Cochrane Library

Cochrane Database of Systematic Reviews

Interventions for learning disabled sex offenders (Review)

Ashman LLM, Duggan L

Ashman LLM, Duggan L.
Interventions for learning disabled sex offenders.
Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD003682.
DOI: 10.1002/14651858.CD003682.pub2.

www.cochranelibrary.com

WILEY

TABLE OF CONTENTS

[Intervention Review]

Interventions for learning disabled sex offenders

Lorraine LM Ashman[1], Lorna Duggan[2]

[1]Learning Disability Psychiatry, Northamptonshire Healthcare NHS Trust, Kettering, UK. [2]Care Principles Ltd, Newmarket, UK

Contact address: Lorraine LM Ashman, Learning Disability Psychiatry, Northamptonshire Healthcare NHS Trust, Barton Hall, Barton Road, Kettering, Northants, NN15 6SG, UK. Lorraine.ashman@nht.northants.nhs.uk, vivienneallport@nht.northants.nhs.uk.

Editorial group: Cochrane Developmental, Psychosocial and Learning Problems Group
Publication status and date: Edited (no change to conclusions), published in Issue 1, 2009.

Citation: Ashman LLM, Duggan L. Interventions for learning disabled sex offenders. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD003682. DOI: 10.1002/14651858.CD003682.pub2.

ABSTRACT

Background

The management of sex offenders is a major public concern. Behavioural and pharmacological interventions have been used for many years and more recently cognitive behavioural based interventions have become popular around the world. Programmes designed for the general population have been modified for those sex offenders with learning disability, to address their cognitive deficits. The efficacy of these modified programmes is unclear.

Objectives

To determine the efficacy of interventions with learning disabled sex offenders.

Search methods

The reviewers searched the Cochrane Library 2006 (Issue 1), MEDLINE (1966 to Sept 2006), Embase (1980 to September 2006), CINAHL (1982 to September 2006), PsycINFO (1872 to September 2006), Biological Abstracts (1980 to September 2006).

Selection criteria

All randomised controlled trials comparing an intervention for learning disabled sex offenders to any other, or no intervention.

Data collection and analysis

Data were independently extracted.

Main results

No randomised controlled trial was identified.

Authors' conclusions

Using the methods described the reviewers found no randomised controlled trial evidence to guide the use of interventions for learning disabled sex offenders. Until the urgent need for randomised controlled trials is met, clinical practice will continue to be guided by either extrapolation of evidence from randomised controlled trials involving sex offenders without learning disability or non-randomised trial evidence of interventions for the learning disabled sex offender.

PLAIN LANGUAGE SUMMARY

Interventions for learning disabled sex offenders

Sex offending is of increasing public concern with calls for longer terms of imprisonment and closer supervision of such offenders in the community. Currently a variety of treatment approaches are used including medication and talking therapies, though little is known about their success rates. The small group of sex offenders with learning disabilities pose a particular challenge as talking therapies need to be modified to account for the offender's limited understanding. We could find no randomised controlled trial evidence to guide us in the treatment of learning disabled sex offenders.

BACKGROUND

For the purpose of this review we use the term 'learning disability' to describe those people with a significant impairment of intelligence and social functioning with onset in the first eighteen years of life. This corresponds to 'mental retardation' as described in the major taxonomies of DSM IV (APA 1994) and ICD 10 (WHO 1992), other terms include 'mental handicap and 'intellectual disabililities'.

Few studies examine the prevalence of sexual offences in learning disabled offenders. In the United Kingdom, (Day 1994) carried out a survey of 47 learning disabled male sex offenders. They had committed a total of 191 sexual offences, 55% were heterosexual offences, 26% were indecent exposure and 12% were homosexual. In addition he reported higher recidivism rates with learning disabled sex offenders. (Hawk 1993) found that the point prevalence rate of sex offence charges were nearly twice as high amongst learning disabled defendants than amongst defendants without a learning disabilty. Cooper argued that people with learning disability were over-represented amongst sexual offenders. He stated that the prevalence of learning disability (including borderline intellectual functioning) in the general population is 9% whereas but that individuals with a learning disability commit 10 to 15% of all sex offences (Cooper 1995).

Further, much of this research on prevalence has relied on data from prison populations. These figures do not take into account individuals diverted from the criminal justice system such as those admitted to hospital with charges not pursued, those found unfit to plead and those whose offending behaviour is never reported to the police. Lyall, Holland and Collins (Lyall 1995) investigated the attitudes of staff and the policies of the services to offending behaviour by learning disabled adults in a community setting. They found that tolerance levels towards offending behaviour were extremely high and that theft and criminal damage were hardly ever reported. Staff in only three of the thirty establishments visited stated a sexual assault or indecent exposure would always be reported if it was to occur. Therefore, it is likely that the point prevalence of sex offences in the learning disabled population is higher than that reported in the literature.

The learning-disabled sex offender is more likely to commit offences against both males and females and is less likely to know their victim than non-learning disabled offenders (Murrey 1992). Sexual naivety, a lack of relationship skills and poor impulse control are prominent features in learning disabled sex offenders (Sellings 1939, Gebhard 1965).

The management of sex offenders has been the subject of much public debate in the Western world with recent examples in Belgium (Guardian 2000b), Megan's Law in the United States of America (New Jersey 1994) and tabloid headlines in the United Kingdom (News of the World, Guardian 2000a). An evidence base for the efficacy of sex offender treatment programmes is beginning to emerge (McKenzie 1999, White 2001). Often these programmes specifically exclude those of below average intelligence.

