Growing Up in Ireland
National Longitudinal Study of Children

Bullying and Health Care Untilisation

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ESRI

An Roinn Leanaí agus Gnóthaí Óige
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Acknowledgements

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Growing Up in Ireland

Background

- Socioeconomic factors and having an ongoing chronic illness are significant factors that predict health care utilisation in children

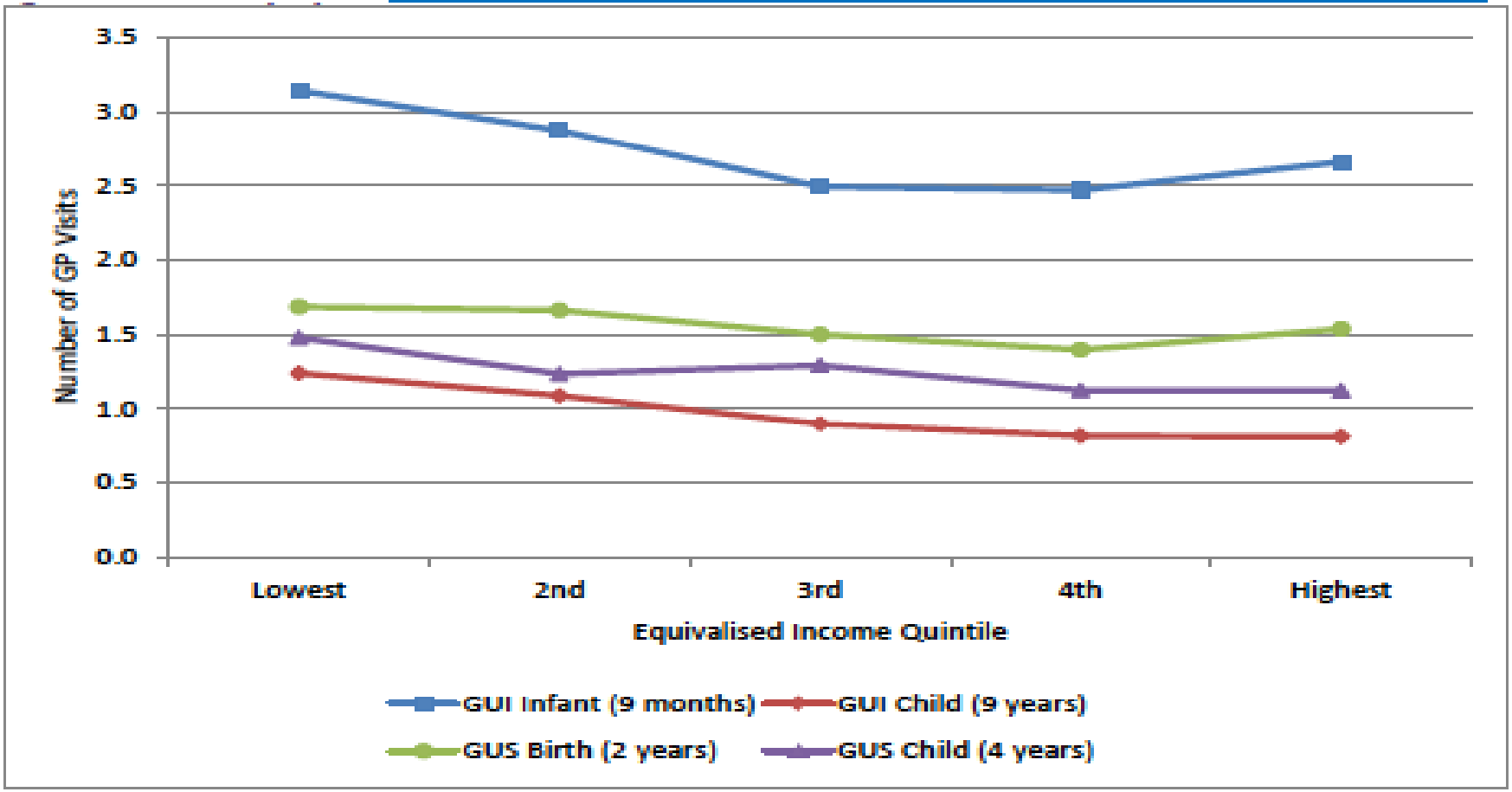
- Known association between chronic illness and victimisation in children and adolescents (Forero et al.,1999, Wolke et al., 2001, Fekkes et al.2006)
  - Being bullied leads to deterioration in health
  - Having chronic illness, more likely to be bullied

