Cover sheet

Title

Cognitive-behavioral treatment for antisocial behavior in youth in residential treatment

Reviewers

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Dates

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This protocol is co-registered within the Cochrane Developmental, Psychosocial and Learning Problems Group.

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Contribution of reviewers

Tore Andreassen (TORE) and Bengt-Åke Armelius (BARM) contributed to writing the text of this protocol. The search strategy was developed by Joanne Abbott, TSC of the Cochrane Developmental, Psychosocial and Learning Problems Group, and Anette Fomsgaard (AFOM) of the Nordic Campbell Center. Searches will be run by TORE, Joanne Abbott and AFOM.

Selection of abstracts, review of potential trials, data extraction and data entry will be independently done by TOREand BARM. Analyses will be performed by TOREand BARM. The text of the completed systematic review will be written by TOREand BARM. TINE and TERJ will contribute by given comments on the text of the review and act as mediators if nessaracy
Responsibility for updating the review will be shared between TORE and BARM.

Internal sources of support

None

External sources of support

Nordic Campbell Centre, DENMARK

Text of review

Background

Antisocial behaviour in youth
The term "antisocial behaviour" can be used to mean one of a range of behaviours including violence toward people or animals, destruction of property, deceitfulness, theft and/or serious rule violations. The type of behaviour included in the definition varies across countries, and also the seriousness of the behaviour included in the term (from verbal abuse and graffiti, to serious assaults). Young people's antisocial behaviour has emerged as an important issue of concern to the legal system, to the public, to researchers and to practitioners in many countries, who seek for treatment options to prevent further offending and negative consequences for the youth involved, their families and society at large. Many other terms (used in clinical and also colloquial senses), like 'psychopath', 'offender', 'delinquent' or 'conduct disorder' are often used to describe young persons or their behaviour in these circumstances. This review is will consider only youth involved in serious antisocial behaviour, who have committed at least one crime.

Antisocial behaviour can result in harm to other people or their property. The costs for the youth, the family and society may be large both in terms of physical and emotional harm, but also in terms of money. There has been substantial research on antisocial behaviour in youth in the past twenty years, which has advanced the breadth, depth and specificity of knowledge about antisocial behaviour in youth (Elliot 1998; Loeber 1998; Tolan 1994; Rutter 1998). Serious delinquency is characterized by antisocial attitudes, values, beliefs and cognitive emotional states and personality patterns like weak self control or restlessness and aggression (Cottle 2001; Simourd 1994; Heilbrun 2000; Andrews 1990). It is often preceded by antisocial behaviour in early childhood, and other important correlates are antisocial friends and isolation from non-criminal others, parenting problems in the domains of affection/caring and monitoring/discipline, low levels of achievement in school or at work, little involvement in non-criminal leisure and recreational pursuits, and substance abuse (Simourd 1994; Henggeler 1996; Andrews 1998) All of these characteristics may also be used to predict antisocial behaviour in the future.

In any birth cohort, the incidence and prevalence of serious antisocial behaviour reaches a peak during adolescence (Lipsey 1998). A very large percentage of adolescents participate in antisocial behaviour of some sort which is usually not considered to be a serious crime. However, only 5-10% of all who show antisocial behaviour in youth continue with serious antisocial behaviour in adulthood (Moffitt 1993; Patterson 1993). In fact, only about 5% of all children exhibit an early, persistent and extreme pattern of antisocial behaviour. However, this small group accounts for 50-60% of all crimes committed by youth (Howell 1995; Tremblay 1999; Stattin 1991; Loeber 1997; Loeber 1998; Loeber 2000) and Moffitt (Moffitt 1993) found that 86% of the children diagnosed as conduct disordered at seven, were still exhibiting these behaviours at 15 years old.

Interventions
Several approaches have been used to tackle the problem of antisocial behaviour, varying from incarceration as punishment, to treatment in correctional settings, residential treatment and a variety of treatments under open care conditions such as multi-systemic therapy (MST) and Functional Family Therapy (FFT). Although home-based treatments like MST (Littell, 2004) and FFT may appear to be more effective than residential treatments (Lipsey 2001) it is sometimes necessary to place the youth in a residential setting, which means some form of institution with restrictions and a high degree of control over behaviour.