Interventions can be classified as follows:

1. Pharmacological
These treatments include antilibidinals (cyproterone acetate in the United Kingdom and medroxyprogesterone acetate in the United States), antipsychotic mediction (such as benperidol) and more recently introduced Selective Serotonin Reuptake Inhibitors (SSRIs). They are used to reduce sexual drive.

2. Psychological
Behavioural interventions are based on the modification of frequency, intensity and salience of deviant behaviours using a variety of methods including counter-conditioning and overcorrection to modify deviant sexual behaviours or preferences.

Cognitive behavioural therapy (CBT) aims to teach sex offenders ways of controlling their inappropriate sexual behaviour by systematically identifying and challenging key distorted and permissive thinking patterns known to support sexually aggressive behaviour for example minimisation, justification and normalisation

Psychological treatment programmes of non-learning disabled sex offenders are usually cognitive behaviour therapies employing cognitive restructuring techniques to challenge the distorted cognitions the offender may have about their behaviour (Bremble 1999). Pharmacological and behavioural interventions are most often used with the learning disabled population.

Cognitive behavioural treatment of learning disabled sex offenders is a recent development and is not widely available or standardised. Individuals with a learning disability are likely to have limited reasoning and poor adaptive and verbal skills. They may also have poor concentration skills and low levels of understanding of abstract concepts and inappropriate behaviours (Allam 1997). Most cognitive behavioural treatment programmes have to be modified to compensate for these deficiencies. This includes a breaking down of tasks, more regular repetition of key points, less use of metaphor and greater involvement of key staff in the development of relapse prevention strategies.

Little is known about the effectiveness of these interventions with learning disabled sex offenders. This review examines whether interventions with learning disabled sex offenders reduces the likelihood of future offending.

OBJECTIVES

To evaluate the effectiveness of pharmacological (including antilibidinal and psychotropic preparations) and psychological treatments in reducing the target sexual acts, urges and thoughts of learning disabled sex offenders.

METHODS

Criteria for considering studies for this review

Types of studies

Relevant randomised controlled trials.

Types of participants

Males or females with learning disability (defined as IQ <70) and borderline learning disability, (defined as IQ between 71 and 80), either convicted of a sexual offence or with sexually offensive behaviour. Aged 18 years and older and treated within the community, hospital or prison.

Types of interventions

Cognitive behavioural therapy - in this context we shall define it as an approach, either group or individual, that focuses on teaching skills for the offender to control their sexual behaviours.
Behaviour therapy - in this context means modifying deviant sexual behaviour by behavioural means (and hence sexual offending) such as covert counter-conditioning.
Pharmacological treatment - these reflect the theory that sex offending is result of hormonal drives and thus can be managed by reducing testosterone levels with antilibidinals. Whereas the rationale of using SSRIs is that the behaviour has a compulsive quality. One of the adverse effects of antipsychotic medication is a reduction in libido and for this reason they are prescribed to reduce sexual interest.

All interventions were compared to placebo or 'standard care'.

Types of outcome measures

The primary outcome measures were:
a. recidivism
b. people lost to follow up.
c. psychometric scores (that measures deviant arousal and pro-offending cognitions)
Other outcomes examined were:
a. death (suicide, all causes);
b. other non-sexual offence;
c. adverse effects;
d. level of security of placement

It was hoped to present outcomes in the short-term (< 1 year), medium term (1-10 years) and long term (> 10 years)

Many rating scales are available to measure outcomes in mental health and criminological trials. These scales vary in quality and many are poorly validated. It is generally accepted that measuring instruments should have the properties of reliability (the extent to which a test effectively measures anything at all) and validity (the extent to which a test measures that which it is supposed to measure). Before publication of an instrument, most scientific journals insist that both reliability and validity be demonstrated to the satisfaction of referees. As a minimum standard, data were excluded from unpublished rating scales. In addition, the rating scale should be either: (i) a self report; or (ii) completed by an independent rater or relative. More stringent standards for instruments may be set in future editions of this review.

Search methods for identification of studies

1 Electronic searches
2 Searching references from relevant articles.
3 Contact with pharmaceutical companies marketing antilibidinal medication in the United Kingdom (Schering and Pharmacia).
4 Contact with authors of relevant studies.

1. Electronic searches
The following databases were searched:

Cochrane Library (CENTRAL) 2006 (Issue 3)
MEDLINE searched 1966 to September 2006
PsycINFO searched 1887 to September 2006
CINAHL searched 1982 to September 2006
EMBASE searched 1980 to September 2006
Biological Abstracts searched 1980 to September 2006

The strategy below was used to search MEDLINE:

Database: Medline 1966 to September 2006 (searched via OVID)
Search Strategy:
---

1 exp Sex Offenses/
2 exp Paraphilias/
3 paraphilia$.tw.
4 incest$.tw.
5 exhibitionism$.tw.
6 fetish$.tw.
7 masochis$.tw.
8 (pedophil$ or paedophil$).tw.
9 sadis$.tw.
10 voyeur$.tw.
11 pederast$.tw.
12 bondag$.tw.
13 frotteur$.tw.
14 necrophil$.tw.
15 (sex$ adj2 (offence$ or offense$ or offend$)).tw.
16 (sex$ adj2 (deviant$ or deviat$)).tw.
17 (sex$ adj2 delinquen$).tw.
18 (sex$ adj2 assault$).tw.
19 (sex adj2 crime$).tw.
20 (sex$ adj2 (abus$ or perver$ or inappropriate$)).tw.
21 (child adj2 molest$).tw.
22 masturbat$.tw.
23 Child Abuse, Sexual/
24 or/1-23
25 Learning Disorders/
26 exp Mental Retardation/
27 Developmental Disabilities/
28 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).mp. [mp=title, original title, abstract, name of substance word, subject heading word]
29 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).tw.
30 oligophreni$.tw.
31 subnormal$.tw.
32 ((fragile or down$) adj2 syndrome).tw.
33 phenyketonuri$.tw.
34 or/25-33
35 24 and 34

A highly sensitive search strategy devised for identifying reports of randomized controlled trials in MEDLINE was also used (Dickersin 1994; Robinson 2002).

