



Asthma, Family Structure & Health Utilisation in Infants

D. Kelly, T. O'Dowd, U. Reulbach

www.growingup.ie





Introduction

- **Research Team based in Department of Public Health & Primary Care, School of Medicine, Trinity College Dublin**
- **Research interests:**
 - Health, social and emotional well-being
 - Parental smoking and ETS
 - Obesity
 - Bullying
 - Breastfeeding
 - Health utilisation and social deprivation





Research Objectives

- **To identify socio-demographic factors associated with asthma in 9 month olds**
- **To identify material deprivation factors associated with the development of asthma during the first nine months of life**



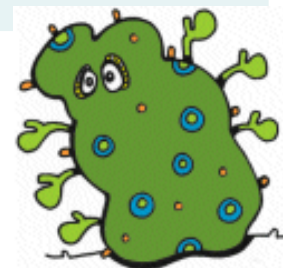
Methods: Respiratory Illness

- **“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?”**
- Wheezing or asthma
 - Chest infection
 - Snuffles or common cold



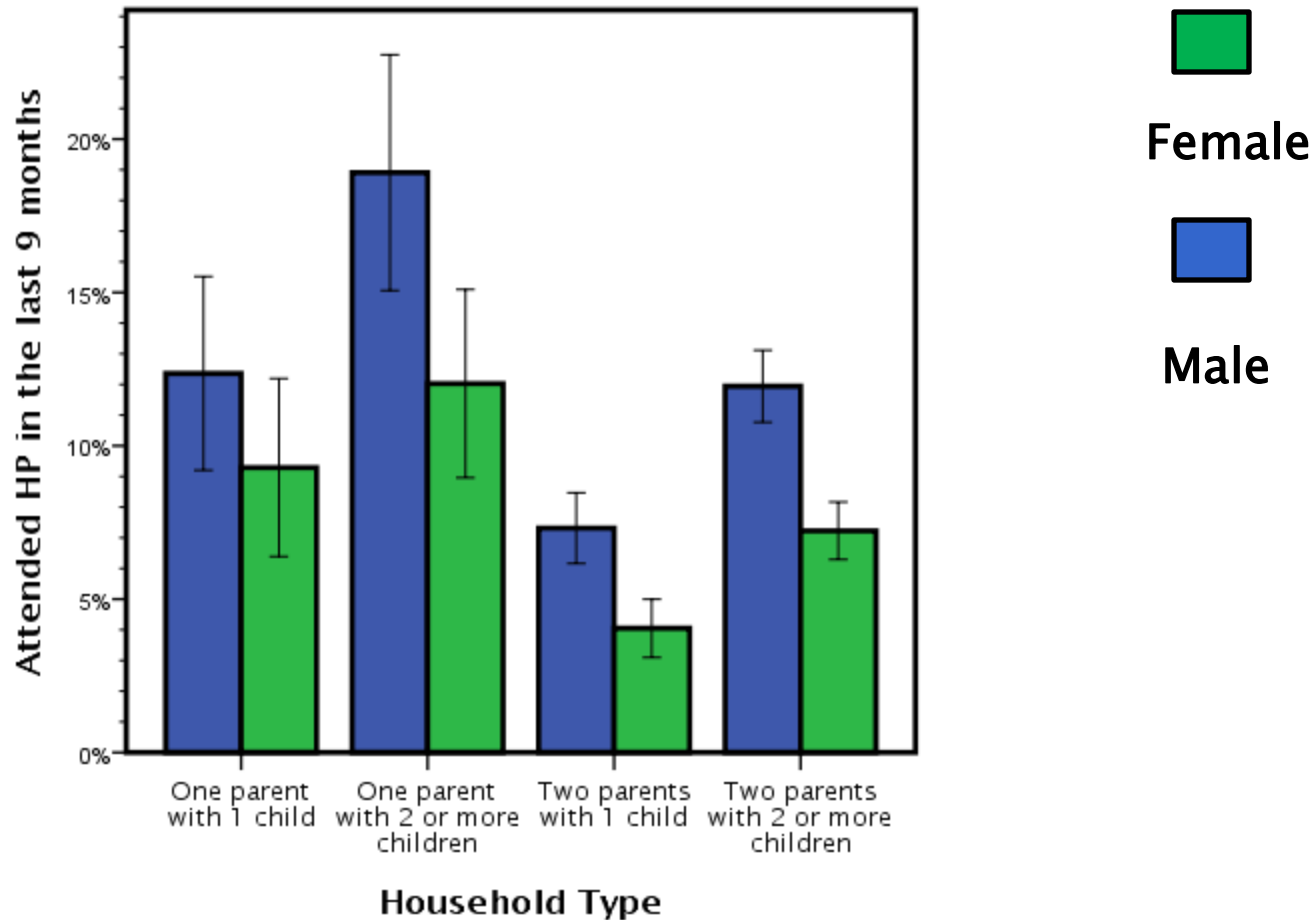
Gender differences

Nine – month - olds	Prevalence		Significance (p-value)
	Male infant	Female infant	
Diagnosed with a respiratory illness	4.9%	3.1%	$p < 0.001$
Taken to HP due to Asthma / wheezing	10.9%	6.8%	$p < 0.001$
Taken to HP due to snuffles / common cold	46.1%	47.8%	$p = 0.074$ (n.s.)
Taken to HP due to chest infection	34.7	29.4	$p < 0.001$





