

Juvenile arson intervention programs in Australia

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Arson is a crime that is often committed by young people. An important strategy for preventing deliberate firesetting is intervention with young people who show an unhealthy interest in fire. Fire services in all Australian jurisdictions conduct juvenile arson intervention programs for such young people. These programs are usually run by specially trained firefighters, are carried out in the home of the young person with the involvement of the parents, and focus on the young person's behaviour and their family environment. Most programs are offered to children of all ages, and are not limited to those who have been involved in a criminal offence. The approaches that the programs take vary, but all include education about fire and cognitive behavioural approaches to problem behaviours. Most programs maintain strong linkages with mental health and other social services. To date, there has been limited evaluation of the programs, but anecdotal evidence suggests that they are viewed as successful. Formal, independent evaluation of programs should now be undertaken to ensure that they are effective in stopping firelighting behaviour among young people.

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Of all of the crimes committed by young people, arson is potentially one of the most devastating. A deliberately lit fire can cause vast amounts of damage and may even result in the loss of life. Many young people are fascinated by fire, but when that interest results in the inappropriate or dangerous lighting of fires, regardless of whether this constitutes a criminal act, some form of intervention may be appropriate. The lighting of fires may also be symptomatic of a deeper problem, such as family stress, and an arson intervention program may be an avenue for referring the individual to additional support or intervention services. Fire lighting is both a problematic behaviour, and a possible sign of an at-risk young person. Intervening early in the developmental life cycle with such at-risk individuals is consistent with a developmental approach to crime prevention.

Juvenile arson intervention programs have operated in other countries, particularly the United States and the United Kingdom, for a number of years. However, little has been written about such programs in Australia. The research described in this paper surveyed juvenile arson intervention programs throughout Australia in order to determine where they were located and how they operated.

Juvenile firesetting: theories of causation

Statistics from the US and Britain indicate that arson often involves young people, with young males as common offenders (Lambie, McCardle & Coleman 2002). Roughly 20 percent of fires in Australia are thought to be started by juveniles (Dadds & Fraser 2006).

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A four-part categorisation has been proposed for juvenile firesetters based on a continuum of increasingly dangerous behaviour, from children playing with matches to firesetters whose behaviour is considered a cry for help, to delinquent and finally to severely disturbed firesetters (Wooden & Berkey 1984). This typology has served as an important foundation for other modified firesetting classifications.

Many authors have explored environmental connections as potential contributing factors for firesetting. An ecological risk model for juvenile firesetting includes four key factors relating to family life:

- poor supervision and monitoring
- parental non-involvement
- parental pathology
- stressful events.

Kolko and Kazdin (1990), for example, used self-report information provided by parents to examine differences between firesetters and non-firesetters in a group of 477 children aged from six to 13 years. Their findings supported the hypothesis that the family conditions of firesetters are generally more problematic than those of non-firesetters. Specifically, firesetter parents, when compared with non-firesetter parents, reported more psychological distress, marital problems and stressful life events, with less child acceptance and lower levels of supervision and discipline.

There is also a significant amount of literature about the association between firesetting and more generalised patterns of antisocial behaviour. Firesetting most likely represents an extreme end of a behavioural problem continuum, rather than being a distinct syndrome (Walsh, Lambie & Stewart 2004).

In a study examining the relationship between antisocial behaviour subtypes and firesetting, Stickle and Blechman (2002) found that, among adolescents with delinquency problems, firesetters

often exhibited higher levels of aggression and a greater intensity of antisocial acts than did non-firesetter delinquents. Early identification of a tendency to set fires may therefore be an important step in preventing the escalation of a juvenile's antisocial acts.

The presence of antisocial behaviour impacts on the provision of interventions for firesetters in important ways. In particular, in treating offenders with antisocial tendencies, a participant's lack of understanding about socially responsible behaviour can hinder intervention. Appropriate behaviour must therefore be reinforced with structure and accountability in treatment. Antisocial firesetters may also require the experience of mental health services to direct intervention.

Assessment and treatment

Proper assessment is crucial to intervening effectively with arsonists. Given the diversity of firesetting behaviour and motives, it is vital to identify why an individual is setting fires to formulate an appropriate intervention. Assessment may determine that psychosocial interventions are not necessary, and thus avoid spending program resources to little effect. If a psychosocial approach is deemed critical to treatment, assessment is also a pivotal first step for designing more individualised treatment (Epps & Hollin 2000). Additionally, family assessment interviews to identify possible dysfunction are beneficial, as these problems may contribute to firesetting (Slavkin & Fineman 2000: 767)

Despite differing terminologies, much of the literature on arson treatment highlights two general approaches: fire education, and behavioural, social, or psychological treatment. Programs often incorporate a combination of these. While the chosen approach depends on the type of firesetter targeted, a multifaceted, eclectic approach is viewed as an

effective way to address the complexity of deliberate firesetting (Soltys 1992; Palmer, Caulfield & Hollin 2005).