This strategy was modified where necessary for the other databases that were searched . Please see Table 1, Table 2, Table 3, Table 4 and Table 5 for the other search strategies.

Other databases
In addition, database compiled by Adams and Cure (Adams 2000) and C2-SPECTR were searched using the following terms:
((mental* or learning or developmental or cognitiv*) near2 (handi* or disab* or difficult* or disorder* or impair*)) and (sex*)
Two American databases (the National Clearinghouse on Child Abuse and Neglect Information and the National Criminal Justice Reference Service were searched online using the term 'mental retardation'.

2. Reference lists
All references of articles selected were searched for further relevant trials.

3. Authors of studies
The reviewers would have contacted authors of studies when necessary to clarify data, and request information on possible additional studies.

4. Pharmaceutical companies
The reviewers contacted Schering HC and Pharmacia Ltd, the pharmaceutical companies that market cyproterone acetate and medroxyprogesterone respectively, in the United Kingdom, to request unpublished data and unpublished trials.

Data collection and analysis

No studies currently meet inclusion criteria for this review. Methods below describe plans described in the protocol, which will be implemented should relevant studies be identified in future updates.

1. Selection of studies
Two reviewers (LD, LA) independently inspected all reports of identified studies. It was usually possible to resolve any disagreement by consensus; however, where doubt remained the full article was acquired. The reviewers independently decided whether these met the review criteria. No blinding to the names of authors, institutions and journal of publication took place.

2. Assessment of methodological quality
Reviewers (LD, LA) planned to allocate trials to three quality categories, A - adequate concealment, B - concealment unclear and C -inadequate concealment, as described in the Cochrane Collaboration Handbook (Higgins 2005). A decision was taken at the protocol stage to include only trials in category A and B.

3. Addressing publication bias
Data from all selected trials would have been entered into a funnel graph (trial effect against trial size) in an attempt to investigate the likelihood of overt publication bias (Egger 1997).

4. Data extraction
We intended to independently extract data and resolve any disagreement by discussion. If this was not possible, we would have sought further information from trial authors.

5. Data synthesis
It was decided that if, for a given outcome, more than 50% of the total numbers randomised were not accounted for, results should not be presented, as such data are impossible to interpret with authority. If however, more than 50% of those in one arm of a study are lost, but the total loss is less than 50%, data will be presented, marked with an asterisk '*' to indicate the result may be prone to bias.

5.1 Intention to treat analysis
The reviewers intended to analyse data on an intention-to-treat basis where possible and assumed that those who had not been accounted for had the less positive outcome. We planned to test this assumption with a sensitivity analysis. For continuous data it is impossible to manage the data in this way therefore 'completer' data would be presented as binary data - where possible, the reviewers would convert continuous scores to dichotomous data.

5.2 Binary data
In this edition of the review we did not identify any useable data. If, however, data are identified in the future we will analyse binary data where appropriate by calculating the relative risk (RR) statistic with a 95% confidence interval (CI) and use a random effects model. In addition, as a measure of efficiency, we would estimate the number needed to treat (NNT) or the number needed to harm (NNH) from the pooled totals.

5.3 Continuous data
Continuous data may be presented from different scales, rating the same outcome. In this event, the reviewers would have presented all data without summation and inspected the general direction of effect.

Data on continuous outcomes are frequently skewed, the mean not being the centre of the distribution. The statistics for meta-analysis are thought to be able to cope with some skew, but were not formulated for non-parametric data. To avoid this potential pitfall, the following standards would have been applied to all data before inclusion: (i) standard deviations and means were reported or obtained from authors; and (ii) for data with finite limits, such as endpoint scale data, the standard deviation (SD), when multiplied by two, was less than the mean. Otherwise the mean is unlikely to be an appropriate measure of the centre of the distribution (Altman 1996). The reviewers would have reported data that did not meet the first or second standard in the 'Other data' tables.

For change data (endpoint minus baseline), the situation is even more problematic. In the absence of individual patient data it is impossible to know if data are skewed, though likely. After consulting the ALLSTAT electronic statistics mailing list, the reviewers would have presented change data in MetaView in order to summarise available information. In doing this, it is assumed either that data were not skewed or that the analyses could cope with the unknown degree of skewness. Without individual patient data it is impossible to test this assumption. If both change and endpoint data were available for the same outcome category we would only present endpoint data.

Where possible, reviewers would have entered data in such a way that the area to the left of the line of no effect indicated a favourable outcome for the treatment.

6. Test for heterogeneity
To test differences between results of trials the reviewers would have inspected the graphical display and used Chi-squared tests of heterogeneity (limit value, p>0.1). Consistency of results would have been assessed by examining I^2 (Higgins 2002). I^2 is a quantity describing approximately the proportion of variation in point estimates that is due to heterogeneity of a sample rather than error in sampling of the population. A test of homogeneity would have been used to determine that the heterogeneity is genuine.