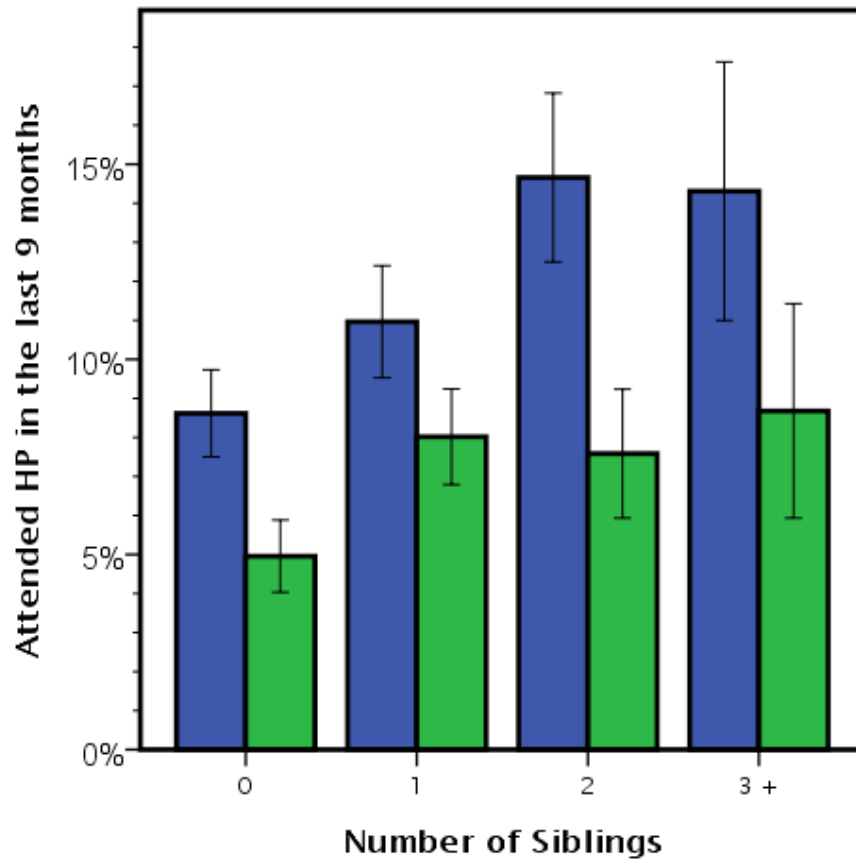
Wheezing and household type



Error bars: 95% CI



Wheezing and Sibling number



Error bars: 95% CI