There are different levels of intervention possible: primary prevention targets children generally, to reduce the possibility of future experimentation, and secondary prevention is aimed at recognised or potentially high risk firesetters (Webb et al. 1990). Secondary prevention may be incorporated directly with social and behavioural approaches, or linked to a referral system for such services. As an arson prevention tool, education is fire-specific but does not aim to directly modify the child's behaviour. Webb and colleagues (1990) also note the possibility for tertiary prevention which may include intervention with firesetters identified as more dangerous and requiring professional mental health intervention.

Fire education is the most common approach for firesetting prevention, especially with juveniles. In a report on juvenile arson, the United States Fire Administration concluded that fire education is a necessary component of any intervention regardless of the young person's motives or firesetting intensity (Schwartzman, Stambaugh & Kimball 1998).

Three possible educational methods have been advocated for younger 'playing with matches' and some 'crying for help' firesetters (Wooden & Berkey 1984). One approach has the child answer different fire-related questions and complete fire-related colouring books for better understanding. The second approach has the child view films about fire, including impacts on firefighters. The third approach has the child take responsibility for his or her personal fire safety, including promising not to play with matches or touch dirty ashtrays. All of these are relatively low intensity options but can be helpful in teaching young children about appropriate fire use.

A fire safety education technique used in conjunction with a cognitive behavioural treatment has shown promising impacts on reducing recidivism (Kolko 2001). The education process was tailored specifically to children with firesetting histories. The curriculum was derived from descriptive characteristics identified in juvenile firesetters and included instruction in fire safety skills, the effects of fire, and specific prevention practices emphasised through role play.

Behavioural and psychosocial approaches are used more commonly with higher intensity firesetters, often older juvenile, recidivist firesetters or convicted arsonists, such as 'delinquent' or pathological firesetters (Wooden & Berkey 1984). Firesetting can be one form of broader antisocial conduct or personality disorder, so mental health professionals are usually involved in some capacity with these approaches. Thus, whereas education tends to be fire-specific and does not aim to directly modify the child's behaviour, the goal of treatment is to directly alter the firesetter's behaviour by using positive reinforcement to change the way they respond to the triggering factors for firesetting (Palmer, Caulfield & Hollin 2005).

Behavioural treatment may also involve teaching social skills. For juveniles who act out of anger and revenge, aggression replacement training or anger management skills can help them to express themselves in less destructive ways. Additional treatment methods include general family counselling, training parents to provide appropriate discipline, teaching the firesetter to use self calming strategies during stressful events, overt sensitisation such as personal interaction with burn victims to confront firesetting consequences, and where appropriate, pharmacological medications for underlying personality disorders (Soltys 1992).

Some treatment techniques use fire lighting as part of the treatment, including overcorrection, satiation or negative

Table 1: Australian juvenile arson intervention programs

Program name	Jurisdiction		Operating agency
Juvenile Fire Awareness and Intervention Program	JFAIP	ACT	Australian Capital Territory Fire Brigade
Intervention and Fire Awareness Program	IFAP	NSW	New South Wales Fire Brigades
Juvenile Fire Awareness and Intervention Program	JFAIP	NT	Northern Territory Fire and Rescue Service
Fight Fire Fascination	FFF	Qld	Queensland Fire and Rescue Service
Juvenile Arson Offenders Program	JAOP	Qld	Queensland Fire and Rescue Service
Juvenile Firelighters Intervention Program	J-FLIP	SA	South Australia Metropolitan Fire Service
Juvenile Fire Lighter Intervention Program	JFLIP	Tas	Tasmania Fire Service
Juvenile Fire Awareness and Intervention Program	JFAIP	Vic	Metropolitan Fire Brigade (and Country Fire Authority)
Juvenile and Family Fire Awareness	JAFFA	WA	Fire and Emergency Services Authority of WA

Source: AIC, Survey of fire agencies, October 2006

consequence methods. These may include having the young person repeatedly strike matches until they terminate the behaviour because of boredom (Palmer, Caulfield & Hollin 2005). The effectiveness of fire lighting as a component of treatment is contentious due to the possibility that 'practising' may reinforce a sense of control over fire and so provoke repeat firesetting (Sharp et al. 2006).