RESULTS

Description of studies

Please see 'Included and excluded studies' tables.
Studies were excluded for a variety of reasons. Studies were often not randomised; participants were not diagnosed as having both learning disability and sexually offensive behaviour. Although we identified a single randomised controlled trial that appeared to

meet the inclusion criteria Cooper 1992 when this review was initially developed in 2002, we excluded it on the grounds that there was no control for the one participant with borderline intellectual functioning.

Following searches conducted in 2006, we identified 15 further papers to inspect, all of which were excluded. Eight were added to the list of excluded studies.

Risk of bias in included studies

We could find no randomised controlled trials that fulfilled the inclusion criteria.

Effects of interventions

We could find no randomised controlled trials that fulfilled the inclusion criteria.

DISCUSSION

There is no randomised controlled trial-based evidence for the effectiveness, or ineffectiveness, of any intervention for those sexual offenders with learning disability. In this update we failed to find any RCTs, however, we identified four reviews (Clarke 1989, Courtney 2004, Lambrick 2004, Lindsay 2002) only one of which was systematic (Courtney 2004). It would appear that this area is well-reviewed, however, in spite of reviewers' calls for high quality trials none have been undertaken as yet. Given the importance of the area this is disappointing.

AUTHORS' CONCLUSIONS

Implications for practice

Clinicians

Professionals in both criminal justice and mental health settings are expected (and often mandated) to offer treatments that reduce recidivism in learning disabled sex offenders. At the present time they cannot base their choice of intervention on randomised controlled trial evidence. Until better evidence is forthcoming, clinicians will have to continue to base practice on clinical experience and evidence from the non-learning disabled population. The courts, recipients of care and carers should be informed of the basis on which an intervention is given.

Criminal justice agencies, recipients of care or their carers

Currently criminal justice agencies, recipients of care or their carers should know that the use of these interventions is based on data relating to non-learning disabled population of sex offenders.

Implications for research

The lack of included trials was not felt to be a result of over-strict inclusion criteria but reflected a genuine dearth of useable material. This review has highlighted the lack of randomised controlled trials of interventions for learning disabled sex offenders.

Trials often exclude the learning disabled population. In the one study where a person with borderline intellectual functioning was included it was impossible to tell the outcome for that individual as the results were not analysed with reference to intellectual functioning.

There is an urgent need for randomised controlled trials of efficacy of interventions for learning disabled sex offenders.

REFERENCES

References to studies excluded from this review

Bancroft 1974 *{published data only}*

* Bancroft J, Tennant G, Loucas K, Cass J. The control of deviant sexual behaviour by drugs: 1. Behavioural changes following oestrogens and anti-androgens. *British Journal of Psychiatry* 1974;**125**:310-5.

Barron 2004 *{published data only}*

Barron P, Hassiotis A, Banes J. Offenders with intellectual disability: a prospective comparative study. *Journal of Intellectual Disability Research* 2004;**48(1)**:69-76.

Brown 1996 *{published data only}*

Brown CM, Traverso G, Fedoroff JP. Masturbation prohibition in sex offenders: a crossover study. *Archives of Sexual Behavior* 1996;**25**(4):397-408.

Clarke 1989 *{published data only}*

Clarke DJ. Antilibidinal drugs and mental retardation: a review. *Medicine, Science & the Law* 1989;**29(2)**:136-46.

Cooper 1981 *{published data only}*

Cooper AJ. A placebo-controlled trial of the antiandrogen cyproterone acetate in deviant hypersexuality. *Comprehensive Psychiatry* 1981;**22**(5):458-65.

Cooper 1992 *{published data only}*

Cooper AJ, Sandhu S, Losztyn S, Cernovsky Z. A double-blind placebo controlled trial of medroxyprogesterone acetate and cyproterone acetate with seven pedophiles. *Canadian Journal of Psychiatry* 1992;**37**:687-93.

Cooper 1995 *{published data only}*

Cooper AJ. Review of the role of two antilibidinal drugs in the treatment of sex offenders with mental retardation. *Mental Retardation* 1995;**33**(1):42-8.

Courtney 2004 *{published data only}*

Courtney J, Rose J. The effectiveness of treatment for male sex offenders with learning disabilities: a review of the literature. *Journal of Sexual Aggression* 2004;**10(2)**:215-36.

Lambrick 2004 *{published data only}*

Lambrick F, Glaser W. Sex offenders with an intellectual disability. *Sexual Abuse: Journal of Research & Treatment* 2004;**16(4)**:381-92.

Langevin 1979 *{published data only}*

Langevin R, Paitich D, Hucker S, Newman S, Ramsay G, Pope S, Geller G, Anderson C. The effect of assertiveness training, provera and sex of therapist in the treatment of genital exhibitionism. *Journal of Behavioral Therapy and Experimental Psychiatry* 1979;**10**:275-82.

Lindsay 1998a *{published data only}*

Lindsay WR, Neilson CQ, Morrison F, Smith HW. The treatment of six men with a learning disability convicted of sex offences against children. *British Journal of Clinical Psychology* 1998;**37**:83-98.

Lindsay 1998b *{published data only}*

Lindsay WR, Smith AH. Responses to treatment for sex offenders with intellectual disability: a comparison of men with 1- and 2-year probation sentences. *Journal of Intellectual Disability Research* 1998;**42(5)**:346-53.

Lindsay 2002 *{published data only}*

Lindsay W R. Research and literature on sex offenders with intellectual and developmental disabilities. *Journal of Intellectual Disability Research* 2002;**46 Suppl 1**:74-85.

Marques 1994 *{published data only}*

* Marques J, Nelson C, West MA, Day D. The relationship between treatment goals and recidivism among child molester. *Behavioral Research Therapy* 1994;**32**(5):577-88.