Historically, there have been a variety of approaches to treatment of antisocial behaviour in youth, usually with poor outcomes. During the last 20 years, reviews, including meta-analytic reviews, suggest that interventions based on cognitive behavioural therapy (CBT) can result in positive outcomes (Garrett 1985; Izzo 1990; Lipsey 1992; Antonowicz 1994; Redondo 1999; Dowden 2000; Lipsey 2001). These reviews have been undertaken in different parts of the world and include studies from many countries. Even if a relatively large part of the included studies were undertaken in the USA or Canada, similar results are found in reviews that study European treatment programmes (Redondo 1999). Cognitive-behavioural approaches fall into the 'skill-based' category, combining the use of techniques from cognitive therapy (based on cognitive theories) and behavioural therapy (derived from learning theory). CBT approaches are based on the premise that cognition is a major determinant of behaviour and mood. Thus, CBT approaches use behavioural (e.g., reinforcement and response cost) and cognitive techniques (such as challenging negative automatic thoughts) to identify and correct problematic thinking patterns that are associated with dysfunctional behaviour. Usually, several different techniques, such as social skills training, moral reasoning, aggression management, etc., are combined to form a comprehensive treatment program, addressing several of the factors that contribute to antisocial behaviour. Prototypical examples of comprehensive CBT programs for offenders include Aggression Replacement Training (Goldstein 1987), Reasoning and Rehabilitation Program (Ross 1985), and Moral Reconation Therapy (Little 1988). These structured programs include training manuals for stepwise development of social skills and moral thinking that will help the person to function pro-socially.

There is some evidence to suggest that, in order to be maximally effective, programs, including CBT programs need to include a focus on the known predictors of antisocial behaviour, sometimes called criminogenic needs (Andrews 1990; Dowden 2000; Cameron 2004). Such criminogenic needs, especially criminological thinking and

antisocial attitudes and values, exist in the youth, but also in his social context (Henggeler 1989; Mulvay 1993; Tolan 1994). Maintenance and generalisation of changes is a problem for residential treatments, because it is difficult to include peers, family and school. For cognitive behavioural therapy it is important to include within the treatment the opportunity to rehearse new behaviours, including cognitive behaviours, in those environments where they occur i.e. within society. For this reason, there has been uncertainty whether any sustainable treatment effects can be delivered in a context in which i) the person has been placed against his or her will and ii) where there are very limited contacts with his usual environment, which is important for maintenance and generalisation of any changes obtained within the institution.

The need for a systematic review

To date, meta-analytic reviews suggest that CBT is the treatment method of choice for antisocial youth but they draw heavily on studies conducted in a mixture of open and secure, or residential, settings (Lipsey 1992, Lipsey 1998, Lipsey 1999; Izzo 1990; Andrews 1990; Dowden 1999; Dowden 2000), and include a mixture of adolescent and adult offenders, with different degrees of problem behaviour (Redondo 1999; Dowden 2000; Lipsey 2001). Some of the meta-analyses have used broad definitions of CBT (Wilson 2000), which include traditional behaviour therapy methods (e.g. token economy, contingency contracting, etc.) while others have adopted a relatively narrow definition that requires that the intervention focuses primarily on cognitive change (Lipsey 2001). The research evidence for the effectiveness of CBT in residential settings for youth remains undetermined.

Of the few reviews that focus solely on residential or institutional treatment (Garrett 1985; Redondo 1997; Redondo 1999), only one (Garrett 1985) was restricted to youth. This review included studies up to 1983 and did not have a specific focus on CBT. The review by Lipsey 2001 is the only study with a specific focus on CBT, but this review included both juvenile and adult offenders in both institutional and non-institutional settings. The review was restricted to studies with experimental or strong quasi-experimental designs and only 14 primary studies that met the eligibility criteria were located. The most promising results were found for juvenile offenders in demonstration programs set up by researchers and applied to offenders on probation or parole i.e. not incarcerated. No research studies of mainstream programs using CBT with juvenile offenders that met the methodological standards of the review were found.

