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Are parenting programs in Sweden cost-effective in reducing child conduct problems?

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2014-06-10

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Health economic evaluation

- Informed decision-making – maximize health with available resources

- Compares the relative costs and effects of two or more courses of action.

$$\text{Incremental Cost-Effectiveness Ratio (ICER)} = \frac{\text{Cost}_A - \text{Cost}_B}{\text{Effect}_A - \text{Effect}_B}$$

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Why the cost-effectiveness of parenting programs?

- Poor parenting practices as a risk factor for childhood conduct problems (CP)
- Early onset of CP increases the risk for persistent problems in adulthood
- Severe and costly outcomes
- Few international studies on the effectiveness and cost-effectiveness of parenting programs but none comparing several in an RCT

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Aim

To perform a health economic evaluation, from a payer´s perspective, of 4 parenting programs and a self-guided book on parenting strategies compared to a waitlist control, at post-test (4 months after baseline upon program completion).

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Methods

Study design

Parents of children aged 3-12 years screened for conduct problems and recruited at local health units.

Parents were randomized to: a program, a book, a waitlist.

Participants

961 parents with baseline data (1104 randomized):

- 635 who started a program
- 165 started reading the book,
- 159 parents in a waitlist control.

Interventions

Programs Komet, Connect, Incredible Years, Cope

A self-guided book on parenting strategies (Fem gånger mer kärlek)

A 4-month waitlist control

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Methods

Data collection

Parent reports at baseline and post-test

Instrument

ECBI

Outcome measures

1.Cost/point reduction in the intensity scale of the Eyberg Child Behaviour Inventory

2.Cost/averted clinical case of conduct problems.

Intervention costs

Training costs – practitioner's training fees, travel costs, marketing

Running costs – practitioner's time running + outside sessions, material, rent of venue

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Results – Costs

	Komet (n=172)	Connect (n=196)	IY (n=92)	Cope (n=175)	Book (n=167)
Total cost	1 402 298	519 216	1 107 249	571 287	20 040
Average total cost/child	**8 153**	**2 649**	**12 035**	**3 264**	**120**
Total running cost	1 014 272	380 629	1 059 628	507 756	20 040
Average running cost/child	**5 897**	**1 942**	**11 518**	**2 901**	**120**

