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*“Speaking Truth to Power:
Evidence for decisions in education, social welfare and criminal justice”*

Where does economics fit in? Incorporating economics perspectives and evidence into Campbell reviews to inform policy and practice

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Background

- ❑ A review of economics in completed C2 reviews
- ❑ Campbell & Cochrane Economics Methods Group (CCEMG)
- ❑ C2 Methods Policy Brief: Economics Methods

www.campbellcollaboration.org/MG/briefs.asp

Background

- ❑ Economics is the study of the optimal allocation of limited resources for the production of benefit to society (Samuelson 2005)
- ❑ C2 reviews cover questions whose answers are important for the improvement of individual and social well-being in environments where resources are limited
- ❑ Optimal decisions require the best available evidence on effects and efficiency
- ❑ Including economic perspectives and evidence in C2 reviews can increase their relevance and usefulness as a component of the basis for decision-making (Petticrew 2006, Lavis 2005)

Aims of the paper

- i. To describe and evaluate current approaches to incorporating economic perspectives and evidence into C2 reviews
- ii. To discuss these approaches in the context of new guidance on the use of economics methods in C2 reviews
- iii. To assess the potential for economics (and effectiveness) components of C2 reviews to influence economic decisions in policy and practice

Methods

- 33 completed C2 reviews in C2-RIPE at 05/03/2008
- Screened full-text reviews and protocols
- Inclusion criterion: must contain coverage of economics perspectives or evidence
- 31 of 33 C2 reviews met inclusion criterion
- Extracted details of economics components using pre-specified coding scheme
- Data analysis using SPSS v14.0 and thematic analysis

Results: *Publication year and CCG*

- ❑ 31 C2 reviews published between 2000 and 2008
- ❑ Majority published between 2005 and 2008
- ❑ 17 Social Welfare Coordinating Group reviews
- ❑ 9 Crime and Justice Coordinating Group reviews
- ❑ 5 Education Coordinating Group reviews

Results: *Economic interventions*

An intervention involving direct provision of financial (or material) incentives or support to a service-recipient (or service provider) with the intention of influencing behaviour (or practice)

- ❑ 7 reviews of ‘economic interventions’ or programs including an ‘economic intervention’ component (23%, 7 of 31)
- ❑ e.g. ‘Personal assistance for older adults without dementia’ (Montgomery 2008)
- ❑ e.g. ‘Approaches to Parent Involvement for Improving the Academic Performance of Elementary School Age Children’ (Nye 2008)

Results: *Highlighting economic aspects of interventions*

❑ Overall, 23 reviews highlight one or more economics aspects of interventions (74%, 23 of 31)

❑ 10 reviews highlight issue of intervention cost-effectiveness (32%, 10 of 31)

“As a focussed, time- limited form of intervention [cognitive-behavioural interventions for children who have been sexually abused] may also be a cost-effective way of helping a larger number of children than currently receive help.”

(Macdonald 2006)

Results: *Highlighting economic aspects of interventions*

- **10 reviews highlight features of the ‘resource context’**
(32%, 10 of 31)

“As educators across the country work to meet adequate yearly progress goals in state accountability systems, and as they seek affordable ways to offer additional services to students at risk of not meeting annual academic goals, it would be worthwhile to consider structured, reading-focused volunteer tutoring programs as strategies to improve reading and language skills.”

(Ritter 2006)

Results: *Highlighting economic aspects of interventions*

- 7 reviews highlight the economic burden of the problem
(23%, 7 of 31)

“Antisocial behavior can result in harm to other people or their property. The costs for the youth, the family and society may be large both in terms of physical and emotional harm, but also in terms of money.”

(Armeliu 2007)

Results: *Highlighting economic aspects of interventions*

- 8 reviews highlight levels of public / private expenditure
(26%, 8 of 31)

“The federal government, states, localities, and private foundations have invested substantial resources in programs. For example, appropriations for 21st Century Community Learning Centers increased from \$40 million in 1998 to the nearly \$1 billion appropriated for the program in 2004.”

(Zief 2006)

Results: *Highlighting economic aspects of interventions*

- 7 reviews highlight resource inputs (costs)
(23%, 7 of 31)

“[Scared Straight] programs are...very inexpensive (a Maryland program was estimated to cost less than \$1 US per participant).”

(Petrosino 2003)

Results: *Highlighting economic aspects of interventions*

- ❑ 6 reviews highlight resource consequences (costs)
(19%, 6 of 31)

“According to a survey of state correctional officials by Gowdy (1996), reduced correctional costs and recidivism were the primary goals of boot camps...boot camps may have other benefits, such as reduced need for prison beds (e.g., MacKenzie and Piquero, 1994; MacKenzie and Parent, 1991).”

(Wilson 2005)

Results: *Economic outcomes: measures of resource use, costs and cost-effectiveness*

- No reviews set out *specifically* to identify published economic analyses
- 4 reviews include a search of 'Econlit' but focus is on identification of studies of intervention effects (13%, 4 of 31)
- 8 reviews include one or more measures of resource use, costs or cost-effectiveness amongst target outcomes (26%, 8 of 31)
- 8 reviews include one or more measures of resource use amongst target outcomes (26%, 8 of 31)
- 3 reviews include one or more measures of costs and/ or cost-effectiveness amongst target outcomes (10%, 3 of 31)

Results: *Economic outcomes: measures of resource use, costs and cost-effectiveness*

- ❑ 3 reviews include one or more measures of costs and/ or cost-effectiveness amongst target outcomes (10%, 3 of 31)
 1. 'Personal assistance for older adults without dementia' (Montgomery 2008)
 - 'Direct and indirect costs, both immediate and long-term'
 2. 'School feeding for improving the physical and psychosocial health of disadvantaged elementary school children' (Kristjansson 2007)
 - 'Cost-effectiveness'
 3. 'Treatment Foster Care for improving outcomes in children and young people' (Macdonald 2008)
 - 'Programme costs and cost-benefit'

Results: *Economic outcomes: measures of resource use, costs and cost-effectiveness*

□ Implications for future research:

“Future studies (or even papers on past studies) should - minimally - provide information on the costs of programmes. Wherever possible, cost-benefit analyses should be undertaken or the data necessary for this to be done should be incorporated.”

