Maternal Citizenship and Maternal Birthplace: strongest association with breastfeeding rates**
- **Irish Citizens and Irish born mothers significantly less likely than non Irish mothers to breastfeed ($p < 0.001$)**



Breastfeeding & Maternal Citizenship





Research Objective

To examine the association between infant ill health and maternal immigrant status in Ireland, using the nine month old infant cohort of Growing Up in Ireland



Methods: Sample

- Growing up in Ireland Infant Cohort – 11,134 nine month old infant and mother pairs
- First wave of data collection: September 2008 – April 2009
- Cohort randomly selected from the Child Benefit Register



Methods: Variables

- Infant illness
- Maternal immigrant status
- Maternal, infant and household characteristics



Methods: Infant illness

“We would like to know about any health problems or illnesses for which <baby> has been taken to the GP, Health Centre or Public Health Nurse or to Accident and Emergency. What were these problems?”

- Ear Infection
- Chest Infection
- Wheezing or asthma



Methods: Maternal Immigrant Status

“Are you a citizen of Ireland?”

“Were you born in Ireland?”

“How long ago did you first come to live in Ireland?”

- Within the last year
- 1-5 years ago
- 6-10 years ago
- 11-20 years ago
- More than 20 years ago



Methods: Analyses

- Logistic regression analysis to estimate odds ratios for infant illness relative to maternal immigrant status



Potential Confounders

- Household social class
- Household income
- Maternal Age
- Maternal Smoking
- Breastfeeding History



Results: Infant illness

- 17.2% (n= 1919) seen due to ear infection
- 32.1% (n= 3576) seen due to chest infection
- 8.9% (n=990) seen due to asthma or wheeze



Results: Maternal immigrant status

- 15.3% (n=1703) do not hold Irish citizenship
- 22.2% (n=2475) not born in Ireland
 - 1.0% (n=24) arrived within the last year
 - 43.5% (n=1075) arrived 1 - 5 years ago
 - 28.3% (n=699) arrived 6 -10 years ago
 - 10.0% (n=246) arrived 11 – 20 years ago
 - 17.2% (n=425) arrived more than 20 years ago



Citizenship & Birthplace

- Maternal citizenship and maternal birthplace highly correlated
- Phi coefficient
($\phi = 0.79$, $n = 11125$, $p < 0.001$)



Maternal Citizenship & Infant illness

Mother is NOT an Irish Citizen VS Mother IS an Irish Citizen

	Crude	Adjusted
Taken to a HP due to ear infection	0.44* <i>95% CI: 0.37 – 0.52</i>	0.50* <i>95% CI: 0.40 – 0.59</i>
Taken to a HP due to chest infection	0.53* <i>95% CI: 0.47 – 0.60</i>	0.54* <i>95% CI: 0.24 – 0.73</i>
Taken to a HP due to Asthma / Wheeze	0.30* <i>95% CI: 0.23 – 0.39</i>	0.30* <i>95% CI: 0.15 – 0.46</i>

***p<0.001**

Adjusted for household social class, household income, maternal age, maternal smoking, breastfeeding



Maternal Birthplace & Infant illness

Mother was NOT born in Ireland VS mother WAS born in Ireland

	Crude	Adjusted
Taken to a HP due to ear infection	0.57* 95% CI: 0.50 – 0.65	0.66* 95% CI: 0.66 – 0.73
Taken to a HP due to chest infection	0.65* 95% CI: 0.58 – 0.72	0.68* 95% CI: 0.11 – 0.73
Taken to a HP due to Asthma / Wheeze	0.49* 95% CI: 0.41 – 0.60	0.54* 95% CI: 0.43 – 0.64