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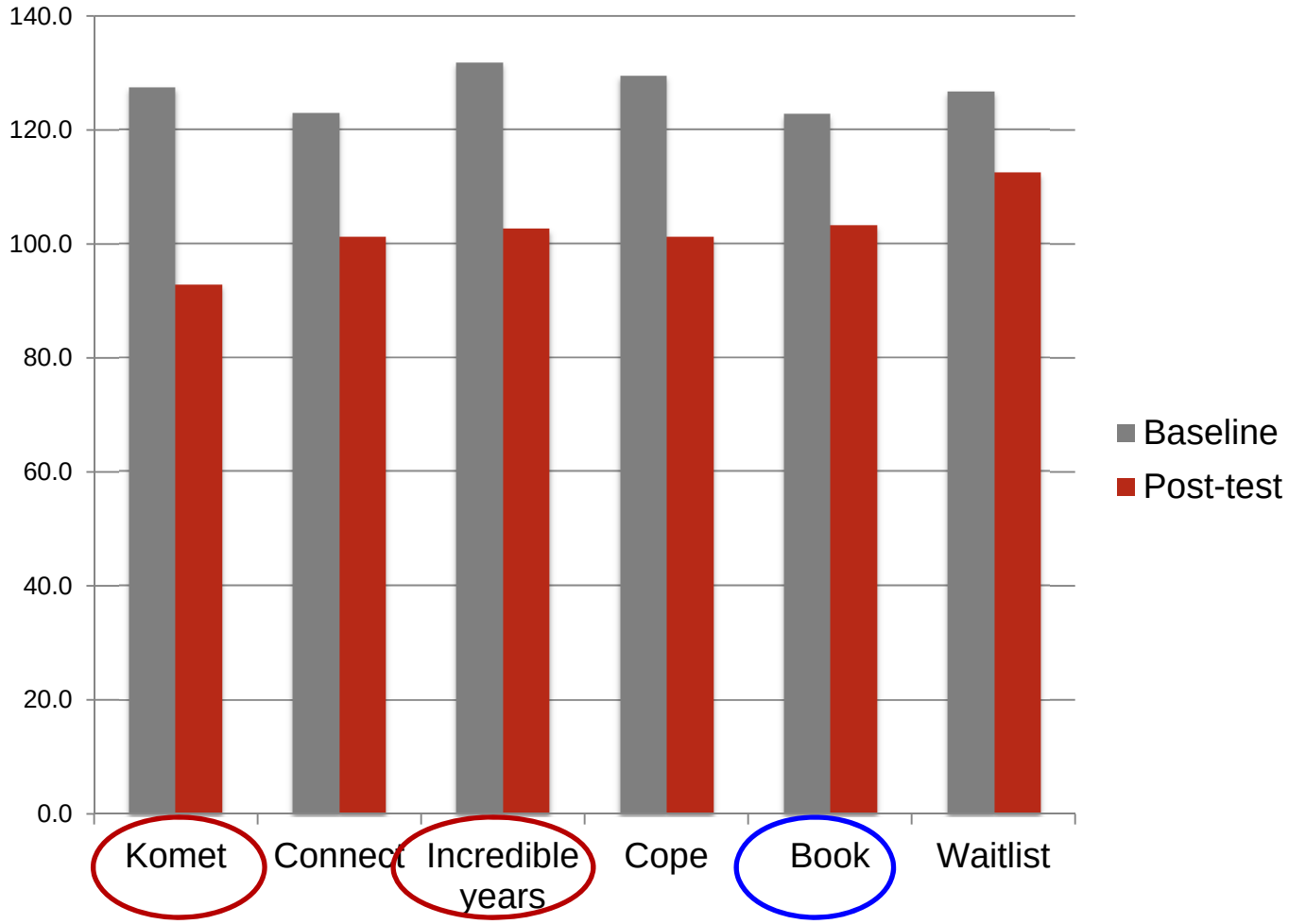
Health effects – Reduction in ECBI mean scores



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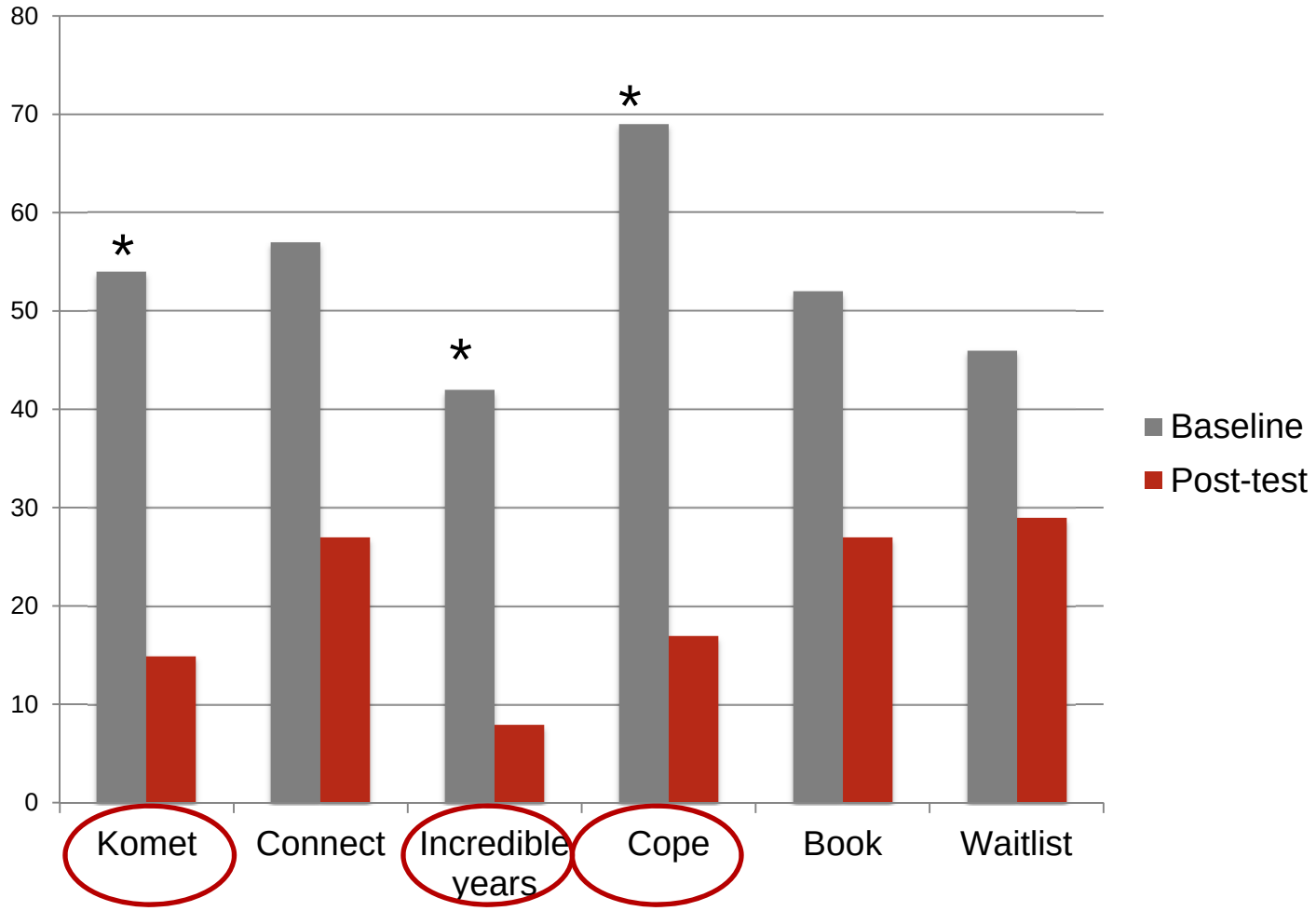
Health effects – Averted clinical cases of CP



