The State of the Art: Economics and mental health in children and adolescents

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Where we’re going

A. Some introductory remarks to define the territory
The State of the Art: Economics and mental health in children and adolescents

Introduction
(Health) economics: the discipline ... can be applied to the topic of child mental health

- Whole system(s) evaluation
- Market analysis
- Supply and demand for health care
- What is health? What is the value of health? What influences health?
- Studies of planning, budgeting and monitoring mechanisms
- Micro-economics & evaluation

See Culyer, 1987
High demand – low supply

Evaluation modes – and where we going

B. Cost of illness studies
C. Costs in adulthood and cost savings in the future
D. Cost-effectiveness studies
E. Finale

IMAGINE...
For Europe - scant evidence

The cost of brain disorders

- 5.93 million c&a 0-17 years with ...
- ASD, CD, ADHD
- €21.3billion (PPP; 2010) for health care, non-medical care and informal care

- Only 3 disorders?
- 11 studies for epidemiology; 4 for costs

Gustavsson et al, 2011; Oleson et al, 2012
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Cost of illness studies: ADHD
Cost of illness: the case of ADHD (US$PPP, 2021)

2*US lit reviews: $4,600 - $18,470

2*UK surveys: $5,300 - $6,665

Belgium parent survey: $1,980

NL clinical sample: $4,900

Cost varies by study design, age, severity etc. and most importantly scope

Scope – costs in these studies cover different combinations of mental health care, social care, education, justice system, parental out-of-pocket expenses, lost productivity
Cost of health care: the case of ADHD (US$PPP, 2021)

2*US lit reviews: $600 - $3,410

2*UK surveys: $2,170 - $460

NL clinical sample: $1,010

Belgium parent survey: $1,130

Cost varies by study design, age, severity etc. ... and scope?

**Scope** – what does each country/region/area provide within health and mental health care? What information was recorded? [Health care as % of total? Education and CJS?]
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Future costs and cost savings studies: CD
Outcomes in adulthood (UK)

Analysis of UK cohort surveys suggests:

- **C&A CD**: less likely to be economically active age 30 than no-CD peers, but if working, earned more. (Poorer outcomes at 35-56 also.)

- **C&A ADHD**: at age 30, poorer employment and if working were in less-skilled, lower-paid jobs that no-ADHD peers

- **Externalising behaviour**: at age 30, more symptoms of depression, anxiety, alcohol abuse and experienced adversity than no-EB peers.
Future costs: the case of CD in the UK
Average extra costs from 10 to 28yrs

Scott et al 200, BMJ
Persistent CD: cost saving model

Advantages of decision models
- Estimates impact of an intervention when insufficient evidence on costs and outcomes exists.

Disadvantage of decision models
- Insufficient evidence to build the model!
- Many do not make clear the assumptions used

A number of uncertainties including links between:
- C&A disorder and longer-term outcomes
- Improvement in C&A disorder and improvement in longer-term outcomes
- Services/support used (costs) and longer-term outcomes
- Limited transferability between countries
- And of course, rarity of evidence on the costs of the problem we are trying to prevent

Bonin, Stevens, Beecham et al, 2012, BMCPH
Probability of child with persistent CD

A small change in the % child having persistent CD, but a positive return on investment after 5-8 years.

Bonin, Stevens, Beecham, 2011, BMCPH
Parenting programmes for child age 5 with persistent CD (2008-09 prices)

<table>
<thead>
<tr>
<th>Budget</th>
<th>Av £ p.a. per person with P~CD</th>
<th>Savings over 25 years</th>
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<tbody>
<tr>
<td>Age 5-10</td>
<td></td>
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<tr>
<td>NHS</td>
<td>£1,1113</td>
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<tr>
<td>Social Care</td>
<td>£157</td>
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<tr>
<td>Education</td>
<td>£882</td>
<td>£63</td>
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<td>Voluntary Orgs</td>
<td>£23</td>
<td>£23</td>
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<td>Total</td>
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<td>£2842</td>
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<tr>
<td>Age 11-16</td>
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<tr>
<td>NHS</td>
<td>£101</td>
<td>£2,195</td>
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<tr>
<td>Social Care</td>
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<tr>
<td>Education</td>
<td>£1,202</td>
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<td>Voluntary Orgs</td>
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<td>Total</td>
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<td>£690</td>
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<td>Age 17+</td>
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<tr>
<td>Total</td>
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<td>£690</td>
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</tbody>
</table>

Intervention £1000-£3300 per child; breaks even c5-9 years. BUT – what about roll-out?

Bonin, Stevens, Beecham et al, 2011, BMCPH
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Cost-effectiveness analyses: depression
Is “Intervention A” more cost effective than TAU?

High costs

Less effective

Lower costs

More effective

Do outcomes justify the higher costs?

Intervention A is more cost-effective
(equal or lower costs and higher outcomes)
Cost-effective? Treating depression
(studies similar in study year, c&a age, SSRI)

UK: SSRI v SSRI+CBT

At 28 weeks...
- No sig diff outcomes
- No sig diff costs
- Only a 30% probability that SSRI+CBT more cost-effective than SSRI alone

US: SSRI v CBT v CBT+SSRI

At 12 weeks...
- SSRI alone more cost-effective

At 36 weeks...
- >90% probability that SSRI+CBT (90%) cost-effective than SSRI alone
Is SSRI+CBT more cost effective than SSRI alone?

Approximate spread of individual points (with apologies to authors for inaccuracy!)

Intervention A is more cost-effective (equal or lower costs and higher outcomes)
Treatment for depression

Good news
- Two studies studying the cost-effectiveness of similar treatment options...
- ... although in different countries with different health care organisation and financing systems.

Bad news
- Conflicting results
- Need more studies of these interventions ...
- And then what about other treatments?
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Finale

Quantity, quality & the future
State of the art: quantity 2005-2012

- On average c7 English language ‘economic’ papers published per year (excl medication only).
- ... across all ages, diagnoses, severity, interventions, countries, etc.
- 4/7 US: One CEA. And 10 per year since 2009 An improving picture?
- Link research to practice? Not enough evidence
State of the art: quality 2005-2012

- Quality generally improving compared to earlier reviews

- Methods commonly clearly stated and appropriate to topic and evaluation mode

- Economic evaluation modes appropriate to topic – some tweaking? Perspective; family; unit costs.

- We still don’t know enough about what support or treatment to provide; when, where or to whom
The future: from research to clinical expertise

How can economic studies help clinicians

- Costs; for services, for c&c ‘packages’
- CEA evidence on interventions helps inform commissioners
- Cost variations analyses help inform providers

How can clinicians help economic studies

- Be open to an economic evaluation
- Be prepared to share cost/finance data as well as outcomes
- Involve an economist early in planning your study