






# Cognitive behavioural therapy (CBT)

A talking therapy used to challenge and change offenders' cognitive distortions and behaviours.

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Effect scale	Quality of evidence				
	Effect Impact on crime	Mechanism How it works	Moderator Where it works	Implementation How to do it	Economic cost What it costs
 Overall reduction	 Strong	 Strong	 Moderate	 Strong	No information

## Focus of the intervention

Cognitive behavioural therapy (CBT) for offenders targets criminal thinking as a factor that contributes towards criminal behaviour.

By assuming that this criminal thinking is a cognitive deficit that has been learned, CBT focuses on teaching offenders to understand the thinking processes and choices that lead to criminal behaviour.

CBT programmes aim to build cognitive skills and restructure biased or distorted thinking. Elements of CBT for offenders may include cognitive skills training, anger management, moral development and relapse prevention.

CBT can be delivered in correctional and community settings and is used for both adults and young people.

This narrative is primarily based on Review one, a meta-analytic review of 58 studies. It is supplemented by Reviews two, three and four. Review two (based on 13 studies) provides evidence on the effect, mechanisms and moderators sections. Review three (based on 12 studies) provides additional evidence on the mechanisms and implementation sections. Review four (based on eight studies) contributes evidence to the moderator and implementation sections. The crime outcome measured in all four reviews was reoffending.

All of the primary studies included in the reviews were based on evidence from the UK, Canada, New Zealand, and the USA.

## Effect – how effective is it?

Overall, the evidence suggests that CBT has reduced crime.

A meta-analysis of outcomes from all 58 studies in Review one showed a statistically significant reduction in reoffending of 25% among participants who received CBT compared to those who did not. The meta-analysis, containing 8 studies, from Review two showed a similar statistically significant reduction in general (23%) and violent (28%) reoffending among those who underwent CBT.

Review one tested the relationship between different elements of treatment within CBT programmes and levels of participants' reoffending. It found that the treatment elements that were associated with significantly lower levels of reoffending were:

- cognitive restructuring (a process of learning that guides offenders to see their behaviours as the direct result of the choices they make)
- anger management
- individual attention for participants outside of group sessions

Review one also tested to see if there was a correlation between effect size and study methodology. It found no statistically significant effect – weaker studies found similar levels of reoffending to those with a stronger research design.

Finally, Review one found no significant difference in levels of reoffending by type of reoffending measure – whether this was rearrest or reconviction.

## How strong is the evidence?

Reviews one and two were both sufficiently systematic that many forms of bias that could influence the study conclusions could be ruled out.

Review one considered many elements of validity, conducted relevant statistical analyses and used quality assurance to ensure the accuracy of the information collected from the primary studies. It also took into account the potential effects of publication bias and only combined studies of similar methodological quality.

Review two demonstrated a high-quality design in terms of calculating the appropriate effect sizes and considering the variability in the data. Review two also took into account the potential effects of publication bias while conducting a thorough extraction of data from the included studies. However, it did not sufficiently consider the potential effects of statistical outliers or implement an appropriate weighting scheme based on study sample size.

## Mechanism – how does it work?

The reviews suggested the following mechanisms by which CBT might have an effect on crime.

### **Building cognitive skills and restructuring offenders' thinking**

Reviews one, two and three noted that CBT is based on the assumption that cognitive deficits and distortions characteristic of offenders are learned rather than inherent. CBT therefore emphasises individual accountability and attempts to teach offenders to better understand the thinking processes and choices thought to immediately lead to their criminal behaviour. All cognitive behavioural interventions therefore employ a set of structured techniques aimed at building cognitive skills in areas where offenders show deficits, and restructuring offenders' thinking in areas where it is biased or distorted.

These techniques typically involve cognitive skills training, anger management, and various supplementary components related to social skills, moral development, and relapse prevention. Relapse prevention is increasingly popular and is aimed at developing cognitive risk-management

strategies along with a set of behavioural contracts for avoiding or de-escalating the precursors to offending behaviour (for example, high-risk situations, places, associates, or maladaptive coping responses).

Review three described the basic premise underlying CBT – that thoughts, images, beliefs and attitudes are intimately related to how we behave. Therefore, it is necessary to direct interventions to both cognitive and behavioural aspects of the criminal behaviour, for example, cognitive skills training or anger management. To be as effective as possible CBT may also need to focus on predictors of criminal behaviour, such as criminal thinking and antisocial attitudes.

## **Assuming personal responsibility for crimes and developing victim empathy**

Reviews one and two noted that elements of CBT programmes may focus on assuming personal responsibility for crimes (for example, challenging offenders' tendency to justify their behaviour by blaming the victim) and on developing victim empathy (for example, by correcting their minimising of the harm they caused). These elements specifically work to remove offenders' excuses for committing crimes.

These mechanisms were not empirically tested as the original studies did not provide the necessary information to do so.

## **Moderators – in which contexts does it work best?**

The reviews note that the effect of CBT might differ according to several moderating factors.

