






# Wilderness challenge programmes

Physically demanding outdoor activities for young people.

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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
 Overall reduction	 Strong	 Strong	 Moderate	 Moderate	

## Focus of the intervention

Wilderness challenge programmes involve physically demanding outdoor activities (such as canoeing, caving, rock-climbing and surviving in outdoor environments).

They are sometimes implemented in conjunction with therapy or other interventions.

This narrative covers wilderness challenge programmes with young offender participants, either in isolation or with other therapeutic enhancements, aged 10 to 18 years old. Whilst interpersonal skills are also measured, the main focus is the prevention of reoffending, measured by either officially recorded offending or self-reported delinquent behaviour.

This narrative is primarily based on one systematic review covering 28 studies. A second review (covering 23 studies) provides additional evidence in relation to the mechanism and implementation sections below.

## Effect – how effective is it?

Overall, the evidence suggests that the intervention has reduced crime, but there is no evidence of significant changes for individual studies. This is due to neither of the reviews providing information on the effects for the primary studies.

Review one estimated that, on average, only 29% of participants in the wilderness challenge programmes will reoffend compared to 37% of the control group, a statistically significant difference.

Differences in the methodological quality of primary studies were analysed but no significant differences upon the effect sizes were found.

## How strong is the evidence?

The review was sufficiently systematic that many forms of bias that could influence the study conclusions can be ruled out.

The overall evidence is taken from a systematic review covering 28 studies (Review one), which demonstrated a high quality design in terms of having a transparent and well-designed search strategy, featured valid statistical analysis and sufficient assessment of the risk of bias in the analysis.

The review did not, however, assess for publication bias or consider the validity of the way the outcomes (self-reports of reoffending and official records) were combined.

## Mechanism – how does it work?

Wilderness challenge programmes are believed to work by providing participants with direct experiences to facilitate personal growth.

Specifically, Review one notes that by mastering a series of incrementally challenging physical activities participants have the opportunity to build self-esteem and self-control, as well as prosocial interpersonal skills.

Review two adds that participants can enhance their independence, self-reliance, persistence, physical fitness and resourcefulness. Since self-esteem and self-control are presumed to be related to antisocial behaviour and offending, it is believed that a participant acquiring these new skills will be empowered and less likely to reoffend.

Review one assessed the influence of improvements in self-esteem (nine studies), social skills (seven studies), self-control (seven studies) and school adjustment (six studies) against the effect of the intervention. All treatment groups showed better outcomes on these variables than the control groups.

Self-esteem was shown to be significantly higher but the increase in self-control was not significant. These results should be treated with caution due to the small number of studies however.

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

Review one analysed whether the age of the participant, or the risk of offending (ranging from non-offender, at-risk of offending, or institutionalised offenders), had an impact on reoffending. The results indicated no relationship.

Review one also found that high intensity wilderness challenge programmes (those with more challenging activities and/or greater physical demands) were associated with significantly larger reductions in reoffending than programmes with less rigorous activities. Similarly, programmes that incorporated a distinct therapy component saw significantly larger reductions in reoffending than those without.

The review authors suggest that a therapeutic session may help the participants to consolidate the learning outcomes of the challenging experiences, and draw implications for their own behaviour.

Analysis of the duration of the wilderness challenge programmes in Review one showed that longer programmes (over three months' duration) produced smaller reductions in reoffending. This counter-intuitive finding was investigated further but no hypotheses were tested. The review authors speculated that the longer programmes might have a diluted effect, due to them being delivered in combination with other forms of treatment. Thus the wilderness challenge component may not have been delivered over the duration of the entire programme.

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

Review two provided a basic description of what was delivered in practice for the 23 studies it covered.

- Programmes are typically limited to 12 participants, with two or three instructors.
- Physical conditioning, survival skills training, safety training for the activities and team training are stressed throughout the programme.
- A three-day solo experience is sometimes implemented, where the participant is given the opportunity to demonstrate self-sufficiency skills and challenge their dependence on companionship.

Review two also identified a number of barriers to successful implementation of wilderness challenge programmes. Regarding participants; some may be physically unfit and find the challenge activities very tiring. These (and others) may respond better to traditional forms of punishment and rehabilitation. Participants' home life may create difficulties in applying the lessons learned from the programme.

Review two suggests that after-care from the programme implementers may prove crucial to consolidating the learning objectives, however, this is usually limited.

The setting is important for wilderness challenge programmes, with implications for logistics and resourcing. The location needs to be sufficiently remote that participants cannot easily run away, yet not so remote that emergency situations cannot be swiftly handled. Other obstacles include negotiating risk with insurance companies, navigating ethical considerations of hiring staff with appropriate credentials, and recruitment of experienced staff who are willing to undertake a lot of training and work in a wilderness situation with the participants for maybe a month at a time.

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

Review one does not mention costs (and/or benefits) and no formal economic analysis is provided. However, Review two notes that it is costly to set up a wilderness challenge programme, requiring staff training and time and effort to find suitable locations for these programmes.

No formal analysis of the cost of wilderness challenge programmes was conducted, however.

## **General considerations**

- There is currently no standard definition for 'wilderness therapy'. This makes it difficult to disentangle and measure the effect of the therapeutic component of wilderness challenge programmes.
- Both reviews note that there is limited research evidence regarding how this intervention might work for different populations (e.g. women or non-white ethnicities).
- Few wilderness challenge programme organisers may be willing to take 'high risk' offenders, violent offenders or substance abusers.
- Little evidence exists on whether the positive effects of wilderness challenge programmes are maintained over time. Future research should focus on extended follow-up measurement periods to address this gap.



## Summary

Overall, the evidence suggests that the intervention has reduced crime, but there is no evidence of significant changes for individual studies.

Wilderness challenge programmes are believed to work by providing participants with the opportunities to build self-esteem and self-control, as well as prosocial interpersonal skills. High-intensity and programmes that incorporated a distinct therapy component saw the largest reductions in reoffending.

## Reviews



### Review one

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

## Reference

- Wilson, S. J. and Lipsey, M. W. (2000). Wilderness challenge programs for delinquent youth: a meta-analysis of outcome evaluations. *Evaluation and Program Planning*, 23, pp. 1-12.

## Review two

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

## Reference

- Bedard, R. M. (2004). Wilderness Therapy Programs for Juvenile Delinquents: A Meta-Analysis. Doctoral Thesis, Colorado State University.

## Summary prepared by

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