Juvenile prevention programs in Australia

The lighting of fires by children in Australia is a significant problem. Fires caused by children (aged 16 or under) in NSW resulted in losses of \$24 million between 1987 and 1994, according to Nicolopoulos (1996). Children were responsible for 21 percent of all fires during that same period, and 71 percent of fires lit by children were bush or grass fires. Many fires lit by children do not result in formal action in the criminal justice system, due to the triviality of the fire or the age of the firesetter. In NSW in 2005, for example, only 55 individuals appeared in the Children's Court charged with arson (NSW BOCSAR 2006).

To identify the juvenile arson intervention options in Australia, questionnaires were distributed via email to program contacts in all eight Australian states and territories. Each state and territory had at least one operational program targeting juvenile firesetters or children who exhibit a curiosity about fire. Based on responses to the questionnaire and program information on websites, details were collected on nine programs, which are listed in Table 1.

Program characteristics

The age group of firesetters targeted by the programs varies, but, with the exception of the Qld Juvenile Arson Offenders Program (JAOP), all programs target children exhibiting firesetting behaviours from as young as 3–5 years up to 15–18 years of age. The participants do not have to come to the attention of the criminal justice system to enter the programs. JAOP takes only young people aged 13–17 years who have been charged with an arson offence.

Across the jurisdictions, common program characteristics include:

- firefighters as facilitators with special training for program involvement

- mostly based in the home
- not specific to bushfires
- largely educational with some behaviour change elements
- no fire lighting
- parental involvement encouraged or required
- links with (referrals to/from) mental health services and the juvenile justice system (courts and family group conferences).

Similarities exist as many of the programs are derived from established programs in other jurisdictions, notably Victoria's Juvenile Fire Awareness and Intervention Program (Vic JFAIP), which was established by the Metropolitan Fire Brigade in 1988. The South Australian, Northern Territory and ACT all note that their programs are based on or related to Vic JFAIP. The Metropolitan Fire Brigade was instrumental in spreading its program model and offering assistance with training facilitators in other states, including adjusting the program to suit the needs of their state or territory. Vic JFAIP also noted that they adopted concepts from foreign programs in developing their model.

While based on the Victorian model, the Qld Fight Fire Fascination (FFF) program, first run in 1998, is an example of a program that has been extensively adapted to address the local geographic conditions and philosophical approach. WA's Juvenile and Family Fire Awareness (JAFFA) is also a long standing program, established in 1989. JAFFA is considered 'home grown' but highlighted that visits to the US had an influence in program revisions undertaken in 2003.

When asked about the assumptions about firesetting and treatment upon which their programs were based, only NSW IFAP responded that their program was based on cognitive behavioural models with additional fire safety education. While not explicitly articulated, some of the program descriptions draw from the firesetting classifications that

exist in the literature. These include the motive models, which are incorporated into the WA JAFFA, Vic JFAIP and SA J-FLIP program material.

The programs are largely consistent with recommendations about the treatment of juvenile firesetters discussed in the literature. A combination of fire education approaches combined with cognitive behaviour therapy is common to most of the programs. Likewise, an appreciation of family dynamics and their contribution to behaviour such as firesetting is implicit in most of the programs. While targeting firesetting specifically, there is a recognition that this may be just one of several forms of antisocial behaviour that the young person engages in, any of which might be assisted by the program.

Despite not being specifically designed for young people who light bushfires, the programs are relatively flexible in their approach. The use of trained facilitators and linkages with the resources of the mental health system result in the programs being amenable to adaptation where necessary.

Program delivery

All the state and territory programs utilise specially trained firefighters as the facilitators and educators in their program delivery. Firefighters are perceived as the most qualified to deliver fire safety and education information due to their standing in the community. Selected firefighters go through a screening process in most of the programs. Some of the key selection features identified by various programs include enthusiasm, working well with children, having good communication skills and having a general interest in helping the broader community.

Several programs emphasised that relationship building and trust development between the firefighter facilitator and the juvenile are major aspects of their programs. As part of their positive reinforcement approach,

Vic JFAIP identifies trust building, intervention/education and positive reinforcement for not setting fires as the three core components of its program. The relationship between facilitator and juvenile is important because established rapport with a firefighter is one potential way to deter future firesetting behaviour with some juveniles.

Location and program setting

Eight of the nine programs use the home as a program setting in some form. The exception is SA J-FLIP which expressly operates its program in a non-home setting, noting that they do so for the safety of the participant and facilitators involved. Additionally, the majority of the JAOP takes place outside the home, but the initial assessment interviews are usually conducted within the home.

