Growing Up in Ireland
National Longitudinal Study of Children

DIFFERENT WAYS OF ESTIMATING ADHD PREVALENCE RATES AND THE IMPLICATIONS FOR MENTAL HEALTH SERVICE

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ADHD in Irish CAMHS

Attention Deficit/Hyperactivity Disorder or Hyperkinetic Disorder is a chronic behavioural disorder, characterized by symptoms of inattention, hyperactivity, and impulsivity, with onset in childhood that often persists into adulthood.

It is the most frequent primary presentation to Irish Child and Adolescent Mental Health Services (CAMHS). The Fifth Annual Report of Child and Adolescent Mental Health Services (2013) notes that for 31.6% of young patients ADHD was their main aliment.

2% of children aged 5-17 years (N= 16,664) were attending CAMHS in 2012 (CAMHS report, 2013). Accurate estimates of the prevalence of mental health disorders in youth would allow for the assessment of service gap, and are critical for shaping public policy, planning, and the development of mental health services.

The prevalence of ADHD and how it's measured

"Prevalence estimates of ADHD within and between countries often vary widely" (Thomas et al., 2015)

"significant variations in the prevalence rates of the disorder across continents were reported" (Canino, 2011)

"Several literature reviews have reported highly variable rates worldwide, ranging from as low as 1% to as high as nearly 20% among school-age children" (Polanczyk, 2007)

ADHD is the most common behavioural disorder among children. It is estimated that the condition affects 3-9% of school-aged children and young people." (http://www.hse.ie/eng/health/az/A/ADHD/)

„It's thought that around 2% to 5% of school-aged children may have ADHD" (NHS Choices)

The precise approximation of ADHD prevalence rate for Ireland is currently not available.

Prevalence variability sources

Reasons for reported differences:

geographical (Europe vs North America) -> ADHD as a product of cultural factors

Increase in incidence over time

Methodological differences

Methods of data collection and definitions of caseness used in research vary

a single question
"Has a doctor or health professional ever told you that (sample child) had attention deficit hyperactivity disorder (ADHD) or attention deficit disorder (ADD)?" (American National Health Interview Survey)

validated ADHD rating scales
Connors Scale, Strengths and Difficulties Questionnaire (SDQ), Child Behaviour Checklist (CBCL)

clinical interviews and standardised diagnostic measures
based on ICD 10 or DSM IV, V, Development and Well Being Assessment (DAWBA)

Other varying factors include informants used to assess symptoms (parents, teachers, subjects) and methods of data integration ("and", "or", "best estimate"), examined population (age and gender), and inclusion of functional impairment

ADHD as measured in GUI Study (9 year olds)

Strengths and Difficulties Questionnaire (SDQ) completed by primary caregiver and teacher

A 25 item inventory with five sub-scales: emotional symptoms, hyperactivity/inattention, peer relationships problems, conduct problems and pro-social behaviour. 20 items form a total difficulties score

Hyperactivity/inattention scale (0-10 points)
Restless, overactive, cannot stay still for long
Constantly fidgeting or squirming
Easily distracted, concentration wanders
Thinks things out before acting
Sees tasks through to the end, good attention span

4-fold classification: 'close to average', 'slightly raised', 'high' and 'very high' scores
Older 3 band categorisation: 'normal', 'borderline', and 'abnormal' classes

Indication made by primary caregiver whether the child had ADHD

with subsequent information on the presence of formal diagnosis

"Do you think the Study Child has a Specific Learning Difficulty, Communication or Co-ordination Disorder?"

"What is the nature of the difficulty or disorder?" : a) Dyslexia (incl. Dysgraphia, dyscalculia), b) ADHD (Attention Deficit Hyperactivity Disorder), c) Autism, d) Aspergers Syndrome, e) Speech & Language Difficulty, f) Dyspraxia, g) Slow progress (reasons unclear), h) Other (specify).

"Was it diagnosed by a professional?"

GUI results – different possible prevalence estimations

Parents yes/no indication: 1.4% (116 children out of 8568), including 0.83% (71) with professional diagnosis

SDQ scoring: difference that cut-points make

	Original categorisation			New categorisation			
	normal	borderline	abnormal	close to average	slightly raised	high	very high
Parent-rated Hyperactivity	0-5	6	7-10	0-5	6-7	8	9-10
Teacher-rated Hyperactivity	0-5	6	7-10	0-5	6-7	8	9-10

When defining ADHD caseness as reaching the threshold of top 10% of high scores ('abnormal' category in original classification or 'high' and 'very high scores' in current one), the change from old to new banding lowers the prevalence percentage by more than 4%.