Since the evidence seems to point to less favourable results for antisocial youth who are treated in institutions than in open care (Lipsey 1992; Izzo 1990; Andrews 1990), it is likely that open care will be preferred whenever possible, and that differences in results may be due to selection effects rather than effects of the type of care. However, as residential treatment is common, and is often chosen or mandated, it is important to explore the effects of CBT interventions within such settings, which will often cater to the most severe cases under the most severe conditions.

Objectives

The objective of this review is to determine the effectiveness of CBT in residential settings for reducing criminal or offending behaviour in young people. A secondary

objective is to determine if a focus on criminogenic needs within CBT programs is associated with better outcomes than those without such a focus.

Criteria for considering studies for this review

Types of studies

Both randomised controlled trials (RCTs) and quasi-randomised studies (with alternate allocation of participants to at least two different conditions) will be included. Only studies with parallel cohort designs will be included. Comparison groups may be either a non-CBT treatment or a standard treatment condition.

Types of participants

Youth aged 12-20 years who have been placed in a residential setting to receive treatment because of antisocial behaviour, whether legally adjudicated or not, will be included. Participants with co-morbid conditions, such as learning disability, will be included. If the study includes groups of youth with different problems, it will be included if results for those with antisocial behaviour are reported separately.

Types of interventions

CBT, whether in the form of a comprehensive programme or an isolated intervention, provided in a residential setting will be included. Studies with behavioural interventions without a cognitive component will be excluded as well as studies with a cognitive component but no behavioural component.

Residential settings include out-of-home group settings with more than two staff members. This excludes foster homes and specialised foster homes (Treatment Foster Care) (Fisher 2000) as well as family-like interventions with several youth but only two adults, such as Teaching Family Homes (Wolf 1995). Residential settings will include both secure and open settings. The term "secure" means, for this review, environments or institutions characterized by physical restraint measures such as locked doors, walls, bars, fences, etc. Prison and prison-like placements will be included.

Acceptable comparisons will be interventions in residential settings that do not satisfy the criteria for CBT interventions as described above.

Types of outcome measures

Primary outcome measures are expressions of criminal behaviour:

- Official records obtained from the police or juvenile justice records that involve any kind of court or police response;
- Other official records that report offences which, because of age, have not resulted in responses from juvenile justice.
- Self reports on criminal behaviour from the offender after leaving the program.

- Any new official serious registered offence that causes a new intake to a residential facility.

Secondary outcome measures are other behavioural outcomes:

· Outcomes based on standardized tests and inventories related to variables such as self-control, locus of control, psychological adjustment, self-esteem, school attendance, cognitive and social skills, relations to pro-social friends, etc.

Outcomes reported in studies are based on observation periods that vary in length, but investigators should provide outcome data in fixed interval periods (e.g. one year after random assignment might be 2001-2002 for one case and 2003-2004 for another case). The goal of treatment is not limited to changes in behaviour while the youth are in a residential setting, but lasting changes in "normal settings", after discharge from residential settings. The review will exclude studies that only report outcome measures while the youth is in a residential setting. Analyses will be made for different follow-up periods depending on available data.

Search strategy for identification of studies

In order to identify studies that meet the inclusion criteria searches of electronic databases will be run, authors working in this area will be contacted, and references in reviews and meta-analyses will be examined. Both published and unpublished work will be eligible for the review. No language restrictions will be applied.

The following databases will be searched:

- Cochrane Controlled Trial Register (CENTRAL)
- Medline
- Campbell Collaborations Social, Psychological, Educational & Criminological Register (C2-SPECTR)
- Psychological Abstracts
- Sociological Abstracts
- Criminal Justice Abstracts
- Criminal Justice Periodical Index
- National Criminal Justice Reference Service (NCJRS)
- Child Abuse and Neglect Abstracts (National Child Abuse and Neglect or NCCAN Clearinghouse)
- Legal Resource Index
- Dissertation Abstracts
- PsycINFO
- ERIC Social Sciences Citation Index
- ·Bibliography of Nordic Criminology
- SIGLE (System for Information on Grey Literature in Europe)

The following subject headings and text words will be used. The terms will be modified where necessary to meet the requirements of the individual databases.

