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T A B L E   O F   C O N T E N T S

Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

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A B S T R A C T

Background

A strong and consistent relationship has been observed between relative poverty and poor child health and well-being even among rich nations. This review set out to examine evidence that additional monies provided to poor or disadvantaged families may benefit children by reducing relative poverty and thereby improving children's health, well-being and educational attainment.

Objectives

To assess the effectiveness of direct provision of additional monies to socially or economically disadvantaged families in improving children's health, well-being and educational attainment

Search methods

In total, 10 electronic databases were searched, including CENTRAL (searched Issue 3, 2006), MEDLINE (searched 1966 to May 2006), EconLit (searched 1969 to June 2006) and PsycINFO (searched 1872 to June 2006), together with three libraries of working papers (MDRC, SSRN, SRDC). The general search strategy was [terms for income and financial benefits] and [paediatric terms] and [RCT filter].

Selection criteria

Studies selected provided money to relatively poor families (which included a child under the age of 18 or a pregnant woman), were randomised or quasi-randomised, measured outcomes related to child health or well-being and were conducted in a high income country.

Data collection and analysis

Titles and abstracts identified in the search were independently assessed for eligibility by two reviewers. Data were extracted and entered into Review Manager software (RevMan), synthesised and presented in both written and graphical form (forest plots).

Main results

Nine trials including more than 25,000 participants were included in this review. No effect was observed on child health, measures of child mental health or emotional state. Non-significant effects favouring the intervention group were seen for child cognitive development and educational achievement, and a non-significant effect favouring controls in rates of teenage pregnancy.

Authors' conclusions

The review set out to examine the potential of financial support to poor families to improve circumstances for children. However, on the basis of current evidence we cannot state unequivocally whether financial benefits delivered as an intervention are effective at improving child health or well-being in the short term. Our conclusions are limited by the fact that most of the studies had small effects on total household income and that, while no conditions were attached to how money was spent, all studies included strict conditions for receipt of payments. We note particular concerns by some authors that sanctions and conditions (such as working hours) placed on families may increase family stress.

PLAIN LANGUAGE SUMMARY

Financial support for improving health of children from low income families in rich countries

The association between low income and poor outcome in all dimensions of child health is strong and consistent across countries and time. Disadvantage in childhood is often associated with lifetime poor outcomes. This review aimed to assess whether additional monies provided to socially or economically disadvantaged families could affect children's health, well-being and educational attainment. Nine studies were identified that met inclusion criteria. There was tentative evidence of benefit in early language development, but given lack of effect on all other outcomes, authors conclude that the evidence did not show an effect on child outcomes in the short to medium term in response to direct financial benefits to families. In the context of the monetary value of interventions observed, and the conditions placed on receipt of benefits, authors conclude this is a statement of "no evidence of effect" rather than "evidence of no effect". Implications for research and practice are noted.

BACKGROUND

Description of the condition

Within OECD (Organisation for Economic Co-operation and Development) countries relative poverty is a problem for a significant proportion of families with children. Data on relative poverty show that while the UK and the USA are among the wealthiest nations, they show high rates of relative poverty (UNICEF 2000; OECD 2006). The UK, USA, Australia and New Zealand constitute the small group of OECD countries where inequalities have increased since the 1960s (Weeks 2005). Whilst some data show that the UK, USA and New Zealand began reversing this pattern in the 1990s, overall the proportion of children living in relative poverty has increased (UNICEF 2005). According to US Census figures in 2004, around 17.8% of under 18s were living in households with income below what the US government defines as the poverty threshold (income below the federal poverty level (DeNavas-Walt 2005)). Using internationally recognised assessments of relative poverty this figure rises to 21.9% for the USA, second only within OECD countries to Mexico (27.7%), followed by Italy (16.6%), New Zealand (16.3%), Ireland (15.7%), Portugal (15.6%), and the UK (15.4%) (UNICEF 2005). These figures all consider income before housing costs are taken into account, but some consider income after housing costs to be a better estimate of household poverty. In the UK in 2002/3 28% of children lived in households with incomes below fifty percent of the mean after housing costs, giving the UK the fifth highest rate of relative child poverty in the EU (Bradshaw 2005). In contrast to a generation ago, poverty in the UK is now most prevalent in households with children (Darton 2003). Whilst there has been some progress in the UK, the aspirations to end child poverty are unlikely to be met on current predictions (Hirsch 2006).

Attree's systematic review of qualitative work confirms that from children's own viewpoint, despite their efforts to maximise their resources, many poor children experience a gradual narrowing of their horizons, both socially and economically (Attree 2006).

The WHO commission on the social determinants of health (WHO 2007) which was set up to support countries and global health partners to address the social factors leading to ill health and inequities has produced a number of reports touching on this area, including those on early childhood development (Siddiqi 2007) which point out that in every society, inequities in socioeconomic resources result in inequities in early childhood development, and that investment in this area is highlight efficient.

Inequalities in the distribution of resources are known to have marked impacts on child health and wellbeing. A UNICEF report in 2007 which ranked the wellbeing of children in 21 rich countries found both the United States and the United Kingdom well to the bottom of the list (UNICEF 2007). Despite the fact that for the most part relative poverty does not severely restrict access to essential resources (water, shelter, food) differences in health and life opportunities are still apparent between the poorest and richest in a wealthy society (Wilkinson 2006) The impact of relative poverty, even in rich countries, is illustrated by a comparison between infant mortality in urban areas of Kerala, India, with that among African Americans living in Washington DC. Despite far higher national wealth, the infant mortality rate is higher in the USA group (UNDP 2005, Chapter 2). In high income countries, relative poverty reduces the life chances of children in many ways (Acheson 1998; Baker 2002; Dearing 2001; Petterson 2001; Shaw 1999; Smith 1997; Duncan 1994; HM Treasury 2004). Poverty in early life has far reaching consequences, Roberts (Roberts 1997) points to the "long shadow forward" (p. 1123) cast over physical and emotional health that can result from the experience of living in poverty during childhood. People from the lowest social classes are at increased risk from serious or long-term life-limiting illness. Children from these groups are less likely to meet their full potential in education and are more likely to be unemployed or working in unskilled, poorly paid manual jobs in adult life (Roberts 1997, Shaw 1999). Davey-Smith (Davey-Smith 1999) argues that fluctuations in income also impact on health outcomes, with higher mortality rates amongst those who experience reductions in income levels, even if temporary.

How the intervention might work

The mechanism for the impact of income on child health is not clear, but it would appear that household income is important over and above access to resources. One might suppose that, for example, lack of access to health care would be the key factor limiting the health chances of poor children in the USA. In fact, comparisons of data between USA, Canada and UK suggest that while the universal health care provided by the latter countries may lessen the impact of growing up poor, the association between health and wealth persists (Case 2002; Currie 2003; Currie 2004). These data imply that within-country factors may mediate the relationship between health and income. Research from Canada has also found that children from poorer backgrounds are more likely to be diag-

nosed with mental health problems in childhood (Currie 2005). Oral health shows similar income gradients, where international studies have shown that children from poorer families have higher rates of dental decay (caries) and poorer oral health than richer children living in the same country (Petersen 2003; Watt 1999).

Why it is important to do this review

Given the consistent observation of an association between economic status and health outcomes, this review seeks to answer the question of whether reducing relative poverty through additions to income may have beneficial effects. Income, rather than social support, is at the heart of the interventions explored in this systematic review, which aims to interrogate the evidence to assess the effectiveness of additional money given to poor families in improving child health. 'Health' is interpreted here in its widest sense, incorporating physical and mental health, as well as social wellbeing indicated by factors such as educational attainment.

This review considers evidence of effectiveness in randomised controlled trials and quasi-randomised trials of interventions that provide additional monies to socially and economically disadvantaged families. The history of the use of RCTs in the social sciences is mixed. While experimental methods have a significant history in the social sciences (Oakley 1998), they are not universally welcomed. Resistance to the use of trials in social interventions on practical, ethical or political grounds has been documented (Petticrew 2005) and such views have had an impact on the types of studies conducted (for example see Seethaler 2005). In addition, some changes (such as universal policy interventions) can be documented only across a cohort as a whole, since an entire population is (or is intended to be) in receipt of such changes. In view of these issues the inclusion of non-randomised trials and other study types was considered by authors and discussed at length with the co-ordinating editor of the review group. The final decision to include only RCTs and quasi-RCTs was informed by a preference for studies with the greatest potential to attribute causality to the intervention, as well as by the constraints of systematically searching for multiple study types in a broad field. Searching only for RCTs resulted in some 16,000 to 20,000 hits. In MEDLINE alone a search that included non RCTs produced > 31,000 hits. While the findings of the review are based on experimental evidence from controlled trials only, it is important to consider other types of study when interpreting the findings of this review.

O B J E C T I V E S

To assess the effectiveness of direct provision of financial benefits to socially or economically disadvantaged families in improving children's physical health, mental health and educational attainment

METHODS

Criteria for considering studies for this review

Types of studies

Randomised controlled trials and quasi-randomised (e.g. alternate allocation or allocation by date of birth) controlled trials.

Types of participants

Families with at least one child under 18, or in which a woman is pregnant, living in a 'high income country as reported in 2005 Human Development Report (UNDP 2005)

Participants must be identified by triallist as being from groups socially or economically disadvantaged within their country. This might be assessed by income or by geographical/neighbourhood data (i.e., having an address in area of high unemployment or low average income).

Types of interventions

Interventions to increase the amount of money available to a family. These include:

- Direct cash payments
- Positive taxation schemes, such as Negative Income Tax, which benefit low-income families

Excluded from the review were:

- Vouchers, loans, and conditional payments for commodities (cash that can only be spent in specified ways, for example to pay for personal care for disabled children).

Types of outcome measures

Primary outcomes

1. Any measure of physical child health, including anthropometry (body measurements) or measures of mortality, morbidity (illness diagnosed or treated by medical professionals), admissions to hospital, attendance at emergency medical services, attendance at routine health screening programmes, or uptake of immunisation
2. Any measure of children's mental health or emotional state (e.g. quality of life measures, the CBCL (Child Behavior Checklist Achenbach 1991) or the Strengths and Difficulties Questionnaire Goodman 1997).
3. Oral health as assessed by the D(M)F (decayed (missing) filled) Index for permanent or deciduous teeth (dMF Index for milk or baby teeth) or restorative index (the ratio between health, filled and decayed teeth). The former provide well validated assessments

of total dental health, and the latter the extent of untreated decay (Pitts 2006)

Secondary outcomes

1. Any standardised measure of children's psychomotor or cognitive development.
2. Any standardised measure of educational progress or attainment.
3. Numbers of pregnancies, births or sexually transmitted infections among under 16s in target families

Any adverse effects reported for any member of the family were recorded.

Search methods for identification of studies

Published or unpublished trials were considered with no language restrictions.

Electronic searches

The following electronic databases were searched:
CENTRAL (Cochrane Library) searched 2006 (Issue 3)
MEDLINE searched 1966 to May 2006
ASSIA searched 1987 to August 2006
CINAHL searched 1982 to August 2006
Econlit searched 1969 to June 2006
Embase searched 1980 to June 2006
ERIC searched 1966 to June 2006
Index to Theses searched 1716 to August 2006
MDRC (Manpower Demonstration Research Corporation publications) accessed 18 September 2006
PsycINFO searched 1872 to June 2006
SIGLE searched 1980 to June 2006
SSRN elibrary accessed 18 September 2006
SRDC (Social Research and Demonstration Corporation publications) accessed 18 September 2006
The general structure of the search strategy was:
(terms for income and financial benefits including appropriate MeSH terms depending on the Thesaurus for each database)
'and'
Paediatric filter (see Mackway-Jones 2002)
'and'
Cochrane filters for the identification of RCT's was used where available, e.g. Dickersin 1994; Robinson 2002, as detailed below. The search strategy was adapted where necessary for each database searched.
The full strategies used to search each of the databases can be found in Appendix 1, Appendix 2, Appendix 3, Appendix 4, Appendix 5, Appendix 6, Appendix 7, Appendix 8, Appendix 9.

Searching other resources

Contact was made with first authors of included studies and field experts to enquire of relevant further or unpublished research. No unpublished analyses or reports were located.

References of retrieved articles and relevant reviews were screened for eligible studies.

Data collection and analysis

Selection of studies

Titles and abstracts of studies identified by searches were read on screen and independently assessed for inclusion by two reviewers (PL, KM) against the inclusion criteria set out above.

Those studies that appeared to meet the inclusion criteria were retrieved in hard copy and examined independently by two members of the research team (SD, CJ, PL, JN, KM). Records were kept detailing reasons for rejection.

Data extraction and management

Details of each study were independently extracted by two researchers and entered into a word table, an excel file for transformation of data and finally RevMan 4.2.8. Recorded data included:
Participants:
Family composition
Family socioeconomic position
Country and setting (e.g. rural, urban or region)
Age and gender of child(ren)
Intervention
Value of intervention in local currency
Duration of intervention
Comparator/alternative interventions
Type of intervention
Detail of intervention (e.g. frequency of home visits, details of visitor)
Duration of intervention
Co-interventions
Type of intervention
Detail of intervention (e.g. frequency of home visits, details of visitor)
Duration of intervention
Citations were stored using Reference Manager, and a QUOROM-style flow-chart documenting the selection process for included and excluded studies generated (Figure 1).

Figure 1.

Search results from July 2006 (number of hits including duplicates)
Electronic databases (including duplicates n=19,120, excluding
duplicates n=15998), website searches (n=614), Other sources (Personal
contact, internet search engines, reference lists) (n=9)
Total n=19742 (including duplicates)

Citations judged irrelevant by title
or abstract or duplicates
(n=16533)

Full reports retrieved (n=88)

Reviews/commentaries
(n=17)

Excluded (n=52)

Papers included (n=19)

Studies included (n=9)

A data extraction sheet was piloted amongst reviewers with the aim of ensuring maximum utility and comprehensiveness. Data were extracted and entered into the finished forms and stored electronically. Annotated copies of included studies have been stored in hard or electronic copy.

Corresponding authors of primary studies included in this review were contacted with methodological queries and to request missing data or analyses. Although several authors responded to queries, not all queries were answered. In particular where it was queried none of the authors were able to clarify rates of attrition relating to the use of sub-studies and subgroups, an issue which was particularly challenging in this review. Authors did not identify any missing or unpublished outcomes or analyses.

Assessment of risk of bias in included studies

Two members of the research team independently assessed the following aspects of study quality for the included studies.

1. Method of allocation

Allocation (method by which participants are assigned to group) was classified as follows:

(A) Allocation described as adequate if allocation was by a well described randomisation process (e.g. flipping a coin, central randomisation using number tables).

(B) Allocation described as unclear if the unit of allocation is not described or is not described in sufficient detail to be certain of quality of randomisation.

(C) Allocation described as inadequate if allocation was undertaken using a non-random method (e.g. by day of the week)

2. Allocation concealment

Allocation concealment was assessed as follows:

(A) Allocation described as adequately concealed if allocation was centralised (e.g. allocation by a central office unaware of participant characteristics), used pre-numbered sealed opaque envelopes, generated by computer or other methods not accessible to those in charge of allocation.

(B) Allocation concealment described as unclear if the method of concealment is not described or is not described in sufficient detail to be certain of concealment

(C) Allocation concealment described as inadequate if allocation was undertaken by personnel with access to participant characteristics.

3. Loss to follow-up

Loss to follow-up as a percentage of those entering each study group is reported where data are available. When considering loss to follow-up a cut off is often used; for example, a loss of more than 25% of the sample may be judged unacceptable. The position of such a cut off at 25% rather that 30% or 20% is difficult to justify. However, a summary of quality assessment is useful and thus, in addition to actual loss, a description using the following categories is given:

(A) Loss to follow-up considered acceptable if attrition is both similar across intervention groups, and of an acceptable level. We take acceptable loss to follow-up to be no greater than 25% of sample entering intervention, but allow for reviewer judgement (for example up to 30% loss may be acceptable for follow-up of 5+ years, or where populations are highly mobile).

(B) Loss to follow-up recorded as not reported

(C) Loss to follow-up recorded as unacceptable if loss is either high (greater than 25% overall noting the possibility of exceptions e.g. highly mobile populations or long term follow-up as described above), or unevenly distributed across groups. Uneven attrition will be further considered in sensitivity analysis.

There were no cases where attrition was close to the cut off for acceptability, and therefore reviewer judgement of potential for bias was not required.

4. Blinding of outcome assessment

In the case of psychosocial and service interventions blinding of participants and providers isn't possible and therefore isn't assessed here. Blinding of outcome assessment was reviewed, and judged as follows:

(A) Blinding of outcome assessment was considered adequate if authors state assessor was blind to participant allocation, or outcome assessed by means outside of the study (e.g. school records).

(B) Blinding of outcome assessment was considered unclear where insufficient information is provided to judge blinding.

(C) Blinding of outcome assessment was considered inadequate where assessors are likely to know the group allocation of participants.

In studies with multiple outcomes, blinding on each outcome is discussed in the study description below.

Disagreements were resolved by consensus, and first authors contacted for clarification in the case of unclear methods.

Measures of treatment effect

1. Binary data

For binary outcomes, e.g. 'pregnant' or 'not pregnant', a standard estimation of the Odds Ratio with the 95% confidence interval was calculated.

2. Continuous data

Few means and standard deviations were provided or could be derived from available data (such as test statistics) thus effect size could not be calculated for any outcome measure using continuous data.

Assessment of heterogeneity

Meta-analysis was conducted where the following assessments of heterogeneity suggested that it was appropriate:

1) Common sense. Where the participants, interventions or outcomes sufficiently similar to justify consideration of meta-analysis. (Kristjansson 2007).

2) Quantification of inconsistency across studies. The consistency of results were assessed using the I^2 statistic (Higgins 2003). If there was evidence of heterogeneity (Q-statistic=0.1 coupled with an I-squared value of 25% or greater), the authors considered sources according to pre-specified subgroup analyses but did not calculate an overall estimate of effect size. Where the primary studies were significantly heterogeneous (I-squared value of 25% or greater), or where the data were insufficient for meta-analysis within RevMan, then only a narrative (descriptive) analysis was undertaken.

Data synthesis

It was decided that any analyses conducted would use a random effects model since intervention models and populations varied and we expected heterogeneity to be high.

Subgroup analysis and investigation of heterogeneity

The following subgroup analyses were carried out:
Intensity of intervention (amount of financial assistance given);
Method of delivery of intervention (e.g. direct cash payment versus indirect tax benefits);
Additional subgroup analyses were planned of underlying health/social welfare provision (e.g. countries with universal healthcare systems in place vs. those without), effects of co-interventions and socioeconomic position (where sample includes more than one socioeconomic group). However, data were not available to allow these.

Sensitivity analysis

Primary analyses were based on available data from all included studies relevant to the comparison and outcome of interest.
Given limited opportunities for meta-analysis and missing data (for example attrition rates) sensitivity analyses were not undertaken.

R E S U L T S

Description of studies

See: Characteristics of included studies; Characteristics of excluded studies.
Characteristics of included studies are shown in the Characteristics of included studies table and in Table 1.
In total, 63 studies were excluded (see Characteristics of excluded studies). Most were excluded because the intervention did not meet inclusion criteria or because child outcomes were not included. One study (Jagannathan FDP 2005) included an intervention of interest, but was excluded because the only outcome reported was child involvement with child welfare services (such as fostering services). It was judged by the review group that since it was not possible to identify a desirable direction of effect this study would be excluded. The same was held to be true of household changes where they were reported. Moving house or being taken into foster care could be beneficial (e.g. where the move is to better circumstances or where children are at risk in home environment) but they may also be harmful, for example the result of homelessness. Without further long term data it was judged unwise to incorporate these outcomes.
One other study was excluded after consultation among reviewers as to whether it was within the scope of the review or not. Bos 1997

reports on a trial of cash incentives given to teenage parents in return for attending school. After some discussion it was decided that this study was excluded because outcomes for the children of these parents were not recorded, only school attendance for the parents themselves. Similarly we also discussed grants and incentives given to young people in return for school attendance (such as the UK Education Maintenance Allowance see also excluded studies Reid 1994; Reid 1995), and decided these were excluded because they did not change family income, but rather the child's expendible income.
In addition four publications were considered for inclusion but rejected on the basis of group assignment. These papers all referred to the well known Seattle and Denver Income Maintenance experiments, where the Conlisk-Watts method of allocation was used. This method is designed to produce unbiased estimates of effect by modelling of the data to account for differences at baseline produced by the selection and allocation procedures. The authors excluded these studies from the review on the basis that the consensus is that this method uses non-random allocation (Connor 1999; Keeley 1980). Moreover, the modelling needed to produce unbiased estimates makes comparison with RCTs inherently difficult. However since these studies are well known and are likely to be considered relevant to this review brief details from these studies are included in additional Table 2.
Nine studies were identified, with more than 19 associated publications. Only those publications which include extracted methods or outcome data are referenced here.

Study design

All studies were randomised controlled trials.

Population location

Eight studies were based in the USA (ABC Study 2003 in Delaware, Fraker 2002 in Iowa, MFIP 2005 in Minnesota, Huston 2006 in Wisconsin, Jobs First 2003 in Connecticut, Stevens-Simon 1997 in Denver, Colorado, FTP 2003, in Florida and Vermont WRP 2002) and one in Canada (SSP 2006 in British Columbia and New Brunswick).
All studies except Stevens-Simon 1997 were multi-site and included a mix of rural, urban and sub-urban samples.

Participants

Stevens-Simon 1997 recruited young women (<18 years) with a child younger than 5 months. All other studies recruited welfare recipients or applicants.
Three studies recruited single-parent samples, and these samples were largely female (ABC Study 2003 single parents, Jobs First 2003 Female welfare recipients, SSP 2006 single parents).
Six studies only recruited participants with at least one child (Stevens-Simon 1997; ABC Study 2003; Jobs First 2003; MFIP

2005; Vermont WRP 2002; SSP 2006). For all studies findings are only reported for participants with children in this review (i.e. only parent sample reported from Fraker 2002; New Hope 2003; FTP 2003), and wherever possible recruitment and attrition rates in this group are reported. The ages of the children at randomisation varied from 5 months to 18 years, but most were between 3 and 10 years at randomisation.

Ethnic mix of participants where it was reported reflects local norms, and therefore varies across studies but the samples were majority white in all studies.

No studies included non-disadvantaged participants.

Intervention type

Specific intervention characteristics are summarised in the table of included study characteristics. Eight of the nine included studies were welfare reform studies (A Better Chance in Delaware (ABC), Welfare Reform in Iowa, Minnesota Family Investment Project (MFIP), Florida Transition Program (FTP), New Hope, Jobs First in Connecticut, Welfare Restructuring Project in Vermont (WRP) and Self-Sufficiency Project in New Brunswick & British Columbia (SSP)). One study was a teenage pregnancy reduction study (Dollar-a-day Program Stevens-Simon 1997). The welfare reform studies combined cash incentives (e.g. negative taxation, income supplements) with work support or requirement to work along with other changes to provision of welfare payments.

Control and comparison groups

All studies used no-intervention control groups (in these cases participants received standard care or welfare benefits).

Three studies included alternative intervention groups. Stevens-Simon 1997 tested monetary incentives with and without peer support group, a peer support only group and a no-treatment control. SSP 2006 included a comparison group that received additional financial incentives, but without job search assistance. Vermont WRP 2002 included a comparison group that received additional financial incentives, but without the work requirement. Unfortunately Vermont WRP 2002 reports only school outcomes and SSP 2006 no child outcomes for these alternative intervention conditions so while their existence is noted here, few results can be reported for these groups.

Primary outcome 1: child physical health

Six studies (Fraker 2002; FTP 2003; Vermont WRP 2002; MFIP 2005; Huston 2006; SSP 2006) report health outcomes for children. Parents were asked to report child health status on a 1-5 Likert scale in 4 studies (Fraker 2002, Huston 2006, Jobs First 2003; SSP 2006; FTP 2003). Whether or not children had current health insurance, and whether there had been periods without health insurance were reported by parents in 2 studies (FTP 2003; Vermont WRP 2002). Fraker 2002 also reports parental reports

of visits to emergency departments following accident or injury, and Jobs First 2003 parent-reported health service use including use of routine health and dental clinics.

ABC Study 2003 reports child maltreatment, collected using state Division of Family Service records. Any alleged maltreatment was reported, differentiated by substantiated cases and type of abuse. It should be noted that the unit of outcome was families, and not children (so where several children within family were maltreated this represents one case).

Primary outcome 2: children's mental health or emotional state

Five studies (Fraker 2002; New Hope 2003; FTP 2003; SSP 2006; MFIP 2005) used parent ratings on the same Positive Child Behaviour scale and Behaviour Problem Index (Peterson 1986). MFIP 2005 also used these scales with teachers to assess school behaviour.

New Hope 2003 used The Loneliness and Social Dissatisfaction Questionnaire and the Revised Children's Manifest Anxiety Scale. Three studies report involvement with police. Parental reports of involvement with police are given in New Hope 2003 and Vermont WRP 2002 while FTP 2003 includes parental report of any arrests or convictions.

Fraker 2002 and Vermont WRP 2002 both record parent-reported frequency of child involvement in organised activities (clubs, sports and lessons outside of school) although Vermont WRP 2002 reports this outcome for single parent subsample only.

Primary outcome 3: oral health

None reported, aside from dental check ups in Fraker 2002.

Secondary outcome 1: children's psychomotor or cognitive development.

Three studies used measures of cognitive development in young children (those under 5). The MacArthur Communication Development Inventory was used in Jobs First 2003, The Woodcock-Johnson Achievement Test in New Hope 2003 and The Peabody Picture Vocabulary Scale (revised) in SSP 2006 for those aged 5 and under at randomisation.

Secondary outcome 2: educational progress or attainment.

Education progress was most often provided as parental report of current educational standard (compared to others) on a 1-5 point Likert scale (Fraker 2002; New Hope 2003; FTP 2003; Vermont WRP 2002; SSP 2006; MFIP 2005). For older children (adolescents at follow-up) SSP 2006 also reports child reported school achievement.

Parent report was also used to collect data on grade retention (Fraker 2002; MFIP 2005; FTP 2003; Vermont WRP 2002) and

school absences (Fraker 2002; Vermont WRP 2002) suspension or expulsion from school (Fraker 2002; Vermont WRP 2002) any time in special education (FTP 2003) and school drop out (Vermont WRP 2002).

Secondary outcome 3: teenage sexual health

FTP 2003 reports those having a baby and Stevens-Simon 1997 and SSP 2006 report those becoming pregnant. Only Stevens-Simon undertook pregnancy testing, all other studies rely on self-report.