(Macdonald 2008)

Results: *Economic outcomes: measures of resource use, costs and cost-effectiveness*

- ❑ Overall, 2 reviews found no included studies containing target ‘economic outcomes’ (2 of 8)**
- ❑ Overall, 6 reviews found small numbers of included studies containing target ‘economic outcomes’ (6 of 8)**
 - All 6 reviews present a narrative summary of these data (6 of 6)**
 - 2 reviews include a meta-analysis of one or more measures of resource use (2 of 6)**

Results: *Extended coverage of economic analyses*

- ❑ 'Personal assistance for older adults without dementia' (Montgomery 2008)
- ❑ Personal assistance is paid support given to older adults with impairments in various settings to enable them to participate in mainstream activities
- ❑ Narrative summary of the results of four cost analyses
- ❑ Critical appraisal to highlight key strengths and limitations (e.g. analytic perspective, generalisability)
- ❑ Discussion of results (e.g. substitution effect between personal assistance and informal care)

Results: *Reviews which do not seek to summarise economic analyses*

- Identify those included studies which contain economic analysis and data
- Include a succinct statement on the approach (not) adopted

“This review did not examine research on the cost effects of these programs...”

(Wilson 2005)

Results: *Implementation data, resource use and costs*

- ❑ Evidence on costs and resource use provide an important component of the ‘implementation context’ for evidence on intervention effects**

- ❑ Implementation data – characteristics of interventions and comparators – can inform assessments of resource use and costs**
 - Duration of the intervention period
 - Number and duration of sessions
 - Time intervals between sessions
 - Type and number of personnel
 - Delivery setting
 - Types and amounts of equipment and other materials
 - Size of participant groups (if applicable)

Results: *Implementation data, resource use and costs*

- ❑ 28 reviews include one or more types of implementation data (90%, 28 of 31)
- ❑ 21 reviews tabulate these data in 'characteristics of included studies tables' or additional tables (or both) (68%, 21 of 31)
- ❑ 12 reviews include narrative descriptions of these data in main text of review (39%, 12 of 31)
- ❑ 7 reviews present these data in both tables and narratively *and* in main text (23%, 7 of 31)

Results: *Implementation data, resource use and costs*

	n
Any implementation data	28
Duration of intervention period	22
Number of sessions	19
Duration of each session	16
Time intervals between sessions	13
Delivery setting (e.g. prison, school)	13
Types of personnel delivering intervention	18
Number of personnel delivering each session	0
Types of equipment and other materials used	4
Amounts of equipment and other materials used	0
Delivered to individuals, groups, both or other (e.g. area-based)	28
Size of group (if applicable)	4 (22)

Results: *Implementation data, resource use and costs*

- Extract as much implementation data as possible for comparators (if applicable)
- Include a table which systematically summarises implementation data, by study

Additional Table: Intervention characteristics (resource inputs) by study

<i>Study</i>	<i>Program</i>	<i>Duration of intervention period</i>	<i>Number of sessions</i>	<i>Duration of each session</i>	<i>Time intervals between sessions</i>	<i>Delivery setting</i>	<i>Types of personnel delivering intervention</i>	<i>Number of personnel delivering each session</i>	<i>Types of equipment and other materials used</i>	<i>Amounts of equipment and other materials used</i>	<i>Delivered to individual, group, both or other</i>	<i>Size of each group (if applicable)</i>
A	Program A	10 wks	10	1 hr	Weekly	Prison	Trained therapist	1	None	N/A	Individual	N/A
	Comparator A	10 wks	10	1 hr	Weekly	Prison	Prison officers	4	Not stated	Not stated	Group	20
B	Program B	18 wks	12	2 hrs	Weekly (wks 1-6); then every two weeks (wks 7-18)	Prison	Trained therapist	1	Not stated	Not stated	Individual	N/A
	Comparator B	No program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
C	Program C	12 wks	12	2 hrs	Weekly	Prison	Not stated	Not stated	DVD, DVD player, screen, projector	Not stated	Group	12
	Comparator C	12 wks	Not stated	Not stated	Not stated	Prison	Not stated	Not stated	Not stated	Not stated	Group	12
D	Program D	8 wks	4	Not stated	Every two weeks	Prison	Trained therapist	Not stated	Not stated	Not stated	Individual	N/A
	Comparator D1	8 wks	4	Not stated	Not stated	Prison	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated
	Comparator D2	8 wks	4	Not stated	Not stated	Prison	Not stated	Not stated	Not stated	Not stated	Not stated	Not stated

Results: *Moderator and sub-group analyses*

- Implementation data used in moderator analyses
- Implementation data used in sub-group analyses
- These analyses can convey useful information about relationship between effect-size and levels of resource use

Discussion & conclusions

- The majority of C2 reviews incorporate economics perspectives and evidence
- Current approaches are often fairly limited in scope
- Campbell authors aware of the importance of economics perspectives and evidence
- Implementation data can be presented in ways which may prove useful to help inform subsequent economic analyses
- Relative lack of relevant economic analyses in many C2 topic areas

Discussion & conclusions

- Identify studies which include economic analyses and/ or measures of resource use, costs and cost-effectiveness
- Extract and summarise the resource use, costs and cost-effectiveness data that are present
- Extract and present effects data in a format that is useful to inform further economic analyses



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