Background

- Research has mainly focused on the positive association between victimisation and specific conditions,
  - e.g. diabetes, ADHD and disability
- Bullied children often hold back on disclosing victimisation and bullying (Wolke et al., Arch Dis Child, 2001)
- Little research on the use of the health services by children who are bullied
- Based on research findings from Nordic countries, the prevalence of children's utilisation of General Practitioners' (GP) services varied from 14% - 28%.
- Tylee et al. Lancet 2007 found that most children visit their GP at least once a year

GP Visits by Equivalised Income Quintile (GUI & GUS)

Source: ESRI, WP454, Layte and Nolan 2013



Note: Sample weights are employed.

Study Aim

- To examine the association between being a victim of bullying and healthcare utilisation in a nationally representative GUI cohort of 9-year-old children

Study Population

- GUI child cohort – wave 1
- Children
  - Total = 8,568; Females: 4,404, Males: 4,164
  - Questions on bullying
- Primary care giver
  - Total = 8,568; Females: 8,465, Males: 103
  - Questions on health care utilisation and chronic illness/disability

Method – Study Questions

- Bullying
  - Self reported victimisation of bullying in previous 12 months. Questions as previously reported.
- Chronic Illness
  - “Does the Study Child have any on-going chronic physical or mental health problem, illness or disability?” Nature of problem?
  - “Do you think the Study Child has a Specific Learning Difficulty, Communication or Co-ordination Disorder?”

    (Select from dyslexia, dyspraxia, autism, Asbergers, ADHD, S&L difficulty, slow progress (reasons unclear) and other)
- Health Care Utilisation
  - `’About how many nights has the child spent in hospital over his/her lifetime?”
  - Visits to ED, number of contacts with GP, another medical doctor or other health professionals over the last 12 months

Method – Data analysis

- Statistically reweighted data
  - Ensure representative of all 9 yr olds
  - Complex sample design
- Health care utilisation (HCU)– dependent variable
  - Median nights in hospital over lifetime
  - Median Visits to ED (last 12 months)
  - No. GP contacts, other medical, other professionals (12 months)
- Univariate model
  - Association with a number of variables *separately* with HCU
- Multivariable model
  - Association with a number of variables *simulanteously* with HCU model to determine best predictors of HCU while taking each of the other variables factors into account

Regression Model- Independent variables

• Victimization of child – (primary caregiver)	Yes/No
• Gender	Male/Female
• Lone parenthood	Yes/No
• Chronic illness	Yes/No
• Overweight or obesity	Yes/No
• Occupational household class	Non-professional/ Managerial, Prof/Manag.
• Medical card status	Full, doctor only, none
• Deprivation index	Numeric

Prevalence data

	All	Male	Female
Victim of bullying	40	40.1%	39.7%
Chronic Illness	11.1%	12.4%	9.8%
Average no. nights in hospital over lifetime (43%)	1.98	2.20	1.76
Average No. GP contacts per year (41%)	1.0	1.04	0.9

ED Visits: 14.9%; other doctors 16%; other HCP 7.3%

Health Utilisation - Simple Multivariable Model**

Source: (Reulbach et al., 2013)