Adolescent OR
(young person or young people).tw. OR
(youth$ or juvenile$ or adolescen$ or teenage$).tw

AND
Juvenile Delinquency/ OR
Exp Offending/offending behaviour/ OR
exp Crime/ OR
exp Violence/ OR
(offender$ or delinquen$ or trouble$ or violen$ or crime or criminal$ or aggress$).tw. OR
Conduct Disorder/ OR
(antisocial adj3 behavio#r$).tw. OR
(behavio#r adj3 disorder$).tw. OR
(conduct adj3 disorder$).tw.

AND
Cognitive Therapy/ OR
cognitive.tw. OR
CBT.tw. OR
social skill$ train$.tw. OR
aggression replacement train$.tw. OR
moral reason$.tw. OR
moral reconation therap$.tw. OR
MRT.tw. OR
moral discussion group$.tw. OR
MDG.tw. OR
equip.tw.

AND
institution$.tw. OR
residential.tw. OR
children'homes/secure units/local authority secure units/secure training centres/ OR
Prisons/ OR
(prison or prisons).tw. OR
(correction$ adj3 program$).tw. OR
(correction$ adj3 facilit$).tw. OR
out of home treatment$.tw. OR
rehabilitat$.tw. OR
group treatment$.tw. OR
incarcerate$

Trials filters will not be used, because it will limit the searches in the listed social and welfare databases. Approaches to experts in the field will be made to identify unpublished or ongoing studies.

Methods of the review

Selection of studies
Selection of primary studies will be based on the inclusion criteria described above. Complete copies of all titles and abstracts will be examined by two reviewers (TA, BA). Any title considered eligible by at least one of the reviewers (TA, BA) will be imported into RevMan and copies obtained. The retrieved full text will then be independently read by two reviewers (TA, BA) and if two reviewers disagree about eligibility a third reviewer will mediate and decision on whether to include or not will be taken together.

Quality assessment of included studies
Two reviewers (TA and BA) will independently assign each included study to quality categories described below. Uncertainty or disagreement will be solved by discussion with a third reviewer. If further information is needed, the authors of the study will be contacted for clarification.

Prevention of selection and allocation bias
MET = Resulting sequences are unpredictable (explicitly stated use of either computer-generated random numbers) or use of less unpredictable methods of randomization like table of random numbers, drawing lots or envelopes, coin tossing, shuffling cards, or throwing dice).
UNCLEAR = statement that the study was randomised but no description of the generation of the allocation sequence or statement(s) indicating that random allocation was used in some but not all cases.
NOT MET = No attempt to prevent selection bias or clearly non-randomised allocation sequence.

Concealment of allocation sequence
MET = Neither participants nor investigators can foresee assignment (e.g. central randomisation performed at a site remote from trial location; or use of sequentially numbered, sealed, opaque envelopes).
UNCLEAR = statement that the study was randomised but not describing the concealment of allocation.
NOT MET = No attempt to conceal allocation sequence.

Prevention of performance bias
MET = Interventions other than CBT avoided, controlled or used similarly across comparison groups.
UNCLEAR = Use of interventions other than CBT not reported and cannot be verified by contacting the investigators.
NOT MET = Dissimilar use of interventions other than CBT across comparison groups, i.e. differences in the care provided to the participants in the comparison groups other than the intervention under investigation.

Prevention of detection bias
MET = Assessor unaware of the assigned treatment when collecting outcome measures
UNCLEAR = "Blinding" of assessor not reported and cannot be verified by contacting investigators.
NOT MET = Assessor aware of the assigned treatment when collecting outcome measures.

Prevention of attrition bias
MET = Losses to follow up less than 20% and relatively equally distributed between comparison groups (e.g. 18% and 20%).
UNCLEAR = Losses to follow up not reported.
NOT MET = Losses to follow up 20% or greater, or not equally distributed between comparison groups (e.g. 18% and 24%).

Intention-to-treat
MET = Intention to treat analysis performed or possible with data provided.
UNCLEAR = Intention to treat not reported, and cannot be verified by contacting the investigators.
NOT MET = Intention to treat analyses not done and not possible for reviewers to calculate independently.
An overall assessment of internal validity is based on a summary of these seven methodological criteria.

Details of each included study will be coded into a database in Access or Filemaker Pro. Two reviewers (TORE and BARM) will perform the coding independently of each other.