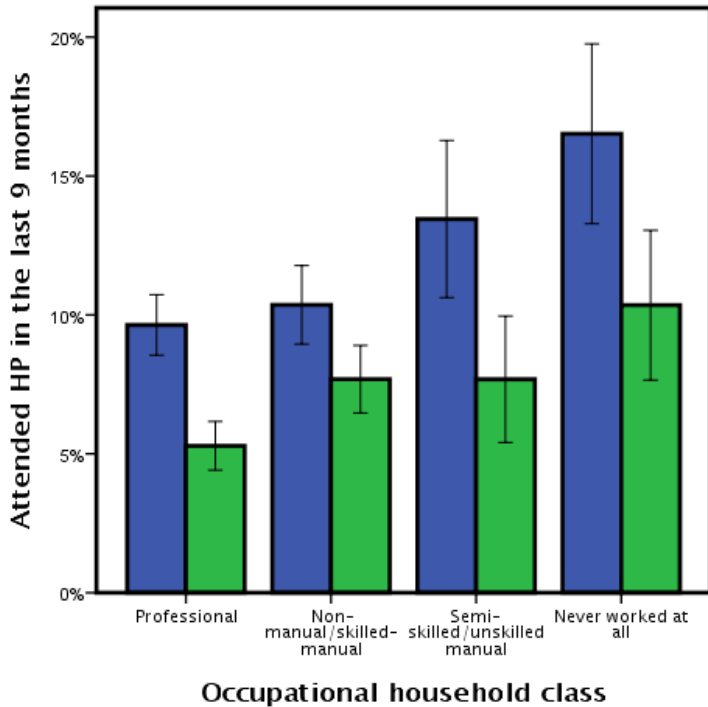
Female
Male





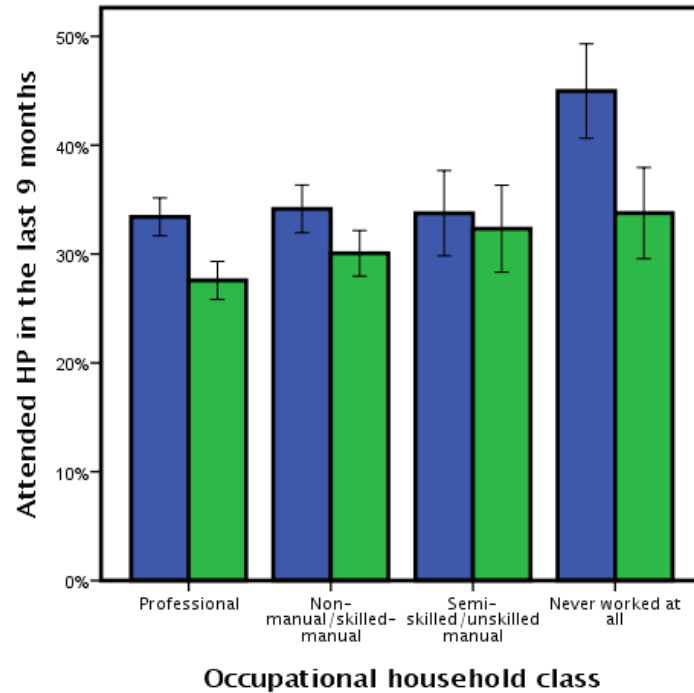
Social Class

Wheezing





Error bars: 95% CI