Length of follow-up

Length of follow-up was calculated as time since randomisation for all included studies. Three studies had follow-up periods of 1 to 3 years post randomisation (Jobs First 2003 18 months; Stevens-Simon 1997 12 and 24 months; ABC Study 2003 12, 24 and 36 months). Two other studies had multiple follow-up periods, MFIP 2005 followed up at 36 and 72 months although different outcome measures are reported at each time. SSP 2006 followed up at 36, 54 and 72 months. With the exception of MFIP, data from the last follow-up is used in this review. Vermont WRP 2002 reports at 42 months; New Hope 2003 at 60 months. Two studies where recruitment covered an extended period had variable periods between randomisation and follow-up. FTP 2003 reports for 48 to 61 months post randomisation, with an average of 51 months. Fraker 2002 reported between 30 and 72 months post randomisation.

Risk of bias in included studies

Study quality was assessed across the domains of allocation method and concealment, loss to follow-up, and blinding of assessment outcomes. Additional methodological information is included in "Additional Quality Assessment" Table 1.
The conduct of the studies was generally of a high quality, but across the studies as a whole the reporting of methodological detail with regard to the group of interest here (families with children) was sometimes lacking.

Allocation

Six studies adequately concealed the allocation process (ABC Study 2003; MFIP 2005; New Hope 2003; Stevens-Simon 1997; FTP 2003; SSP 2006), all four remaining studies did not describe the allocation procedure and authors did not respond to enquiries for further information (Fraker 2002; Jobs First 2003; Vermont WRP 2002).

Blinding

For most outcomes, which relied on participant self-report, it was not possible to blind outcome assessments. Where used, no studies stated whether assessors were blinded to group allocation. Where outcomes were recorded by independent means (such as routinely recorded data, or independent testing) this is noted in the narrative (ABC Study 2003; MFIP 2005; Stevens-Simon 1997).

Incomplete outcome data

Drop out and loss to follow-up

Attrition and drop out rates are reported in Table 1 "Additional Quality Assessment - Included Studies". This data was incomplete in 4 cases (Fraker 2002; MFIP 2005; Jobs First 2003; Vermont WRP 2002). In the other 5 studies retention appears to be adequate, although in all studies loss to follow-up was slightly higher in intervention than control groups.

Intention to treat

Across all studies follow-up was collected for all participants regardless of intervention uptake. However, we also note that in all cases missing cases and data points are excluded and attrition rates are often unknown. Thus while follow-up was reported for all participants regardless of treatment uptake (one element of intention to treat), information is not available to account for non-response and therefore outcome assessments may be biased towards responders.
New Hope 2003 analysed differences between responders and non-responders and found that non-responders were more likely to be male, but did not differ on other characteristics at baseline.

Selective reporting

While most outcomes seem to have been reported in published studies, selective reporting by sub-group is a considerable difficulty in several of the included studies. Where outcomes are reported by subgroup (for example by age group, gender or welfare status) it isn't always possible to report these outcomes. For example, MFIP 2005 reports child health insurance coverage for rural samples only, excluding urban samples, and is therefore not reported here. Such sub-group reporting leaves open the possibility of reporting bias, where published outcomes are not representative of all outcomes.

Ethical conduct of trials

The ethical conduct of trials is not often considered in Cochrane reviews. However, since eight of the included studies were based on government supported welfare reforms we considered it important to examine the extent to which these studies conformed

with principles of informed consent (CIOMS 2002), in particular whether participants had the right to choose not to take part in the research. Three studies discuss opt out from the trial; Fraker 2002 states that participants could chose to "to seek employment instead of FTP benefits" (p. 22), New Hope 2003 invited welfare applicants to take part (thus they could refuse), and SSP describes an informed consent procedure where participants could refuse to take part and where 10% of those approached did not participate (SSP 2006). The remaining five studies describe only eligibility criteria and do not state whether welfare recipients could choose to opt out of the trial.

Effects of interventions

Although many studies report continuous data, findings reported here are largely dichotomized. The use of dichotomized data enabled us to combine across groups where they were reported separately. For example, where the proportion of those judged to be in poor health were reportedly separately for rural and urban samples these were combined by reviewers to give an overall proportion in poor health across the entire sample. All such data transformations were conducted using Excel, and the first author of this review can be contacted for access to this file. In no cases were continuous outcomes reported in sufficient detail to allow combination in a similar fashion across reporting groups. Similarly, where continuous data were reported for the whole sample it was often not possible to calculate Standardised Mean Differences from data provided (eg group means and p values reported without a test statistics or measures of variance). In these cases the continuous data are reported, noting missing statistics , but meta-analysis across studies was not possible

Since varied outcome measure were used across the nine studies reviewers judged that meta-analysis *across* outcomes was not appropriate and so outcomes are reported separately. Within each outcome data are combined where appropriate and possible, as described below.

Primary outcome 1: child physical health

Six studies (Fraker 2002; FTP 2003; Vermont WRP 2002; MFIP 2005; New Hope 2003; SSP 2006) report health outcomes for children. Dichotomous data are shown in Analysis 1.1; Analysis 1.3; Analysis 1.4; Analysis 1.5; Analysis 1.6; Analysis 1.7.

a. Child coverage by health insurance

In total, data were available for 3095 intervention and 1983 control cases concerning health insurance coverage for children (Fraker 2002; Vermont WRP 2002; FTP 2003). MFIP 2005 also reports child health insurance coverage, but since only data from rural samples were reported it is not included here. Data reported are the number of households where there have been gaps in insurance coverage for children. A non-significant effect favouring controls was observed (OR 1.05 [0.90,1.23]).

b. General health status

General Health rating by parents as a continuous variable

SSP 2006 report differences in health ratings by intervention and control parents in the SSP study but only for age sub-groups (e.g. children aged 1-5 at randomisation and children aged 6-12 at randomisation). Since these age groups were mutually exclusive a summary estimate was derived using a generic inverse variance approach to estimate the effect size across these groups. Using this approach a non significant effect size was found in 54 month data (SMD=0.01, CI=-0.04,0.05) .

Health status is also reported by New Hope 2003. Overall parental health rating was higher among intervention (mean=4.3 n=429 using 1-5 scale) than control (mean=4.2 n=421) although the reported difference is non-significant (p=0.39).

FTP 2003 reports general health rating for a subsample of focal child aged 5-12 years at 51 month outcome. Standard deviations were not reported. Instead, the difference between means and the effect size (difference in mean outcome/control group standard deviation) were reported alongside p value following a two-tailed t test. Parents reported general state of health as slightly better among the intervention group. The difference is reported as being significant at the 10% level (as reported by study authors control mean=4.1, diff=0.1 (i.e. intervention mean 4.2) effect size=0.09) although significance level for a two-tailed t test is usually 5% so others would report this as a non-significant difference.

Dichotomous Child Health rating by parents

In three further studies a dichotomous variable of poor health is reported. As shown in Analysis 1.3, MFIP 2005 reported child health rated as average or poor, while FTP 2003 and New Hope 2003 report child health rated as poor. SSP 2006 reports any long term health problems. Heterogeneity was high (I^2=82.8%) so meta-analysis was not conducted. Of these 4 studies and 3 outcomes, two report a statistically significant effect, New Hope 2003 reports a significant effect favouring control (OR 1.73 [1.26,2.37]) and FTP 2003 a significant effect favouring intervention (OR 0.55 [0.31,0.97]). Non-significant differences favour both control (MFIP 2005) and intervention (SSP 2006).

Parental rating of those 'in good health' were also reported in SSP 2006, where a non-significant effect favouring control was observed (intervention n=753, control n=720 OR=0.89 [0.69,1.14]).

c. Child maltreatment

Child maltreatment recorded in state records was reported in ABC Study 2003. Insufficient data were reported to allow calculation of SMD for maltreatment. Little difference was observed between the percent of families where alleged maltreatment took place at year 1 (control=10.5% intervention=11.6%) year 2 (c=11.6% i= 11.0%) or year 3 (c=10.9% i=12.3%) after random assignment. All differences were non-significant and in year 1 and 3 favour control. For substantiated cases differences were non-significant in year 1(c=4.9% i=5.7%) and year 2(c=5.6% i=4.9%) but significantly different at year 3 (c=3.1% i=4.5% p<0.05). Authors report differences by abuse type (physical/emotional abuse, sexual abuse, neglect) in each study year. In none of years 1, 2 or 3 do rates of physical/emotional or sexual abuse vary significantly between intervention and control groups. In year 1 and 3 a significant difference in rates of neglect was observed where a larger proportion of the intervention group were found to have neglected their children in year 1 (c=2.6% i=4.1% p<0.01) and year 3 (c= 1.5% i=2.4% p<0.1), this difference was not observed in year 2 ((c=2.9% i=3.0% p>0.1). Neglect was the most common type of substantiated maltreatment, with 3.3% of all children in the sample experiencing one or more substantiated incidents.

d. Accidents and sudden illness

Parent reported visits to emergency department by study child was reported by Fraker 2002 and FTP 2003. Neither study reports a significant effect, and pooled effects suggests a non-significant effect favouring treatment (OR=0.99 [0.79,1.24]). SSP Study (SSP 2006) give the number of injuries in the last year reported by parents 36 and 54 month follow-up (for 54 month follow-up OR= 1.06[0.82,1.35]). No effect was observed (OR=1.02 [0.86,1.21] fixed effects) (Analysis 1.5).

e. Routine health check-ups

Only one study reported the use of routine health care (Fraker 2002). The odds of receiving a routine medical check up favoured intervention (OR=1.06 [0.79,1.43]) and of receiving a dental check up favoured control (OR=0.93 [0.73,1.20]) however neither result reached statistical significance (Analysis 1.6; Analysis 1.7).

Child health summary

Excluding health insurance coverage, only one meta-analysis was possible within this category where 3 studies showed no effect on injuries or visits to emergency department. Other data were available for single studies, and most differences were not statistically significant and did not show a consistent direction of effect. Being in poor health was reported significantly more often once in an intervention group, and once in a control group. Measures of child maltreatment in one study favoured control. Given that benefits observed were not consistent across studies or outcomes we conclude that no effect on child health has been observed.

Primary outcome 2: children's mental health or emotional state

a. Parent-rated child behaviour

Measures of children's mental health or emotional state were largely assessed through child behaviour (positive behaviour, problem behaviour, and criminal behaviour). The Children's Manifest Anxiety Scale was used but outcome not reported in New Hope 2003 because "reliabilities for younger children were generally low" (Huston 2001 p. 328) although authors state there were no programme effects observed. No findings from the Loneliness and Social Dissatisfaction Scale were reported (New Hope 2003).

Child behaviour ratings as continuous outcomes

Two studies (New Hope 2003 and Fraker 2002) report group mean scores from parent ratings on problem behaviour scales (Analysis 2.1) and positive behaviour indexes (Analysis 2.2), no measures of variance in the sample are reported in either study. New Hope 2003 study authors report non-significant differences; parent rated problem behaviour scale (SMD=0.11, p=0.184, n= 530, no CI reported) favours intervention and parent rated positive behaviour (SMD=0.15, p=0.061, no CI reported) favours intervention. Fraker 2002 reports mean scores for new welfare applicants and existing welfare applicants separately and reviewers have combined these to give overall mean scores per group (problem behaviour intervention mean=11.57, control mean =11.51; positive behaviour intervention mean=58.4, control mean =58.3) indicating slightly better scores for control in both cases, although sub-group differences are reported as non-significant by Fraker 2002.
SSP 2006 also reports behaviour problems. In this case data from subgroups could not be combined (only group means and standard error of difference provided) and therefore these cannot be reported here. Within subgroups, none of the differences between intervention and control group were statistically significant.

Dichotomised data from child behaviour scales

Four studies report dichotomised post ive behaviour data. FTP 2003 reports high scores on positive behaviour scale and New Hope 2003; Jobs First 2003; SSP 2006 report parents positive assessment (Analysis 2.3). Across all four studies heterogeneity is low (I^2=0) so a meta-analysis is appropriate, but the differences between groups is non-significant (OR 0.96 [0.79,1.16]).

Five studies report dichotomised problem behaviour data (Analysis 2.4). FTP 2003 reports those with a high score on problem behaviour scales, while Jobs First 2003, SSP 2006, New Hope 2003 and MFIP 2005 all report parent identification of problematic behaviour. Since heterogeneity in the sample is low (I^2=0%) meta-analysis is appropriate. Overall a small effect of borderline significance favouring controls is observed (OR=1.09 [0.98, 1.22]).

b. Police involvement

Three studies reports on parent reports of involvement with police (Analysis 2.5), WRP (Vermont WRP 2002) reports any trouble with police, while FTP and Jobs first (FTP 2003; Jobs First 2003) report any arrests to children in sample. Since I^2 is high (54.4%) indicating heterogeneity in the sample, meta-analysis of involvement with police was not appropriate. Loeb appears to be an outlier favouring intervention, while Scrivener favours control and Wilk shows a null effect. New Hope 2003 reports child report of 'delinquent behaviour' on a 1-5 scale and reports a non-significant effect favouring controls (SMD=0.11, p=0.26, no CI reported). FTP 2003 also reports convictions, slightly different data are reported each of the two publications relating to this study both relating to 10-17 year olds in the sample. Bloom 2000 reports convictions recorded to 13/455 intervention and 12/484 control children. In contrast, Morris 2003 reports convictions to 13/454 intervention and 11/467 control children. The differences are slight, and the differences between groups is non-significant.

c. Activities for child

Two studies report child involvement in 'organised activities' (Vermont WRP 2002; Fraker 2002), and we take this to contribute to child well-being. Although both studies suggest an effect in the same direction (favouring treatment, Vermont WRP 2002 shows a significant effect), I^2 suggested significant heterogeneity (43.9%) and a meta-analysis was not appropriate (Analysis 3.1).

New Hope also reports use of organised activities such as sport clubs (New Hope 2003). Mean frequency of involvement in organised activities were given (intervention=2.4, control=2.3) along with regression coefficient of 0.1 (used as an estimate of effect), which shows a non-significant effect (p=0.218) favouring intervention.

Child mental health or emotional state summary

Two meta-analyses were possible within these outcomes (parent rated positive and problem behaviour) the combined effect in each case favoured control although neither were statistically significant. Treatment groups were reported as being more likely to take part in organised activities in 2 studies (Fraker 2002; Vermont WRP 2002), though neither reached significance. Positive child behaviour was more common in the treatment groups twice and control groups twice across 4 studies, none reaching significance.

Involvement with the police was more likely among intervention children in one study (Vermont WRP 2002) and among control children in one other (Jobs First 2003). Again we would conclude that no consistent effect has been observed on measures of child mental health or emotional state.

Primary outcome 3: Oral health

None reported, aside from dental check ups in Fraker 2002 see above.

Secondary outcome 1: children's psychomotor or cognitive development.

The MacArthur Communication Development Inventory was used to assess language development in the Jobs First study (Jobs First 2003). The group means were not reported, instead the regression coefficient for the composite (combined data across 12-42 month olds n=283) was transformed to give an estimate of effect of 0.26 (standard deviation units higher than control) with t= 2.21, although a p value is not reported this t value suggests that this finding is likely to be significant, favouring intervention.

The Woodcock-Johnson Achievement Test was used in the New Hope studies (New Hope 2003). In this study effect sizes are given as an SMD but differing statistics were given; in the summary report (Huston 2003a) the SMD was given as 0.12 (intervention mean=98.05 control mean=96.01 p=0.091, n=816, no CI reported) and in body of text SMD=0.12 (intervention mean=96, control mean =94.2 p=0.108, n=816, no CI reported) (Huston 2003b). Although the effect size and direction remain the same (favouring intervention) the significance and mean values differ.

The Peabody Picture Vocabulary Scale (revised) was used in SSP study at 36 month follow-up (SSP 2006). Results are reported for two age groups, those aged 1-2 years at random assignment (control group mean=90.7, control n=396, intervention mean=93.0 n= 379, SE=1.4) and those aged 3-4 years at random assignment (control group mean=91.7, control n=374, intervention mean=93.6 n=387, SE=1.6), both showing a non-significant effect favouring treatment.

Child psychomotor or cognitive development summary

Three studies reported results from three different cognitive tests. All three report in favour of intervention children, one of which reaches significance at 95% confidence level.

Secondary outcome 2: Educational progress or attainment.

a. Educational Attainment in Public Records

MFIP reports Minnesota public school test assessments taken between 5 and 9 years post randomisation for children of single parents (MFIP 2005). Results are reported separately for children living with single parents or two parent families. Reviewers combined these and results are shown in Table 3. Children in the intervention group score higher on both reading and mathematics tests and a greater proportion of the intervention sample met the age expected level for reading and mathematics in both the 3rd and 5th grades. We cannot ascertain whether these differences reached

statistical significance since measures of variance in the sample are not available.

b. Parent-rated educational achievement as a dichotomous variable

Six studies reported poor achievement ratings by parents as a dichotomous variable (below average achievement/not below average achievement), and these data can be combined in a meta-analysis. Combining effects across the 6 studies (Fraker 2002; Vermont WRP 2002; Jobs First 2003; SSP 2006; FTP 2003; MFIP 2005) shows a null effect (OR=1.00 [0.90,1.11] Analysis 4.1).

c. Ever repeated a grade

Six studies reported the proportion of children that had ever repeated a grade (Fraker 2002; Vermont WRP 2002; Jobs First 2003; FTP 2003; MFIP 2005; SSP 2006). Meta-analysis of findings from these studies showed a null effect (Analysis 4.2; OR=1.00 [0.88,1.13]).

d. Ever received additional support from special education

Four studies reported the proportion of children ever receiving special education (Fraker 2002; Vermont WRP 2002; FTP 2003; SSP 2006). Individual odds ratios are shown in Analysis 4.3 but I^2 was high (40%) suggesting a high level of heterogeneity and therefore meta-analysis was not appropriate. Two studies favour intervention, and two control although none show a significant effect (Analysis 4.3).

e. High rate of absences from school

Two studies reported the proportion of children who had been absent from school more than 3 days in the previous month (Fraker 2002; Vermont WRP 2002 see Analysis 4.4). Fraker 2002 reported a significant effect favouring intervention (OR=0.74 [0.54. 1.03]) and Scrivener a non-significant effect favouring control (OR=1.1 [0.83, 1.45]). Meta-analysis was not appropriate as I^2=99% suggesting a high degree of heterogeneity.

f. Ever suspended or expelled

Two studies report the proportion of children suspended or expelled (Fraker 2002; Vermont WRP 2002), two studies suspensions (Jobs First 2003; FTP 2003) and FTP 2003 also reports those expelled. The two FTP publications report overlapping groups for suspensions and expulsions; Morris 2003 reports data for 10-17 years olds while Bloom 2000 reports data for 5-12 year olds. Since these groups are not mutually exclusive they cannot be combined, instead we report data for 10-17 year old since this was the age group with the higher rates of suspension and expulsion. Across these outcomes a null effect was observed (Analysis 4.5; OR=1.09

[0.94,1.37]), although the lower rate of expulsions in the control group in the FTP study was approaching significance (OR=1.68 [0.94,2.99]) .

g. Dropped out of school

Vermont WRP 2002 reports proportion of the sample dropping out of school, 7.6% of intervention (n=934) and 7.3% of control (n=439) children dropped out of school. A non-significant effect favouring control (OR=1.05 [0.65,1.61]).

Educational progress or attainment summary

Three meta-analyses were possible (academic performance below average, grade repetition, and suspension/expulsion from school), all show no effect. Overall ratings of achievement favoured intervention in one study using routinely collected data. In summary we would conclude that no effect was observed.

Secondary outcome 3: teenage sexual health

The number of under-18s becoming pregnant reported in Stevens-Simon 1997 and SSP 2006 is shown in Analysis 5.1. FTP 2003 also reports those having babies, again slightly different data are reported each of the two publications relating to this study. Bloom 2000 reports findings for 10-17 years olds with births recorded to 10/471 intervention and 13/491control children. In contrast, Morris 2003 reports findings for 12-17 year olds and reports births to 10/454 intervention and 14/482 control children. As with suspensions and expulsions, the older age group was chosen for use here. Only Stevens-Simon 1997 undertook pregnancy testing, all other studies rely on self-report, and all studies report for only those children aged at least 10 years old. Stevens-Simon data were reported as a cumulative count of pregnancy for each 6 month period, data reported here is for 24 month outcome. SSP is reported from 54 month follow-up data for those still aged under 18 (data for those aged 19+ was also reported, but excluded here as this is not an outcome of interest). A meta-analysis of these study findings shows a non-significant effect favouring control (OR=1.19 [0.94,1.51]).

New Hope 2003 reports the mean scores on a child self report scale of ever becoming pregnant (1 never, 5 five or more times) (Huston 2003a). The data presented shows that the difference between control and intervention group was non-significant (control n= 274 mean=1, intervention n=272 mean=1.1, p=0.65).

Subgroups

Planned subgroups were:

Intensity of intervention (amount of financial assistance given) subgroup reported below.

Underlying health/social welfare provision (e.g. countries with universal healthcare systems in place vs. those without). One study was conducted in Canada SSP 2006, and the remainder in the USA, so this subgroup was not considered.

Method of delivery of intervention (e.g. direct cash payment versus indirect tax benefits). The studies were better described according to conditionality of payment and data are reported below.

Effects of co-interventions. Data were not reported according to receipt of co-interventions and this subgroup was not reported.

Socioeconomic position (where sample includes more than one socioeconomic group). None of the studies delivered the intervention to mixed socioeconomic groups, all targeted low socioeconomic status groups.

a. Value or intensity of intervention

As noted in study descriptions the actual value of the interventions for participants varied across studies and participants, but was often low. Findings were compared across three categories of level of predicted additional income (i.e. combining earnings and welfare payments):

1) Value <US$50 per month. This average level of benefit was reported by Fraker 2002; Vermont WRP 2002; Stevens-Simon 1997.

2) Value US$50-100 per month. This average level of benefit was reported by FTP 2003; New Hope 2003; and single parents in MFIP 2005.

3) Value >US$100 per month (approximately £50 or Can$120). This average level of benefit was reported by SSP 2006; Jobs First 2003; and couples in MFIP 2005.

To put these values in context, if we compare these sums to USDA reports of the estimates of money spent by low income couples on a child aged 3 to 5 years in the year $50 would have contributed 10.7% of this spend in 1995, 9.3% in 2000 and 8.0% in 2005 (Lino 1996; Lino 2001; Lino 2006).

Outcomes by value of intervention are shown in Analysis 6.1; Analysis 6.2; Analysis 6.3; Analysis 6.4; Analysis 6.5; Analysis 6.6. Where possible data from MFIP was disaggregated for single parents and couples. See Table 4.

It was possible to compare four outcomes by value of intervention: child health insurance coverage, parent-reported positive behaviour, parent-reported problem behaviour and involvement with the police. None of these comparisons appear to show a relationship between intervention value and outcome, and heterogeneity is high in these samples precluding meta-analysis (positive behaviour $I^2=30.3\%$, problem behaviour $I^2=63.4\%$, involvement with police $I^2=69.6\%$).

b. Conditionality of intervention

Most of the studies reported here applied conditions to the receipt of money. For the most part conditions involved recipients of the benefits taking up employment (FTP 2003; Fraker 2002; SSP 2006; New Hope 2003; Jobs First 2003; Vermont WRP 2002; ABC Study 2003; Vermont WRP 2002) and participants in Stevens-Simon 1997 had to attend group meetings and undertook compulsory pregnancy testing. Only 3 studies included an

incentives only sample (MFIP 2005; Vermont WRP 2002; SSP 2006) but of these studies only Scrivener 2002 reports child outcomes for the incentive only groups. Outcomes from Scrivener for comparisons between incentive only, incentives with conditions and control group are shown in additional Table 5. On the whole the incentives group appears to have done less well than those in the conditional groups, although Scrivener does not report significantly different results.

DISCUSSION

This review set out to assess the effects of a financial intervention to families on child health, psychosocial and educational outcomes. No overall effect was observed in the examined outcomes. There was a trend toward improved early language performance among children in the intervention group. In other cases where significant outcomes were observed in individual studies, other studies found outcomes in the other direction. Within the nine included studies the value of the intervention did not seem to determine outcome. Outcomes themselves often relied on parental report alone and therefore may be subject to reporting bias. These findings mirror results found in the Seattle and Denver Income Maintenance experiments, where outcomes were mixed in favour of control, intervention or null effects.

We were not able to examine the effect of conditional receipt of money, which was unfortunate since interest in the impact of increasing family choice through income increases was core to the rationale for the review. Of the three studies collecting data for incentives only groups, only one reports data for this group and results from this study suggest that for most outcomes (five out of seven reported) the unrestricted incentives group showed mixed results but tended to have less positive outcomes than the control or conditional incentives groups. Psychosocial factors have been proposed to explain links between relative poverty and health (see, for example, Wilkinson 2006). If the increased stress experienced by disadvantaged groups explains poor outcomes (for example by increasing aggression) even in part, then the extent to which an intervention targeting these groups is likely to reduce stress may be important in understanding effectiveness. Promoting work amongst the jobless may increase status for those that are successful and therefore increasing employment provide psychosocial as well as monetary benefits. The studies included in this review did increase employment, but they also introduce new controls on participants. However, enforcing the uptake of low status work may increase stigma and stress rather than reducing it. Since income benefits could not be disentangled from conditions we were not able to test this supposition. We hope that future publications by study authors may report differential effects for incentive only intervention groups.

Some of the reporting studies were concerned with the potential impact of the conditionality itself; for instance the imposition of sanctions on families, and of increased working hours among single parents with young children. Had we been able to report on outcomes for study groups with and without conditions we too could comment on the effects of conditionality.

There were also tentative but important evidence that sanctions and work requirements involved in the interventions may place additional stresses on families with young children and has the potential to increase family breakdown and child abuse (ABC Study 2003).

When interpreting the findings we also note that the monetary value of many interventions was low. Most studies the total increase in income to intervention families was less than US$50 per month (or US$11.50 per week), despite the fact that many parents were compelled to work full time. For a whole family, we would question whether this level of income increase is likely to effect living conditions, and therefore whether the studies show no effect because the intervention was too small. Only three studies provided benefits of more than US$150 per month, and within one study (MFIP 2005) this was only for a minority of participants, most received less. We have reported here outcomes by income level, but we treat these findings with caution as total increase in family income differs by subgroup in all these studies. For example, despite an everage increase in income Fraker 2002 reports a *decrease* of $202 per month in total household income among single mothers under the new welfare regime. Authors suggest this is due to "a positive impact on being never-married and negative impact on being currently married" (p. 62), in other words the intervention made remaining or becoming a lone parent more likely. The impact of these interventions on poverty seems to be questionable in at least some cases, and any conclusions made on the basis of these studies is therefore limited to interventions of similar value.

