

# The effectiveness of fire setting treatment programmes delivered to children and young people: a systematic review of the literature

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## Introduction

Fire play and fire interest is a common phenomenon in childhood, starting as young as 3 years old. The true prevalence should be taken with caution with many children involved in unreported and undetected fireplay. Firesetting is a serious behavioural concern which is not only an important public health problem but could also be a children's mental health problem.

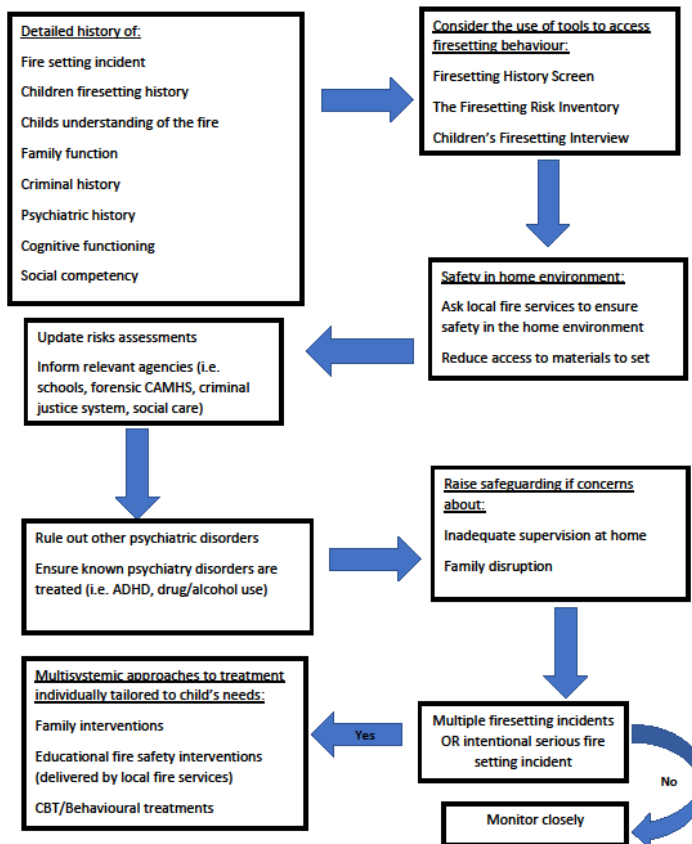
## Method

The aim of this systematic review was to identify and evaluate treatments for juvenile fire setters. The PsychINFO, CINAHL, Embase and Medline databases were searched in June 2020. Reference lists of previously published articles were also read to identify further articles that could be included. Papers were included if they had been peer reviewed, not a duplicate of a previous paper and available in English. Exclusion criteria included the removal of articles pertaining to general treatment programs (i.e. not specific to fire setting) and those studies that did not 'test' whether or not a particular method, approach or program reduced recidivism amongst juvenile firesetters. The search on the databases was not restricted by date. The search followed PRISMA guidelines. Primary outcomes were measured by the rate of offending.

## Results

Thirteen articles met all the inclusion criteria and were included for qualitative synthesis. Most of the studies incorporated an educational fire safety treatment. Only one study looked solely at a cognitive behavioural intervention. Three studies were conducted in an inpatient psychiatry unit. 1 of the 13 studies intricately designed a Randomised Control Design, with the majority being pretest-posttest Quasi-experimental designs. The review included a total of 2975 children and adolescents.

### A proposed algorithm for fire setting behaviour in Children and Adolescents for Mental Health Clinicians:



## Discussion

A surprisingly small number of papers met inclusion criteria given the severe nature of the problem. Overall, the methodological quality of the included studies was poor. The lack of standardized interventions in main key characteristics (delivery, content, child and parent involvement, duration, follow up) means no reliable comparison can occur across studies.

The review found a wide range of confounding factors that contributed to juvenile firesetting and the risk of recidivism. These included but not limited to family structure, family disruption, age, gender, antisocial behaviours and curiosity. Assessment and treatment will need to address and consider these factors on an individual basis.

The effort in completing any intervention shouldn't be overlooked with high dropout rates reported in the studies. This was presumed due to the demands of the experimental and specialists' groups being too great or a sample deemed as more pathological.

## Conclusion

The most successful treatment programs are focused on a multisystemic approach and are flexible to the juvenile's individual needs. What is clear is what might work for some young people doesn't work for others, highlighting the complexities and individualised nature of the problem. Future research calls for randomised controlled trials, larger samples, standardized interventions and measurable outcome measures.

At present no single professional agency feels responsible for the management of these individuals with inconsistent and varying services provided.

An algorithm for mental health professionals working with young people who set fires is proposed following this systematic review, to provide clearer knowledge about the treatment process.