Chest Infection

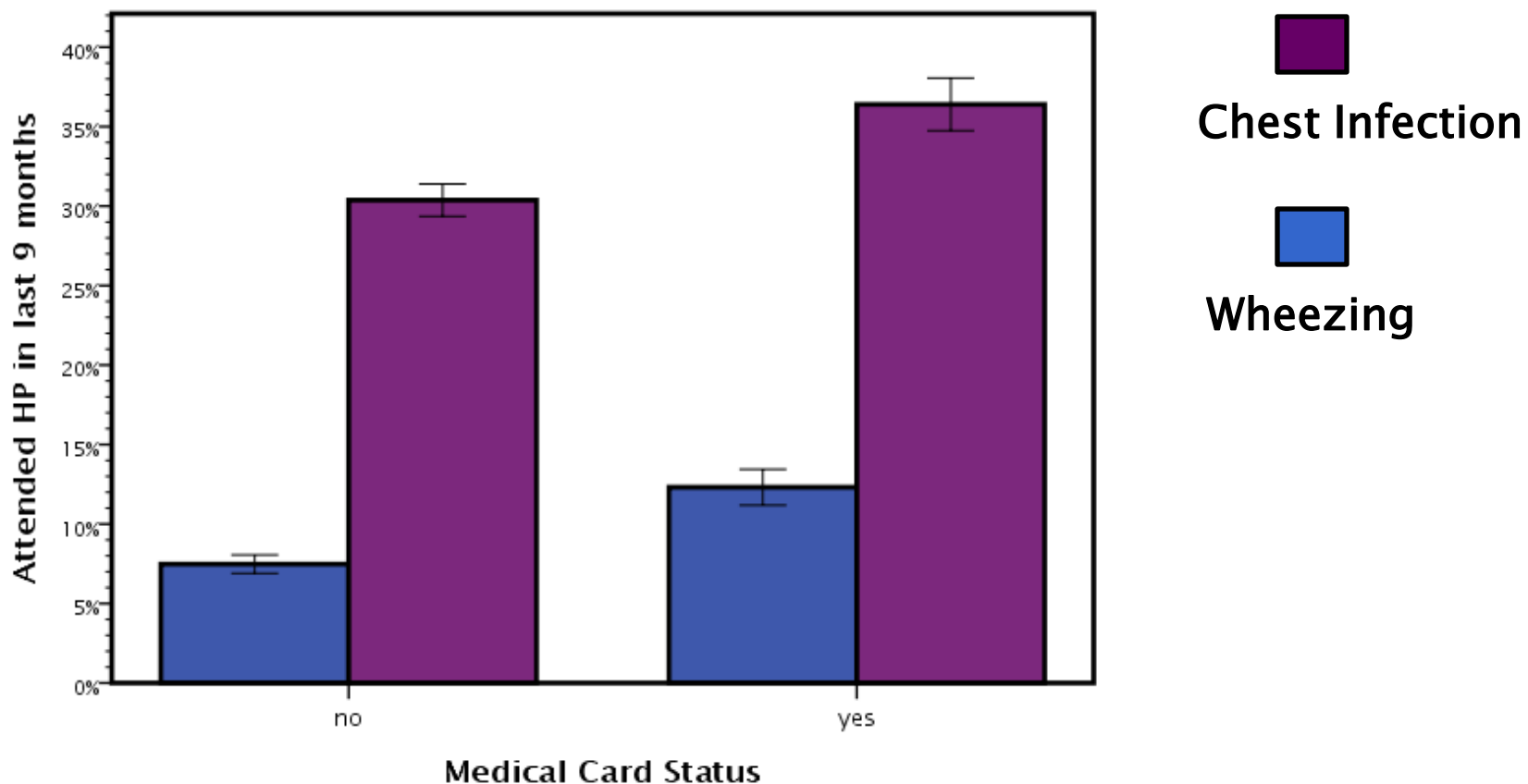


Error bars: 95% CI

 Female
 Male



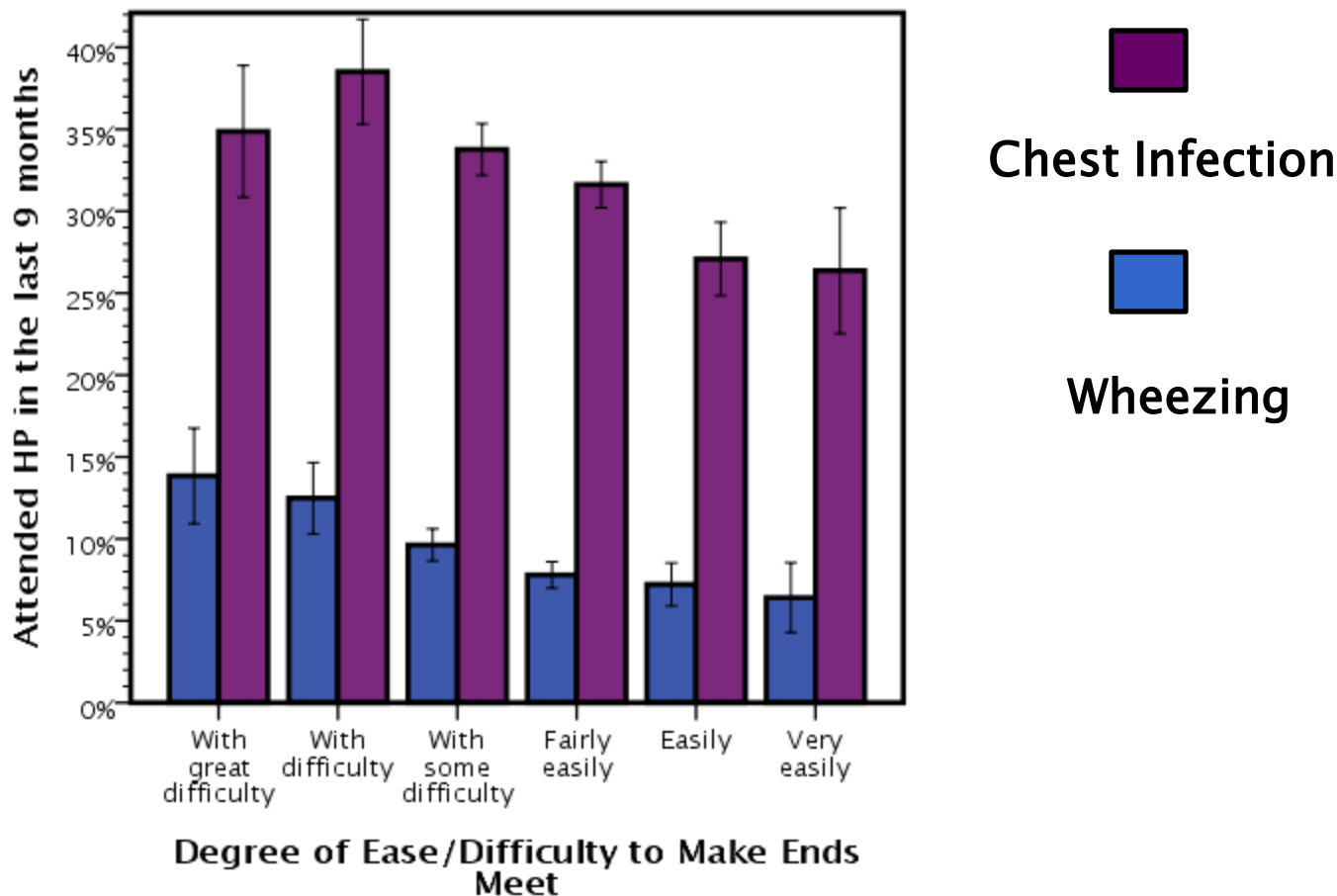