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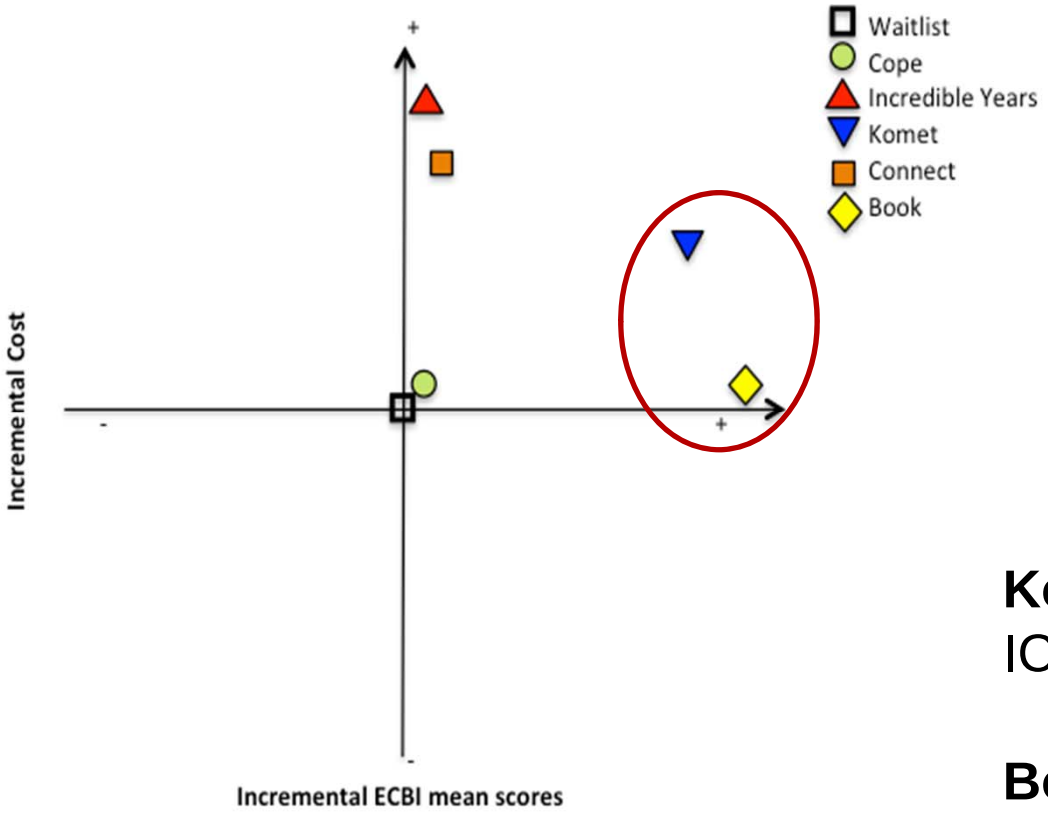
Cost-effectiveness - Reduction in ECBI mean scores