Data management
Data extraction. Data will be independently extracted by two of the authors (TA and BA). Any disagreement will be resolved by discussion where possible, and when not possible, a third author will adjudicate. All decisions will be documented and where necessary, the authors of studies will be contacted to assist in resolving problems or disputes.

Data synthesis
a) Incomplete data. Missing data and dropouts will be assessed for each included study and the review will report the number of participants who are included in the final analysis as a portion of all participants in each study. If possible, intention to treat analyses will be performed. The possible influence of missing data on the results will be discussed.

b) Binary data
For binary outcomes, for example, 'offence' or 'no offence', a standard estimation of the Odds Ratio with the 95% confidence interval will be calculated. Risks, risk ratios and NNT will also be calculated. All analyses will be explained, since many social workers are unfamiliar with the various ways of computing binary outcome results.

c) Continuous data
Continuous data will be analysed if (i) means and standard deviations are available. Continuous outcome measures will be analyzed as weighted mean differences. Continuous variables that are measured on different scales in different studies will be analysed as standardized mean differences. Confidence intervals (95%) will be reported. Results will be reported at yearly follow-up intervals

d) Missing data
In the first instance, the primary author of each study will be contacted to supply any unreported data from included studies (e.g. group means and standard deviations

(SDs), details of dropouts, details of interventions received by the control group). If the missing data concerning attrition are not obtainable, the analyses and review will report the number of participants completing the trial.

Meta-analysis
Data will be analysed using both fixed effect and random effects models, although we expect a random effects model to be more appropriate due to expected heterogeneity across studies.

Heterogeneity and sensitivity analysis
The consistency of results will be assessed using the I^2 statistic (Higgins 2002*)* in Review Manager 4.2. If there is a substantial heterogeneity (which we will define as (a) a statistically significant homogeneity test coupled with (b) an I^2 value of 25% or greater among primary outcome studies) the following factors will be considered as possible explanations: design quality, publication bias, voluntary or mandatory participation, intensity or length/period of the intervention, and differences in participant characteristics such as multiple problems/disorders. If there are many primary studies we will subgroup them according to these variables, and perform a moderator analysis (meta-analysis analogue toANOVA, or meta-regression) in order to identify whether these possible sources of heterogeneity appear to be important. If the primary studies are judged to be substantially heterogeneous even within these subgroupings, only a descriptive analysis will be performed, particularly if there is variation in direction of effect.

Sub-group analyses
Subgroup analyses will be made for interventions with criminogenic focus vs. other foci, for boys vs. girls and for older vs younger adolescents, and for offending history (eg previously -incarcerated vs. first time offenders).

Sensitivity analyses
Primary analyses will be based on available data from all included studies relevant to the comparison and outcome of interest. In order to assess the robustness of conclusions to quality of data and approaches to analysis, sensitivity analyses will be performed. These will include:
a) Study design. RCTs and quasi-randomised RCTs will be analyzed separately but the impact of the study design on the overall results will also be assessed.
b) Intention to treat. For dichotomous outcomes, such as 'offended' or 'not offended', the authors will assume that those who were lost to follow up (i) had proportionately the same outcomes as those who completed in the control group (ii) experienced the successful outcome (iii) all experienced the unsuccessful outcome.
c) Differential drop-out. Studies with severe imbalance in terms of numbers of attrition will be excluded from the analysis to assess their influence on the overall result.

Assessment of bias
Funnel plots will be drawn to investigate any relationships between effect size and study precision in terms of sample size. Such a relationship could be due to publication or related biases or due to systematic differences between small and large studies. If a relationship is identified, clinical diversity of the studies will be further examined as a possible explanation (Egger 1997).

Time Frame
It is anticipated that the review will be completed within one year of the publication of this protocol.

Plans for updating the review
Following the publication of the initial review, we plan to update the review at two-year intervals.

Potential conflict of interest

Tore Andreassen is involved in design and implementation of a residential treatment model based on a non-systematic review of the research. This model includes risk assessment and focus on criminogenic needs.

Other references

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Notes

Unpublished CRG notes

Exported from Review Manager 4.3 Beta
Exported from Review Manager 4.2.6

Published notes

This review is co-registered within the Cochrane Collaboration.

Amended sections

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