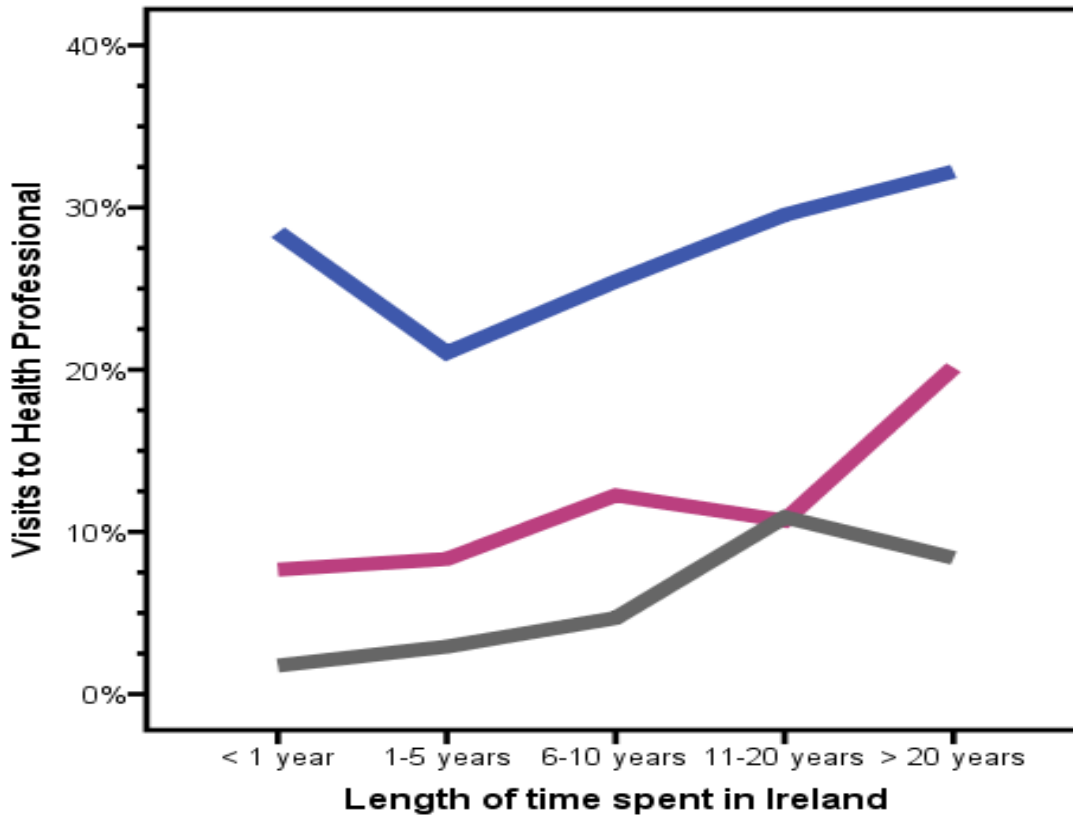
* $p < 0.001$

Adjusted for household social class, household income, maternal age, maternal smoking, breastfeeding



Length of time spent in Ireland

The association between maternal length of time spent in Ireland and infant health, for mothers not born in Ireland



- Chest Infection*
- Ear Infection*
- Asthma / Wheeze*

* $p < 0.001$ in crude & adjusted models



Limitations

- **Proxy measure of infant illness**
- **Potential recall bias**
- **Maternal country of origin not examined**
- **Cultural differences in health utilisation**
- **Potential language barrier**
- **Cross sectional analysis**



Conclusions

- **Healthy immigrant effect may be present in children of immigrants in Ireland**
- **Children of mothers not born in Ireland or who are not Irish citizens, less likely to be seen by a health professional due to ear infections, chest infections, or asthma / wheezing than children of Irish mothers**
- **This effect appears to diminish the longer the mother has lived in Ireland**



Future Research

- **Extend analyses longitudinally using the three year old cohort of GUI**
- **Differences in health status over time between children of immigrants and children of Irish mothers?**
- **Does this effect fade?**
- **Compare effects according to country of origin**



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For more information: www.growingup.ie



Thank You

Questions?