Komet
ICER = 772 SEK

Book
ICER = 13 SEK

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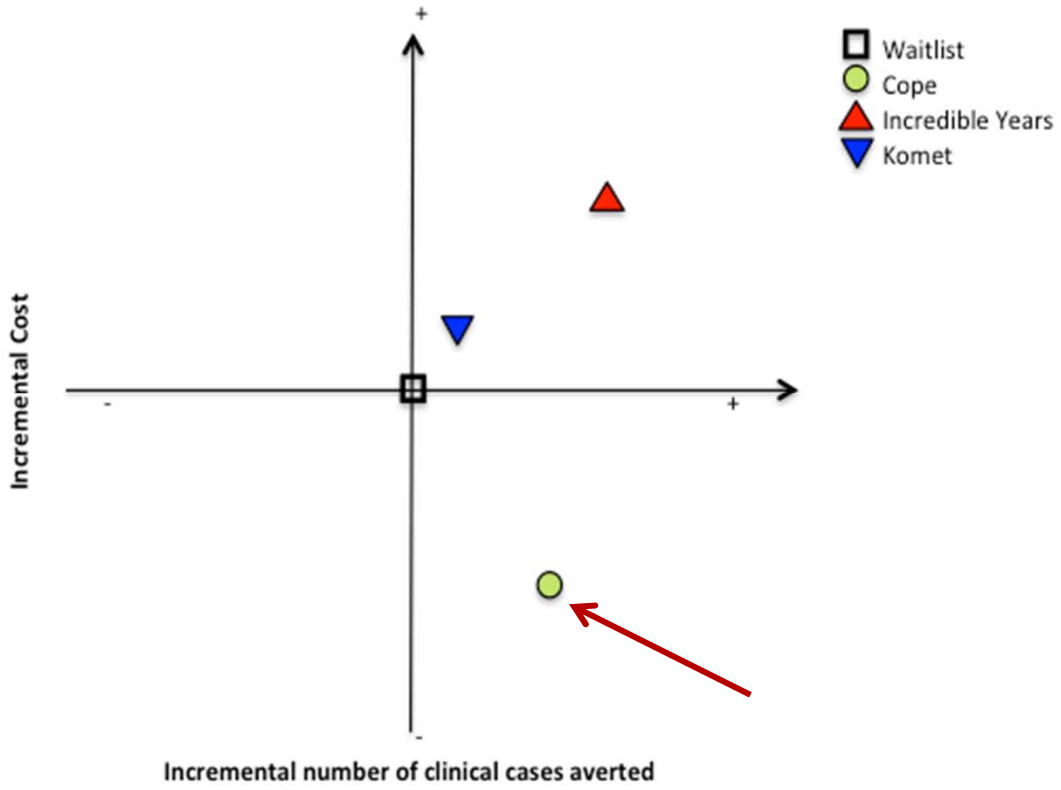
Cost-effectiveness - Averted clinical cases of CP



- **Cope ICER<0**/one averted case of CP
- Lowest average cost per one averted case of CP – **16 322 SEK**.

Sensitivity analysis: Program completion improved cost-effectiveness

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Conclusions

- Different programs were cost-effective at post-test depending on the outcome:
  - ✓ The book and Komet were cost-effective in improving child CP on a group level
  - ✓ Cope was cost-effective in reducing clinical cases of conduct problems
- Selection of the appropriate program determined by:
  - ✓ budget constraints
  - ✓ target group
  - ✓ decision-makers' willingness-to-pay