In a similar vein, economic theory would suggest that it is not just the increase in income that matters, but also the likelihood that the income increase be sustained (Friedman 1957). The permanent income hypothesis suggests that people do not change their spending habits in response to what are seen to be temporary changes in income, only if they see a significant and sustained change will they change their lifestyles. We have suggested the changes in income observed here may not be significant, and the short term nature of support offered in some of these studies may not be interpreted by families as sustained. In other words, none of these interventions are large enough or sustained enough to constitute a sufficient 'dose' and this may explain the lack of observed effect.

Length of outcome data for these studies was reasonably long term (up to 6 years in some cases), but other studies which aim to change future outcomes for children by preventive intervention in childhood have shown that very long term data is needed to assess the effects of such preventive work (e.g. High/Scope Pre-school Perry). Future updates of this review should seek out follow-up data for the studies reported here, as well as any new studies reporting.

It is also useful here to consider the limitations of the review methodology. The systematic searches undertaken here were highly inefficient (with a high abstract hit rate for few relevant studies) and made searching for study types other than RCTs impractical. The review methodology also means that intervention types are included or rejected a priori. We could not predict that we would only locate studies where additional monies were modest and were made conditional on strict employment or attendance requirements, despite the fact that the scope of the review was broader. We were not able to report on the effect of unconditional additional monies, nor of interventions with higher 'dosage' (i.e. interventions of higher value and/or longer period). We also did not include studies where money was paid to young people rather than parents (such as education maintenance allowance), previous studies suggests that the division of household income is not straightforward (Goode 1998) and is not inevitably shared . We acknowledge that a different decision might have been made here, but could find no evidence supporting (or rebutting) the view that this is considered family money.

There is a very strong and consistent association in observational data between family income and virtually every health, behavioural and educational outcome in children. This association is again reported in all of the studies discussed here with substantial levels of ill health reported amongst children of participants. A number of studies have highlighted the significant stress experienced by families with young children on low incomes and the association with adverse psychological outcomes for children and mothers. Previous observational studies cannot address causation, so these associations may relate to other causal factors. In addition, it is unclear whether any effects are the consequence of long term material deprivation, and whether such effects could be remedied in the short term by the provision of increased financial resources. The response of government to the recognition of the increased risk to children of the poorest families has been, in general, to provide services to attempt to ameliorate adverse consequences or increase work among welfare recipients. The welfare reform studies cited here were largely successful in their aims; that is they increased employment and reduced welfare payments over time. However, the question of 'what works?' is more correctly phrased 'what works for whom?'. Given that increased parental employment is thought to be critical to the reduction of child poverty in many countries including the UK (Freud 2007) it is important to monitor effects on children as well as on employment.

On the basis of current evidence we have not been able to establish whether unconditional financial benefits delivered as an intervention are effective at redressing inequalities in health and wellbeing resulting from relative poverty in the short term. This is in essence a statement of no evidence of effect rather than evidence of no effect

and, given the constraints on participants in these cases, we would not conclude that the potential impact of additional income has yet been assessed. There is tentative evidence that young children (under 42 months) in the intervention groups had improved early language skills, an improvement that may well be associated with greater use of organised child care (Allhusen 2002). The association between lower income and poorer outcome across all dimensions of child health is strong and consistent across countries and time, and small value interventions with strict conditions attached have not been shown to reverse the pattern of disadvantage for poor groups.

AUTHORS' CONCLUSIONS

Implications for practice

The association between low income and poor outcome in all dimensions of child health is strong and consistent across countries and time. On the basis of current evidence we have not been able to establish that direct financial benefits delivered as an intervention are effective in redressing this balance in the short term. It is plausible that studies reviewed here did not offer a significant 'dose' (an interventions of larger value or longer duration). This is in essence a statement of "no evidence of effect" rather than of "evidence of no effect" viewed in the context of the monetary value of the interventions studied. While this review has not found significant benefits associated with low-value, strictly conditional welfare reform, the implications for practice is that increasing family income remains a promising intervention.

Implications for research

Large scale evaluations of conditional payments of small value have been thoroughly tested and, not withstanding the limited child outcome data in these studies, probably do not need to be repeated. The gaps in the research evidence remain in the evaluation of unconditional payments of higher value, with high quality child outcome measures. For those studies completed, data collection for outcomes of children in experimental families should be ongoing.

ACKNOWLEDGEMENTS

REFERENCES

References to studies included in this review

ABC Study 2003 *{published data only}*
Fein DJ, Karweit JA. *The ABC Evaluation: The Early Economic Impacts of Delaware's A Better Chance Welfare Reform Program*. Cambridge, MA: Abt Associates, 1997.
Fein DJ, Lee WS. The impacts of welfare reform on child maltreatment in Delaware. *Children and Youth Services Review* 2003;**25**(1):83–111. [MEDLINE: 14099]

Fraker 2002 *{published data only}*
* Fraker TM, Ross CM, Stapulonis RA, Olsen RB, Kovac MD, Dion MD, Rangarajan A. *The Evaluation of Welfare Reform in Iowa: Final Impact Report*. Washington, DC: Mathematica Policy Research, Inc, 2002.

FTP 2003 *{published data only}*
Bloom D, Kemple JJ, Morris P, Scrivener S, Verma N, Hendra R, Adams-Ciardullo D, Seith D, Walter J. *The Family Transition Program: Final Report on Florida's Initial Time-Limited Welfare Program*. New York, NY:

Manpower Demonstration Research Corporation Research Corporation, 2000.
* Morris P, Bloom D, Kemple J, Hendra R. The effects of a time-limited welfare program on children: the moderating role of parents' risk of welfare dependency. *Child Development* 2003;**74**(3):851–74. [MEDLINE: 218]

Jobs First 2003 *{published data only}*
* Horwitz SM, Kerker B. Preschool and School Age Children Under Welfare Reform. *Child Psychiatry and Human Development* 2001;**32**(2):107–24.
Loeb S. How welfare reform affects young children: experimental findings from Connecticut. A research note. *Journal of Policy Analysis and Management* 2003;**22**(4): 537–50. [MEDLINE: 346]

MFIP 2005 *{published data only}*
Gennetian LA, Miller C. Children and welfare reform: a view from an experimental welfare program in Minnesota. *Child Development* 2002;**73**(2):601–20.
* Gennetian LA, Miller C, Smith J. *Turning Welfare into a Work Support Six-Year Impacts on Parents and Children from*

the *Minnesota Family Investment Program*. New York, NY: Manpower Demonstration Research Corporation, 2005.
Gennetian LA, Morris PA. The effects of time limits and make-work-pay strategies on the well-being of children: experimental evidence from two welfare reform programs. *Children and Youth Services Review* 2003;**25**(1-2):17–54.
Knox V, Miller C, Gennetian LA. *Summary of the Final Report on the Minnesota Family Investment Program*. New York, NY: Manpower Demonstration Research Corporation, 2000.
Morris P, Gennetian L. Identifying the effects of income on children's development using experimental data. *Journal of Marriage and Family* 2003;**65**(3):716–29.
Yoshikawa H, Magnuson KA, Bos JA, Hsueh J. Effects of Earnings-Supplement Policies on Adult Economic and Middle-Childhood Outcomes Differ for the "Hardest to Employ". *Child Development* 2003;**74**(5):1500–21.

New Hope 2003 *{published data only}*
* Huston A, Miller C, Richburg H, Duncan G, Eldred C, Weisner T, et al.*New hope for families and children: five-year results of a program to reduce poverty and reform welfare*. New York: Manpower Demonstration Research Corporation (MDRC), 2003.
Huston A, Miller C, Richburg H, Duncan G, Eldred C, Weisner T, et al.*New hope for families and children: five-year results of a program to reduce poverty and reform welfare. Summary report: June 2003*. New York, NY: Manpower Demonstration Research Corporation (MDRC), 2003. [MEDLINE: 59]
Huston AC. Effects of a family poverty intervention program last from middle childhood to adolescence. In: Huston AC, Ripke MN editor(s). *Developmental contexts in middle childhood*. New York: Cambridge University Press, 2006:383–408.
Huston AC, Duncan GJ, Granger R, Bos J, McLoyd V, Mistry R, et al.Work-based antipoverty programs for parents can enhance the school performance and social behavior of children. *Child Development* 2001;**72**(1):318–36.
Lowe ED. Ethnographic study of low-income families. In: Cooper C, Garcia-Coll C, Bartko T, Davis H, Chatman C editor(s). *Hills of gold: diverse pathways through middle childhood*. Mahwah, NJ: Erlbaum, 2005:121–144.

SSP 2006 *{published data only}*
Ford R, Gyarmati D, Foley K, Tattrie D, Jimenez L. *Can Work Incentives Pay for Themselves? Final Report on the Self-Sufficiency Project for Welfare Applicants*. Ottawa: Social Research and Demonstration Corporation, 2003.
Michalopoulos C, Tattrie D, Miller C, Robins PK, Morris P, Gyarmati D, Redcross C, Foley K, Ford R. *Making Work Pay. Final Report on the Self-Sufficiency Project for Long-Term Welfare Recipients*. Ottawa: Social Research and Demonstration Corporation, 2002.
Morris P, Kalil A. Out-of-School Time-Use During Middle Childhood in a Low-Income Sample: Do Combinations of Activities Affect Achievement and Behaviour? The Self-Sufficiency Project. *SRDC Working Paper Series 04-06*.

Ottawa: SRDC, 2004.
Morris P, Michalopoulos C. *The Self-Sufficiency Project at 36 Months: Effects on Children of a Program that Increased Parental Employment and Income - Executive Summary*. Ottawa: Social Research and Demonstration Corporation, 2000.
Morris PM, Michalopoulos C. Findings from the Self-Sufficiency Project: effects on children and adolescents of a program that increased employment and income. *Journal of Applied Developmental Psychology* 2003;**24**(2):201–39.
* Wilk P, Boyle MH, Dooley MD, Lipman EL. *The Effect of the Self-Sufficiency Project on Children*. Ottawa: Social Research and Demonstration Corporation, 2006.

Stevens-Simon 1997 *{published data only}*
* Stevens-Simon C, Dolgan JI, Kelly L, Singer D. The effect of monetary incentives and peer support groups on repeat adolescent pregnancies: a randomized trial of the Dollar-a-Day program. *JAMA* 1997;**277**(12):977–82.

Vermont WRP 2002 *{published data only}*
* Scrivener S, Hendra R, Redcross C, Bloom D, Michalopoulos C, Walter J. *WRP: final report on Vermont's Welfare Restructuring Project (September 2002)*. New York, NY: Manpower Demonstration Research Corp, 2002. [MEDLINE: 58]

References to studies excluded from this review

Aber 1995 *{published data only}*
Aber JL, Brooks-Gunn J, Maynard RA. Effects of Welfare Reform on Teenage Parents and Their Children. *The Future of Children* 1995;**5**(2):53–71.

Anonymous 1991 *{published data only}*
* Anonymous. Maternity and parental leave, preschool child care, and tax receipts. *International Journal of Health Services* 1991;**21**(3):573–8. [MEDLINE: 5493]

Bos 1997 *{published data only}*
* Bos J, Fellerath V. *Leap: Ohio's welfare initiative to improve school attendance among teenage parents. Ohio's learning, earning, and parenting program. Final report August 1997 (BBB17200)*. New York, NY: Manpower Demonstration Research Corporation, 1997.
Long D, Gueron JM, Wood RG, Fisher R, Fellerath V. *LEAP. Three-Year Impacts of Ohio's Welfare Initiative to Improve School Attendance Among Teenage Parents. Ohio's learning, Earning, and Parenting Program*. New York, NY: Manpower Demonstration Research Demonstration, 1996.

Brown 1999 *{published data only}*
* Brown HN, Saunders RB, Dick MJ. Preventing Secondary Pregnancy in Adolescents: A Model Program. *Health Care for Women International* 1999;**20**:5–15.

Cauthen 2002 *{published data only}*
* Cauthen N. *Policies that improve family income matter for children. Improving children's economic security: research findings about increasing family income through employment. Policy brief 2002*. New York, NY: National Center for Children in Poverty, Columbia University, 2002. [MEDLINE: 134]

Chung 1996 *{published data only}*
* Chung W, Pardeck J. Welfare versus workfare: policy implications. *Early Child Development and Care* 1996;**119**: 65–72.

Coates 1982 *{published data only}*
Coates. The Use of Monetary Reward as a Learning Incentive. Annual Meeting of the American Educational Research Association (New York). 1982.

Collins 1996 *{published data only}*
* Collins A, Jones S, Bloom H. *Children and welfare reform: highlights from recent research 1996*. New York, NY: National Center for Children in Poverty, Columbia University, 1996.

Cook 2002 *{published data only}*
* Cook JT, Frank DA, Berkowitz C, Black MM, Casey PH, Cutts DB, Meyers AF, Zaldivzr N, Skalicky A, Levenson S, Heeren T. Welfare Reform and the health of young Children. A sentinel Survey in 6 US Cities. *Archives of Paediatric and Adolescent Medicine* 2002;**156**:678–684.

Dearden 2005 *{published data only}*
* Dearden L, Emmerson C, Frayne C, Meghir C. *Education subsidies and school drop-out rates*. London: Institute for Fiscal Studies and University College London, 2005.

Donovan 1995 *{published data only}*
* Donovan P. The 'Family Cap': A Popular but Unproven Method of Welfare Reform. *Family Planning Perspectives* 1995;**27**(4):166–171.

Duncan 2000 *{published data only}*
* Duncan G, Chase L. *Welfare reform and child well-being. JCPR working paper 271*. Chicago, IL: Joint Center for Poverty Research, 2000.

Farel 1995 *{published data only}*
Farel AM, McCarraher DR, Cotten N, McLaurin JA. Opportunities for older children and adolescents with disabilities through the supplemental security income program. *Child Health Care* 1995;**24**:21–32.

Fraker 1995 *{published data only}*
Fraker TM, Martini AP, Ohls JC. The Effect of Food Stamp Cashout on Food Expenditures: An Assessment of the Findings from Four Demonstrations. *The Journal of Human Resources* 1995;**30**(4):633–649.

Freedman NEWWS 2000 *{published data only}*
Freedman. *Four-Year Impacts of Ten Programs on Employment Stability and Earnings Growth. The National Evaluation of Welfare-to-Work Strategies*. New York, NY: MDRC, 2000.

Fuller 2002 *{published data only}*
* Fuller B, Caspary G, Kagan SL, Gauthier C, Huang DS, Carroll J, et al.Does maternal employment influence poor children's social development?. *Early Childhood Research Quarterly* 2002;**17**(4):470–97. [MEDLINE: 13604]

Futrell 1975 *{published data only}*
Futrell MF, Kilgore LT, Windham F. Nutritional status of black preschool children in Mississippi. Influence of income, mother's education, and food programs. *Journal of American Dietetic Association* 1975;**66**(1):22–27.

Gennetian 2002b *{published data only}*
Gennetian LA, Duncan GJ, Knox VW, Vargas WG, Clark-Kauffman E, London AS. *How Welfare and Work Policies for Parents Affect Adolescents*. New York, NY: MDRC, 2002.

Gennetian 2002c *{published data only}*
Gennetian L, Duncan G, Knox V, Vargas W, Clark K, London A. *How welfare and work policies for parents affect adolescents: a synthesis of research May 2002*. New York, NY: Manpower Demonstration Research Corporation, 2002. [MEDLINE: 139]

Gennetian 2004 *{published data only}*
Gennetian L, Duncan G, Knox V, Vargas W, Clark K, London A. How welfare policies affect adolescents' school outcomes: a synthesis of evidence from experimental studies. *Journal of Research on Adolescence* 2004;**14**(4): 399–423. [MEDLINE: 13612]

Gertler 2004 *{published data only}*
* Gertler P. Do conditional cash transfers improve child health? Evidence from PROGRESA's control randomized experiment. *American Economic Review* 2004;**94**(2): 336–41. [MEDLINE: 223]

Granger 1999 *{published data only}*
* Granger R, Cytron R. Teenage parent programs: a synthesis of the long-term effects of the new chance demonstration, Ohio's learning, earning, and parenting program, and the teenage parent demonstration. *Evaluation Review* 1999;**23**(2):107–45. [MEDLINE: 319]

Haas 1993 *{published data only}*
* Haas JS, Udvarhelyi S, Epstein AM. The effect of health coverage for uninsured pregnant women on maternal health and the use of cesarean section. *JAMA* 1993;**270**(1):61–4. [MEDLINE: 6744]

Hamilton 2001 *{published data only}*
* Hamilton G, Freedman S, Gennetian L, Michalopoulos C, Walter J, Adams-Ciardullo D, Gassman-Pines A, McGroder S, Zaslow M, Brooks J, Ahluwalia S, Small E, Ricchetti B. *National Evaluation of Welfare-to-Work Strategies How Effective Are Different Welfare-to-Work Approaches? Five-Year Adult and Child Impacts for Eleven Programs*. Washington, DC: U.S. Department of Health and Human Services, 2001.
Hamilton G, Freedman S, McGroder SM. *National Evaluation of Welfare-to-Work Strategies Do Mandatory Welfare-to-Work Programs Affect the Well-Being of Children? A Synthesis of Child Research Conducted as Part of the National Evaluation of Welfare-to-Work Strategies*. Washington, DC: U.S. Department of Health and Human Services, 2000.

Hangsleben 1995 *{published data only}*
* Hangsleben K, Jones M, Lia-Hoagberg B, Skovholt C, Wingeier R. Medicaid and non-Medicaid prenatal care by nurse-midwives. Comparison of risk, time, care coordination, and reimbursement. *Journal of Nurse-Midwifery* 1995;**40**(4):320–7. [MEDLINE: 7612]

Hoekstra 1999 *{published data only}*
* Hoekstra EJ, LeBaron CW, Johnson-Partlow T, Hoekstra EJ, LeBaron CW, Johnson-Partlow T. Does reminder-recall

augment the impact of voucher incentives on immunization rates among inner-city infants enrolled in WIC? Special Supplemental Program for Women, Infants, and Children. *Journal of Pediatrics* 1999;**135**(2 Pt 1):261–3. [MEDLINE: 10657]

Holl 2000 *{published data only}*
* Holl JL, Szilagyi PG, Rodewald LE, Shone LP, Zwanziger J, Mukamel DB, et al.Evaluation of New York State's Child Health Plus: access, utilization, quality of health care, and health status. *Pediatrics* 2000;**105**(3 Suppl E):711–8. [MEDLINE: 10439]

Hutchins 1999 *{published data only}*
* Hutchins SS, Rosenthal J, Eason P, Swint E, Guerrero H, Hadler S, et al.Effectiveness and cost-effectiveness of linking the special supplemental program for women, infants, and children (WIC) and immunization activities. *Journal of Public Health Policy* 1999;**20**(4):408–26. [MEDLINE: 9136]

Jagannathan FDP 2005 *{published data only}*
* Jagannathan R, Camasso MJ, McLanahan SS. Welfare reform and child fostering: pinpointing affected child populations. *Social Science Quarterly* 2005;**86**(Supplement): 1080–1103. [MEDLINE: 20]

Johnson 1999 *{published data only}*
* Johnson FC, Hotchkiss DR, Mock NB, McCandless P, Karolak M, Johnson FC, et al.The impact of the AFDC and Food Stamp programs on child nutrition: empirical evidence from New Orleans. *Journal of Health Care for the Poor and Underserved* 1999;**10**(3):298–312. [MEDLINE: 10651]

Jonas 1992 *{published data only}*
* Jonas E, Hayes L. The use of monetary reward as a learning incentive. Paper presented at the Annual Meeting of the American Educational Research Association (New York, March 19-23, 1982). New York: AERA, 1982. [MEDLINE: 1027]

Jones 1991 *{published data only}*
Jones HE, Haug N, Silverman K, Stitzer M, Svikis D. The effectiveness of incentives in enhancing treatment attendance and drug abstinence in methadone-maintained pregnant women. *Drug and Alcohol Dependence* 1991;**61** (3):297–306.

Kafatos 1977 *{published data only}*
Kafatos AG, Zee P. Nutritional benefits from federal food assistance: a survey of preschool black children from low-income families in Memphis. *American Journal of Diseases of Children* 1977;**131**(3):265–269.

Kalil 1998 *{published data only}*
* Kalil A, Eccles JS. Does Welfare Affect Family Processes and Adolescent Adjustment?. *Child Development* 1998;**69** (6):1597–1613.

Kirk 2002 *{published data only}*
* Kirk G. Support for the costs of learning. LSDA reports 2002. LSDA, London. Learning and Skills Development Agency, London (England). (BBB36557).. [MEDLINE: 140]

Maynard 1977 *{published data only}*
* Maynard RA. The effects of the rural income maintenance experiment on the school performance of children. *American Economic Review* 1977;**67**:370–5.

Maynard 1979 *{published data only}*
* Maynard R, Murnane R. The effects of a negative income tax on school performance: results of an experiment. *Journal of Human Resources* 1979;**14**(4):463–76.

McDonald 1979 *{published data only}*
* McDonald J, Stephenson S. The effect of income maintenance on the school-enrollment and labor- supply decisions of teenagers. *Journal of Human Resources* 1979;**14** (4):488–95.

Mills 2006 *{published data only}*
* Mills G, Gale WG, Patterson R, Apostolov E. What Do Individual Development Accounts Do? Evidence from a Controlled Experiment. Abt Associates. 2006.

Mitchell 1992 *{published data only}*
* Mitchell G. *The Milwaukee parental choice program*. Milwaukee WI: Wisconsin Policy Research Institute, 1992. [MEDLINE: 685]

Morris 2001 *{published data only}*
* Morris P, Huston A, Duncan G, Crosby D, Bos J. *How welfare and work policies affect children: a synthesis of research March 2001*. New York, NY: Manpower Demonstration Research Corp, 2001. [MEDLINE: 207]

Morris 2005 *{published data only}*
Morris P, Duncan GJ, Clark-Kauffman E. Child well-being in an era of welfare reform: the sensitivity of transitions in development to policy change. *Developmental Psychology* 2005;**41**(6):919–32. [MEDLINE: 90]

Mullett 1988 *{published data only}*
* Mullett SE, Leonard BJ, Oberg CN, Lia-Hoagberg B. A comparison of birth outcomes by payment source. *Minnesota Medicine* 1988;**71**(6):365–9. [MEDLINE: 4434]

Parkin 1995 *{published data only}*
Parkin PC, Hu X, Spence LJ, Kranz KE, Shortt LG, Wesson DE. Evaluation of a subsidy program to increase bicycle helmet use by children of low-income families.. *Pediatrics* 1995;**96**(2 Pt1):283–287.

Rauh 1990 *{published data only}*
* Rauh VA, Nurcombe B, Achenbach T, Howell C. The Mother-Infant Transaction Program. The content and implications of an intervention for the mothers of low-birthweight infants. *Clinics in Perinatology* 1990;**17**(1): 31–45. [MEDLINE: 5953]

Reid 1994 *{published data only}*
* Reid W, et al.Cash incentives versus case management: can money replace services in preventing school failure?. *Social Work Research* 1994;**18**(4):227–36. [MEDLINE: 605]

Reid 1995 *{published data only}*
* Reid WJ, Bailey-Dempsey C. The effects of monetary incentives on school performance. *Families in Society* 1995; **76**:331–40. [MEDLINE: 14220]

Reiss 1976 *{published data only}*

Reiss ML, Piotrowski WD, Bailey JS. Behavioral community psychology: encouraging low-income parents to seek dental care for their children. *Journal of Applied Behavior Analysis* 1976;**9**(4):387–397.

Rivera-Casale 1982 *{published data only}*

* Rivera-Casale C, et al.*Can employer or worker subsidies raise youth employment? An evaluation of two financial incentive programs for disadvantaged youth. Final report September 1982*. Waltham, MA: Florence Heller Graduate School for Advanced Studies in Social Welfare, Center for Employment and Income Studies (CEIS), Brandeis University, 1982. [MEDLINE: 982]

Schaefer 2002 *{published data only}*

Schaefer S. *Welfare to work: does it work for kids? Research on work and income welfare experiments. Fact sheet*. Washington, DC: National Association of Child Advocates, 2002. [MEDLINE: 151]

Schwartz 2002 *{published data only}*

* Schwartz W. *Welfare reform and urban children (Report: ED471970 2002-12-00) (Available online at: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/ content˙storage˙01/0000019b/80/1a/ac/1a.pdf, accessed January 2008)*. New York, NY: Institute for Urban and Minority Education, Columbia University, 2002. [MEDLINE: 107]

Sherman 2001 *{published data only}*

* Sherman A. *Welfare Experiments: The Pivotal Role of Income*. Washington, DC: Children's Defense Fund, 2001.

Smith 2001 *{published data only}*

* Smith JR, Brooks-Gunn J, Kohen D, McCarton C. Transitions on and off AFDC: implications for parenting and children's cognitive development. *Child Development* 2001;**72**(5):1512–33. [MEDLINE: 317]

Spencer 2005 *{published data only}*

* Spencer MB, Noll E, Cassidy E. Monetary incentives in support of academic achievement: results of a randomized field trial involving high-achieving, low-resource, ethnically diverse urban adolescents. *Evaluation Review* 2005;**29**(3): 199–222. [MEDLINE: 1985]

Spermann 2006 *{published data only}*

* Spermann A, Strotmann H. *The Targeted Negative Income Tax (TNIT) in Germany: Evidence from a Quasi Experiment. Discussion Paper No. 2067*. Bonn, Germany: Forschungsinstitut zur Zukunft der Arbeit Institute for the Study of Labor, 2006.

Venti 1984 *{published data only}*

Venti SF. The Effects of Income Maintenance on Work, Schooling, and Non-Market Activities of Youth. *The Review of Economics and Statistics* 1984;**66**(1):16–25.

Wells 1989 *{published data only}*

* Wells KB, Manning WG, Jr, Valdez RB. The effects of insurance generosity on the psychological distress and psychological well-being of a general population. *Archives of General Psychiatry* 1989;**46**(4):315–20. [MEDLINE: 4292]

Wells 2003 *{published data only}*

* Wells K, Guo S, Shafran R, Pearlmutter S. *Deterioration of child welfare families under conditions of welfare reform. JCPR working paper*. Chicago IL: Joint Center for Poverty Research, 2003. [MEDLINE: 70]

Whitmore 2005 *{published data only}*

* Whitmore D. Resource and peer impacts on girls' academic achievement: evidence from a randomized experiment. *American Economic Review* 2005;**95**(2): 199–203. [MEDLINE: 43]

Wolfe 2002 *{published data only}*

* Wolfe B. Welfare reform in the US: early evidence of impacts. *Australian Journal of Labour Economics* 2002;**5**(4): 457–70. [MEDLINE: 393]

Yoshikawa 1999 *{published data only}*

Yoshikawa H. Welfare dynamics, support services, mothers' earnings, and child cognitive development: Implications for contemporary welfare reform. *Child Development* 1999;**70**: 779–801.