Respiratory Illness and Medical Card



Error bars: 95% CI



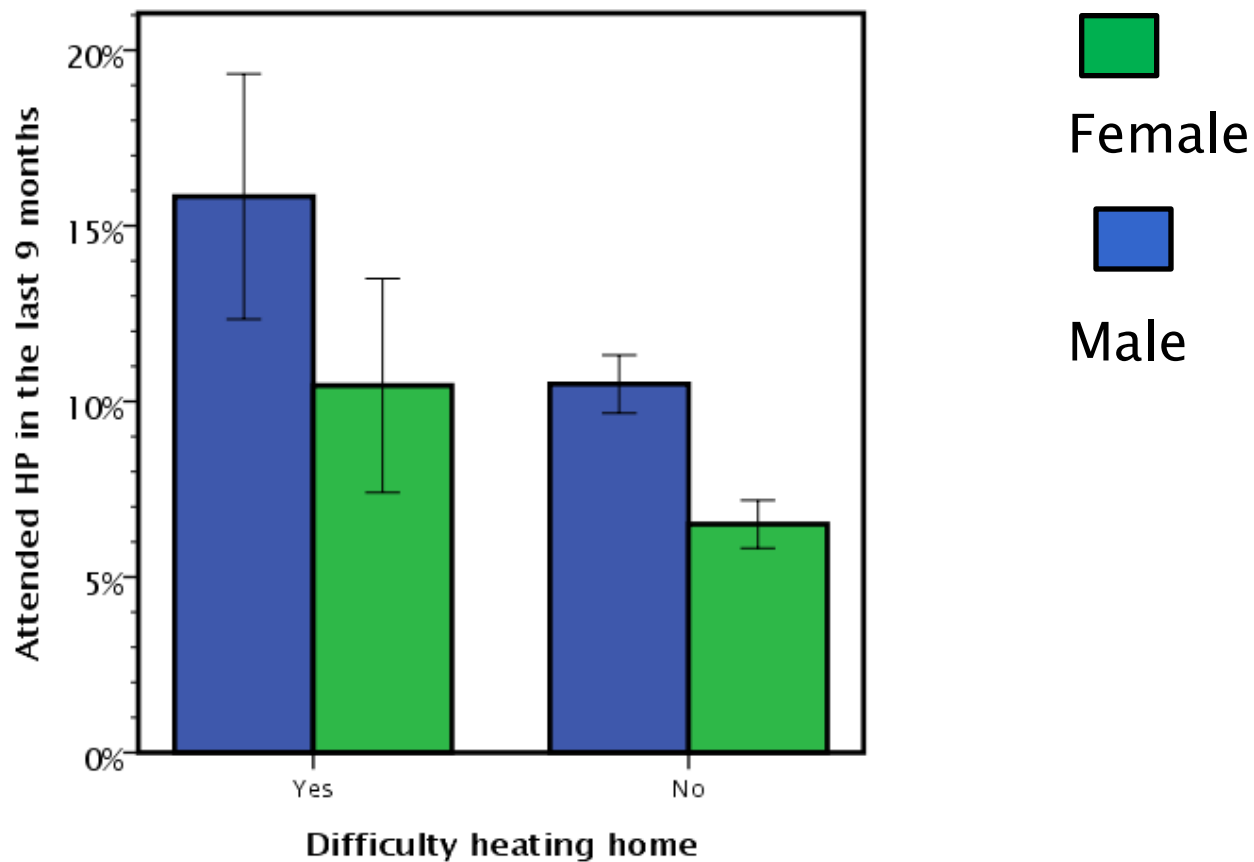
Respiratory Illness & Material Deprivation