Several of the programs noted that the home setting is a critical component of program effectiveness. The rationale for the home setting includes allowing the facilitator insight into any family or home problems that might contribute to the fire behaviour, identification of the environment of the fire if the child is lighting fires in the home and development of specific home-tailored fire safety plans the child may be able to help enforce.

Parental involvement

One of the most significant similarities in all nine programs is an emphasis on the participation of parents or care providers, with some programs involving the parents or carers as active participants. This may include either sitting in with their child and the facilitator, or attending separate information sessions where they are taught how to effectively reinforce and implement what their child is learning. The programs explicitly acknowledge that the parent or carer is integral to the effectiveness of their programs.

NSW IFAP highlighted that their experience with clients has often

shown certain levels of conflict at the familial level that contribute to the child's firesetting behaviour including smoking, neglect, poor mental health, a history of fireplay in the family and broken families. To address these issues, NSW IFAP created a variety of information sheets to provide information to parents about possible associations between such problems and their child's behaviour. This can increase the parents' understanding of the juvenile's behaviour and offers parents ways to modify their behaviour to help their child terminate his or her firesetting.

Program content

Fire education about awareness, dangers and fire safety appears to be the most common approach used, at least in some form, by the programs. In several of the programs, education is tailored to meet the needs, firesetting behaviour and maturity of the individual child after initial assessment. The aim of most of the educational components is to have the child recognise the dangers and take responsibility for their firesetting behaviour, to emphasise the power of fire, its benefits as a tool and to provide fire safety knowledge.

While some of the programs incorporate simple behaviour modification practices to deter the child's behaviour, JAOP has the most extensive experiential component, targeting more serious arson offenders. JAOP's group-based approach incorporates team building to address and develop personal skills that help the juvenile return as a functioning member of the community once their 'time has been served'. JAOP partially addresses these skills in a non-clinical sense through simulated fire activities and a three day experiential course.

Some of the programs include interactive components. Most significant is the experiential learning of the JAOP program, which involves the young person working alongside firefighters

at the Whyte Island training facility to extinguish simulated fires. However, none of the programs include the controversial behavioural modification technique, previously used in some overseas programs, that requires the child to repeatedly light fires to undermine fascination and create an association of fire with boredom. Although Vic JFAIP originally required the child to light a small fire in a pot every night for three weeks and to be responsible for cleaning out the pot, they subsequently removed this component from their program.

Many of the programs targeting juvenile firesetters do not differentiate between bushfire and other arson, and most target both rural and urban communities as needed. However, Vic JFAIP stated that they tailor the program to individual firesetting behaviour, which may include additional measures to address bushfire arson. Qld JAOP also incorporates additional education sessions for juvenile offenders who are involved with bushfire arson, by requiring that the offender liaise with a rural fire brigade.

Linkages

Mental health professionals are often best equipped to deal with the underlying behavioural problems that are sometimes associated with firesetting. Many of the programs in Australia recognise that, as programs operated by the fires services, it is beyond their purview to address underlying antisocial behaviours and personality disorders. To compensate for this, many of the programs have established, or are trying to create, alliances with mental health services. This collaboration may take different forms:

- as a source of referral to their own program
- for assistance in training their firefighter facilitators
- for help in establishing their own or joint programs that may more effectively address all facets of the child's firesetting behaviour

- as a potential resource to which children who need additional help may be referred.

Vic JFAIP was developed in collaboration with a child psychiatrist, and incorporates a psychological perspective. The program continues to maintain a clinical psychologist as a consultant who provides feedback for firefighter facilitators. If appropriate, the firefighter facilitator will recommend that the family seek additional mental health counselling. Other programs also suggest referrals to mental health professionals, although there may not always be a formal arrangement between the program and mental health professional or organisation.

Referral sources

Many of the programs accept referrals from youth courts and community conferencing. JAOP is notable because its sole referral source is through the judicial system, as it is specifically designed for juveniles charged with arson offences. In contrast to most of the other programs' participants, participation in JAOP is made compulsory by court order or community conference agreement. If not completed, the child faces further action in the justice system. JAOP's ongoing relationship with the juvenile court system and community conferencing outlets appears unique in Australia. It offers a promising alternative to juvenile detention or conviction that may prove effective in addressing certain arson behaviours, and is an example of cooperation between a fire service and the criminal justice system (in this case the Queensland Department of Communities, which is responsible for overseeing juvenile offenders).

Evaluation

Evaluations of the programs vary in degree and formality. Some programs currently are more oriented towards

generating operating statistics for internal review. Many of the programs also have some form of participant evaluation, primarily by the parent completing a survey at the program's conclusion and possibly again in subsequent follow up.