Yoshikawa 2003 *{published data only}*

* Yoshikawa H, Magnuson KA, Bos JB, Hsueh J. Effects of Earnings-Supplement Policies on Adult Economic and Middle-Childhood Outcomes Differ for the "Hardest to Employ". *Child Development* 2003;**64**(5):1500–21.

Zaslow 1994 *{published data only}*

* Zaslow M, Moore K, Coiro M, Morrison D. *Programs to enhance the self-sufficiency of welfare families: working towards a model of effects on young children*. Washington DC: Child Trends, Inc, 1994. [MEDLINE: 410]

Zaslow 2000 *{published data only}*

* Zaslow M, McGroder S, Moore K. *Impacts on young children and their families two years after enrollment: findings from the child outcomes study. Summary report. National Evaluation of Welfare-to-Work Strategies June 2000*. Washington, DC: Administration for Children and Families (DHHS), 2000. [MEDLINE: 220]

Additional references

Achenbach 1991

Achenbach TM. *Manual for the Child Behavior Checklist/ 4-18 and 1991 Profile*. Burlington: University of Vermont Department of Psychiatry, 1991.

Acheson 1998

Acheson D. *Independent Inquiry into Inequalities in Health Report*. London: The Stationery Office, 1998.

Allhusen 2002

Allhusen V, Belsky J, Booth C, Bradley R, Brownell CA, Burchinal M, Caldwell B, Campbell SB, Clarke-Stewart KA, Cox M, Friedman SL, Hirsh-Pasek, K, et al.Early child care and children's development prior to school entry: Results from the NICHD Study of Early Child Care. *American Educational Research Journal* 2002;**39**(1):133–64.

Attree 2006

Attree P. The Social Costs of Child Poverty: A Systematic Review of the Qualitative Evidence. *Children & Society* 2006;**20**(1):54–66.

Baker 2002

Baker M. Child Poverty, Maternal Health and Social Benefits.. *Current Sociology* 2002;**50**(6):828–38.

Bloom 2000

Bloom D, Kemple JJ, Morris P, Scrivener S, Verma N, Hendra R, Adams-Ciardullo D, Seith D, Walter J. *The Family Transition Program: Final Report on Florida's Initial Time-Limited Welfare Program*. New York, NY: Manpower Demonstration Research Corporation Research Corporation, 2000.

Bradshaw 2005

Bradshaw J. *The well-being of children in the UK*. 2nd Edition. London: Save the Children, 2005.

Case 2002

Case A, Lubotsky D, Paxson C. Economic Status and health in childhood: The origins of gradients. American Economic Review Papers and Proceedings. 2002; Vol. 94:331–335.

CIOMS 2002

CIOMS. *International Ethical Guidelines for Biomedical Research Involving Human Subjects*. Geneva: The Council for International Organizations of Medical Sciences (CIOMS), 2002.

Connor 1999

Connor J, Rodgers A, Priest P. Randomised studies of income supplementation: a lost opportunity to assess health outcomes. *Journal of Epidemiology and Community Health* 1999;**53**:725–30.

Currie 2003

Currie J, Stabile M. Socioeconomic Status and Health: Why is the Relationship Stronger for Older Children?. *American Economic Review* 2003;**93**(5):1813–23.

Currie 2004

Currie A, Shields MA, Wheatley Price S. Is the Child Health/Family Income gradient universal? Evidence from England. IZA Discussion paper. Bonn, Germany: IZA, 2004. [: IZA DP NO. 1328]

Currie 2005

Currie J, Stabile. Child Mental Health and Human Capital Accumulation: The Case of ADHD. *NBER Working Paper*. Cambridge, MA: National Bureau of Economic Research, 2005. [: Working Paper #10435]

Darton 2003

Darton D, Hirsch D, Sterlitz J. *Tackling disadvantage: A 20-year enterprise*. York: Joseph Rowntree Foundation, 2003.

Davey-Smith 1999

Davey Smith G. Poverty across the life-course and health. In: Gordon D, Shaw M, Dorling D, Davey Smith G editor (s). *Inequalities in Health: The evidence presented to the Independent Inquiry into Inequalities in Health, chaired by Sir Donald Acheson*. Bristol: The Policy Press, 1999:76–86.

Dearing 2001

Dearing E, McCartney K, Taylor BA. Change in Family Income-to-Needs Matters More for Children with Less. *Child Development* 2001;**72**(6):1779–93.

DeNavas-Walt 2005

DeNavas-Walt C, Proctor BD, Hill Lee C. Income, Poverty, and Health Insurance Coverage in the United States: 2004. *http://www.census.gov/hhes/www/poverty/poverty04.html (accessed 7 Sept 2006)*. Washington DC, USA: US Census Bureau, 2005.

Dickersin 1994

Dickersin K, Scherer R, Lefebvre C. Identifying relevant studies for systematic reviews. *BMJ* 1994;**309**:1286–91.

Duncan 1994

Duncan GJ, Brooks-Gunn J, Klebanov P. Economic deprivation and early child development. *Child Development* 1994;**64**:296–318.

Freud 2007

Freud D. *Reducing dependency, increasing opportunity: options for the future of. welfare to work*. London: Department for Work and Pensions, 2007.

Friedman 1957

Friedman M. *A Theory of the Consumption Function*. Princeton, NJ: National Bureau of Economic Research, 1957.

Goode 1998

Goode, J, Callander, C, Lister. R. *Purse or Wallet? Gender inequalities and income distribution within families on benefit*. London: Policy Studies Institute, 1998.

Goodman 1997

Goodman R. Strength and Difficulties Questionnaire: a. research note. *Journal of Child Psychology & Psyciatry* 1997;**38**:581–6.

Higgins 2003

Higgins JPT, Thompson SG, Deeks JJ, Altman DG. Measuring inconsistency in meta-analyses. *BMJ* 2003;**327**:557–560.

Hirsch 2006

Hirsch D. *What will it take to end child poverty?*. York, UK: Joseph Rowntree Foundation, 2006.

HM Treasury 2004

HM Treasury. *Treasury Child Poverty Review*. London: HM Treasury, 2004.

Huston 2001

Huston AC, Duncan GJ, Granger R, Bos J, McLoyd V, Mistry R, et al.Work-based antipoverty programs for parents can enhance the school performance and social behavior of children. *Child Development* 2001;**72**(1):318–36.

Huston 2003a

Huston A, Miller C, Richburg H, Duncan G, Eldred C, Weisner T, et al.*New hope for families and children: five-year results of a program to reduce poverty and reform welfare. Summary report: June 2003*. New York, NY: Manpower Demonstration Research Corporation (MDRC), 2003. [MEDLINE: 59]

Huston 2003b

Huston A, Miller C, Richburg H, Duncan G, Eldred C, Weisner T, et al.*New hope for families and children: five-year results of a program to reduce poverty and reform welfare*. New

Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries (Review)   **22**

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York: Manpower Demonstration Research Corporation (MDRC), 2003.

Keeley 1980

Keeley, Michael C, Philip K. Robins. Experimental design, the Conlisk-Watts Assignment Model, and the proper estimation of behavioral response. *Journal of Human Resources* 1980;**15**(4):480–98.

Kristjansson 2007

Kristjansson E, Robinson VA, Greenhalgh T, McGowan J, Francis D, Tugwell P, Petticrew M, Shea B, Wells G. School feeding for improving the physical and psychosocial health of disadvantaged students. *Cochrane Database of Systematic Reviews* 2007, Issue 1. [DOI: 10.1002/14651858.CD004676.pub2]

Lino 1996

Lino M. *Expenditures on Children by Families, 1995 Annual Report*. Vol. **Publication No. 1528-1995**, Washington, DC: U.S.Department of Agriculture, 1996.

Lino 2001

Lino M. *Expenditures on Children by Families, 2000 Annual Report*. Vol. **Miscellaneous Publication No. 1528-2000**, Washington,DC: U.S. Department of Agriculture, 2001.

Lino 2006

Lino. *Expenditures on Children by Families, 2005*. Vol. **Miscellaneous Publication No. 1528-2005**, Washington, DC: U.S. Department of Agriculture, 2006.

Mackway-Jones 2002

Mackway-Jones K, Jenkins M, Wylie K, Green C. BestBETS: Paediatric Filter. http://www.bestbets.org/ (accessed 19 March 2003) 2002.

Morris 2003

Morris P, Bloom D, Kemple J, Hendra R. The effects of a time-limited welfare program on children: the moderating role of parents' risk of welfare dependency. *Child Development* 2003;**74**(3):851–74. [MEDLINE: 218]

Oakley 1998

Oakley A. Experimentation and social interventions: a forgotten but important history. *BMJ* 1998;**317**:1239–42.

OECD 2006

OECD. Selection of figures from OECD Questionnaire on Income Distribution and Poverty Data set published 18 February 2006. http://www.oecd.org/dataoecd/12/4/35445297.xls (accessed 27 March 2006) 2006.

Petersen 2003

Petersen PE. *The World Oral Health Report 2003 Continuous improvement of oral health in the 21st century - the approach of the WHO Global Oral Health Programme*. Geneva: WHO, 2003.

Peterson 1986

Peterson JL, Zill N. Marital disruption, parent-child relationships, and behavioral problems in children. *Journal of Marriage and the Family* 1986;**48**:295–307.

Petterson 2001

Petterson SM, Albers AB. Effects of Poverty and Maternal Depression on Early Child Development. *Child Development* 2001;**72**(6):1794–1813.

Petticrew 2005

Petticrew M, Roberts H. *Systematic reviews in the social sciences. A practical guide*. London: Blackwell Publishing, 2005.

Pitts 2006

Pitts N B, Boyles J, Nugent ZJ, Thomas N, Pine CM. *BASCD Survey Report 2004/2005 (accessed October 2006 at: http://www.bascd.org/viewdoc.php?doc˙id=41&offset=0& keyword=)*. Sheffield: BASCD, 2006.

Roberts 1997

Roberts H. Socioeconomic determinants of health: Children, inequalities and health. *BMJ* 1997;**314**:1122.

Robinson 2002

Robinson KA. Dickersin K. Development of a highly sensitive search strategy for the retrieval of controlled trials using PubMed. *International Journal of Epidemiology* 2002; **31**:150–3.

Seethaler 2005

Seethaler PM, Fuchs LS. A drop in the bucket: Randomized controlled trials testing reading and math interventions. *Learning Disabilities Research and Practice* 2005;**20**:98–102.

Shaw 1999

Shaw M, Dorling D, Gordon D, Davey Smith G. *The Widening gap: Health inequalities and policy in Britain*. Bristol: The Policy Press, 1999.

Siddiqi 2007

Siddiqi A, Irwin LG, Hertzman C. *Towards environment assessment model for early childhood development . Evidence Report for the World Health Organization's Commission on the Social Determinants of Health*. Vancouver, BC: Human Early Learning Partnership (HELP), 2007.

Smith 1997

Smith J.R, Brooks-Gunn J, Klebanov P. The consequences of living in poverty for young children's cognitive and verbal ability and early school achievement. In: Duncan G.J, Brooks-Gunn J editor(s). *Consequences of growing up poor*. New York: Russell Sage Foundation, 1997.

UNDP 2005

UNDP. *Human Development Report 2005. International cooperation at a crossroad: Aid, trade and security in an unequal world*. New York: United National Development Programme, 2005.

UNICEF 2000

UNICEF. *Innocenti Report Card No.1.A league table of child poverty in rich nations*. Florence, Italy: UNICEF Innocenti Research Centre, 2000.

UNICEF 2005

UNICEF. *Innocenti Report Card No. 6. Child Poverty in Rich Countries*. Florence: UNICEF Innocenti research centre, 2005.

UNICEF 2007

UNICEF. Child poverty in perspective: an overview of child well-being in rich countries.. *Child poverty in perspective: an overview of child well-being in rich countries..* Florence: Unicef Innocenti Research Centre, 2007.

Watt 1999

Watt R, Sheiham A. Inequalities in oral health: a review of the evidence and recommendations for action. *British Dental Journal* 1999;**18**(1):6–12.

Weeks 2005

Weeks J. Inequality Trends in Some Developed OECD Countries. DESA Working Paper No. 6. New York: UN Department of Economics and Social Affairs, 2005. [:

www.un.org/esa/desa/papers]

WHO 2007

World Health Organization (WHO). Commission on social determinants of health. *http://www.who.int/ social˙determinants/en/ (Accessed January 2008).* Geneva: WHO, 2007.

Wilkinson 2006

Wilkinson RG, Pickett KE. Income inequality and population health: A review and explanation of the evidence Income inequality and population health: A review and explanation of the evidence. *Social Science & Medicine* 2006;**62**:1768–84.

* *Indicates the major publication for the study*

CHARACTERISTICS OF STUDIES

Characteristics of included studies *[ordered by study ID]*

ABC Study 2003

Methods	Randomised controlled trial, follow-up at 12, 24 and 36 months
Participants	3959 single-parents cases assigned to ABC welfare programme
Interventions	1. ABC Provision including earnings disregard, expanded health insurance and child care 2. Previous welfare benefits
Outcomes	Child Maltreatment (Alleged or substantiated) at 1,2 and 3 years after randomisation Child placed in foster care
Notes	Location of study Delaware, USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

Fraker 2002

Methods	Randomised controlled trial, follow-up at 30-70 months
Participants	17345 welfare recipients and new applicants in 1996/7
Interventions	1. Earned income disregard, greater savings allowed, plus child care support n=11567 2. Existing welfare benefits n=5778
Outcomes	School attendance Educational outcomes Behaviour Parentings Child in foster care
Notes	Location of study Mix of urban and rural in Iowa, USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Unclear risk	B - Unclear

FTP 2003

Methods	Randomised controlled trial, follow-up at 48-61 months
Participants	Single mother welfare recipients n=2737 Total number of people randomised is larger, but not reported here
Interventions	Intervention: Time limited earnings disregard combined with subsidised cihld care, case worker to encourage work Control: Existing welfare benefits Authors note: the maximum additional income available in the intervention arm was low
Outcomes	Academic achievement School attendance, progression, suspensions and expulsions Behaviour Involvement with police Teenage parenthood HOME scale Parenting
Notes	Location of study Florida, USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

Jobs First 2003

Methods	Randomised controlled trial, 18 month follow-up
Participants	Total sample n=6115 Follow-up sample n=1018 Data available on children between the ages of 3 and 10 years at follow-up, n = 288 Data available for mothers with child 12-42 months at follow-up n=308
Interventions	Aid for Families with Dependent Children (AFDC) pre-reform welfare programme, 'Jobs First' post welfare reform programme, this involved: 1. cash assistance limited to a total of 21 months 2. earned income disregard 3. child care subsidies 4. Medicaid benefits 5. assistance with job training

Jobs First 2003   (*Continued*)

Outcomes	Measures of physical health status Parenting, positive child qualities, stressful events
Notes	Location of study USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Unclear risk	B - Unclear

MFIP 2005

Methods	Randomised controlled trial, follow-up at 36 or 72 months
Participants	Total sample randomised n>9,000 Families receiving welfare benefits Single mothers with child aged 2-9 years n=2639
Interventions	2 Intervention groups: 1. Earnings disregard plus child care costs paid 2. Above plus employment and training activities control group: Standard welfare benefits
Outcomes	Reading achievement Maths achievement Grade retention Behaviour Problems Index Positive Behaviour Scale Special Education provision HOME scale Parenting measure
Notes	Location of study Minnesota, USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

New Hope 2003

Methods	Randomised controlled trial, follow-up at 2 years
Participants	Residents of a poor neighbourhood in a US city who had an income at or below 150% of the poverty line; had at least one child between the ages of 1 year and 10 years, 11months at the outset of the programme and were willing to work more than thirty hours per week n=745
Interventions	Intervention all of: 1. A wage supplement that ensured that net income increased as people earned more 2. A child care subsidy for children under 13 3. Subsidized health insurance Control group: standard welfare benefits
Outcomes	Child education and aspiration Child social behaviour Child psychological well being Child care and child activities Health care Parenting
Notes	Location of study USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

SSP 2006

Methods	Randomised controlled trial Follow-up at 36 months, 54 months, 72 months
Participants	6022 single parent long term welfare recipients and 3315 new applicants
Interventions	Three groups 1. Wage supplement 2. Wage supplement plus job search assistance (no child outcomes reported) 3. Control (standard welfare)
Outcomes	Child outcomes available for subsample with children aged 4-18 years at first follow-up Peabody picture vocab test Maths test Parent reported behaviour, academic outcomes and health status
Notes	Location of study Urban and Sub-urban regions of British Columbia and New Brunwswick, Canada

SSP 2006   (*Continued*)

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

Stevens-Simon 1997

Methods	Randomised controlled trial, follow-up at 12 and 24 months
Participants	286 primiparous girls younger than 18 years of age and of low socioeconomic status
Interventions	Four groups: 1. Monetary incentive and peer support group 2. Peer-support group only 3. Monetary incentive only 4. No intervention (control)
Outcomes	Consistency of participation in planned intervention and repeat pregnancy
Notes	Location of study Denver,USA

Risk of bias

Bias	Authors' judgement	Support for judgement
Allocation concealment (selection bias)	Low risk	A - Adequate

Vermont WRP 2002

Methods	Randomised controlled trial, follow-up at 42 months
Participants	Total sample randomised 10637 families on welfare benefits Report sample of 7691 from these
Interventions	1. WRP Provision including earnings disregard, expanded health insurance and child care with work requirement (60% of sample) 2. WRP benefits as above without work requirement (20% of sample) 3. Previous welfare benefits (20% of sample)
Outcomes	Parent reported School outcomes, grade retention, school absence, special needs provision and use of 'organised activities'
Notes	Location of study Vermont, USA

Vermont WRP 2002 *(Continued)*

Risk of bias		
Bias	**Authors' judgement**	**Support for judgement**
Allocation concealment (selection bias)	Unclear risk	B - Unclear

Characteristics of excluded studies *[ordered by study ID]*

Study	Reason for exclusion
Aber 1995	Cash benefit not given, only financial sanctions Child Outcomes: Child vocabulary, verbal ability, sociability, mental health and parenting
Anonymous 1991	Incomplete reference, study unavailable but title suggests not cash benefits
Bos 1997	Cash benefit given Child Outcomes: Teen parent educational outcomes - school enrolment, attendance, progress, completion Comments: Outcomes not for children in this context
Brown 1999	Cash benefit given No child outcomes No control group
Cauthen 2002	Review of relevant studies
Chung 1996	Review of relevant studies
Coates 1982	Cash benefit not given - young people lodged 'deposits' with research team which they were then given back if they met conditions
Collins 1996	Review of relevant studies
Cook 2002	Cash benefit not given, only financial sanctions Child Outcomes: Yes Retrospective cohort
Dearden 2005	Cash benefit given Child Outcomes: Not in this publication but planned Comments: Payment to teen themselves, not to family
Donovan 1995	No cash benefit given, comments on impact of financial sanctions
Duncan 2000	Review of relevant studies

(Continued)

Farel 1995	Unclear if cash benefit given (payments to families for services for disabled child) Comments: Survey of unmet need in this group
Fraker 1995	Possible cash benefit, review of 4 programmes comparing food vouchers with food cheques No child outcomes
Freedman NEWWS 2000	Cash benefit not given, various welfare to work strategies including subsidised child care and health insurance but no additional income only sanctions. Child outcomes, used RCT method
Fuller 2002	Unclear if additional cash benefits given (welfare benefits) Child outcomes: social development, Child Behaviour Checklist Comments: Survey of welfare recipients not RCT
Futrell 1975	Cash benefits not given, only food vouchers
Gennetian 2002b	Review of relevant studies
Gennetian 2002c	Review of relevant studies
Gennetian 2004	Review of relevant studies
Gertler 2004	Cash Benefits given Child Outcomes: Yes Comment: Study based in Mexico
Granger 1999	Review of relevant studies
Haas 1993	Cash benefit not given
Hamilton 2001	Cash benefit not given
Hangsleben 1995	Cash benefit not given
Hoekstra 1999	Cash benefit not given, only food vouchers
Holl 2000	Cash benefit not given, only child health insurance
Hutchins 1999	Cash benefit not given, only food vouchers Child Outcomes: Immunisation
Jagannathan FDP 2005	Cash benefit given, used RCT method Child outcomes: involvement with family (social) services
Johnson 1999	Cash benefit given Child Outcomes: Anthropometry Comments: Survey data looking at food expenditure and health in low income sample

(Continued)

Jonas 1992	Cash benefit given Child Outcomes: maths, communication skills, career development Comments: Randomised control group but all groups received same money so no data available to test impact of financial component of intervention
Jones 1991	Cash benefits not given, a loan system No child outcomes
Kafatos 1977	No cash benefit given, only food vouchers
Kalil 1998	Cash benefit given Child Outcomes: Adolescent behaviour Comments: Random sample survey on ADFC vs non welfare families (poor & non-poor)
Kirk 2002	Unclear whether cash benefits given
Maynard 1977	Minimum income guarantee see table on Conlisk-Watts allocation
Maynard 1979	Minimum income guarantee see table on Conlisk-Watts allocation
McDonald 1979	Minimum income guarantee see table on Conlisk-Watts allocation
Mills 2006	Unclear whether cash benefits given eligible, matched savings funds went spent on approved expenditure (e.g. buying house) No child outcomes
Mitchell 1992	Milwaukee Parent Choice Program Cash benefit not given, state subsidised school fees only
Morris 2001	Review (of included studies)
Morris 2005	Review of relevant studies
Mullett 1988	Cash benefit not given, payment of medical bills
Parkin 1995	No cash benefit given, subsidy for approved expenditure (bicycle helmet)
Rauh 1990	Cash benefit not given
Reid 1994	Cash benefit given Child Outcomes: School grades, self esteem, school absence Comments: Payment to teen themselves, not to family
Reid 1995	Cash benefit given Child Outcomes: School grades, self esteem, school absence Comments: Payment to teen themselves, not to family
Reiss 1976	No cash benefit, voucher for dental care

Rivera-Casale 1982	Cash benefit given No Child Outcomes: only youth employment Comments: Comparison group used, not clear if randomised
Schaefer 2002	Review of relevant studies
Schwartz 2002	Cash benefit given Child Outcomes: School readiness Comments: Not study report but commentary. See Sherman 2001
Sherman 2001	Review of relevant studies, specifically examining impact of income components
Smith 2001	Cash benefit not given
Spencer 2005	Cash benefit given Child Outcomes: School grades Comments: Payment to teen themselves, not to family otherwise fits criteria
Spermann 2006	Cash benefit given No Child Outcomes
Venti 1984	Minimum income guarantee see table on Conlisk-Watts allocation
Wells 1989	Cash benefit not given, payment of out-of-pocket medical expenses
Wells 2003	Unclear whether cash benefit given, included families who had received some cash benefits Child Outcomes: Welfare caseloads Case report of welfare introduction
Whitmore 2005	Cash benefit not given, money to given to schools not families
Wolfe 2002	Unavailable for full review on review of abstract refers to cohort data not trial
Yoshikawa 1999	Cash benefit given (Child benefits) Child Outcomes: Comments: Longitudinal study
Yoshikawa 2003	Cash benefits given (MFIP & New Hope studies) Child outcomes: behaviour and academic achievement Comments: compared data from 'low' and 'high risk' intervention groups not compared to control data in this study
Zaslow 1994	Cash benefit not given Child Outcomes: Unclear, Home environment
Zaslow 2000	Cash benefit not given

DATA AND ANALYSES

Comparison 1.   Health outcomes

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Children Not Covered by Health Insurance	3	5078	Odds Ratio (M-H, Random, 95% CI)	1.05 [0.90, 1.23]
2 Parental rating of general health	2	1958	Mean Difference (IV, Fixed, 95% CI)	0.0 [0.0, 0.0]
3 In poor health	4		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
3.1 health rated average or less	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Health rated poor	2		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.3 Any Long Term Health Problems	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4 In Good Health	1	1473	Odds Ratio (M-H, Random, 95% CI)	0.89 [0.69, 1.14]
5 Accidental injuries	3	4854	Odds Ratio (M-H, Random, 95% CI)	1.02 [0.86, 1.21]
5.1 Any injuries to child in last year	1	2271	Odds Ratio (M-H, Random, 95% CI)	1.06 [0.82, 1.35]
5.2 Child ever had to visit Emergency Department	2	2583	Odds Ratio (M-H, Random, 95% CI)	0.99 [0.79, 1.24]
6 Routine visit to Health Clinic	1	1475	Odds Ratio (M-H, Random, 95% CI)	1.06 [0.79, 1.43]
7 Routine visit to Dental Clinic	1	1475	Odds Ratio (M-H, Random, 95% CI)	0.93 [0.73, 1.20]

Comparison 2.   Behavioural outcomes

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Problem Behaviour Scale	2	2036	Mean Difference (IV, Fixed, 95% CI)	0.0 [0.0, 0.0]
2 Positive Behaviour Index	2	2036	Mean Difference (IV, Fixed, 95% CI)	0.0 [0.0, 0.0]
3 Positive Behaviour	4	4536	Odds Ratio (M-H, Random, 95% CI)	0.96 [0.79, 1.17]
3.1 High Score on Scale	1	1108	Odds Ratio (M-H, Random, 95% CI)	0.98 [0.75, 1.28]
3.2 Parent Reported Positive Behaviours	3	3428	Odds Ratio (M-H, Random, 95% CI)	0.90 [0.61, 1.32]
4 Behavior Problems	5	8895	Odds Ratio (M-H, Random, 95% CI)	1.09 [0.98, 1.22]
4.1 Hi Score on Scale	1	1108	Odds Ratio (M-H, Random, 95% CI)	1.13 [0.86, 1.47]
4.2 Parent Reported Problems	4	7787	Odds Ratio (M-H, Random, 95% CI)	1.09 [0.97, 1.22]
5 Involvement with police	4		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
5.1 Ever arrested	2		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.2 Ever involved with police	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5.3 Ever convicted	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]

Comparison 3. Other measures or child emotional wellbeing and quality of life

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Child takes part in organised activities	2		Odds Ratio (M-H, Random, 95% CI)	Totals not selected