Error bars: 95% CI



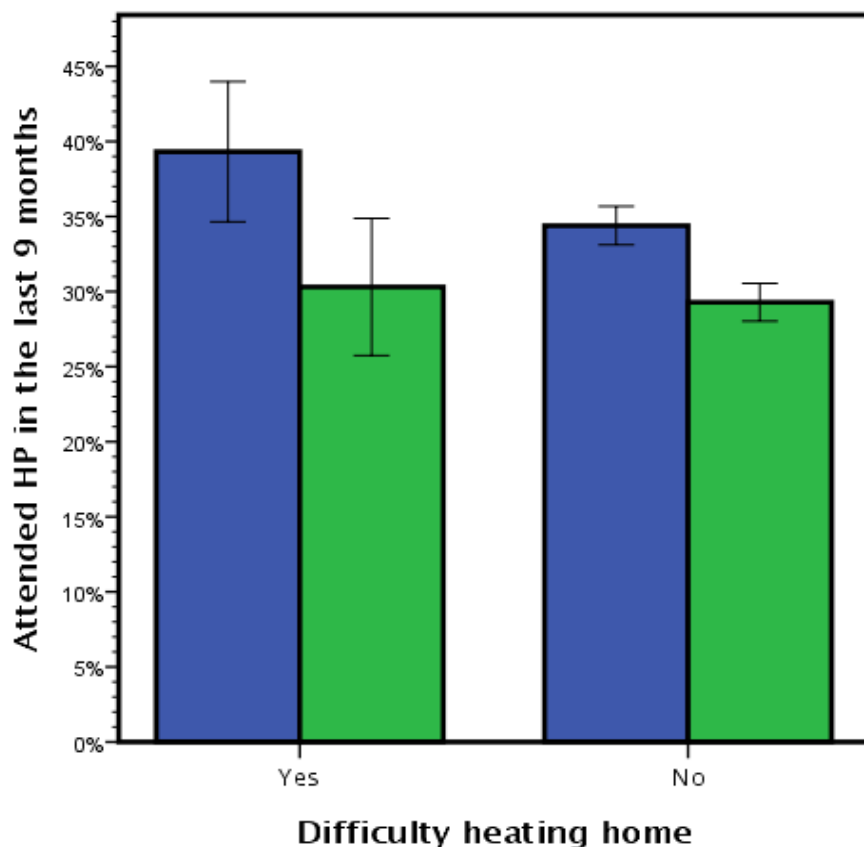
Wheezing and Material Deprivation



Error bars: 95% CI



Chest Infection and Material Deprivation



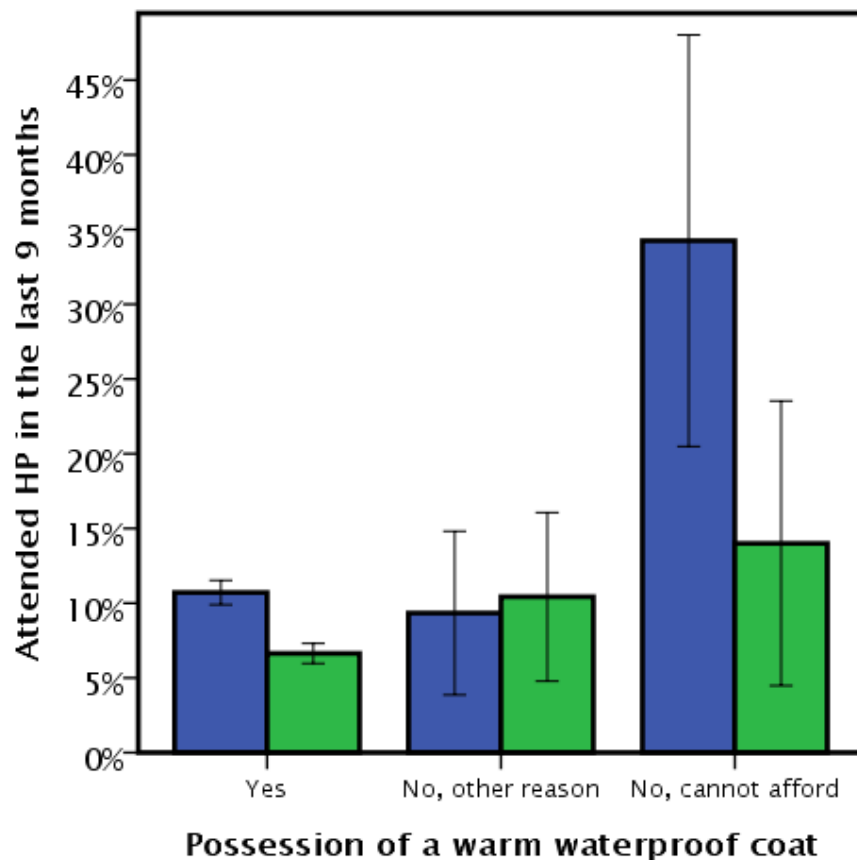
Error bars: 95% CI

Female
Male





Wheezing and Material Deprivation



Error bars: 95% CI

Female
Male





Comparison with literature*

- **Males experience more wheezing than females**
- **Breastfeeding/diet, daycare attendance, parental smoking and material deprivation are the main factors associated with infant wheeze.**
- **Longitudinal studies have found some children go into remission, while others have recurrent episodes that persist into adolescence**

* References:

Midodzi et al 2008, Propper et al 2006.



Conclusions

- **10.8% males and 6.8% females were taken to a healthcare professional with wheeze during first 9 months**
- **Visits to healthcare professionals with respiratory problems was significantly associated with a variety of socioeconomic variables: occupational class, medical card status and material deprivation.**
- **Findings consistent with international literature**



Relevance of Research

- **Increasing prevalence of wheezing and asthma worldwide.**
- **Wheezing phenotypes present diagnostic and management challenges for physicians who treat children.**
- **What factors are associated with development of asthma in Irish children?**





References

- **Midodzi, William, Rowe, Brian, Majaesic, Carina, Saunders, L. Duncan, Senthilselvan, Ambikaipakan, 'Predictors for wheezing phenotypes in the first decade of life'. *Respirology* 2008 13, 537–545**
- **Propper, Carol and Rigg, John, 'Understanding Socio-Economic Inequalities in Childhood Respiratory Health'. March 2006. LSE STICERD Research Paper No. CASE109**



Acknowledgments

- **D.K. is supported by the Irish Lung Foundation**



**IRISH LUNG
FOUNDATION**

Take a Deep Breath.....
and give us some of your time

- **U.R. is supported by the Health Research Board of Ireland through the HRB Centre for Primary Care Research under Grant HRC/2007/1**



HRB CENTRE FOR
PRIMARY CARE RESEARCH





Questions?