Marques JK. The sex offender treatment and evaluation project: California's new outcome study. *Annals of the New York Academy of Sciences* 1988;**528**:235-43.

Marques JK, Day D, Nelson C, West AM|. Effects of cognitive-behavioral treatment on sex offender recidivism preliminary results of a longitudinal study. *Criminal Justice and Behavior* 1994;**21**(1):28-54.

McConaghy 1988 *{published data only}*

* McConaghy N, Blaszczynski A, Kidson W. Treatment of sex offenders with imaginal desensitization and/or medroxyprogesterone. *Acta Psychiatrica Scandinavica* 1988;**77**:199-206.

Murray 1979 *{published data only}*

Murray MAF, Bancroft JHJ, Anderson DC, Tennent TG, Carr PJ. Endocrine changes in male sexual deviants after treatment with anti-androgens, oestrogens or tranquillizers. *Journal of Endocrinology* 1979;**67**:179-88.

O'Connor 1996 *{published data only}*

O'Connor W. A problem solving intervention for sex offenders with an intellectual disability. *Journal of Intellectual and Developmental Disability* 1996;**21**(3):219-35.

Plaud 2000 *{published data only}*

Plaud JJ, Plaud DM, Kolstoe PD, Orvedal L. Behavioral treatment of sexually offending behavior. *Mental Health Aspects of Developmental Disabilities* 2000;**3**(2):54-61.

Rooth 1974 *{published data only}*

Rooth FG, Marks IM. Persistent exhibitionism: short-term response to aversion, self-regulation, and relaxation treatments. *Archives of Sexual Behavior* 1974;**3**(3):227-48.

Schober 2005 *{published data only}*

Schober JM, Kuhn PJ, Kovacs PG, Earle JH, Byrne PM, Fries RA. Leuprolide acetate suppresses pedophilic urges and arousability. *Archives of Sexual Behavior* 2005;**34(6)**:691-705.

Sherak 2000 *{published data only}*

Sherak DL. Pharmacological treatment of sexually offending behavior in people with mental retardation/developmental disabilities. *Mental Health Aspects of Developmental Disabilities* 2000;**3**(2):62-74.

Sramka 1992 *{published data only}*

Sramka M, Pogady P, Csokova Z, Pogady J. Long-term results in patients with stereotaxic surgery for psychopathologic disorders. *Bratislavske Lekarske Listy* 1992;**93(7)**:364-6.

Tennent 1974 *{published data only}*

Tennent G, Bancroft J, Cass J. The control of deviant sexual behavior by drugs: a double-blind controlled study of benperidol, chlorpromazine, and placebo. *Archives of Sexual Behavior* 1974;**3**(3):261-71.

Thibaut 1996 *{published data only}*

Thibaut F, Cordier B, Kuhn JM. Gonadotrophin hormone releasing hormone agonist in cases of severe paraphilia: a lifetime treatment?. *Psychoneuroendocrinology* 1996;**21**(4):411-9.

Zohar 1994 *{published data only}*

Zohar J, Kaplan Z, Benjamin J. Compulsive exhibitionism successfully treated with fluvoxamine: a controlled case study. *Journal of Clinical Psychiatry* 1994;**55**(3):86-8.

Additional references

Adams 2000

Adams CE, Cure S. Creating and disseminating a clearly classified register of controlled clinical trials relevant to offenders and systematically reviewing aspects of treatment relevant to those with dual diagnosis of serious mental illness and violence. Final report for the NHS National R&D Programme for Forensic Mental Health 2000.

Allam 1997

Allam J, Middleton D, Browne K. Different clients, different needs? Practice issues in community-based treatment for sex offenders. *Criminal Behaviour and Mental Health* 1997;**7**:69-84.

Altman 1996

Altman DG, Bland JM. Detecting skewness from summary information. *BMJ* 1996;**313**:1200.

APA 1994

American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Vol. **4th**, Washington DC: American Psychiatric Association, 1994.

Bremble 1999

Bremble A, Rose J. Psychological intervention for adults with learning disabilities accused of sexual offending. *Clinical Psychology Forum* 1999;**131**:24-30.

Day 1994

Day K. Male mentally handicapped sex offenders. *British Journal of Psychiatry* 1994;**165**:630-9.

Dickersin 1994

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

Egger 1997

Egger M, Davey-Smith G, Schneider M, Minder CSO. Bias in meta-analysis detected by a simple, graphical test. *BMJ* 1997;**13**:629-34.

Gebhard 1965

Gebhard P, Gagnon J, Pomeroy W. Sex Offenders: an analysis of types. London: Heinemann, 1965.

Guardian 2000a

Jeffery S, Vasagar J, Glove J. Paedophile protests. Guardian August 10, 2000.

Guardian 2000b

Allison R. Belgian judge forbids naming campaign. Guardian August 10, 2000.

Hawk 1993

Hawk G, Rosenfeld B, Warren J. Prevalence of sexual offenses among mentally retarded criminal defendants. *Hospital and Community Psychiatry* 1993;**44**(8):784-6.

Higgins 2005

Higgins JPT, Green S. Cochrane Handbook for Systematic Reviews of Interventions 4.2.5 [Updated May 2005] In: The Cochrane Library. Chichester UK: John Wiley and Sons, Ltd., 2005 (Issue 3).

Lyall 1995

Lyall I, Holland A, Collins S. Offending by adults with learning disabilities and the attitudes of staff to offending behaviour: implications for service development. *Journal of Intellectual Disability Research* 1995;**39**(6):501-8.