Comparison 4. Educational outcomes

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Below average achievement	6	14023	Odds Ratio (M-H, Random, 95% CI)	1.00 [0.90, 1.11]
1.1 All reporting studies	6	14023	Odds Ratio (M-H, Random, 95% CI)	1.00 [0.90, 1.11]
2 Ever repeated a grade	6	12077	Odds Ratio (M-H, Random, 95% CI)	1.00 [0.88, 1.13]
3 Ever in special education	4		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
4 Absences high (>3 days per month)	2		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
5 ever suspended or expelled	4	7050	Odds Ratio (M-H, Random, 95% CI)	1.09 [0.94, 1.27]
5.1 Suspended or expelled	2	4090	Odds Ratio (M-H, Random, 95% CI)	0.97 [0.78, 1.21]
5.2 Suspended	2	1620	Odds Ratio (M-H, Random, 95% CI)	1.17 [0.93, 1.47]
5.3 Expelled	1	1340	Odds Ratio (M-H, Random, 95% CI)	1.68 [0.94, 2.99]

Comparison 5. Pregnancy in <18 yr olds

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Ever Pregnant or had a baby	3	2028	Odds Ratio (M-H, Random, 95% CI)	1.12 [0.82, 1.52]
1.1 Ever Pregnant	2	1092	Odds Ratio (M-H, Random, 95% CI)	1.19 [0.86, 1.65]
1.2 Ever had a baby	1	936	Odds Ratio (M-H, Random, 95% CI)	0.75 [0.33, 1.71]

Comparison 6. Value of intervention

Outcome or subgroup title	No. of studies	No. of participants	Statistical method	Effect size
1 Children Not Covered by Health Insurance	3	5078	Odds Ratio (M-H, Random, 95% CI)	1.05 [0.90, 1.23]
1.1 Value of intervention <$50	2	3349	Odds Ratio (M-H, Random, 95% CI)	1.03 [0.85, 1.26]
1.2 Value of intervention US$50-100	1	1729	Odds Ratio (M-H, Random, 95% CI)	1.09 [0.85, 1.41]

2 Parent Reported Positive Behaviour	3		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
2.1 Value of intervention <US$50	0		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
2.2 Value of intervention US$50-100	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
2.3 Value of Intervention >US$100	2		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3 Parent Reported Problem Behaviour	3		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
3.1 Value of intervention <US$50	0		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.2 Value of intervention US$50-100	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
3.3 Value of Intervention >US$100	3		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4 Ever arrested (Vermont WRP ever in trouble with police)	3		Odds Ratio (M-H, Random, 95% CI)	Totals not selected
4.1 Value of intervention <US$50	1		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.2 Value of intervention US$50-100	0		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
4.3 Value of intervention >US$100	2		Odds Ratio (M-H, Random, 95% CI)	0.0 [0.0, 0.0]
5 Academic Achievement rated as poor or less	6	14023	Odds Ratio (M-H, Random, 95% CI)	1.00 [0.90, 1.11]
5.1 Value of intervention <US$50	2	4090	Odds Ratio (M-H, Random, 95% CI)	1.03 [0.83, 1.27]
5.2 Value of intervention US$50-100	2	6743	Odds Ratio (M-H, Random, 95% CI)	1.04 [0.89, 1.21]
5.3 Value of intervention >US$100	3	3190	Odds Ratio (M-H, Random, 95% CI)	1.03 [0.72, 1.48]
6 Ever Repeated a Grade	6	12077	Odds Ratio (M-H, Random, 95% CI)	1.00 [0.89, 1.14]
6.1 Value of intervention <US$50	2	4090	Odds Ratio (M-H, Random, 95% CI)	0.95 [0.75, 1.19]
6.2 Value of intervention US$50-100	2	4874	Odds Ratio (M-H, Random, 95% CI)	1.10 [0.92, 1.32]
6.3 Value of intervention >US$100	3	3113	Odds Ratio (M-H, Random, 95% CI)	0.87 [0.67, 1.14]

Analysis 1.1. Comparison 1 Health outcomes, Outcome 1 Children Not Covered by Health Insurance.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 1 Health outcomes

Outcome: 1 Children Not Covered by Health Insurance

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
Fraker 2002	132/982	69/493		24.8 %	0.95 [0.70, 1.31]
FTP 2003	145/860	136/869		37.4 %	1.09 [0.85, 1.41]
Vermont WRP 2002	227/1253	105/621		37.8 %	1.09 [0.84, 1.40]
Total (95% CI)	**3095**	**1983**		**100.0 %**	**1.05 [0.90, 1.23]**

Total events: 504 (Treatment), 310 (Control)
Heterogeneity: Tau² = 0.0; Chi² = 0.52, df = 2 (P = 0.77); I² =0.0%
Test for overall effect: Z = 0.67 (P = 0.50)
Test for subgroup differences: Not applicable

```
        0.1  0.2  0.5   1   2   5   10
       Favours treatment    Favours control
```
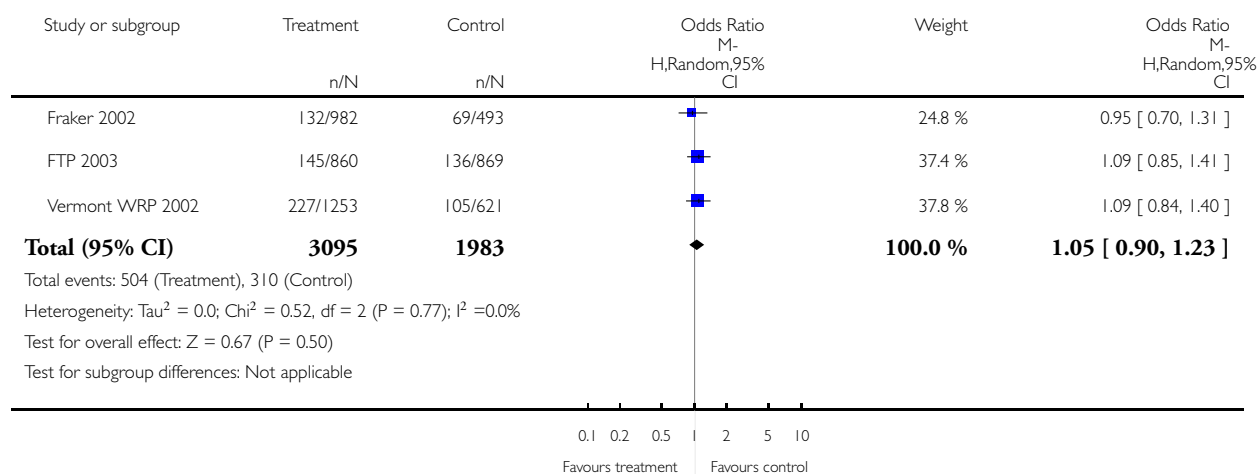
Analysis 1.2. Comparison 1 Health outcomes, Outcome 2 Parental rating of general health.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 1 Health outcomes

Outcome: 2 Parental rating of general health

Study or subgroup	Treatment N	Mean(SD)	Control N	Mean(SD)	Mean Difference IV,Fixed,95% CI	Mean Difference IV,Fixed,95% CI
FTP 2003	543	4.2 (0)	565	4.1 (0)		0.0 [0.0, 0.0]
New Hope 2003	429	4.3 (0)	421	4.2 (0)		0.0 [0.0, 0.0]
Total (95% CI)	**972**		**986**			**0.0 [0.0, 0.0]**

Heterogeneity: Chi² = 0.0, df = 0 (P<0.00001); I² =0.0%
Test for overall effect: Z = 0.0 (P < 0.00001)
Test for subgroup differences: Not applicable

```
        -10   -5    0    5   10
       Favours control    Favours treatment
```

Analysis 1.3. Comparison 1 Health outcomes, Outcome 3 In poor health.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 1 Health outcomes

Outcome: 3 In poor health

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
1 health rated average or less				
MFIP 2005	170/753	148/720		1.13 [0.88, 1.45]
2 Health rated poor				
FTP 2003	19/543	35/565		0.55 [0.31, 0.97]
New Hope 2003	129/429	84/421		1.73 [1.26, 2.37]
3 Any Long Term Health Problems				
SSP 2006	285/1195	279/1076		0.89 [0.74, 1.08]

0.1   0.2   0.5   1   2   5   10

Favours treatment   Favours control
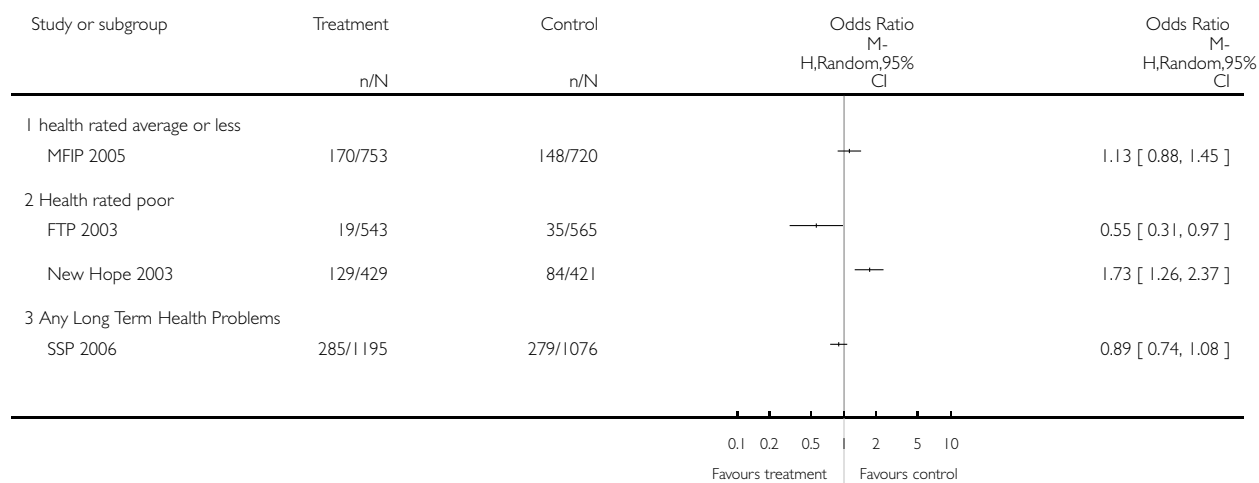
Analysis 1.4. Comparison 1 Health outcomes, Outcome 4 In Good Health.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 1 Health outcomes

Outcome: 4 In Good Health

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
	n/N	n/N			
MFIP 2005	583/753	572/720		100.0 %	0.89 [0.69, 1.14]
Total (95% CI)	**753**	**720**		**100.0 %**	**0.89 [0.69, 1.14]**

Total events: 583 (Treatment), 572 (Control)

Heterogeneity: not applicable

Test for overall effect: Z = 0.94 (P = 0.35)

Test for subgroup differences: Not applicable

0.1   0.2   0.5   1   2   5   10

Favours treatment   Favours control

Analysis 1.5. Comparison 1 Health outcomes, Outcome 5 Accidental injuries.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 1 Health outcomes

Outcome: 5 Accidental injuries

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
	n/N	n/N			
1 Any injuries to child in last year					
SSP 2006	156/1195	134/1076		46.1 %	1.06 [0.82, 1.35]
Subtotal (95% CI)	**1195**	**1076**		**46.1 %**	**1.06 [0.82, 1.35]**
Total events: 156 (Treatment), 134 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.43 (P = 0.67)					
2 Child ever had to visit Emergency Department					
Fraker 2002	132/982	69/493		28.6 %	0.95 [0.70, 1.31]
FTP 2003	80/543	81/565		25.2 %	1.03 [0.74, 1.44]
Subtotal (95% CI)	**1525**	**1058**		**53.9 %**	**0.99 [0.79, 1.24]**
Total events: 212 (Treatment), 150 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.11, df = 1 (P = 0.74); I² =0.0%					
Test for overall effect: Z = 0.09 (P = 0.93)					
Total (95% CI)	**2720**	**2134**		**100.0 %**	**1.02 [0.86, 1.21]**
Total events: 368 (Treatment), 284 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.25, df = 2 (P = 0.88); I² =0.0%					
Test for overall effect: Z = 0.23 (P = 0.82)					
Test for subgroup differences: Chi² = 0.14, df = 1 (P = 0.71), I² =0.0%					

0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control

Analysis 1.6. Comparison 1 Health outcomes, Outcome 6 Routine visit to Health Clinic.

Comparison: 1 Health outcomes

Outcome: 6 Routine visit to Health Clinic

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
Fraker 2002	834/982	415/493		100.0 %	1.06 [0.79, 1.43]
Total (95% CI)	**982**	**493**		**100.0 %**	**1.06 [0.79, 1.43]**

Total events: 834 (Treatment), 415 (Control)

Heterogeneity: not applicable

Test for overall effect: Z = 0.38 (P = 0.71)

Test for subgroup differences: Not applicable

0.1 0.2 0.5 1 2 5 10

Favours control   Favours treatment

Analysis 1.7. Comparison 1 Health outcomes, Outcome 7 Routine visit to Dental Clinic.

Comparison: 1 Health outcomes

Outcome: 7 Routine visit to Dental Clinic

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
Fraker 2002	730/982	373/493		100.0 %	0.93 [0.73, 1.20]
Total (95% CI)	**982**	**493**		**100.0 %**	**0.93 [0.73, 1.20]**

Total events: 730 (Treatment), 373 (Control)

Heterogeneity: not applicable

Test for overall effect: Z = 0.55 (P = 0.58)

Test for subgroup differences: Not applicable

0.1 0.2 0.5 1 2 5 10

Favours control   Favours treatment
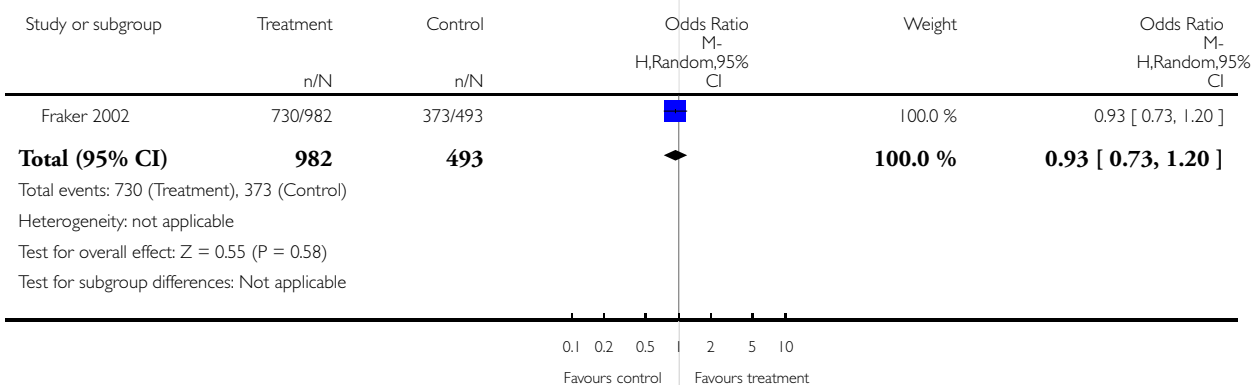
Analysis 2.1. Comparison 2 Behavioural outcomes, Outcome 1 Problem Behaviour Scale.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 2 Behavioural outcomes

Outcome: 1 Problem Behaviour Scale

Study or subgroup	Treatment		Control		Mean Difference	Mean Difference
	N	Mean(SD)	N	Mean(SD)	IV,Fixed,95% CI	IV,Fixed,95% CI
Fraker 2002	982	11.57 (0)	493	11.51 (0)		0.0 [0.0, 0.0]
New Hope 2003	282	2.3 (0)	279	2.3 (0)		0.0 [0.0, 0.0]
Total (95% CI)	**1264**		**772**			**0.0 [0.0, 0.0]**

Heterogeneity: Chi² = 0.0, df = 0 (P<0.00001); I² =0.0%

Test for overall effect: Z = 0.0 (P < 0.00001)

Test for subgroup differences: Not applicable

```
           -10    -5     0     5    10
         Favours treatment    Favours control
```
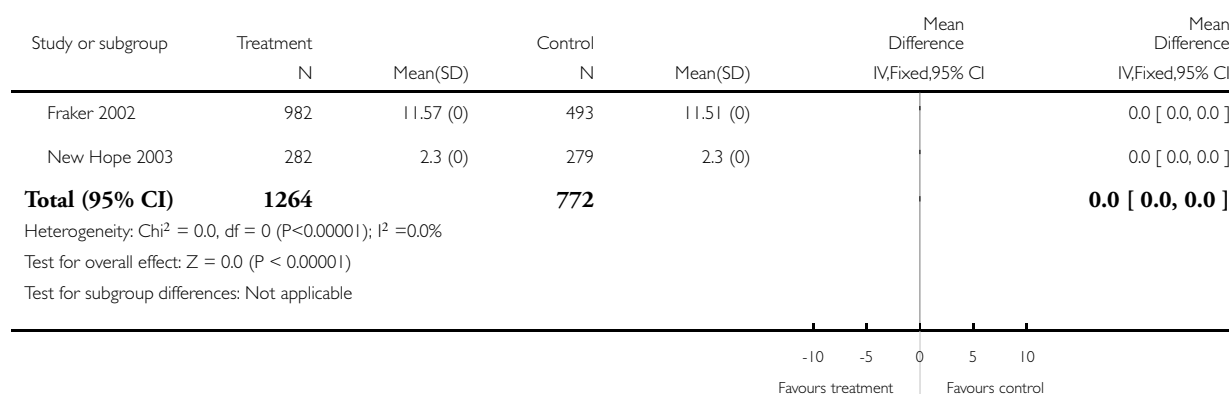
Analysis 2.2. Comparison 2 Behavioural outcomes, Outcome 2 Positive Behaviour Index.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 2 Behavioural outcomes

Outcome: 2 Positive Behaviour Index

Study or subgroup	Treatment		Control		Mean Difference	Mean Difference
	N	Mean(SD)	N	Mean(SD)	IV,Fixed,95% CI	IV,Fixed,95% CI
Fraker 2002	982	58.43 (0)	493	58.34 (0)		0.0 [0.0, 0.0]
New Hope 2003	282	3.6 (0)	279	3.6 (0)		0.0 [0.0, 0.0]
Total (95% CI)	**1264**		**772**			**0.0 [0.0, 0.0]**

Heterogeneity: Chi² = 0.0, df = 0 (P<0.00001); I² =0.0%

Test for overall effect: Z = 0.0 (P < 0.00001)

Test for subgroup differences: Not applicable

```
           -10    -5     0     5    10
         Favours control     Favours treatment
```

Analysis 2.3. Comparison 2 Behavioural outcomes, Outcome 3 Positive Behaviour.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 2 Behavioural outcomes

Outcome: 3 Positive Behaviour

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M- H,Random,95% CI	Weight	Odds Ratio M- H,Random,95% CI
1 High Score on Scale					
FTP 2003	141/543	149/565		52.2 %	0.98 [0.75, 1.28]
Subtotal (95% CI)	**543**	**565**		**52.2 %**	**0.98 [0.75, 1.28]**
Total events: 141 (Treatment), 149 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.15 (P = 0.88)					
2 Parent Reported Positive Behaviours					
Jobs First 2003	144/155	148/152		2.8 %	0.35 [0.11, 1.14]
New Hope 2003	86/429	84/421		33.2 %	1.01 [0.72, 1.41]
SSP 2006	26/1195	24/1076		11.9 %	0.97 [0.56, 1.71]
Subtotal (95% CI)	**1779**	**1649**		**47.8 %**	**0.90 [0.61, 1.32]**
Total events: 256 (Treatment), 256 (Control)					
Heterogeneity: Tau² = 0.04; Chi² = 2.87, df = 2 (P = 0.24); I² =30%					
Test for overall effect: Z = 0.55 (P = 0.58)					
Total (95% CI)	**2322**	**2214**		**100.0 %**	**0.96 [0.79, 1.17]**
Total events: 397 (Treatment), 405 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 2.91, df = 3 (P = 0.41); I² =0.0%					
Test for overall effect: Z = 0.41 (P = 0.68)					
Test for subgroup differences: Chi² = 0.13, df = 1 (P = 0.72), I² =0.0%					

0.1 0.2 0.5 1 2 5 10

Favours control   Favours treatment

Analysis 2.4. Comparison 2 Behavioural outcomes, Outcome 4 Behavior Problems.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 2 Behavioural outcomes

Outcome: 4 Behavior Problems

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M- H,Random,95% CI	Weight	Odds Ratio M- H,Random,95% CI
1 Hi Score on Scale					
FTP 2003	156/543	149/565		16.5 %	1.13 [0.86, 1.47]
Subtotal (95% CI)	**543**	**565**		**16.5 %**	**1.13 [0.86, 1.47]**
Total events: 156 (Treatment), 149 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.88 (P = 0.38)					
2 Parent Reported Problems					
Jobs First 2003	27/146	17/142		2.7 %	1.67 [0.87, 3.22]
MFIP 2005	688/2241	621/2137		68.4 %	1.08 [0.95, 1.23]
New Hope 2003	86/429	84/421		10.1 %	1.01 [0.72, 1.41]
SSP 2006	17/1195	15/1076		2.3 %	1.02 [0.51, 2.05]
Subtotal (95% CI)	**4011**	**3776**		**83.5 %**	**1.09 [0.97, 1.22]**
Total events: 818 (Treatment), 737 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 1.88, df = 3 (P = 0.60); I² =0.0%					
Test for overall effect: Z = 1.37 (P = 0.17)					
Total (95% CI)	**4554**	**4341**		**100.0 %**	**1.09 [0.98, 1.22]**
Total events: 974 (Treatment), 886 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 1.94, df = 4 (P = 0.75); I² =0.0%					
Test for overall effect: Z = 1.61 (P = 0.11)					
Test for subgroup differences: Chi² = 0.06, df = 1 (P = 0.80), I² =0.0%					

```
        0.1  0.2   0.5    1    2    5   10
        Favours treatment    Favours control
```

Analysis 2.5.   Comparison 2 Behavioural outcomes, Outcome 5 Involvement with police.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 2 Behavioural outcomes

Outcome: 5 Involvement with police

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
	n/N	n/N		
1 Ever arrested				
Jobs First 2003	0/45	2/42		0.18 [0.01, 3.82]
SSP 2006	135/718	124/653		0.99 [0.75, 1.29]
2 Ever involved with police				
Vermont WRP 2002	159/934	49/439		1.63 [1.16, 2.30]
3 Ever convicted				
FTP 2003	13/454	11/467		1.22 [0.54, 2.76]

0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control
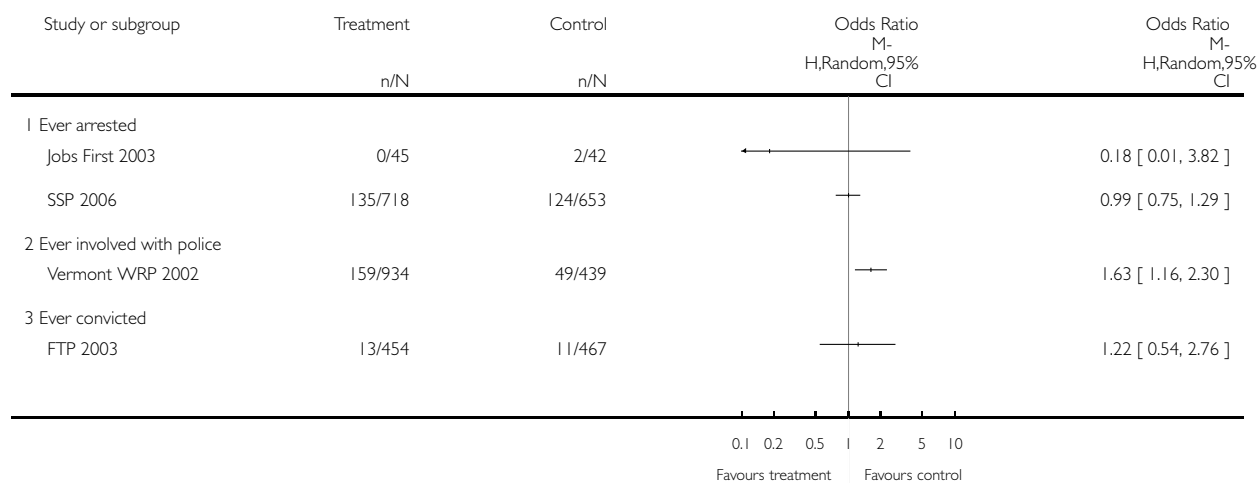
Analysis 3.1.   Comparison 3 Other measures or child emotional wellbeing and quality of life, Outcome 1 Child takes part in organised activities.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 3 Other measures or child emotional wellbeing and quality of life

Outcome: 1 Child takes part in organised activities

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
	n/N	n/N		
Fraker 2002	472/982	232/493		1.04 [0.84, 1.29]
Vermont WRP 2002	358/1127	147/554		1.29 [1.03, 1.62]

0.1 0.2 0.5 1 2 5 10

Favours control   Favours treatment
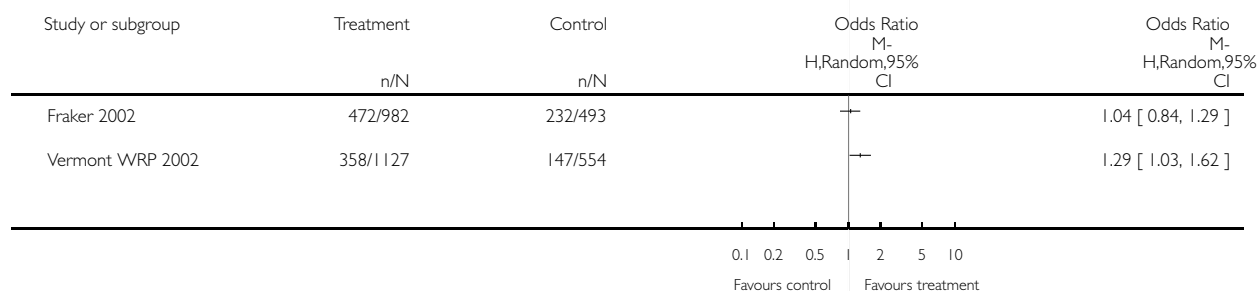
Analysis 4.1. Comparison 4 Educational outcomes, Outcome 1 Below average achievement.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 4 Educational outcomes

Outcome: 1 Below average achievement

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
1 All reporting studies					
Fraker 2002	74/982	36/493		6.1 %	1.03 [0.68, 1.56]
FTP 2003	146/1455	155/1522		18.5 %	0.98 [0.78, 1.25]
Jobs First 2003	11/155	11/152		1.4 %	0.98 [0.41, 2.33]
MFIP 2005	277/2241	239/2137		31.0 %	1.12 [0.93, 1.35]
SSP 2006	240/1195	242/1076		26.0 %	0.87 [0.71, 1.06]
Vermont WRP 2002	220/1770	103/845		16.9 %	1.02 [0.80, 1.31]
Total (95% CI)	**7798**	**6225**		**100.0 %**	**1.00 [0.90, 1.11]**