	Over life time	Last 12 months			
	Nights in hospital (median split)	**Visits to ED** (median split)	Number of times in contact with: (median split)		
			GP	**Other Medical Doctor**	**Other Professional**
Total no. (%)	7,783 (90.8%)	7,788 (90.9%)	7,784 (90.8%)	7,785 (90.9%)	7,786 (90.9%)
Male Gender	OR: **1.34** *p<0.001	OR: **1.16** *p=0.031	OR: **0.85** *p=0.001	OR: 0.97 p: n.s.	OR: **1.57** *p<0.001
Chronic illness	OR: **2.47** *p<0.001	OR: **1.46** *p<0.001	OR: **2.37** *p<0.001	OR: **3.93** *p<0.001	OR: **5.58** *p<0.001
Victimised by bullying	OR: 1.07 p= n.s.	OR: 0.98 p=n.s.	OR: **1.14** *p=0.009	OR: 1.06 P= n.s.	OR: **1.38** *p=0.001

**Adjusted for parental age and household occupational class

Victimisation and health utilisation

(Reulbach et al., 2013)

	Nights in hospital over lifetime	Contacts with GP	Contacts with other medical doctors	Contacts with other healthcare professionals
Victimised child	**1.27** *p*<0.001	**1.28** *p*<0.001	**1.44** *p*<0.001	**1.67** *p*<0.001
Male gender	**1.28** *p*<0.001	**0.88** *p*<0.001	**0.82** *p*<0.003	**1.31** *p*<0.008
Lone parenthood	0.98 *p*<0.756	1.03 *p*<0.554	0.87 *p*<0.111	**1.54** *p*<0.002
Chronic illness	**2.16** *p*<0.001	**2.36** *p*<0.001	**4.43** *p*<0.001	**5.05** *p*<0.001
Overweight or obesity	**1.09** *p*<0.031	**1.11** *p*<0.007	0.90 *p*<0.150	**1.29** *p*<0.013
Non-professional/managerial	**1.09** *p*<0.029	0.99 *p*<0.82	0.90 *p*<0.148	0.85 *p*<0.142
Fully covered by medical card	**1.23** *p*<0.001	**1.37** *p*<0.001	**1.42** *p*<0.001	**1.36** *p*<0.017
Covered by doctor only card	1.15 *p*<0.197	1.18 *p*<0.083	0.77 *p*<0.305	1.37 *p*<0.250
Basic deprivation index	1.00 *p*<0.778	0.99 *p*<0.509	1.04 *p*<0.181	**1.08** *p*<0.022

Main Findings

- Having a chronic illness biggest predictor of HCU
- Victimisation is the next most important factor underlying health care utilisation in children, even after adjustment for socioeconomic factors and chronic illness
- Girls more likely seen by a GP, boys a psychologist, counsellor or another non-medical professional.

Gender differences

- Further research necessary to understand gender differences in health effects of victimisation
  - ? Distress manifesting differently in boys and girls leading to perceived differences in health care needs
  - Psychosomatic disturbances, one of the most frequent mental health problems in primary care
  - ? Greater somatisation in girls
  - Higher levels of depression and suicidal thoughts in victimised girls (*Roland et al., 2002; Educational Research).*
  - In adolescent study boys more likely to be referred for suicidal ideation and gestures, peer relationship problems, behaviour problems and delinquency *(Maschi et al, 2010; Child & Adoles. Social Work J)*

Limitations

- No data gathered on intensity and severity of bullying

- Cross-sectional nature of data only allows us to determine association between bullying victimisation and HCU– not cause and effect
- Greater insights with longitudinal analysis (13 yr-olds)

Implication of findings

- Health Professionals (HPs) need to be made aware of the high prevalence of bullying (2:5 nine-year-olds) within the context of children being reluctant to disclose
- Health Professionals (HPs) need to be made aware of potential gender differences in terms of presentation of bullying
- Primary care and other clinical settings, HPs ask about bullying in consultations with medically unexplained symptoms and those with chronic illness
  - ? Need for simple screening tool for sensitive questioning
- Health Services have a role in alerting parents and clinicians about impact of vicitimisation on children's health and design of appropriate services.

Thank You

Questions?