- Age – Review one found no significant difference in the rates of reoffending for adults or young people who were given CBT.
- Type of offender – Review one found that CBT worked significantly better for high-risk participants.
- Programme intensity and duration – Review one found that CBT programmes with more sessions per week and more hours of treatment showed significantly lower rates of reoffending, while programmes with higher quality implementation also had significantly lower rates of reoffending.
- Ethnicity – Review four analysed the effect of CBT by ethnicity in Canada. The review found that there were significant reductions in reoffending for all ethnic groups they assessed (Caucasian,

Black, aboriginal and other), and that there were no significant differences between the levels of reoffending for these groups.

## Implementation – what can be said about implementing this initiative?

Review one conducted a statistical analysis of the effects of what they believed to be the optimal implementation of CBT – the participants were moderately high risk offenders and received two sessions per week of high-quality CBT for 16 weeks.

The programme included anger management techniques and interpersonal problem solving components. The review authors calculated that if there were no dropouts, such an optimal programme would lead to a 52% decrease in reoffending compared to a control group who received no treatment.

The review authors concluded that the most effective CBT programmes include high-quality implementation, represented by:

- low proportions of treatment dropouts
- close monitoring of the quality and fidelity of the treatment implementation
- adequate CBT training for the providers

Review one observed no significant difference between the level of attrition of participants and the overall levels of reoffending.

In comparison, Review two found that participants who completed the CBT programme were less likely to reoffend than those who did not. This represented a 42% reduced risk of reconviction for general offences and 56% reduction in risk of reconviction for violence if offenders had completed treatment compared to those who did not.

This review found that particular groups of men were less likely to complete the CBT treatment, including those who were young, single, from an ethnic minority background or medium risk offenders.

Review three focused on young people in residential treatment who exhibited antisocial behaviour. The review noted that residential programmes may have difficulty in maintaining and generalising

changes in behaviour if peers, family and school cannot be directly included in the treatment programmes. For cognitive behavioural therapy it is important that the treatment includes the opportunity to rehearse new skills and behaviours in the environments where they naturally occur in everyday life.

It is therefore uncertain whether any sustainable treatment effects can be obtained in a context in which the person has been placed against his or her will and where there are very limited contacts with his or her usual environment.

## **Economic considerations – how much might it cost?**

None of the reviews reported any information about the costs of CBT programmes, or any cost-benefit analyses.

## **General considerations**

- All of the reviews showed significant reductions in reoffending for participants who were given CBT. These reductions were observed for both adults and young people and participants of all ethnicities.
- There is some discrepancy among reviews as to whether dropping out of the programme has an impact on its effectiveness.

## **Summary**

Overall, the evidence suggests that CBT has reduced crime. Specific and significant reductions were observed in both general and violent reoffending amongst adults, young people and participants of different ethnicities.

CBT aims to alter the way in which offenders view violence by building cognitive skills, increasing victim empathy and challenging immature attitudes to crime. Results suggest that CBT is effective in both high-risk and mixed-risk offender groups.

Programmes that saw the greatest reduction in reoffending:

- had more sessions per week

- had more hours of treatment
- had high-quality implementation
- included anger management skills and interpersonal problem-solving in the programme elements
- were carried out in a non-institutional environment

## Reviews

### Review one




Quality of evidence			
Mechanism How it works	Moderator Where it works	Implementation How to do it	Economic cost What it costs
 Moderate	 Moderate	 Strong	No information

### Reference

Lipsey, M.W., Landenberger, N.A. and Wilson, S.J. (2007) '[Effects of cognitive-behavioral programs for criminal offenders](#)', Campbell Systematic Reviews 2007:6, DOI: 10.4073/csr.2007.6

### Review two




Quality of evidence			
Mechanism How it works	Moderator Where it works	Implementation How to do it	Economic cost What it costs

 Strong	 Moderate	 Low	No information
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## Reference

- Henwood, K.S., Chou, S., Browne, K.D. (2015) A systematic review and meta-analysis on the effectiveness of CBT informed anger management, *Aggression and Violent Behavior* 25, 280–292.




## Review three

Quality of evidence			
Mechanism How it works	Moderator Where it works	Implementation How to do it	Economic cost What it costs
 Low	 Low	 Low	No information

## Reference

- Armelius, B.Å. and Andreassen, T.H. (2007) '[Cognitive-behavioral treatment for antisocial behavior in youth in residential treatment](#)', *Cochrane Database of Systematic Reviews* 2007, Issue 4. Art. No.: CD005650. DOI: 10.1002/14651858.CD005650.pub2.

## Review four

Quality of evidence			
Mechanism How it works	Moderator Where it works	Implementation How to do it	Economic cost What it costs
 Low	 Moderate	 Low	No information

## Reference

- Usher, A. M. and Stewart, L. A. (2014) '[Effectiveness of Correctional Programs With Ethnically Diverse Offenders: A Meta- Analytic Study](#)', International Journal of Offender Therapy and Comparative Criminology, Vol 58(2) 209–230

## Summary prepared by

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