Total events: 968 (Treatment), 786 (Control)

Heterogeneity: Tau^2 = 0.0; Chi^2 = 3.49, df = 5 (P = 0.62); I^2 =0.0%

Test for overall effect: Z = 0.01 (P = 1.0)

Test for subgroup differences: Not applicable

0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control

Analysis 4.2.   Comparison 4 Educational outcomes, Outcome 2 Ever repeated a grade.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 4 Educational outcomes

Outcome: 2 Ever repeated a grade

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M- H,Random,95% CI	Weight	Odds Ratio M- H,Random,95% CI
Fraker 2002	56/982	36/493		8.2 %	0.77 [0.50, 1.18]
FTP 2003	140/543	140/565		21.0 %	1.05 [0.80, 1.38]
Jobs First 2003	20/119	22/111		3.4 %	0.82 [0.42, 1.60]
MFIP 2005	187/2241	158/2137		31.7 %	1.14 [0.91, 1.42]
SSP 2006	74/1195	80/1076		14.4 %	0.82 [0.59, 1.14]
Vermont WRP 2002	183/1770	87/845		21.2 %	1.00 [0.77, 1.32]
Total (95% CI)	**6850**	**5227**		**100.0 %**	**1.00 [0.88, 1.13]**

Total events: 660 (Treatment), 523 (Control)

Heterogeneity: Tau^2 = 0.0; Chi^2 = 4.66, df = 5 (P = 0.46); I^2 =0.0%

Test for overall effect: Z = 0.05 (P = 0.96)

Test for subgroup differences: Not applicable

0.1   0.2   0.5   1   2   5   10

Favours treatment   Favours control
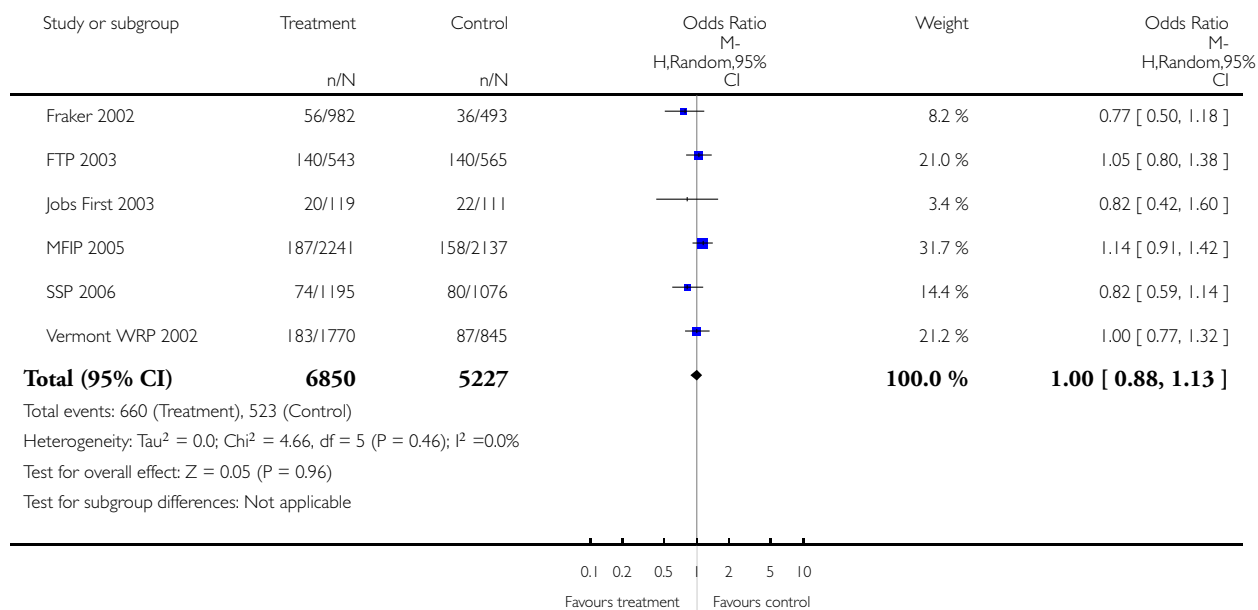
Analysis 4.3. Comparison 4 Educational outcomes, Outcome 3 Ever in special education.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries
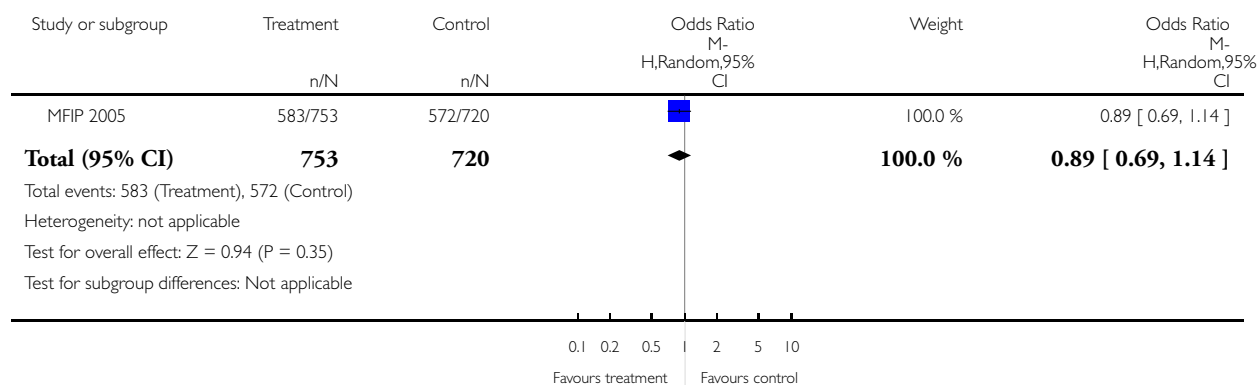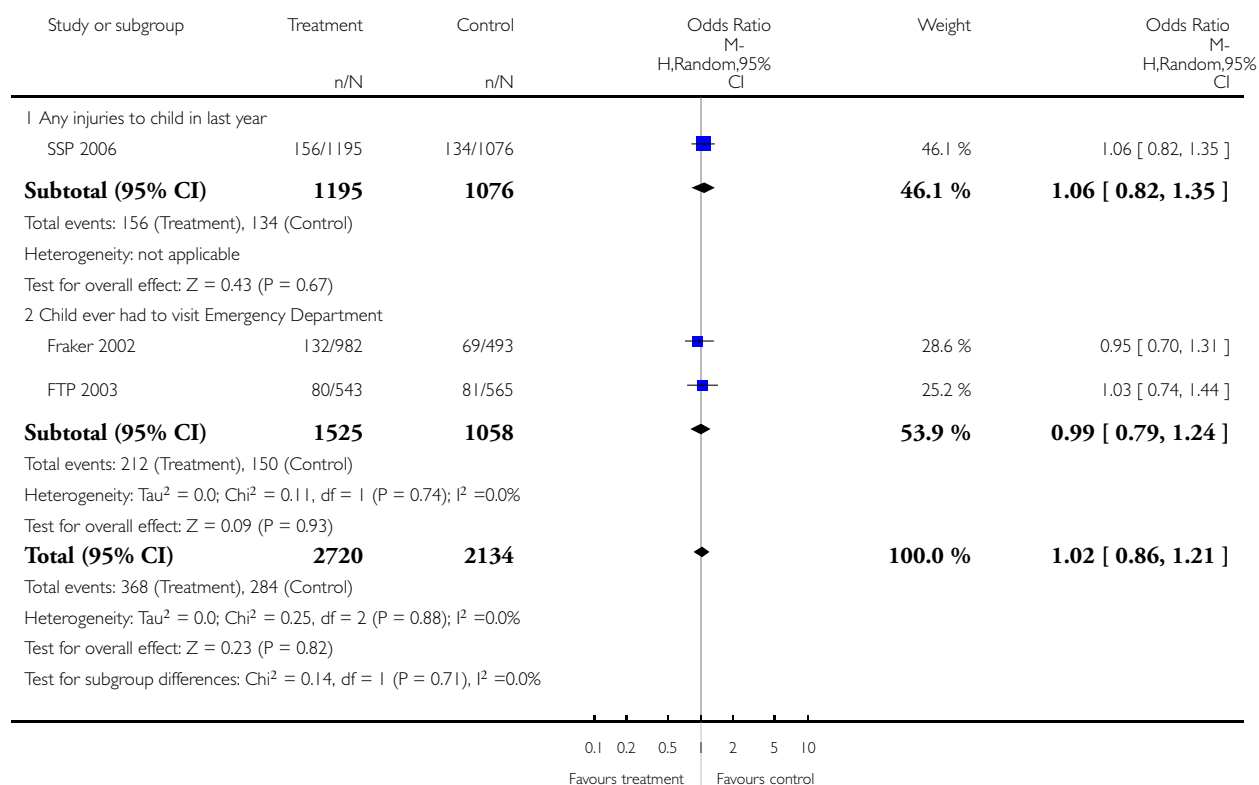
Comparison: 4 Educational outcomes

Outcome: 3 Ever in special education

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
Fraker 2002	214/982	116/493		0.91 [0.70, 1.17]
FTP 2003	199/1455	186/1522		1.14 [0.92, 1.41]
SSP 2006	189/1195	200/1076		0.82 [0.66, 1.02]
Vermont WRP 2002	468/1770	218/845		1.03 [0.86, 1.25]

0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control
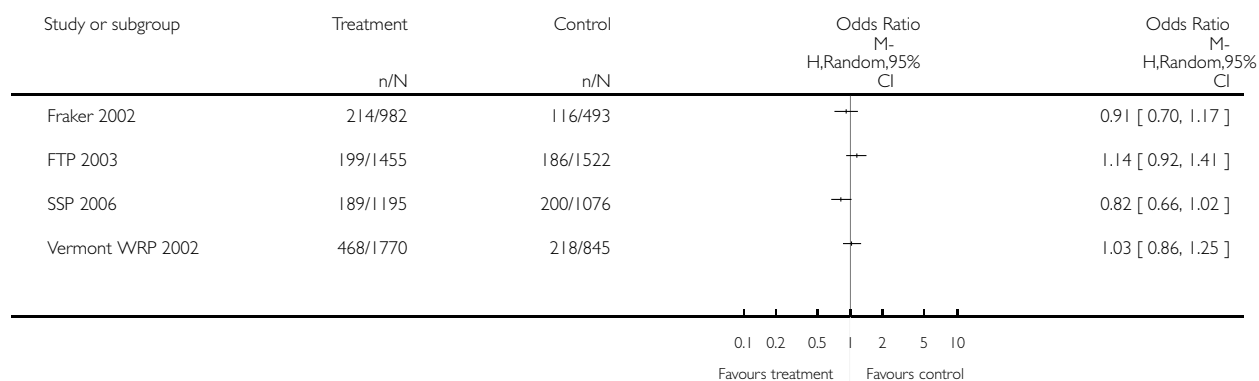
Analysis 4.4. Comparison 4 Educational outcomes, Outcome 4 Absences high (>3 days per month).

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries
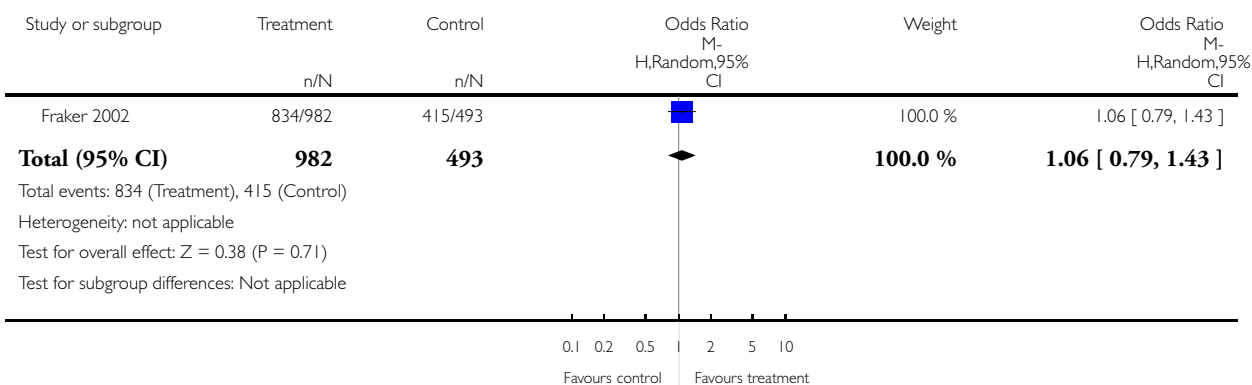
Comparison: 4 Educational outcomes

Outcome: 4 Absences high (>3 days per month)

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
Fraker 2002	106/982	69/493		0.74 [0.54, 1.03]
Vermont WRP 2002	178/1770	78/845		1.10 [0.83, 1.45]

0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control
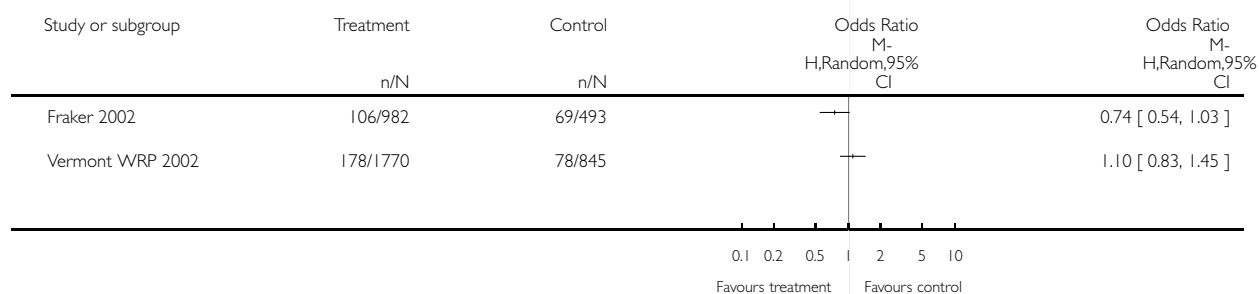
Analysis 4.5. Comparison 4 Educational outcomes, Outcome 5 ever suspended or expelled.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

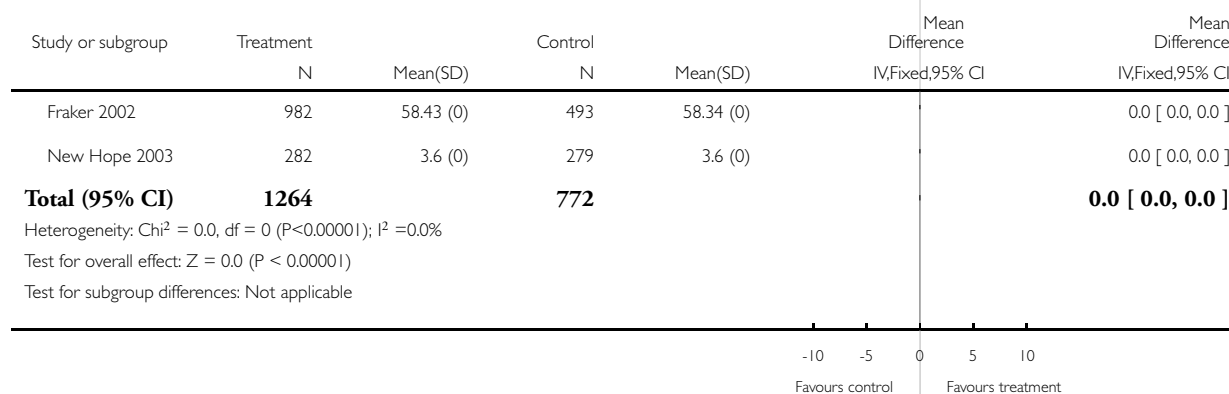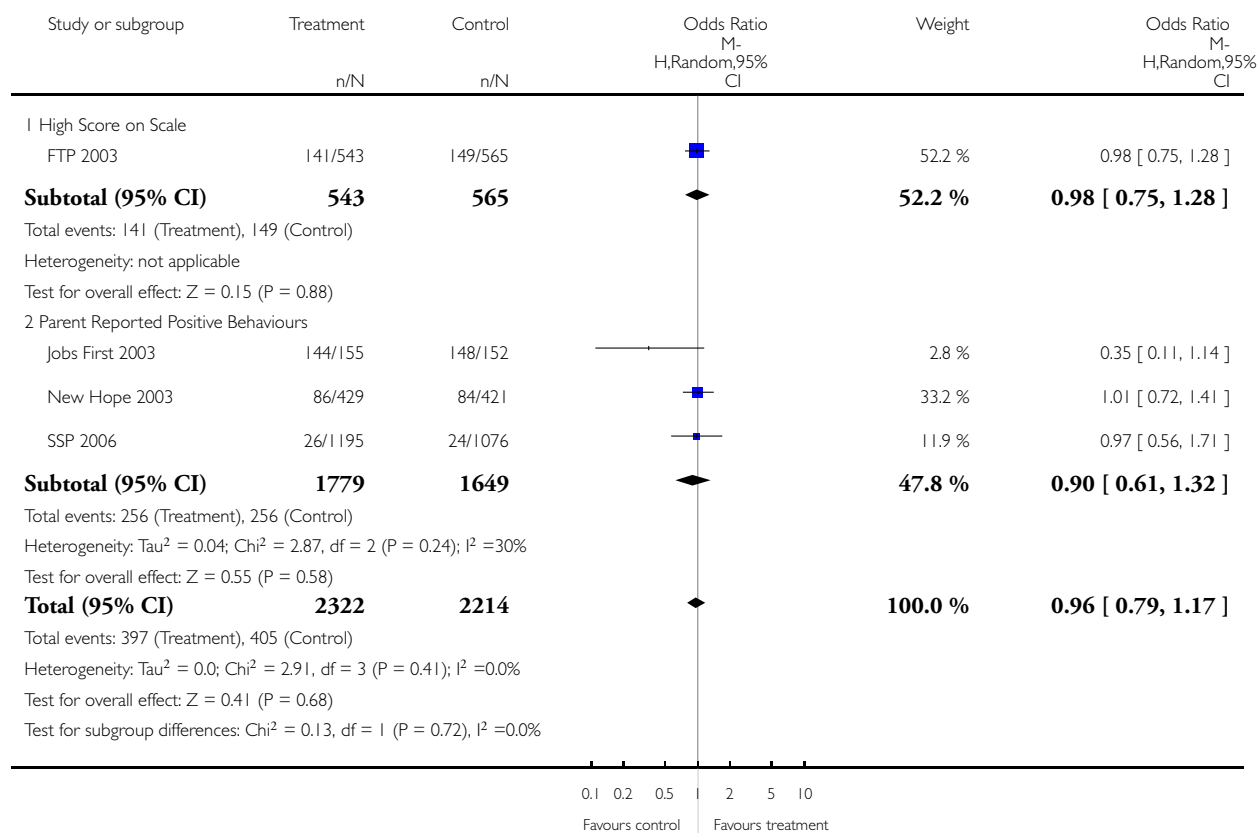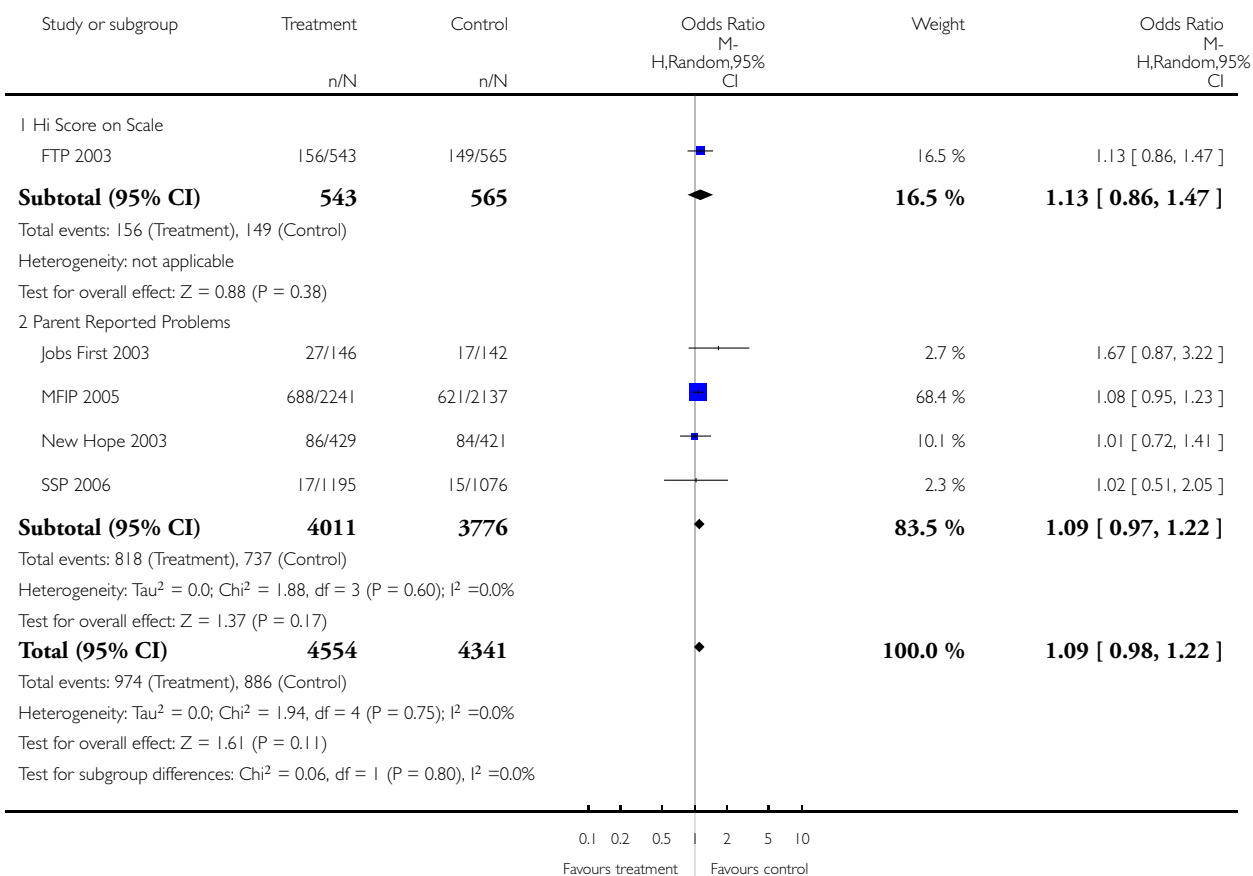Comparison: 4 Educational outcomes

Outcome: 5 ever suspended or expelled

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
	n/N	n/N			
1 Suspended or expelled					
Fraker 2002	71/982	33/493		12.6 %	1.09 [0.71, 1.67]
Vermont WRP 2002	208/1770	105/845		36.8 %	0.94 [0.73, 1.21]
Subtotal (95% CI)	**2752**	**1338**		**49.5 %**	**0.97 [0.78, 1.21]**
Total events: 279 (Treatment), 138 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.33, df = 1 (P = 0.56); I^2 =0.0%					
Test for overall effect: Z = 0.24 (P = 0.81)					
2 Suspended					
FTP 2003	195/678	184/712		41.4 %	1.16 [0.91, 1.47]
Jobs First 2003	10/119	7/111		2.3 %	1.36 [0.50, 3.71]
Subtotal (95% CI)	**797**	**823**		**43.7 %**	**1.17 [0.93, 1.47]**
Total events: 205 (Treatment), 191 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.10, df = 1 (P = 0.76); I^2 =0.0%					
Test for overall effect: Z = 1.33 (P = 0.18)					
3 Expelled					
FTP 2003	29/628	20/712		6.9 %	1.68 [0.94, 2.99]
Subtotal (95% CI)	**628**	**712**		**6.9 %**	**1.68 [0.94, 2.99]**
Total events: 29 (Treatment), 20 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 1.74 (P = 0.081)					
Total (95% CI)	**4177**	**2873**		**100.0 %**	**1.09 [0.94, 1.27]**
Total events: 513 (Treatment), 349 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 3.92, df = 4 (P = 0.42); I^2 =0.0%					
Test for overall effect: Z = 1.17 (P = 0.24)					
Test for subgroup differences: Chi^2 = 3.49, df = 2 (P = 0.17), I^2 =43%					

0.1   0.2   0.5   1   2   5   10

Favours treatment   Favours control

Analysis 5.1. Comparison 5 Pregnancy in <18 yr olds, Outcome 1 Ever Pregnant or had a baby.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 5 Pregnancy in <18 yr olds

Outcome: 1 Ever Pregnant or had a baby

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
1 Ever Pregnant					
SSP 2006	75/461	57/406		66.7 %	1.19 [0.82, 1.73]
Stevens-Simon 1997	69/181	15/44		19.5 %	1.19 [0.60, 2.38]
Subtotal (95% CI)	**642**	**450**		**86.2 %**	**1.19 [0.86, 1.65]**
Total events: 144 (Treatment), 72 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.00, df = 1 (P = 1.00); I² =0.0%					
Test for overall effect: Z = 1.04 (P = 0.30)					
2 Ever had a baby					
FTP 2003	10/454	14/482		13.8 %	0.75 [0.33, 1.71]
Subtotal (95% CI)	**454**	**482**		**13.8 %**	**0.75 [0.33, 1.71]**
Total events: 10 (Treatment), 14 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.68 (P = 0.50)					
Total (95% CI)	**1096**	**932**		**100.0 %**	**1.12 [0.82, 1.52]**
Total events: 154 (Treatment), 86 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 1.03, df = 2 (P = 0.60); I² =0.0%					
Test for overall effect: Z = 0.71 (P = 0.48)					
Test for subgroup differences: Chi² = 1.03, df = 1 (P = 0.31), I² =3%					

```
        0.1  0.2   0.5    1    2    5   10
          Favours treatment   Favours control
```

Analysis 6.1.   Comparison 6 Value of intervention, Outcome 1 Children Not Covered by Health Insurance.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 6 Value of intervention

Outcome: 1 Children Not Covered by Health Insurance

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
	n/N	n/N			
1 Value of intervention <$50					
Fraker 2002	132/982	69/493		24.8 %	0.95 [0.70, 1.31]
Vermont WRP 2002	227/1253	105/621		37.8 %	1.09 [0.84, 1.40]
Subtotal (95% CI)	**2235**	**1114**		**62.6 %**	**1.03 [0.85, 1.26]**
Total events: 359 (Treatment), 174 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.40, df = 1 (P = 0.53); I^2 =0.0%					
Test for overall effect: Z = 0.32 (P = 0.75)					
2 Value of intervention US$50-100					
FTP 2003	145/860	136/869		37.4 %	1.09 [0.85, 1.41]
Subtotal (95% CI)	**860**	**869**		**37.4 %**	**1.09 [0.85, 1.41]**
Total events: 145 (Treatment), 136 (Control)					
Heterogeneity: not applicable					
Test for overall effect: Z = 0.68 (P = 0.50)					
Total (95% CI)	**3095**	**1983**		**100.0 %**	**1.05 [0.90, 1.23]**
Total events: 504 (Treatment), 310 (Control)					
Heterogeneity: Tau^2 = 0.0; Chi^2 = 0.52, df = 2 (P = 0.77); I^2 =0.0%					
Test for overall effect: Z = 0.67 (P = 0.50)					
Test for subgroup differences: Chi^2 = 0.12, df = 1 (P = 0.73), I^2 =0.0%					

```
        0.1  0.2   0.5   1   2   5   10
        Favours treatment      Favours control
```

Analysis 6.2.   Comparison 6 Value of intervention, Outcome 2 Parent Reported Positive Behaviour.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 6 Value of intervention

Outcome: 2 Parent Reported Positive Behaviour

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
	n/N	n/N		
1 Value of intervention <US$50				
2 Value of intervention US$50-100				
New Hope 2003	86/429	84/421		1.01 [0.72, 1.41]
3 Value of Intervention >US$100				
Jobs First 2003	144/155	148/152		0.35 [0.11, 1.14]
SSP 2006	26/1195	24/1076		0.97 [0.56, 1.71]

```
         0.1  0.2   0.5   I    2    5   I0
         Favours control     Favours treatment
```

Analysis 6.3.   Comparison 6 Value of intervention, Outcome 3 Parent Reported Problem Behaviour.