McKenzie 1999

MacKenzie DL, Hickman LJ. What works in corrections? An examination of the effectiveness of the type of rehabilitation programs offered by Washington State Department of Corrections. http://www.bsos.umd.edu/ccjs/corrections 1999.

Murrey 1992

Murrey G, Briggs D, Davis M. Psychopathic disordered, mentally ill, and mentally handicapped sex offenders: a comparative study. *Medicine Science and the Law* 1992;**32**(4):331-6.

New Jersey 1994

Megan's Law. www.state.nj.us/lps/dcj/megan 1994.

News of the World

Name and Shame. News of the World 23 July 2000.

Robinson 2002

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

Sellings 1939

Sellings L. Types of behaviour manifested by feebleminded sex offenders. Proceedings from the American Action on Mental Deficiency. 1939; Vol. 44:178-86.

White 2001

White P, Bradley C, Ferriter M, Hatzipetrou L. Managements for people with disorders of sexual preference and for convicted sexual offenders. *Cochrane Database of Systematic Reviews* 2001, Issue 4.

WHO 1992

World Health Organisation. International Classification of Disease and related disorders (ICD-10). Geneva: World Health Organisation, 1992.

* Indicates the major publication for the study

CHARACTERISTICS OF STUDIES

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

Study	Reason for exclusion
Bancroft 1974	Allocation: not randomised. Participants: male volunteer inpatients, Broadmoor Hospital (high secure), sex offenders. No evidence of learning disability. Intervention: no treatment, ethinyl oestradiol, cyproterone acetate.
Barron 2004	Allocation: prospective, descriptive study.
Brown 1996	Allocation: random assignment not further described. Participants: 12 outpatient, male, adults convicted of sexual offences against children. No participants had mental retardation. Intervention: voluntary abstinence from masturbation.
Clarke 1989	Allocation: not randomised. a review.
Cooper 1981	Allocation: randomised, not further described. Participants: mix sex offenders and non-offenders with hypersexuality. Outpatients. No evidence that any had learning disability. Intervention: cyproterone acetate, placebo, no treatment, crossover
Cooper 1992	Allocation: quasi-randomised, double-blind, crossover. Participants: 7 male, paedophiles, inpatients in a Canadian provincal psychiatric hospital. One patient described as having a borderline IQ, therefore no control.
Cooper 1995	Allocation: not randomised, a review.
Courtney 2004	Allocation: not randomised, a review.
Lambrick 2004	Allocation:not randomised, a review.
Langevin 1979	Allocation: 3 randomised controlled trials. Participants: convicted male, exhibitionists. No evidence of learning disability. Intervention: provera, sex of therapist, assertion training.
Lindsay 1998a	Allocation: not randomised, 6 case reports. Participants: 6 men with developmental disabilities, convicted of sex offences against children, on probation orders. Intervention: group cognitive behavioural therapy.
Lindsay 1998b	Allocation: case series.
Lindsay 2002	Allocation: not randomised, a review.

Study	Reason for exclusion
Marques 1994	Allocation: randomised controlled trial, not further described. Participants: incarcerated, male, sex offenders in California Department of Corrections. Excluded if a) inmates who offended in concert or only against biological children. Included if IQ greater than 80, within 18-21 months of release, aged 18-60, no more than 2 prior felony convictions, admit commiting the offence, no pending holds or felony warrants, can speak english, no psychotic or organic mental condition, not medically debilitated and not presented severe management problems in prison. Intervention: relapse prevention in group therapy.
McConaghy 1988	Allocation: randomised, no further details. Participants: adult, males with anomalous sexual urges and behaviours (DSM-III), 1- paraphillia (n=22), 2 paraphillias (n=8). 2 'sub-normal intelligence'. Mean age 30 years, range 16-50 years. 19 had received convictions. Intervention: medroxyprogesterone, imaginal desensitization or a combination of both. Treatment failures were offered the alternative single treatment and those who did not respond initially to dual treatment were offered aversive therapy. No standard care or placebo offered.
Murray 1979	Allocation: not randomised. Participants: male volunteer inpatients, Broadmoor Hospital (high secure), sex offenders. No evidence of learning disability. Intervention: no treatment, ethinyl oestradiol, cyproterone acetate, benperidol, chlorpromazine and placebo.
O'Connor 1996	Allocation: not randomised, case series. Participants: 13 males, mean age 28, range 17-43 years. Mild learning disability. Charged with sexual offences. Intervention: problem-solving.
Plaud 2000	Allocation: not randomised, a review.
Rooth 1974	Allocation: randomised, latin-square design. Participants: exhibitionists, outpatients and prisoners. Normal intelligence. Intervention: aversion therapy, self-regulation and relaxation.
Schober 2005	Allocation: not randomised. Participants: excluded people with learning disability.
Sherak 2000	Allocation: not randomised, a review.
Sramka 1992	Allocation: case series. Participants: those with learning disability were not sex offenders.
Tennent 1974	Allocation: not randomised. Participants: male volunteer inpatients, Broadmoor Hospital (high secure), sex offenders. No evidence of learning disability. Intervention: no treatment, benperidol, chlorpromazine, placebo.
Thibaut 1996	Allocation: 6 case reports of paraphilias treated with gonadotrophin hormone releasing hormone agonist. Participants: 3 participants had mental retardation.
Zohar 1994	Allocation: case report. Participant: male of normal intelligence who masturbated in public infront of women in public. Intervention: fluvoxamine, desimpramine and placebo in partial single-blind conditions.