SDQ with new cut-points ("close to average", "slightly raised", "high and very high" scores)

Parent

Teacher

High scores

& 2.4%

7.2%

8.1%

or 12.7%

Raised and high scores

& 7.5%

18.6%

16.1%

or 26.9%
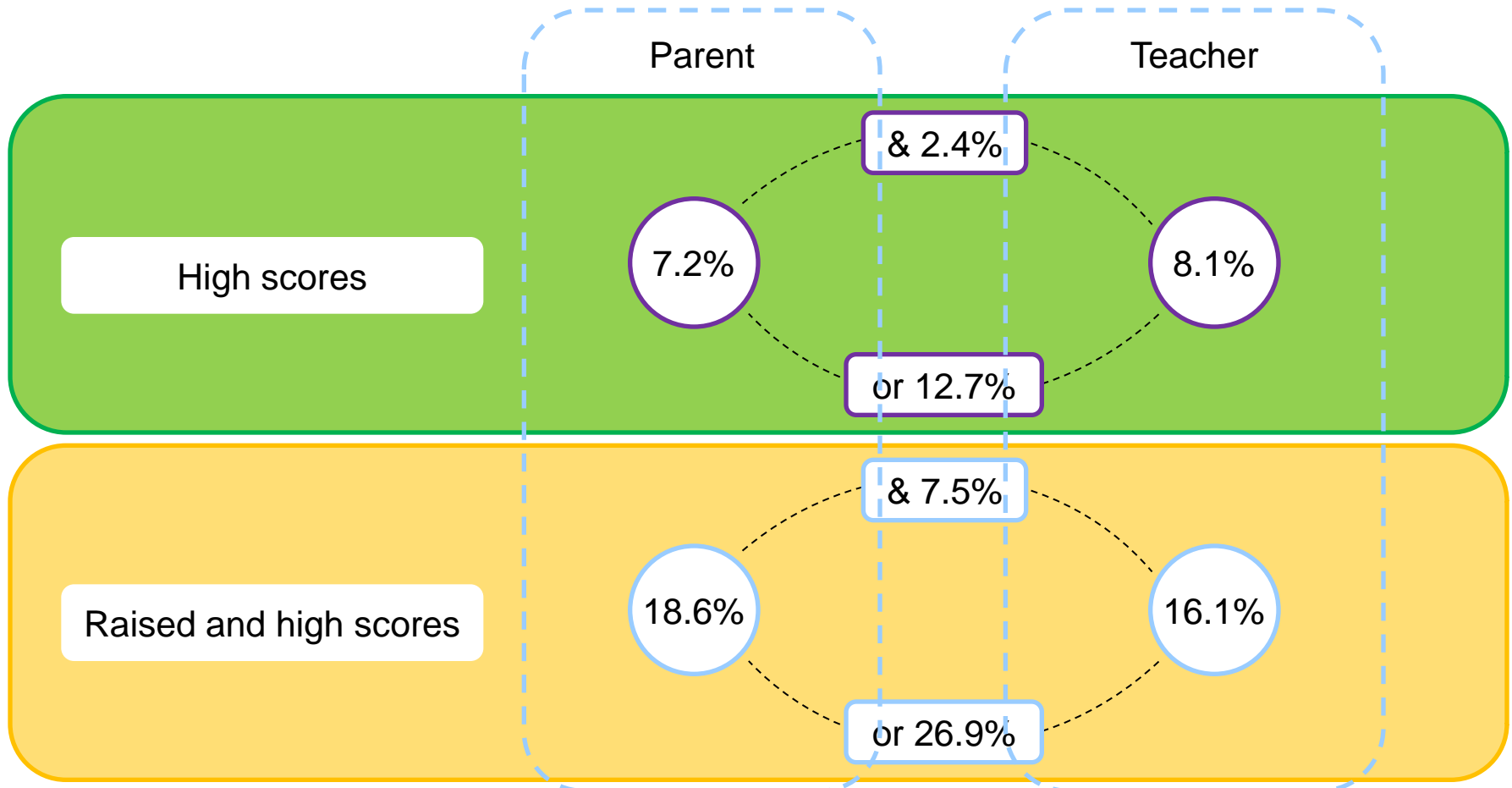
GUI findings and Irish public policy

Growing Up in Ireland was not designed as an epidemiological study on youth mental health.

Its findings nonetheless are informing public policy and were featured for example in 'Better Outcomes, Brighter Futures, the national policy framework for children and young people 2014-2020' released in April 2014.

The document states that "a significant minority of children (15%-20%) were classified as showing significant levels of emotional or behavioural problems", repeating a statement present in Nixon's report (2012), that averages parent's and teacher's assessments ("borderline" and "problematic" scores) for all SDQ subscales.

Numbers obtainable form GUI on the prevalence of ADHD and its symptoms in Irish 9 year olds range from around 1% up to more than 25%, and it is vital to understand what those different numbers represent and mean.

Underestimations
- Lack of assistance with educational difficulties, problems with self-esteem, impaired family and peer relationships, and an overall decrease in quality of life
- Lack of assistance with spillover effects for family members (impact on emotional and physical health and work productivity)
- Long-term effects of untreated symptoms manifesting in occupational difficulties, criminal activity, substance abuse problems, marital discord, traffic accidents, generating long-term economical costs

Overestimations
- Greater immediate economical costs
- Labelling
- Over-medicalization
- Anchoring effect
- Misdiagnosing other disorders

THANK YOU