Comparison: 6 Value of intervention

Outcome: 3 Parent Reported Problem Behaviour

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
	n/N	n/N		
1 Value of intervention <US$50				
2 Value of intervention US$50-100				
MFIP 2005	687/1917	544/1849		1.34 [1.17, 1.54]
3 Value of Intervention >US$100				
Jobs First 2003	27/146	17/142		1.67 [0.87, 3.22]
MFIP 2005	72/324	77/288		0.78 [0.54, 1.13]
SSP 2006	17/1195	15/1076		1.02 [0.51, 2.05]

```
        0.1   0.2   0.5    1     2    5    10
        Favours treatment    Favours control
```

Analysis 6.4. Comparison 6 Value of intervention, Outcome 4 Ever arrested (Vermont WRP ever in trouble with police).

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries
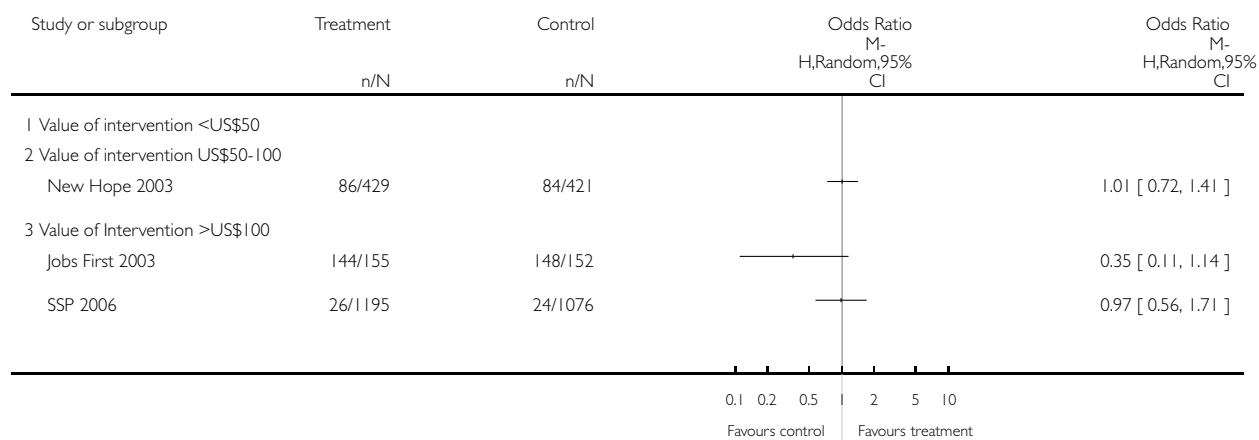
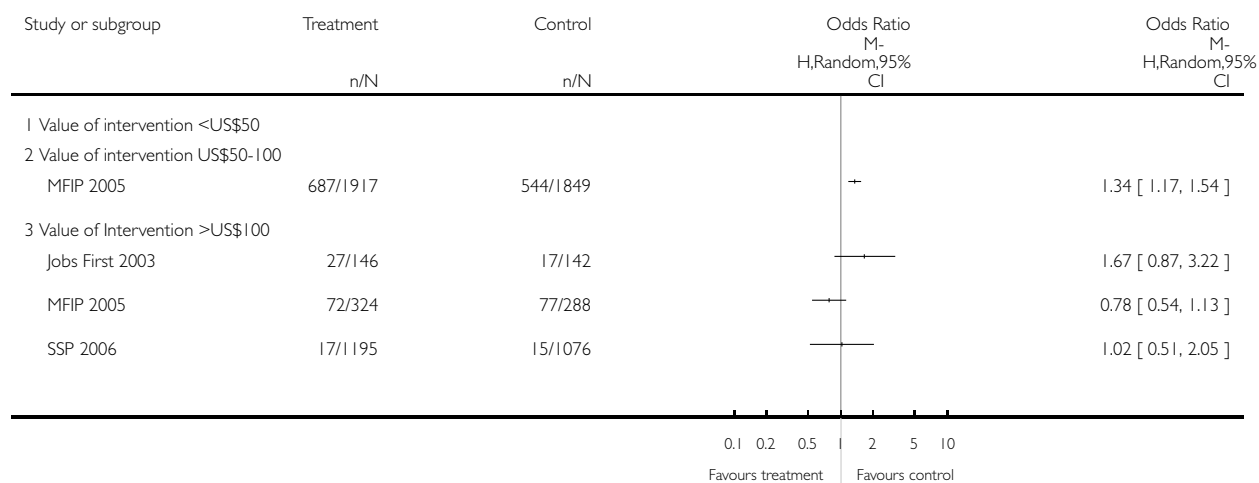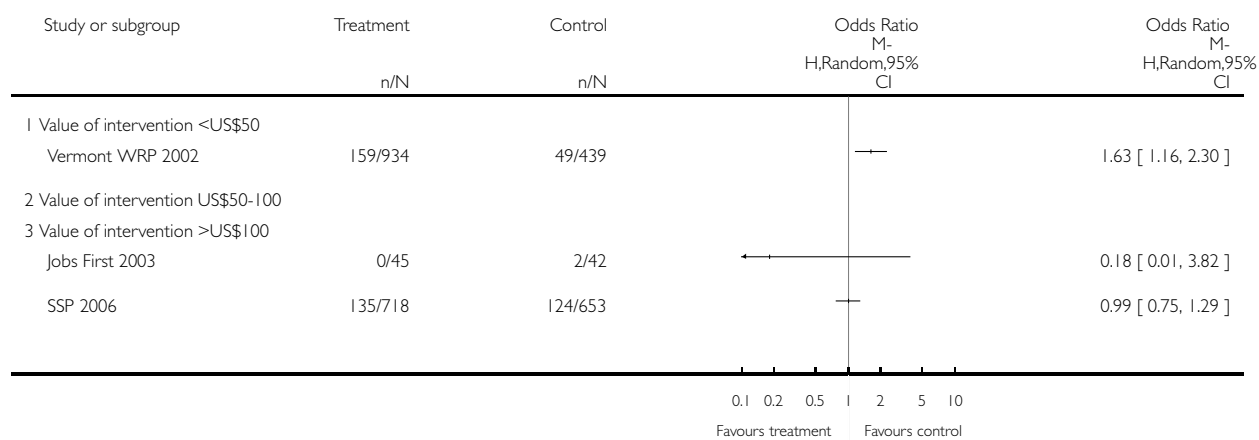Comparison: 6 Value of intervention

Outcome: 4 Ever arrested (Vermont WRP ever in trouble with police)

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Odds Ratio M-H,Random,95% CI
1 Value of intervention <US$50				
Vermont WRP 2002	159/934	49/439		1.63 [1.16, 2.30]
2 Value of intervention US$50-100				
3 Value of intervention >US$100				
Jobs First 2003	0/45	2/42		0.18 [0.01, 3.82]
SSP 2006	135/718	124/653		0.99 [0.75, 1.29]

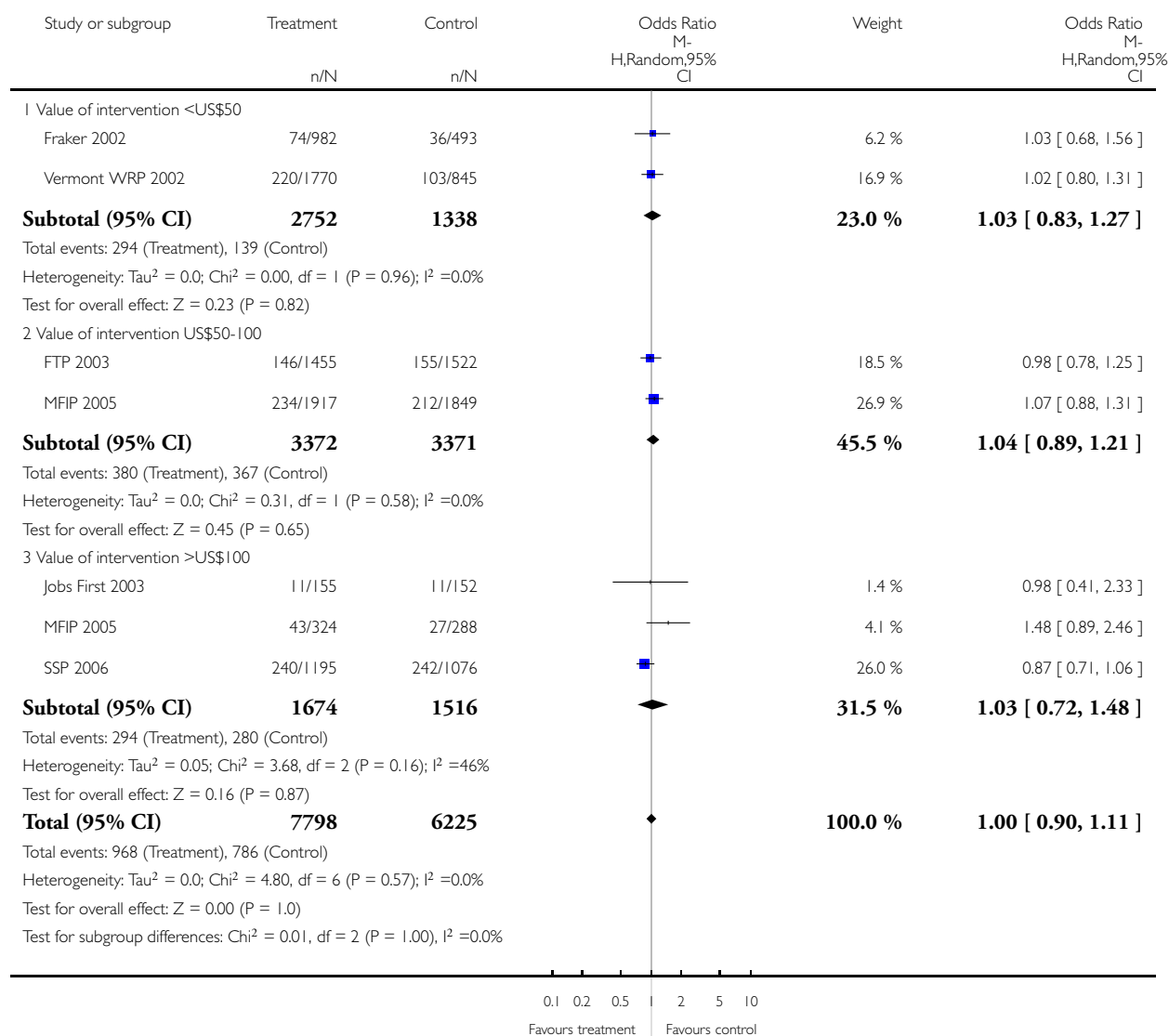0.1 0.2 0.5 1 2 5 10

Favours treatment   Favours control

Analysis 6.5. Comparison 6 Value of intervention, Outcome 5 Academic Achievement rated as poor or less.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 6 Value of intervention

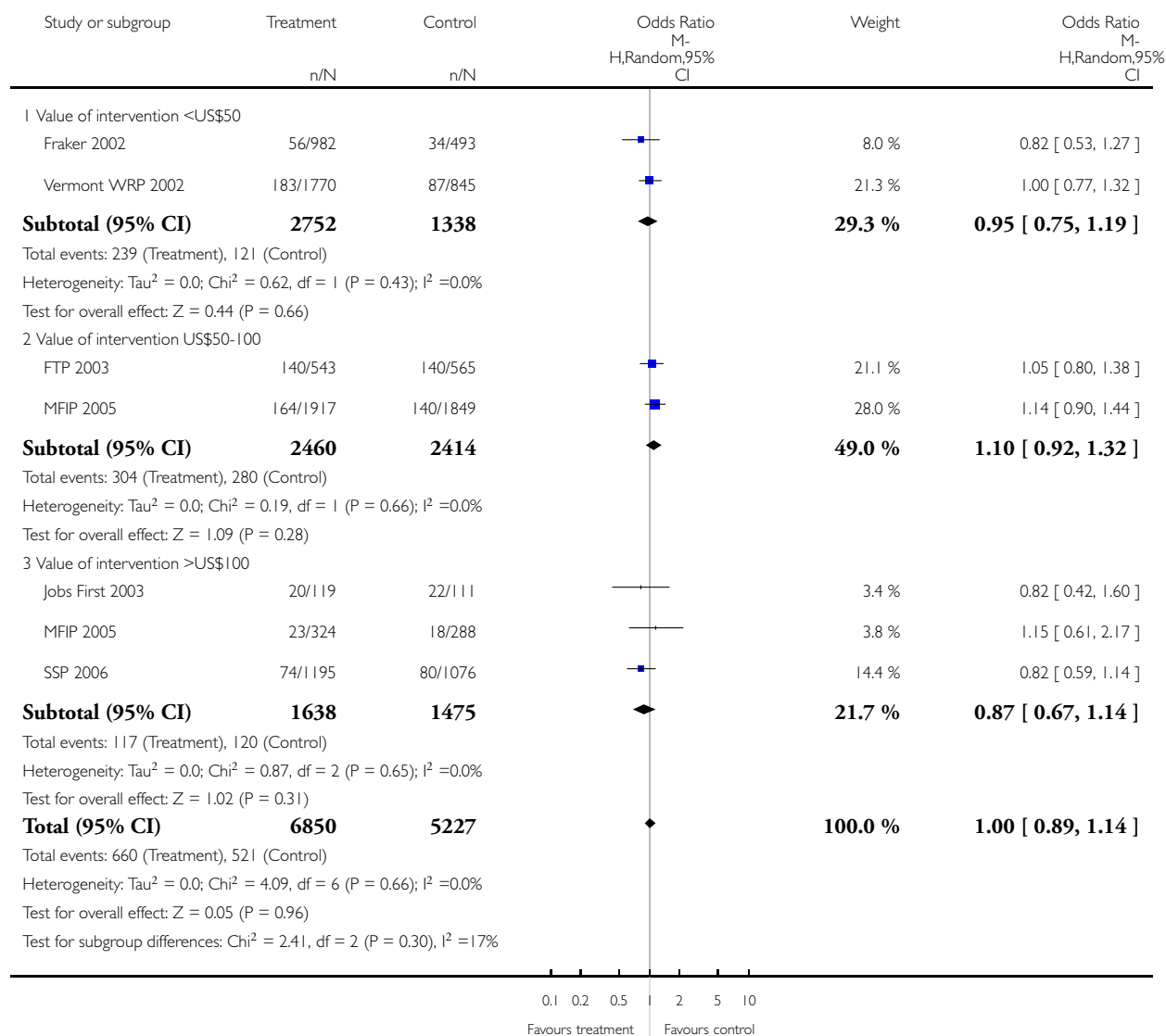Outcome: 5 Academic Achievement rated as poor or less

Study or subgroup	Treatment n/N	Control n/N	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
1 Value of intervention <US$50					
Fraker 2002	74/982	36/493		6.2 %	1.03 [0.68, 1.56]
Vermont WRP 2002	220/1770	103/845		16.9 %	1.02 [0.80, 1.31]
Subtotal (95% CI)	**2752**	**1338**		**23.0 %**	**1.03 [0.83, 1.27]**
Total events: 294 (Treatment), 139 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.00, df = 1 (P = 0.96); I² =0.0%					
Test for overall effect: Z = 0.23 (P = 0.82)					
2 Value of intervention US$50-100					
FTP 2003	146/1455	155/1522		18.5 %	0.98 [0.78, 1.25]
MFIP 2005	234/1917	212/1849		26.9 %	1.07 [0.88, 1.31]
Subtotal (95% CI)	**3372**	**3371**		**45.5 %**	**1.04 [0.89, 1.21]**
Total events: 380 (Treatment), 367 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.31, df = 1 (P = 0.58); I² =0.0%					
Test for overall effect: Z = 0.45 (P = 0.65)					
3 Value of intervention >US$100					
Jobs First 2003	11/155	11/152		1.4 %	0.98 [0.41, 2.33]
MFIP 2005	43/324	27/288		4.1 %	1.48 [0.89, 2.46]
SSP 2006	240/1195	242/1076		26.0 %	0.87 [0.71, 1.06]
Subtotal (95% CI)	**1674**	**1516**		**31.5 %**	**1.03 [0.72, 1.48]**
Total events: 294 (Treatment), 280 (Control)					
Heterogeneity: Tau² = 0.05; Chi² = 3.68, df = 2 (P = 0.16); I² =46%					
Test for overall effect: Z = 0.16 (P = 0.87)					
Total (95% CI)	**7798**	**6225**		**100.0 %**	**1.00 [0.90, 1.11]**
Total events: 968 (Treatment), 786 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 4.80, df = 6 (P = 0.57); I² =0.0%					
Test for overall effect: Z = 0.00 (P = 1.0)					
Test for subgroup differences: Chi² = 0.01, df = 2 (P = 1.00), I² =0.0%					

```
        0.1  0.2  0.5   I    2    5   10
        Favours treatment    Favours control
```

Analysis 6.6. Comparison 6 Value of intervention, Outcome 6 Ever Repeated a Grade.

Review: Financial benefits for child health and well-being in low income or socially disadvantaged families in developed world countries

Comparison: 6 Value of intervention

Outcome: 6 Ever Repeated a Grade

Study or subgroup	Treatment	Control	Odds Ratio M-H,Random,95% CI	Weight	Odds Ratio M-H,Random,95% CI
	n/N	n/N			
1 Value of intervention <US$50					
Fraker 2002	56/982	34/493		8.0 %	0.82 [0.53, 1.27]
Vermont WRP 2002	183/1770	87/845		21.3 %	1.00 [0.77, 1.32]
Subtotal (95% CI)	**2752**	**1338**		**29.3 %**	**0.95 [0.75, 1.19]**
Total events: 239 (Treatment), 121 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.62, df = 1 (P = 0.43); I² =0.0%					
Test for overall effect: Z = 0.44 (P = 0.66)					
2 Value of intervention US$50-100					
FTP 2003	140/543	140/565		21.1 %	1.05 [0.80, 1.38]
MFIP 2005	164/1917	140/1849		28.0 %	1.14 [0.90, 1.44]
Subtotal (95% CI)	**2460**	**2414**		**49.0 %**	**1.10 [0.92, 1.32]**
Total events: 304 (Treatment), 280 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.19, df = 1 (P = 0.66); I² =0.0%					
Test for overall effect: Z = 1.09 (P = 0.28)					
3 Value of intervention >US$100					
Jobs First 2003	20/119	22/111		3.4 %	0.82 [0.42, 1.60]
MFIP 2005	23/324	18/288		3.8 %	1.15 [0.61, 2.17]
SSP 2006	74/1195	80/1076		14.4 %	0.82 [0.59, 1.14]
Subtotal (95% CI)	**1638**	**1475**		**21.7 %**	**0.87 [0.67, 1.14]**
Total events: 117 (Treatment), 120 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 0.87, df = 2 (P = 0.65); I² =0.0%					
Test for overall effect: Z = 1.02 (P = 0.31)					
Total (95% CI)	**6850**	**5227**		**100.0 %**	**1.00 [0.89, 1.14]**
Total events: 660 (Treatment), 521 (Control)					
Heterogeneity: Tau² = 0.0; Chi² = 4.09, df = 6 (P = 0.66); I² =0.0%					
Test for overall effect: Z = 0.05 (P = 0.96)					
Test for subgroup differences: Chi² = 2.41, df = 2 (P = 0.30), I² =17%					

```
        0.1  0.2   0.5    I    2    5   10
        Favours treatment      Favours control
```

Table 1. Additional Quality Assessment - Included Studies

Study ID	Allocation Method	Allocation Concealed	Loss to Follow-up	Blind Outcome assess	Other comments
Fein 2003	Adequate Automated system using State Client System	Adequate	Adequate Not stated, but assumed to be high retention because participation in programme was compulsory and outcome was routinely collected data	Adequate Routinely collected data.	
Fraker 2002	Unclear Research sites not randomly selected - on basis of administrative systems and geographical type Method of allocation for participants not stated, but see p. 20 for discussion of checking of 'random assignment logs' Method for selecting survey sample also not stated, but reported as 'random' with unequal probabilities (2:1 treatment:control) see p. 53 Also note that "the percentage of cases assigned to the nonresearch sample varied from county to county to ensure that the relative frequency distribution of treatment cases across regions of the state matched that of all FIP cases." Fraker 2002	Unclear	B Not reported Final response rate can't be calculated. Total in follow-up survey 2951 (71.8% sample) of which 1962 had children. Of these 1475 also completed both child impact survey (75.2% of the 1962) . Number of eligible parents in original sample not reported. Intervention (Groups 1 & 2) 1984 (72.8%) Unlocateable 4.1%, refusal 9.8%, other 13.3% 982 completed survey child impact survey, 75.8% of 1296 eligible. Control (Groups 3 & 4) 967 (69.9%) Unlocateble 3.8%, refusal 10.2%, other	Inadequate, parental response only	Findings are reported according to applicant status, but only those who were already receiving welfare at randomisation are reported here. It is important to note that two years prior to outcome assessment all welfare recipients in the state (including both control and intervention groups) became subject to a modified version of the restructuring programme, but which was somewhat less generous

Table 1. Additional Quality Assessment - Included Studies *(Continued)*

			16.2% 493 completed child impact survey, 74% of 666 eligible		
MFIP (Gennetian 2005)	Unclear	Adequate	Not reported 36 month responding sample is 80% of baseline sample, and 64% of recruited sample. 72 month data is full data set, but limited outcomes. At no point is it possible to report intervention and control response rates	Adequate where relying on public records, inadequate where parental report	Outcomes are reported by multiple sub-groups (e.g. urban vs rural, risk status of parents) and has been pooled by reviewers where possible
New Hope 2003 (Huston 2005)	Adequate Computer assignment	Adequate	Adequate Huston 2003a 3 years post intervention (sample n=745) In each case maximum reported (i.e. completed at least one measure)Parent response total=75.3%, Intervention= 77.1%, Control=73.5%Teacher response total=63.2%, Intervention=63.0%, Control=64.7%Child response total=72.3%, Intervention=74.2%, Control=70.6%	Inadequate, only possible to blind teachers to treatment group, parental report unblinded	Outcomes are reported separately for girls and boys.
Jobs First 2003	Unclear	Unclear	Not reported Of 964 eligible people 772 (80%) interviewed but 722 (74.9%) 'complete interviews' Horowitz 3-10 years	Inadequate parental response only, impossible to blind to group	Report of random sample of 6115 randomised

Table 1. Additional Quality Assessment - Included Studies *(Continued)*

			only at 18 month follow-up Not possible to calculate drop out Total n=288 Intervention n=146 Control n=142 Note those to whom family cap would apply excluded Loeb 2003 12-24 months old at 18 month follow-up Available sample n= 342 Total n=308 (90%) not broken down by group Note those to whom family cap would apply excluded		
FTP 2003	Adequate Computer assignment using central administration team	Adequate	Adequate Full sample (n=1729 responders) FTP response rate 80.1% (n=860) ADFC response rate 79.9% (n=869) Child sample FTP= 77.6% (n=543), ADFC=79.1% (n= 565) No significant differences in response rates according to a number of participant characteristics. No reasons for loss given. Total from survey sample not whole sample n=1729	Inadequate (all outcomes self report)	Note for a very few outcomes data are collected from more than one child per family and thus unit of analysis different than unit of randomisation. For the most part data collected for one focal child per family in age range 5-12 years at follow-up
Vermont WRP 2002	Unclear	Unclear	Not reported Outcome survey sample	Inadequate (all outcomes self report)	

Table 1. **Additional Quality Assessment - Included Studies** (*Continued*)

			is subset of those randomly assigned. Authors report overall response rate of 80%, but differential loss to follow-up not reported. Across the whole sample attrition is analysed, and non responders found to significantly more likely to be male, less likely to have taken part in the programme, less likely to have received money. Authors concluded some non-response bias. Sample sizes for Individual items are provided.		
Stevens-Simon 1997	Adequate	Adequate	Adequate Total n=248 (87%) Intervention n=181 (group 1=97 (91%) , group 3=84 (83%))Control n= 44 (81%)Comparison n=23 (96%) 38 lost to follow-up because moved with no forwarding address or contact person or disappeared immediately after the enrolment interview	Adequate The objective nature of the outcome (pregnancy) makes blinding of observers irrelevant	States that uptake of comparison intervention only group so low it was abandoned, and sample size doubled in intervention groups to deal with low uptake of intervention, but ITT carried out so potential bias dealt with
SSP 2006 (Wilk 2006)	Adequate Centralised computer allocation	Unclear	Adequate Effectively two samples, recipient study response rate 85% Applicant study re-	Inadequate (all outcomes self report)	The authors argue that ITT analysis underestimates impact. ITT is reported here, but see