Vic JFAIP and Qld's FFF and JAOP are in the process of formal and independent evaluations from the University of Queensland and a Victorian university respectively. Independent reviews of the Queensland programs in 2001 and 2005 found that parents of firesetters reported high levels of satisfaction with the program and low levels of subsequent firelighting.

Conclusion

Interest in fire is common among children, but when interest leads to problematic firesetting, some form of intervention may be beneficial as a replacement for, or adjunct to, formal legal intervention. None of the programs examined in this paper have yet completed a formal evaluation, particularly in terms of long term recidivism, although internal evaluations reported by the agencies appear promising, as is the fact that their development is consistent with the literature in the area. Formal, independent evaluations of the programs are important to ensure that they are an appropriate response to the problem of juvenile firesetting, and are strongly encouraged. In addition, evaluations may identify areas in which the programs are particularly effective, to provide good practice examples for other similar programs.

While not generally presented as such, most of the programs considered in this paper are good examples of developmental crime prevention programs. Such programs identify warning signs in young people, and seek to prevent problems evolving into criminal behaviour, with an emphasis on the interaction between the young person, their behaviour, and their family and social environments. While these programs already have linkages with other relevant services, they may benefit from increased integration with other crime prevention measures that target young people.

Given the close alignment in the development of many of the programs, jurisdictions could benefit from increased data sharing to inform the identification of good practice and future directions for all programs. Formal, published evaluations will also allow better practice aspects of the programs to be identified and developed further.

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References

All URLs correct at April 2007

Dadds MR & Fraser JA 2006. Fire interest, fire setting and psychopathology in Australian children: a normative study. *Australian and New Zealand journal of psychiatry* 40: 581–586

Epps K & Hollin CR 2000. Understanding and treating adolescent fire setters, in Boswell G (ed), *Violent children and adolescents: asking the question why?* London: Whurr: 36–55

Kolko DJ 2001. Efficacy of cognitive-behavioural treatment and fire safety education for children who set fires: initial and follow-up outcomes. *Journal of child psychology and psychiatry* 42(3): 359–369

Kolko DJ & Kazdin AE 1990. Matchplay and fire setting in children: relationship to parent, marital, and family dysfunction. *Journal of clinical child psychology* 19(3): 229–238

Lambie I, McCardle S, & Coleman R 2002. Where there's smoke there's fire: fire setting behaviour in children and adolescents. *New Zealand journal of psychology* 21(2): 73–78

New South Wales. Bureau of Crime Statistics and Research (NSW BOCSAR) 2006. *NSW criminal court statistics 2005*. [http://www.lawlink.nsw.gov.au/lawlink/bocsar/ll_bocsar.nsf/vwFiles/CCS05.pdf/\\$file/CCS05.pdf](http://www.lawlink.nsw.gov.au/lawlink/bocsar/ll_bocsar.nsf/vwFiles/CCS05.pdf/$file/CCS05.pdf)

Nicolopoulos N 1996. *Fires caused by children 1987–1994*. NSW Fire Brigades statistical research paper issue 2/96. Sydney: NSWFB

Palmer EJ, Caulfield LS & Hollin CR 2005. *Evaluation of interventions with arsonists and young firesetters*. London: Office of the Deputy Prime Minister. http://www.communities.gov.uk/pub/173/EvaluationofInterventionswithArsonistsandYoungFiresetters_id1125173.pdf

Schwartzman P, Stambaugh H & Kimball J 1998. *Arson and juveniles: responding to the violence*. Emmitsburg MD: United States Fire Administration. <http://www.usfa.dhs.gov/downloads/txt/publications/tr-095.txt>

Sharp DL et al. 2006. Evidence-based multidisciplinary strategies for working with children who set fires. *Journal of the American Psychiatric Nurses Association* 11(6): 329–337

Slavkin ML & Fineman K 2000. What every professional who works with adolescents needs to know about firesetters. *Adolescence* 35: 759–773

Soltys SM 1992. Pyromania and fire setting behaviors. *Psychiatric annals* 22(2): 79–83

Stickler TR & Blechman EA 2002. Aggression and fire: antisocial behavior in fire setting and nonfire setting juvenile offenders. *Journal of psychopathology and behavioral assessment* 24(3): 177–193

Walsh D, Lambie I & Stewart M 2004. Sparking up: family, behavioural and empathy factors in adolescent firesetters. *American journal of forensic psychology* 22(1): 5–32

Webb NB et al. 1990. Collaborative treatment of juvenile firesetters: assessment and outreach. *American journal of orthopsychiatry* 60(2): 305–310

Wooden WS & Berkey ML 1984. *Children and arson: America's middle class nightmare*. New York NY: Plenum Press