ADDITIONAL TABLES

Table 1. Cochrane Library 2006 (Issue 1)

Cochrane Library
#1 MeSH descriptor SEX OFFENSES explode tree 1
#2 (sex* in All Text near/6 offence* in All Text)
#3 (sex* in All Text near/6 offense* in All Text)
#4 paraphilia* in All Text
#5 (sex* in All Text near/6 crime* in All Text)
#6 incest* in All Text
#7 (sex* in All Text near/6 offend* in All Text)
#8 (sex* in All Text near/6 assault* in All Text)
#9 (sex* in All Text near/6 delinquen* in All Text)
#10(sex* in All Text near/6 deviant* in All Text)
#11 (sex* in All Text near/6 deviat* in All Text)
#12 exhibitionism in All Text
#13 fetish* in All Text
#14 masochis* in All Text
#15 pedophili* in All Text
#16 paedophili* in All Text
#17 sadis* in All Text
#18 (sex* in All Text near/6 perver* in All Text)
#19 (public in All Text near/6 masturbat* in All Text)
#20 voyeur* in All Text
#21 (child* in All Text near/6 molest* in All Text)
#22 (sex* in All Text near/6 abuse* in All Text)
#23 pederast* in All Text
#24 bondag* in All Text
#25 frotteur* in All Text
#26 necrophil* in All Text
#27 (inappropriate in All Text near/6 sex* in All Text)
#28 (((((((#1 or #2) or #3) or #4) or #5) or #6) or #7) or #8) or #9)
#29 ((((((((#10 or #11) or #12) or #13) or #14) or #15) or #16) or #17) or #18) or #19)
#30 ((((((#20 or #21) or #22) or #23) or #24) or #25) or #26) or #27)
#31 ((#28 or #29) or #30)
#32 MeSH descriptor PARAPHILIAS explode tree 1
#33 (#31 or #32)

Table 2. EMBASE 1980 to September 2006 (searched via OVID)

EMBASE
paraphilia$.tw.
2 incest$.tw.
3 exhibitionism$.tw.
4 fetish$.tw.
5 masochis$.tw.
6 (pedophil$ or paedophil$).tw.
7 sadis$.tw.
8 voyeur$.tw.
9 pederast$.tw.
10 bondag$.tw.
11 frotteur$.tw.
12 necrophil$.tw.

Table 2. EMBASE 1980 to September 2006 (searched via OVID) *(Continued)*

13 (sex$ adj2 (offence$ or offense$ or offend$)).tw.
14 (sex$ adj2 (deviant$ or deviat$)).tw.
15 (sex$ adj2 delinquen$).tw.
16 (sex$ adj2 assault$).tw.
17 (sex adj2 crime$).tw.
18 (sex$ adj2 (abus$ or perver$ or inappropriate$)).tw.
19 (child adj2 molest$).tw.
20 masturbat$.tw.
21 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer name]
22 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).tw.
23 oligophreni$.tw.
24 subnormal$.tw.
25 ((fragile or down$) adj2 syndrome).tw.
26 phenyketonuri$.tw.
27 sexual crime/
28 Sexual Deviation/
29 sexual abuse/
30 Learning Disorder/
31 exp Mental Deficiency/
32 Developmental Disorder/
33 (or/1-20) or (or/27-29)
34 (or/21-26) or (or/30-32)
35 clin$.tw.
36 trial$.tw.
37 (clin$ adj3 trial$).tw.
38 singl$.tw.
39 doubl$.tw.
40 trebl$.tw.
41 tripl$.tw.
42 blind$.tw.
43 mask$.tw.
44 ((singl$ or doubl$ or trebl$ or tripl$) adj3 (blind$ or mask$)).tw.
45 randomi$.tw.
46 random$.tw.
47 allocat$.tw.
48 assign$.tw.
49 (random$ adj3 (allocat$ or assign$)).tw.
50 crossover.tw.
51 50 or 49 or 45 or 44 or 37
52 exp Randomized Controlled Trial/
53 exp Double Blind Procedure/
54 exp Crossover Procedure/
55 exp Single Blind Procedure/
56 exp RANDOMIZATION/
57 52 or 53 or 54 or 55 or 56 or 51
58 33 and 34 and 57

Table 3. CINAHL 1982 to September 2006 (searched via OVID)

CINAHL
1 paraphilia$.tw.
2 incest$.tw.
3 exhibitionism$.tw.
4 fetish$.tw.
5 masochis$.tw.
6 (pedophil$ or paedophil$).tw.