Table 1. Additional Quality Assessment - Included Studies *(Continued)*

				sponse rate Effectively two samples, recipient study response rate 85% Applicant study response rate 72%			Wilk 2006 for alternative analysis. Note also that the effective 'value' of the intervention change during the evaluation period as policy context changed (see Michalopoulos 2002 p7) The authors argue that ITT analysis underestimates impact. ITT is reported here, but see Wilk 2006 for alternative analysis. Note also that the effective 'value' of the intervention change during the evaluation period as policy context changed (see Michalopoulos 2002 p7)

Table 2. Income Maintenance Experiments using Conlisk-Watts method of allocation

Study	Design	Participants	Interventions	Outcomes	Location of Study	Quality Assessment	Main Findings
Maynard 1979	Controlled study	Children from low-income families which were participating in the IME n=851	Income maintenance through negative income tax guaranteeing minimum annual income. In this experiment participants could be allocated to one of 11 different levels of income main-	School performance: 1. reading test scores 2. academic grade point average	Seattle and Denver, USA	Allocation concealment Unclear	Grades 4-6 Adjusted differences in Reading Test Scores greater in intervention than control group. Effect seen in some years and not others. Effect only in chil-

| | | | tenance | | | | dren who had participated in the IME for more than 3 years. Pre-participation income level inconsequential to effect. No difference between intervention and control children on Academic Grade Point Average or number of days absent from school. Grades 7-11 No statistically significant differences between intervention and control group children on Reading Test Scores of number of days absent from school. Some statistically significant differences in Academic Grade Point Average, with control group scoring better than the intervention group for some subgroups |

Table 2. Income Maintenance Experiments using Conlisk-Watts method of allocation (*Continued*)

MacDonald 1979	Controlled study	16-18 year old sons and daughters of household heads in IME n=137 males n=129 females	Income maintenance through negative income tax guaranteeing minimum annual income. In this experiment there were two income guarantee levels and two different tax rates (i.e. four different possible groups)	School enrolment and labour supply decisions of teenagers	Gary, Indiana, USA	Allocation concealment Unclear	Unclear 1. Males There was no overall effect of intervention versus control on the outcome of interest; a statistically significant effect was reported for those families who did qualify to receive benefit. The further analyses did not suggest that either the level of guarantee or the level of tax rate affected the likelihood of staying on in education. 2. Females No overall effect was reported. For girls, no difference was seen between intervention and control groups even amongst those families who qualified to receive benefit. The authors re-

							port however that there was a statistically significant effect related to level of benefit received
Maynard 1977	Controlled study	Children whose parents were participants in the IME N= 847	Income maintenance through negative income tax guaranteeing minimum annual income	School performance: 1. attendance 2. comportment grades (behaviour)	North Carolina and Iowa,USA	Allocation concealment Unclear	1. Grades 2-8 (equivalent to ages 6- 12) In North Carolina, the intervention group scored significantly more positively on numbers of days absent from school, comportment grade, academic grade point average and one of two ways of reporting standardised achievement test scores. In contrast, in Iowa, no statistically significant differences were seen between groups on any measure. 2.Grades 9-12 (equivalent to ages 13-16)

							No significant differences between intervention and control groups were reported in either area in this age group
Kehler 1979	Controlled study	Newborn children of participants in the IME (birth records) n=404	Income maintenance through negative income tax guaranteeing minimum annual income	Infant birth weight	Gary, Indiana, USA	Allocation concealment Unclear	Overall there is no significant difference between intervention and control groups. However, in a series of sub-group analyses, beneficial effects were observed in some subgroups. The largest positive effects are seen in the group of mothers under the age of 18, with an interval of less than 18 months between pregnancies who smoked. Other positive effects are seen in sub groups in whom adverse circumstances cluster. While the authors

							argue that these are the groups in which the largest effects were expected, it is not clear that this analysis was planned a priori. It is likely that this division into a large number of sub-groups is responsible for the apparently adverse effect of the programme within one group (18-34 year olds with a long interval between pregnancies and who didn't smoke). The results of this type of post-hoc analysis must be treated with scepticism
Venti 1984	Controlled study	Children from low-income families which were participating in the IME Seattle n=2042, Denver n= 2758 approximately half to intervention and control at each site	Income maintenance through negative income tax guaranteeing minimum annual income. In this experiment participants could be allocated to one of 11 different levels of	Probability of being in school or in work among 16-21 year olds (only 16-18 year olds of interest here)	Seattle and Denver, USA	Allocation concealment Unclear	Rates of young people in school higher among intervention group at 16, 17 and 18 reaching significance only at 18 years. Rates of young people in employ-

Table 2. Income Maintenance Experiments using Conlisk-Watts method of allocation (*Continued*)

		income main-tenance				ment lower among intervention group at 16, 17 and 18 all at a significant level. Rates of young people in either school or employment higher among intervention group at 17 and higher among control group at 16 and18, no differences reached significance

Table 3. MFIP Minnesota Public Education Records

Group	Mean Maths score	Mean Reading score	Met Mathematics Leve	Met Reading Level
Third Grade Intervention (n=621)	1358.9	1360.1	46.1%	43%
Third Grade Control (n=602)	1347.6	1343.7	40&	41.4%
Fifth Grade Intervention (n=690)	1370.7	1405	46.7%	55.2%
Fifth Grade Control (n=716)	1365.7	1403.6	44.5%	51.7%

Table 4. Sample sizes for reporting subgroups

Study	Sample randomised	Sample 1	Sample 2	Sample 3
FTP 2003	Total n=2732 Intervention=1405 Control=1410	Single adult with child n=2160	Single adult with child aged 5-12 at follow-up. Responding sample total-1108 Intervention=543 Control=565	Single adult with child aged 13-17 at follow-up Responding sample total=741 Intervention=367 Control=374

Table 4. Sample sizes for reporting subgroups *(Continued)*

Fraker 2002	Total sample randomised=17,345	Outcomes reported for randomly selected sample total n=4111, number with children not reported. Intervention= 2727 Control=1384	Total number who completed follow-up survey and had children in age range 5-12 years=1962 Intervention=1296 Control=666	Results reported seperately for existing and new applicants. Only ongoing cases reported here, total responding n=813 intervention n=540 control n= 273
Vermont WRP 2002	Total sample randomised=7691, Two parent families=2222, Single parents=5469	Outcome survey sample n=2326	Responding sample sizes Couples=616 (individual item responses vary) Single parent WRP=421 Single parent WRP incentives only=414 Sinlge parent control=421	
SSP 2006	Total recipient sample randomised approx 6000, applicants= 2371	Number randomised to SSP recipients=2880 or 2859 applicants=1648	SSP Plus=293 not used in this report	Number randomised to control recipients=2849 or 2827 applicants=1667

Table 5. Vermont WRP outcomes showing incentives only group outcomes

Outcome	Incentives only N	Incentives only %	Conditional Incent N	Conditional Incent %	Control N	Control %
Absent from school for 3 days or more in last month	847	12.6	923	7.8	845	9.3
Ever in special education	847	28.3	923	24.8	845	25.8
Ever suspended or expelled	847	12.2	923	11.4	845	12.4
Any grade retention	847	9.2	923	11.4	845	10.3
Doing below average in school	847	11.4	923	13.4	845	12.1
Ever dropped out of school	451	4.9	483	4.3	439	7.3

Table 5. Vermont WRP outcomes showing incentives only group outcomes   (*Continued*)

Ever in trouble with police	451	18.6	483	15.7	439	11.2	

A P P E N D I C E S

Appendix 1. CENTRAL SEARCH STRATEGY

CENTRAL searched via the Cochrane Library 2006 (Issue3)

#1 Child MeSH check word

#2 MeSH descriptor infant explode all trees

#3 MeSH descriptor adolescent explode all trees

#4 MeSH descriptor pediatrics explode all trees

#5 pediatric* or paediatric* in

#6 perinat* in

#7 neonat* in

#8 newborn* in

#9 infan* in

#10 baby or babies in

#11 toddler* in

#12 boy* in

#13 girl* in

#14 kid* in

#15 school next age* or school-age* in

#16 juvenile* in

#17 under-age* or under next age* in

#18 teen* or minor* or pubescen* or adolescen* or youth* in

#19 young next person* or young next people* in

#20 (#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19)

#21 MeSH descriptor income this term only

#22 MeSH descriptor social welfare this term only

#23 MeSH descriptor social security explode all trees

#24 MeSH descriptor financial support this term only

#25 MeSH descriptor Public Assistance this term only

#26 MeSH descriptor Financing, Government this term only

#27 (cash or economic or money or monetary or charit* or demogrant or welfare or fiscal or budget or (tax* near credit*) or monies) in

#28 temporary next assistance in

#29 #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 in

#30 (#20 and #29)

Appendix 2. MEDLINE search strategy

MEDLINE searched 1966 to May 2006 via OVID
1 exp CHILD/
2 child.mp.
3 exp PEDIATRICS/
4 pediatric$.mp.
5 paediatric$.mp.
6 or/1-5
7 perinat$.mp.
8 neonat$.mp.
9 newborn$.mp.
10 infan$.mp.
11 bab$.mp.
12 toddler$.mp.
13 boy$.mp.
14 girl$.mp.
15 kid$1.mp.
16 school-age$.mp.
17 school age$.mp.
18 juvenile$.mp.
19 (under-age$ or under age$).mp.
20 teen$.mp.
21 minor$.mp.
22 pubescen$.mp.
23 adolescen$.mp.
24 youth$.mp.

25 young person$.mp.
26 young people.mp.
27 or/7-26
28 infan$.jw.
29 child$.jw.
30 pediatric$.jw.
31 paediatric$.jw.
32 adolescen$.jw.
33 or/28-32
34 33 or 27 or 6
35 income$.tw.
36 financ$.tw.
37 payment$.tw.
38 social security.tw.
39 (cash or economic or (money or monetary) or charit$ or demogrant or temporary assistance for needy families or tanf or welfare or fiscal or budget or (tax$ adj4 credit$)).tw.
40 monies.tw.
41 Income/
42 Social Welfare/
43 Social Security/
44 Financial Support/
45 Public Assistance/
46 Financing, Government/
47 or/35-46
48 randomized controlled trial.pt.
49 controlled clinical trial.pt.
50 randomized controlled trials.sh.
51 random allocation.sh.
52 double blind method.sh.
53 single-blind method.sh.
54 or/48-53
55 (animals not human).sh.
56 54 not 55
57 clinical trial.pt.
58 exp Clinical Trials/
59 (clin$ adj25 trial$).ti,ab.
60 ((singl$ or doubl$ or trebl$ or tripl$) adj25 (blind$ or mask$)).ti,ab.
61 placebos.sh.
62 placebo$.ti,ab.
63 random$.ti,ab.
64 research design.sh.
65 or/57-64
66 65 not 55
67 66 not 56
68 comparative study.sh.
69 exp Evaluation Studies/
70 follow up studies.sh.
71 prospective studies.sh.
72 (control$ or prospectiv$ or volunteer$).ti,ab.
73 or/68-72
74 73 not 55
75 74 not (56 or 67)
76 56 or 67 or 75

77 34 and 47 and 76

Appendix 3. CINAHL search strategy

CINAHL search via OVID 1982 to November 2006

1 financ$.tw.
2 payment$.tw.
3 social security.tw.
4 (cash or money or monetary or monies or charit$ or demogrant or temporary assistance for needy families or welfare or (tax$ adj4 credit$)).tw.
5 Social Welfare/
6 Social Security/
7 Financial Support/
8 Public Assistance/
9 financing, government/
10 tanf.tw.
11 (negative adj2 tax$).tw.
12 income.tw.
13 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12
14 randomi$.mp.
15 (clin$ adj3 trial$).mp.
16 singl$.mp.
17 doubl$.mp.
18 tripl$.mp.
19 trebl$.mp.
20 mask$.mp.
21 blind$.mp.
22 (16 or 17 or 18 or 19) and (20 or 21)
23 crossover.mp.
24 random$.mp.
25 (random$ adj3 (allocat$ or assign$)).mp.
26 Random Assignment/
27 exp Clinical Trials/
28 exp Meta Analysis/
29 "Systematic Review"/
30 15 or 22 or 23 or 24 or 25 or 26 or 27 or 28 or 29
31 Child/
32 child$.mp.
33 PEDIATRICS/
34 pediatric$.mp.
35 paediatric$.mp.
36 or/31-35
37 perinat$.mp.
38 neonat$.mp.
39 newborn$.mp.
40 infan$.mp.
41 (baby$ or babies).mp.
42 toddler$.mp.
43 boy$.mp.
44 girl$.mp.
45 kid$1.mp.

46 school-age$.mp.
47 school age$.mp.
48 juvenile$.mp.
49 (under?age or under?aged).mp.
50 TEEN$.mp.
51 MINOR$.mp.
52 pubescen$.mp.
53 adolescen$.mp.
54 youth$.mp.
55 young person$.mp.
56 young people.mp.
57 or/37-56
58 infan$.jw.
59 child$.jw.
60 pediatric$.jw.
61 paediatric$.jw.
62 adolescen$.jw.
63 or/58-62
64 63 or 57 or 36
65 Infant/
66 BABY/
67 Adolescent/
68 64 or 65 or 66 or 67
69 13 and 30 and 68

Appendix 4. ASSIA search strategy

ASSIA searched via CSA 1987 to August 2006

Query: (((prospective study) OR (follow-up study) OR (comparative study)
OR (clinical trial evaluation study) OR (random allocation) OR
(KW=(randomised controlled trial) OR (controlled trial) OR (random
allocation))) or (DE=("case controlled studies" or "clinical trials" or
"double blind randomized trials" or "prospective controlled trials" or
"prospective studies" or "randomized controlled trials" or "clinical
assessment" or "group assessment" or "clinical evaluation" or "cluster
evaluation" or "group evaluation")) or (TI=(COMPARISON GROUP* OR CONTROL
GROUP* OR PROSPECTIVE STUD* OR FOLLOW* STUD* OR EVALUATIVE STUD* OR
EVALUATION STUD* OR COMPARISON STUD* OR COMPARATIVE STUD* OR COMPARITIVE
STUDY* OR RANDOM* ALLOCAT* OR TRIAL* OR INTERVENTION* OR EXPERIMENT*) or
ab=(COMPARISON GROUP* OR CONTROL GROUP* OR PROSPECTIVE STUD* OR FOLLOW*
STUD* OR EVALUATIVE STUD* OR EVALUATION STUD* OR COMPARISON STUD* OR
COMPARATIVE STUD* OR COMPARITIVE STUDY* OR RANDOM* ALLOCAT* OR TRIAL* OR
INTERVENTION* OR EXPERIMENT*))) and (((de=(Distributive justice or
Income distribution or Wealth distribution or Basic income or Earned
income tax credit or Progressive income tax or Social security or
Welfare benefits or Income support or Supplementary benefits or Child
welfare or Social welfare or Income inequalities or Income
redistribution or Income security)) or (ti(payment* or social security
or cash or money or monetary or monies or charit* or demogrant or
temporary assistance for needy families or tanf or welfare or (tax*
within 4 credit*) or Social Welfare or Financial Support or Public

Assistance or negative tax*) or ab=(payment* or social security or cash
or money or monetary or monies or charit* or demogrant or temporary
assistance for needy families or tanf or welfare or (tax* within 4
credit*) or Social Welfare or Financial Support or Public Assistance or
negative tax*))) and ((JN=(child or family or paediatric* or pediatric*))
or (TI=(child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby* or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person* or young people or school age* or preschool age*)
or AB=(child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby* or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person* or young people or school age* or preschool
age*))))

Appendix 5. EconLit search strategy

EconLit search via SilverPlatter 1969 to June 2006

11 (#8 not (child* or pediatric* or paediatric* or perinat* or
neonat* or newborn* or infan* or baby or babies or toddler* or boy* or
girl* or kid* or juvenile* or teen* or minor* or pubesecen* or
adolescenc* or youth or young person or young people or school age* or
preschool age*) and (child* or pediatric* or paediatric* or perinat*
or neonat* or newborn* or infan* or baby* or babies or toddler* or
boy* or girl* or kid* or juvenile* or teen* or minor* or pubesecen* or
adolescenc* or youth or young person* or young people or school age*
or preschool age*)
10 #8 not (child* or pediatric* or paediatric* or perinat* or neonat*
or newborn* or infan* or baby or babies or toddler* or boy* or girl*
or kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc*
or youth or young person or young people or school age* or preschool
age*)
9 #2 not #8
8 comparison group* or control group* or prospective stud* or follow
up stud* or evaluative stud* or evaluation stud* or comparison stud*
or comparative stud* or comparitive study* or (random* allocat*) or
trial* or intervention stud* or intervention design* or
experiment*
7 child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby* or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person* or young people or school age* or preschool
age*
6 #5 not #3
5 (child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person or young people or school age* or preschool
age*) and ((comparison group or control group or prospective study or
follow up study or evaluative study or evaluation study or comparison
study or comparative study or comparitive study or random allocation

or trial or intervention study or intervention design) or
(experiment*))
4 (comparison group or control group or prospective study or follow
up study or evaluative study or evaluation study or comparison study
or comparative study or comparitive study or random allocation or
trial or intervention study or intervention design) or
(experiment*)
3 #2 not #1
2 animal
1 (animal) and (human)

N.B Due to problems with the database's interface regarding the size of this search terms for "financial benefits" were not added to this strategy.

Appendix 6. ERIC search strategy

ERIC searched via Dialog Datastar 1966 to June 2006

1 Welfare.TI,AB.
2 (financ$ OR benefit$ OR payment$ OR cash OR money).TI,AB.
3 1 OR 2
4 1 AND 2
5 (SOCIAL ADJ SECURITY).TI,AB.
6 (FINANC$ ADJ BENEFIT$ OR FINANC$ ADJ INTERVENTION$ OR FINANC$ ADJ PAYMENT$ OR FINANC$ ADJ EXPERIMENT$).TI,AB.
7 (CASH OR MONEY OR MONETARY OR MONIES OR CHARIT$ OR DEMOGRANT$ OR TAX$).TI,AB.
8 TEMPORARY ADJ ASSISTANCE
9 TANF.TI,AB.
10 (INCOME ADJ MAINTAIN$ OR INCOME ADJ IMPROV$ OR INCOME ADJ CHANG$ OR INCOME ADJ INTERVEN-TION OR INCOME ADJ EXPERIMENT$ OR INCOME ADJ ADJUST$).TI,AB.
11 WELFARE.TI,AB. AND (financ$ OR benefit$ OR payment$ OR cash OR money).TI,AB.
12 5 OR 6 OR 7 OR 8 OR 9 OR 10 OR 11
13 COMPARISON ADJ GROUP$ OR CONTROL ADJ GROUP$ OR PROSPECTIVE ADJ STUD$ OR FOLLOW ADJ UP ADJ STUD$ OR EVALUATIVE ADJ STUD$ OR EVALUATION ADJ STUD$ OR COMPARISON ADJ STUD$ OR COMPARATIVE ADJ STUD$ OR COMPARITIVE ADJ STUDY$ OR RANDOM$ ADJ ALLOCATE$ OR TRIAL$ OR INTERVENTION$ OR EXPERIMENT$
14 ALLOCATION ADJ CONCEALMENT OR CONTROL$ ADJ TRIAL$ OR BLIND$ ADJ ALLOCAT$
15 SCIENTIFIC-METHODOLOGY.DE. OR EVALUATION-METHODS.DE. OR PROGRAM-EVALUATION.DE. OR PSY-CHOLOGICAL-EVALUATION.DE. OR CONTROL-GROUPS.DE. OR COMPARATIVE-ANALYSIS.DE. OR PRETESTS-POSTTESTS.DE. OR EXPERIMENTAL-GROUPS.DE. OR OUTCOMES-OF-TREATMENT.DE. OR PROGRAM-EVALUA-TION.DE. OR EDUCATIONAL-EXPERIMENTS.DE. OR FOLLOWUP-STUDIES.DE. OR FOLLOWUP-STUDIES.DE.
16 13 OR 14 OR 15
17 12 AND 16
18 (YOUNG ADJ PEOPLE OR SCHOOL ADJ AGE$ OR PRESCHOOL ADJ AGE$).TI,AB.
19 (YOUNG ADJ PERSON$).TI,AB.
20 CHILD$ OR PEDIATRIC$ OR PAEDIATRIC$ OR PERINAT$ OR NEONAT$ OR NEWBORN$ OR INFAN* OR BABY* OR BABIES OR TODDLER$ OR BOY$ OR GIRL$ OR KID$ OR JUVENILE$ OR TEEN$ OR MINOR$ OR PUBESCEN$ OR ADOLESCENC$ OR YOUTH
21 ADOLESCENTS.W..DE. OR CHILDREN.W..DE. OR YOUNG-CHILDREN.DE. OR CHILD-BEHAVIOR.DE. OR CHILD-DEVELOPMENT.DE. OR PEDIATRICS.W..DE. OR CHILD-HEALTH.DE. OR CHILD-BEHAVIOR.DE. OR PE-DIATRICS.W..DE. OR INFANTS.W..DE. OR TODDLERS.W..DE. OR PRESCHOOL-CHILDREN.DE. OR FAMILY-ENVI-RONMENT.DE. OR NEONATES.W..DE. OR INFANT-CARE.DE. OR PRESCHOOL-CHILDREN.DE. OR FAMILY-PRO-

GRAMS.DE. OR ELEMENTARY-SCHOOL-STUDENTS.DE. OR EARLY-ADOLESCENTS.DE. OR MIDDLE -SCHOOL-STUDENTS.DE. OR URBAN-YOUTH.DE. OR PREADOLESCENTS.W..DE.
22 18 OR 19 OR 20 OR 21
23 17 AND 22

Appendix 7. Index to Theses search strategy

Index to Theses searched 1716 to August 2006

(ti contains prospective OR follow-up OR comparative OR trial OR random* or controlled or clinical or assessment or evaluation or COMPARISON GROUP* OR CONTROL GROUP* OR INTERVENTION* OR EXPERIMENT*) and (ti contains Income distribution or Wealth distribution or Earned income tax credit or Progressive income tax or Social security or Welfare benefits or Income support or Supplementary benefits or Social welfare or Income redistribution or payment* or cash or money or monetary or monies or charit* or demogrant or temporary assistance for needy families or tanf or (tax* w/4 credit*) or Financial Support or Public Assistance or negative tax*)

Appendix 8. SIGLE search strategy

SIGLE searched via SilverPlatter 1980 to June 2006

#7 #6 not #3
#6 (child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby* or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person* or young people or school age* or preschool
age*) and (comparison group* or control group* or prospective stud* or
follow up stud* or evaluative stud* or evaluation stud* or comparison
stud* or comparative stud* or comparitive stud* or random allocation
or trial or intervention stud* or intervention design or
experiment*)
#5 child* or pediatric* or paediatric* or perinat* or neonat* or
newborn* or infan* or baby* or babies or toddler* or boy* or girl* or
kid* or juvenile* or teen* or minor* or pubesecen* or adolescenc* or
youth or young person* or young people or school age* or preschool
age*
#4 comparison group* or control group* or prospective stud* or follow
up stud* or evaluative stud* or evaluation stud* or comparison stud*
or comparative stud* or comparitive stud* or random allocation or
trial or intervention stud* or intervention design or
experiment*
#3 #2 not #1
#2 animal*
#1 animal* and human*

Appendix 9. PsycINFO search strategy

PsycINFO searched via OVID 1806 to June 2006

1 child.mp.
2 exp PEDIATRICS/
3 pediatric$.mp.
4 paediatric$.mp.
5 or/1-4
6 perinat$.mp.
7 neonat$.mp.
8 newborn$.mp.
9 infan$.mp.
10 bab$.mp.
11 toddler$.mp.
12 boy$.mp.
13 girl$.mp.
14 kid$1.mp.
15 school-age$.mp.
16 school age$.mp.
17 juvenile$.mp.
18 (under-age$ or under age$).mp.
19 teen$.mp.
20 minor$.mp.
21 pubescen$.mp.
22 adolescen$.mp.
23 youth$.mp.
24 young person$.mp.
25 young people.mp.
26 or/6-25
27 infan$.jw.
28 child$.jw.
29 pediatric$.jw.
30 paediatric$.jw.
31 adolescen$.jw.
32 or/27-31
33 32 or 26 or 7
34 exp INCOME LEVEL/ or exp "INCOME (ECONOMIC)"/ or exp LOWER
INCOME LEVEL/
35 exp "Welfare Services (Government)"/
36 exp Social Security/
37 income$.tw.
38 financ$.tw.
39 payment$.tw.
40 social security.tw.
41 (cash or economic or money or monetary or monies charit$ or
demogrant or temporary assistance for needy families or welfare or
fiscal or budget or (tax$ adj4 credit$)).tw.
42 (negative$ adj3 tax).mp. [mp=title, abstract, subject headings,
table of contents, key concepts]
43 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42
44 randomi$.tw.
45 singl$.tw.

46 doubl$.tw.
47 trebl$.tw.
48 tripl$.tw.
49 blind$.tw.
50 mask$.tw.
51 (or/45-48) adj3 (or/49-50)
52 clin$.tw.
53 trial$.tw.
54 (clin$ adj3 trial$).tw.
55 placebo$.tw.
56 exp PLACEBO/
57 crossover.tw.
58 exp Treatment Effectiveness Evaluation/
59 exp Mental Health Program Evaluation/
60 random$.tw.
61 assign$.tw.
62 allocate$.tw.
63 (random$ adj3 (assign$ or allocate$)).tw.
64 63 or 59 or 58 or 57 or 56 or 55 or 54 or 51 or 44
65 33 and 43 and 64

WHAT'S NEW

Last assessed as up-to-date: 3 January 2007.

Date	Event	Description
11 July 2012	Amended	Hyperlinks to additional tables added

HISTORY

Protocol first published: Issue 1, 2007

Review first published: Issue 2, 2008

Date	Event	Description
22 April 2008	Amended	Minor error in 'Results' corrected.
22 April 2008	Amended	Converted to new review format.
19 February 2008	New citation required and conclusions have changed	Substantive amendment

CONTRIBUTIONS OF AUTHORS

PL is coordinator and guarantor for this current review. HR, AS, MP, and PL were responsible for designing the review. PL designed and conducted the searches with support from the TSC of the Cochrane Developmental, Psychosocial and Learning Problems Group. Screening of abstracts was undertaken by PL and KM. Papers were read and extracted by PL, KM, HR and AS. PL was responsible for entering data into RevMan and writing the review with contributions from all authors.

DECLARATIONS OF INTEREST

None known.

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NOTES

This review is co-registered within the Campbell Collaboration.

INDEX TERMS

Medical Subject Headings (MeSH)

*Developed Countries; *Financial Support; Child Development; Child Welfare [*economics]; Educational Status; Poverty [*economics]; Randomized Controlled Trials as Topic

MeSH check words

Child; Humans