Table 3. CINAHL 1982 to September 2006 (searched via OVID) *(Continued)*

7 sadis$.tw.
8 voyeur$.tw.
9 pederast$.tw.
10 bondag$.tw.
11 frotteur$.tw.
12 necrophil$.tw.
13 (sex$ adj2 (offence$ or offense$ or offend$)).tw.
14 (sex$ adj2 (deviant$ or deviat$)).tw.
15 (sex$ adj2 delinquen$).tw.
16 (sex$ adj2 assault$).tw.
17 (sex adj2 crime$).tw.
18 (sex$ adj2 (abus$ or perver$ or inappropriate$)).tw.
19 (child adj2 molest$).tw.
20 masturbat$.tw.
21 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).mp. [mp=title, subject heading word, abstract, instrumentation]
22 ((mental$ or learning or cognitive$) adj2 (retard$ or handicap$ or disab$ or difficult$ or impair$)).tw.
23 oligophreni$.tw.
24 subnormal$.tw.
25 ((fragile or down$) adj2 syndrome).tw.
26 phenyketonuri$.tw.
27 Sex Offenders/
28 Paraphilias/
29 exp Sexual Abuse/
30 (or/1-20) or (or/27-29)
31 Learning Disorders/
32 exp Mental Retardation/
33 Developmental Disabilities/
34 (or/21-26) or (or/31-33)
35 randomi$.mp. [mp=title, subject heading word, abstract, instrumentation]
36 clin$.mp. [mp=title, subject heading word, abstract, instrumentation]
37 trial$.mp. [mp=title, subject heading word, abstract, instrumentation]
38 (clin$ adj3 trial$).mp. [mp=title, subject heading word, abstract, instrumentation]
39 singl$.mp. [mp=title, subject heading word, abstract, instrumentation]
40 doubl$.mp. [mp=title, subject heading word, abstract, instrumentation]
41 tripl$.mp. [mp=title, subject heading word, abstract, instrumentation]
42 trebl$.mp. [mp=title, subject heading word, abstract, instrumentation]
43 mask$.mp. [mp=title, subject heading word, abstract, instrumentation]
44 blind$.mp. [mp=title, subject heading word, abstract, instrumentation]
45 (39 or 40 or 41 or 42) and (43 or 44)
46 crossover.mp. [mp=title, subject heading word, abstract, instrumentation]
47 random$.mp. [mp=title, subject heading word, abstract, instrumentation]
48 allocate$.mp. [mp=title, subject heading word, abstract, instrumentation]
49 assign$.mp. [mp=title, subject heading word, abstract, instrumentation]
50 (random$ adj3 (allocate$ or assign$)).mp.
51 Random Assignment/
52 exp Clinical Trials/
53 exp Meta Analysis/
54 50 or 46 or 45 or 38 or 35 or 51 or 52 or 53
55 30 and 34 and 54

Table 4. PsycINFO 1872 to September 2006 (searched via SilverPlatter)

PsycINFO
#1 (explode "Sex-Offenses" in MJ,MN)
#2 (explode "Paraphilias-" in MJ,MN)
#3 (explode "Sexual-Abuse" in MJ,MN)

Table 4. PsycINFO 1872 to September 2006 (searched via SilverPlatter) *(Continued)*

#4 (explode "Learning-Disorders" in MJ,MN)
#5 (explode "Mental-Retardation" in MJ,MN)
#6 ("Developmental-Disabilities" in MJ,MN)
#7 (((explode "Sexual-Abuse" in MJ,MN) or ((explode "Paraphilias-" in MJ,MN) or ((explode "Sex-Offenses" in MJ,MN)
#8 (((explode "Mental-Retardation" in MJ,MN) or ((explode "Learning-Disorders" in MJ,MN) or (("Developmental-Disabilities" in MJ,MN)
#9 ((((explode "Mental-Retardation" in MJ,MN) or ((explode "Learning-Disorders" in MJ,MN) or (("Developmental-Disabilities" in MJ,MN) and ((((explode "Sexual-Abuse" in MJ,MN) or ((explode "Paraphilias-" in MJ,MN) or ((explode "Sex-Offenses" in MJ,MN)
#10 ((clinical near2 trial*)or(random*)or(crossover or placebo*))
#11 (((clinical near2 trial*)or(random*)or(crossover or placebo*)) and (((((explode "Mental-Retardation" in MJ,MN) or ((explode "Learning-Disorders" in MJ,MN) or (("Developmental-Disabilities" in MJ,MN) and ((((explode "Sexual-Abuse" in MJ,MN) or ((explode "Paraphilias-" in MJ,MN) or ((explode "Sex-Offenses" in MJ,MN)

Table 5. Biological Abstracts (BIOSIS) 1980 to September 2006

BIOSIS
(Searched via ISI Web of Knowledge)
[(clin* near trial*) or (singl* or doubl* or trebl* or tripl*) near (blind* or mask*) or ((randomi* or random*) near (allocat* or assign*) or crossover)]
and
[(mental* or intell* or learning* or cognitive*) near2 (handi* or retard* or impair* or difficult* or disab*) or (subnormal) or (oligophreni*) or (phenylketonuria) or (fragile* or ((down or down's) near1 syndrome)]
and
[(sex offen*) or (sex* devia*) or fetish* or exhibition* or masturbat* or voyeur* or paedophil* or pedophil* or child* molest* or (child* sex* abuse*) or pederast* or masoch* or bondag* or sadis* or necrophil* or or frotteur* or necrophil*]

WHAT'S NEW

Date	Event	Description
10 November 2008	Amended	Converted to new review format.

HISTORY

Review first published: Issue 2, 2002

Date	Event	Description
9 November 2007	Amended	Minor update
1 September 2007	New citation required and conclusions have changed	Substantive amendment
18 September 2006	Amended	Searches for this version of the review were run. No studies identified met inclusion criteria.
1 September 2006	Amended	New studies sought but none found

CONTRIBUTIONS OF AUTHORS

Lorna Duggan - original idea, protocol, searching, data extraction, writing initial report and first update
Lorraine Ashman - protocol, searching, data extraction, writing initial eport and first update

DECLARATIONS OF INTEREST

None known.

SOURCES OF SUPPORT

Internal sources

- Oxfordshire Learning Disability NHS Trust, UK.
- Lifespan NHS Trust, UK.
- St Andrew's Hospital, Billing Road, Northampton, UK.
- Northamptonshire Healthcare NHS Trust, UK.

External sources

- No sources of support supplied

NOTES

Searches for this version of the review were run in September 2006. No studies identified met inclusion criteria.

INDEX TERMS

Medical Subject Headings (MeSH)

Androgen Antagonists [therapeutic use]; Behavior Therapy; Learning Disabilities [complications] [*therapy]; Sex Offenses [*prevention & control]

MeSH check words

Female; Humans; Male